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Published Winter and Summer, the *Journal of Classroom Interaction* is unaffiliated with any organization and receives its support from subscriptions. The Journal does not accept paid advertising and is available through print and online subscription and from University Microfilms International, 300 North Zeeb Road, Dept. PR, Ann Arbor, MI 48106.

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$35 (Online only), $60 (US & Canada Print & Online),
$66.50 (International Print & Online).

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$49.50 (US & Canada), $56 (International), $59 (Online Only, one user),
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In the United States, education that serves the public good requires a qualified, competent and caring teacher in every classroom. Although each of these individual dimensions has been shown to support student learning, we have a limited understanding of how they interact to support students’ school experience.

This special issue examines two essential teaching dimensions in tandem: competence (specifically, classroom management) and care (the quality of teacher-student interactions). It does so by presenting a sample of current research with the intention of inviting researchers and practitioners to consider several essential questions. First, how do we define competent management and care? Second, how do these dimensions function in classroom settings? Answering these questions is important given the need to understand how teachers simultaneously organize efficient learning environments that meet curricular requirements while establishing and maintaining positive, caring relationships with students.

Posing these essential questions reveals limitations in how management and care are often viewed in the research and teacher education literatures. For example, textbooks on the topic often take a functional approach, suggesting how to organize the classroom and how to write rules or emphasize a behavioral approach by detailing how to create specific interventions for individual students. Yet these same texts fail to offer teachers information about the more complex challenge of establishing interpersonal relationships with students and how and why those relationships are essential to learning. Further, researchers often assume that classroom management practices have a direct impact on student behavior and that teacher-student relationships can be measured via observation. While earning valuable information, these approaches overlook students’ active role in their own learning.

In contrast to an often narrow, teacher-centered approach to classroom management, the literature on care is broad and largely conceptual. Starting in the 1970s the literature offered a generalized definition of care and how it helps an individual find his or her place in the world. Later it offered more complex conceptions of the nature of the caring relationship, specifically as a reciprocal relationship or a relationship marked by power used to benefit others. As these definitions have evolved, so has the treatment of care as a variable in classroom-based research. In many studies it emerges as an outcome, yet in others it is treated as a process variable. These different treatments obscure our understanding of how care functions in classrooms for teachers and students.

The time seems ripe for taking a configural approach that unites behaviorist-driven models of classroom management with more humanistic examinations of the role caring and interpersonal relationships play in classroom learning. There are theoretical and empirical models for doing so. For example, in the field of developmental psychology Baumrind advanced modern understanding of effective parenting by uniting two strands of research, one dedicated to parental discipline (which she called demandingness) and the other to parental warmth (which she called responsiveness). Similarly, the field of clinical psychology has shown that a number of therapeutic approaches can be successful as long as they are used within the context of an established bond between therapist and client. In the classroom, the quality of teacher-student relationships—defined as the presence of both demandingness (i.e., management) and responsiveness (i.e., care)—may serve a similar foundational purpose, altering the influence of specific instructional practices.

In this issue the first piece by Davis and colleagues looks at the role of teacher management and care at the elementary school level with low-income, minority first-graders. They focus on students’ understanding of these two teaching dimensions, giving insight into the developmental nature of students’ perceptions of their relationships with teachers and how they relate to engagement and learning. Echoing these ideas, the second piece by Brekelmans and colleagues asks whether high school students and their teachers look at teacher-student relationships through the same psychological lens (i.e., comprised of both management and care) and the extent to which they agree on what they see through that lens. The third piece by Brackett and colleagues assesses the emotional, organizational, and instructional quality of classroom climates and how they relate to student conduct, explicitly testing whether student perceptions of teacher-student relationships mediate the link between the general classroom emotional climate and student conduct. The final piece by Jennings and colleagues analyzes the effects of a program designed to help teachers create both a well managed and caring classroom by learning how to marshal their own emotions. Results for implementation across two different settings are described.
“She Let Us be Smart:” Low-Income African-American First-Grade Students’ Understandings of Teacher Closeness and Influence

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ABSTRACT

The purpose of this study was to explore low-income, African-American first-grade students’ understandings of teacher closeness and influence. Several questions guided our inquiry: How do these children understand their relationships with their teachers, specifically with regard to teacher closeness and influence? To what extent are their understandings of these concepts malleable? How might their feelings of closeness and influence relate to their motivation to engage in mathematics activities? Qualitative data for this project includes a sample of 27 interviews (16 boys, 11 girls). Findings are organized into a working model and describe the ways in which children’s conceptions of closeness and influence were embedded in their understandings and perceptions of equity in the classroom.

INTRODUCTION

In 1997, Gloria Ladson-Billings argued math and science literacy represents the “new civil rights battleground” (p. 698) with access to math and science careers creating new forms of participation in society and unrivaled economic opportunities. In the United States, few African-American and Hispanic students evidence advanced mastery of science and mathematics concepts (Tate, 1997). Gaps in achievement along ethnic and cultural lines may begin as early as elementary school (Ball & Alvarez, 2004) and may not necessarily be associated with enrollment in lesser quality schools or student ability (Clewell, Anderson, & Thorpe, 1992). Rather, they may be created and maintained by the micro-culture of the classroom (Reyes & Stanic, 1998; Strickland & Asher, 1992). For example, minority students tend to perceive their teachers as holding lower expectations for their success and offering limited opportunities to achieve (Grouws & Lembke, 1996; Hart & Alleksaht-Snider, 1996). Moreover, minority students who perceive teachers as holding racial stereotypes or engaging in discrimination tend to underperform in mathematics, report lower math self-concept and task values (Eccles, Wong, & Peck, 2006), and have higher absences from school and elevated alienation (Osborne & Walker, 2006).

Lower expectations and limited opportunities to learn may be a function of math teachers’ enactment of deficit beliefs about diverse students (Ford & Grantham, 2003) or maladaptive beliefs they hold about mathematics (Stodolsky, 1985). Brophy (2004) outlines the ways in which teachers communicate low expectations such as calling on students less often, seating them farther away, seating them closer as a form of behavioral control, paying less attention and demanding less of them, offering inappropriate criticism or praise, or failing to give feedback altogether. Math teachers may also inadvertently communicate stereotypes about the field including messages that minorities do not belong (Hoy, Davis, & Pape, 2006; Ladson-Billings, 1997), yet many ethnographic studies of minority student resilience have documented the power of a single caring teacher to disrupt “at risk” trajectories (see Davis, 2006).

This study explored the role of teacher-child relationships as a form of social capital that contributes to students’ engagement in math. In this paper, social capital is defined as the network of social relationships that contributes to perpetuating social status and participation in society (Van Gellen, 2004). We argue teacher-student relationships represent an important form of social capital for low-income, minority students (Murdock, 1999). Further, we argue the methods that have been used to explore teacher-child relationships, particularly those with young children, have been limited in their ability to (a) capture the child’s perspective (Murray, Murray, & Waas, 2008) and (b) allow for longitudinal investigations of children’s perceptions of teacher relationships (Davis, 2003).
RELATING TO DIVERSE LEARNERS: THE ROLE OF CLOSENESS AND DEMAND

As den Brok and colleagues have noted, cultural mismatch between teachers and students “can easily lead to miscommunication or conflicts, especially if both parties have little knowledge of the viewpoint and experiences of the other” (den Brok, Wubbels, Veldman, & van Tartwijk, 2009, p. 120). Currently the majority of teachers hail from White, middle-class backgrounds (Hoy et al., 2006). Thus, minority and economically disadvantaged students are at risk for being systematically excluded from the social capital afforded by teacher-student relationships (Brown, 2004; Monroe & Obidah, 2004). Indeed, several contemporary studies of teacher relationships with minority students have documented systemic differences based on the race of the teacher (Kesner, 2000; Saft & Pianta, 2001), with more positive relationships among same-race teachers.

A handful of studies, however, have documented the ways in which White teachers have been successful in bridging the “relationship gap” in schools. In 1975, Judith Kleinfeld argued that, “it is the teacher’s interpersonal style, not his ethnic-group membership, that is critical to success” (p. 304). She was able to classify teachers’ approaches to working with Native American children along two dimensions: personal warmth and active demand (see Figure 1). Personal warmth involved physical proximity such as smiling frequently and maintaining a close body distance. Kleinfeld argued that personal warmth, while a necessary condition for eliciting a high level of intellectual performance, is not sufficient for supporting students’ achievement motivation. Rather, to have influence, teachers must also cultivate the legitimacy of their academic content for students, demanding more than their students think they are capable of and articulating the implicit cultural assumptions that impede student success. Using the two dimensions, Kleinfeld was able to classify the teachers in her study into one of four types (Figure 1). Moreover, she argued that teachers with a warm-demanding approach were the most effective in bringing about positive academic outcomes for students. While there have been several contemporary studies of warm-demanding teachers (Case, 1997; Irving & Fraser, 1998; Noblit, 1993; Walker, 2008; Ware, 2006), few have examined the contribution of students’ perceptions of teacher warmth and demand to their motivation and achievement in mathematics.

European scholar Theo Wubbels and colleagues (Wubbels, Brekelmans, den Brok, & van Tartwijk, 2006; Wubbels & Levy, 1993) have also identified the critical relationship that teachers’ expressions of influence, what they term dominant behaviors, play in improving student learning outcomes such as attitude, achievement, and regulation of learning behaviors. In general, students tend to achieve at higher rates with more dominant teachers. With that said, students tend to report more positive attitudes with teachers who express patience and understanding—even if they are issuing a directive. “These results create a dilemma. . . . If teachers want students to be both high-achieving and supportive, they may find themselves pulling in two directions: strictness correlates well with high achievement, while flexibility relates to positive attitudes” (Wubbels, Levy, & Brekelmans, 1997, p. 84).

CAPTURING STUDENTS’ CONCEPTIONS OF WARMTH/CLOSENESS AND DEMAND/INFLUENCE

If we are to succeed in promoting the engagement of low-income minority students in math, we need a framework that allows us to examine (a) how children’s understandings of teacher relationships develop and (b) at what point relationships and/or motivation to engage in math and science erode. In 1992, Aron, Aron, and Smollan published a series of studies designed to explore the nature of relationship quality. They posit all relationships can be deconstructed along two dimensions: individuals’ feelings of closeness to and influence by their relationship partner. To study closeness and influence in relationships, Aron et al. (1992) developed a set of Venn-like diagrams (Inclusion of Other in the Self scale, IOS). The closeness scale comprises two circles that begin overlapping and increase in separation. The influ-
measure to study relationship quality across developmental periods (Davis, 2003).

**METHODS**

**Participants & Procedures**

Participants were 27 first-grade, African-American students sampled from four classrooms in two public charter schools serving low-income, minority students. In School 1, both teachers were African-American; in School 2 both were White. At each school, one of the participating teachers was nominated by the school’s principal for exemplifying the characteristics of a warm-demanding teacher. Each student participated in a semi-structured interview. The interview for one student was corrupted and could not be analyzed. Thus, data for this project includes a sample of 27 interviews (16 boys, 11 girls). The children were interviewed individually at their school by the first two authors. Interviews were recorded and lasted 30 to 45 minutes.

**Measurement Development**

The primary mode of inquiry was a semi-structured interview protocol based on the Inclusion of the Other in the Self scale, described earlier (Aron et al., 1992). To allow the children to share their intuitive understandings without being hampered by unfamiliar linguistic terms, we conducted a word frequency analysis of the core concepts for this project: closeness/close and influence/influenced. Table 1 depicts the frequency students were exposed to terms according to Carroll, Davies, and Richman’s (1971) American Heritage of Word Frequency analysis. Carroll et al. conducted an exhaustive analysis of children’s literature to identify the usage frequency of terms by grade-level and subject area. To date, the Carroll et al. “objective corpus” data (McGee, 2008) represents the best estimate we have for the emergence of children’s understanding of various American language terms.

Analyses revealed that students in the third to fifth grades receive little exposure to the term “relationship” in relevant texts. We expected this term to be somewhat unfamiliar and malleable among first-grade students. Similarly, there appear to be few opportunities for students to appropriately the meaning of “influence/influenced” from the texts to which they are exposed. The frequency for these terms peaks in grades seven to nine within the context of social studies and science texts. In contrast, the term “close” appears much more frequently in some third- to fifth-grade texts and across a variety of academic content areas. Thus, it may be that some first-grade students have had opportunities to appropriate the meanings of “close/closeness.”

**Interview protocol**

Interviews began by asking children to explain what
it means to feel close (Q1: “What does it mean to feel close to someone?”). When children struggled to generate a definition, we guided the discussions of closeness around the context of family relationships (Q1a: “What does it mean to feel close to someone in your family?”). If the child mentioned physical proximity, we followed up with: (Q1b: “I understand that part of feeling close to your family is having them be nearby, or close to you. Do you have any family members that do not live close by? What makes you feel close to them?”) Once the child demonstrated an understanding of closeness, we shifted to the context of the teacher-student relationship (Q2: “What does it mean to feel close to a teacher?”). We followed up with probes using the criteria students generated from Q1.

Next, we asked the children to define what it means to be influenced by someone (Q4: “What does it mean to be influenced by someone?”). Consistent with the word frequency data, initially all of the children reported they did not know what the term “influence” meant. In anticipation, we constructed a broad definition of influence that we offered the children:

“To influence someone means to get them to do something for us: to behave a certain way or to like or dislike certain things. People in our family, for example, are people who have influence over us: they get us to use manners at the dinner table, to do chores, and they are often the people we look up to and want to be like. People with a lot of influence can even get us to do things we really did not want to do (things that are boring, or not fun).”

As with closeness, we guided the initial discussion of influence around the children’s understanding of influence in the family (Q4a: “Can you think of someone in your family who has a lot of influence over you?”). Once the child demonstrated an understanding of influence, we shifted to the context of the teacher-student relationship (Q5: “What does it mean for a teacher to have influence over you?”) following with probes using the criteria embedded in the definition. To
end, we introduced the IOS (Q6: “Here are five circles that grow in size from small to large. Using these circles tell me how much influence your teacher has over you. Why?”). After each response, we probed a little deeper (Q6a: “Are there other ways that your teacher has influence over you?”) until the child did not generate any additional criteria.

In the final portion of the interview, we aimed to identify the ways in which their teacher helped them to feel motivated to do math work (Q7: “How do you feel about mathematics?” Q8: “What are the kinds of things your teacher does to help you feel motivated in math?”). To ensure the students were thinking about specific interactions that happened during math time, prior to this, we asked the children to describe the different types of activities they did in math. As with the term influence, we anticipated the children might be unfamiliar with the term motivation because it has low frequency of use in grades three through five. In the event the children did not understand what it means to be motivated, we offered this definition:

“People often talk about motivation as the forces inside of us that make us feel excited and make us want to do things. People often feel motivated when they are interested in activities and not motivated with activities they find boring. Can you think of something that you have a lot of motivation to do in school?”

Follow-up probes sought to clarify teacher behaviors identified by students.

Midway through the interviews it became clear that many children were uncertain as to whether a teacher should have influence over students. Thus, we added two questions to the interview protocol, “Is it good for students to feel close to their teachers? Is it good for teachers to have influence over students?” It also became clear the children’s understandings of teacher closeness and influence were connected to their understandings of “fairness” or equity. Therefore, we added the questions, “What does it mean for a teacher to be ‘fair’ to students? In what ways is your teacher fair/unfair?”

### Data Analysis

Taped interviews were transcribed and analyzed using grounded theory methodology (Corbin & Strauss, 1990). The overall research question guiding our initial open-coding pass was: How do these African-American children from low-income families understand their feelings of closeness to and influence by their teacher? Our sub-question was: How might the children’s feelings of teacher closeness and influence affect their motivation to engage in mathematics activities? Several passes were made through each transcript to identify themes for closeness, themes for influence, emerging themes, and to classify students’ understandings.

Themes were inductively generated following the constant comparative method of data analysis (Corbin & Strauss, 1990). Through iterations coding we identified emerging themes and sub-themes across students’ understandings of teacher closeness, influence, equity, and motivation to engage in mathematics. Interviews were initially conducted independently by the first two authors in order to allow for comparison and validity checks. After coding independently, we convened to compare the consistency of our coding and the utility of our operational definitions and to reconcile discrepancies. Once we felt confident the themes, codes, and sub-themes were stable, we created a master list (see Table 3) of the themes (9), sub-themes (13), and codes (30). Each participant was profiled with regard to his or her understanding of closeness and influence (see Table 2). We made an additional pass through the data to examine the frequency of codes and to identify exemplary quotes for each theme and sub-theme. This process clarified which constructs drove the meaning of each theme and the pattern of relationships emerging between themes and sub-themes.

Our final pass through the data was designed to classify each child with regard to the level of his or her understanding of closeness and influence. We identified three levels of understanding: limited, emerging, and developed. Children with limited understandings either struggled to articulate an understanding (even when prompted), articulated misconceptions, or for closeness articulated an understanding that was limited to physical or temporal proximity. Children with limited conceptions were not able to apply the definitions provided or use contextualized understandings from family relationships to describe their relationship with their teacher. Children with emerging understandings, once prompted to think about closeness and influence within the context of their family, could elaborate on their feelings of closeness to their teacher and were able to construct meaning (during the interview) around the ways in which their teachers influenced them. Students with developed understandings
teacher closeness and influence generated their own definition, without prompts, that extended beyond physical or temporal proximity. For example, when asked what it means to feel close to someone, one child said, “Like they’re in my heart. I have some people that died in my family, but they’re still in my heart.” Similarly, when asked what it means for a teacher to have influence, one child replied, “Because she makes us do her rules,” or “Kids listen to Ms. G a lot because they think she has a lot of influence.”

**FINDINGS**

**Classifying Children’s Understanding**

Consistent with the word frequency analysis (Table 1), most of the children interviewed were classified as holding limited or emerging understandings of one or more of the concepts, suggesting that children’s concepts of teacher closeness and influence are malleable constructs (see Table 2). Thus, children with emerging and developed understandings served as key informants (Patton, 1990) for developing our conceptual model. Consistent with the word frequency analysis we found that the concept of “influence” was a more foreign, less developed concept than “closeness.” It is important to note that even students who held developed concepts of teacher closeness and influence did not have understandings that were comprehensive of the different characteristics implicated by the literature (Wubbles et al., 2006). While all children with emerging and developed concepts mentioned multiple dimensions, no child mentioned all of them.

**A Working Model of Children’s Understandings**

We organized findings into a working model (Figure 2). In the center of the model are the children’s understandings of closeness and influence (Table 2) which appeared

### TABLE 3

<table>
<thead>
<tr>
<th>Theme</th>
<th>Operational Definition</th>
<th>Exemplary Quotes</th>
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| Closeness as Proximity            | Children reported feeling close or distant because of perceived physical or temporal proximity. | “We are not so close because, she’s there all the way in the front when we are in our desks.”  
“We wouldn’t feel close ‘cause, I hadn’t been [with my teacher] for a long time.” |
| Closeness as an Affect            | Children reported feeling close because of the pleasant feelings they felt such as enjoyment, fun, caring, exciting. | “They are in my heart.”                                                          |
| Closeness Involves Shared Activities | Children reported feeling close because they engaged in different activities with their teacher such as play, lunch, or seeing them outside school. | “She plays with me at recess.”                                                   
“I like working with my teacher.” |
| Closeness as Watchfulness        | Children reported feeling close to their teacher because they perceived she was watching over them. | “She tells us not to run on the rocks [on the playground].”                      
“She asks, ‘Why don’t you have any work out on your desk?’” |
| Influence as Evoking Affect       | Children reported teacher influence as the potential to make kids feel good or bad about what is happening in the classroom. | “She make students get mad.”                                                     |
| Influence as Getting Students to Perform Behaviors | Children reported teacher influence as the power to get students to perform different behaviors and classroom activities. | “And if the teacher asks them to do something one time, and if she asks you twice then you’re in trouble.”  
“She gives us homework.” |
| Influence as Administering Discipline | Children reported teacher influence as the power to discipline.                         | “She has the influence to write you up and don’t come back to school.”            |
| Influence as Giving Responsibility | Children reported teacher influence as the power to award responsibilities to students in the class. | “She tells me to take stuff to the office.”                                      
“She let me pass out sheets.” |
| Influence by Having Something Desired | Children reported being influenced to act like another person, including their teachers, because they coveted their material possessions or privileges. | “[I want to] tell people what to do.”                                           |
Low-Income African-American First-Grade Students’ Understandings of Teacher Closeness and Influence

How did these First-Grade Students Understand Teacher Closeness and Influence?

Children reported feeling close or distant because of perceived physical or temporal proximity, because they felt good when they were with them, because they engaged in enjoyable activities together, and because they perceived their teacher to be watching over them. Findings corroborate the literature on teacher immediacy behaviors (Potee, 2002) and shared activities (Davis, 2003, 2006; Tharpe, Estrada, Dalton, & Yamauchi, 2000), indicating perceived physical, emotional, and temporal proximity matter for young children. Findings also corroborate research by Wubbels et al. (2006), which indicates teachers’ attempts to cultivate pleasant emotions in the classroom, via the use of tones of patience and expressions of understanding, also matter for young children. Lastly, the children reported feeling close to teachers because “they might be all up on you to see your own work.” They also noted behaviors such as giving directions, making sure they were engaged in their work, and making sure they did not get hurt while on the playground or while loading the bus. They perceived this watchfulness as an expression of caring to ensure that they did well in school (Waters & Cross, 2010).

The children identified three ways in which their teachers exerted influence over them: by making them feel or act a certain way, through classroom discipline, and by affording them responsibilities in the classroom. The children also reported teacher influence as the power to get students to perform different behaviors and classroom activities—even undesirable ones such as homework. Many participants said their teacher influenced them by rewarding good behavior and punishing bad behavior. They noted the teachers had the power to “move paws,” “move frogs,” and “flip cards”—all references to the Positive Behavior Support systems enacted in the classroom (Burke, Ayres, & Hagan-Burke, 2004; Scott, Gagnon, & Nelson, 2008). When asked if teacher influence was good or bad, most children responded that teachers need to have influence in order to protect children: “Our teacher has influence so we won’t get hurt.” The children, however, were careful to note that disciplinary behaviors such as yelling would lead to not feeling close to the teacher. The children also described teacher influence in terms of the power to award responsibilities to students in the class. Students noted that being selected to pass out papers, take things to the office, erase the board, and other classroom jobs such as serving as the ‘workshop warrior’ were perceived as important and unique and motivated them to behave in ways
the teacher preferred. Finally, the children reported being influenced to act like another person in their family because they coveted their material possessions (e.g., toys, trophies, cell phone) or privileges (e.g., sports, driving, going to college, job). In follow-up probes, several students noted they desired their teachers’ access to the computers and authority in the classroom. When asked if there were any ways she wanted to be like her teacher, one student said, “Yeah, tell people what to do.”

**What Factors Influenced the Students’ Perceptions of Closeness and Influence?**

**Factors Affecting Perceptions of Closeness.** Children described several factors that contributed to their feelings of closeness: their perception that their teacher allowed the class to do “fun activities,” treating students with kindness and respect, and providing instrumental support. The most common factor was that students felt close to their teacher when they were afforded opportunities to do fun activities (e.g., time for free centers, “Fun Friday,” or play). When asked why he felt close to his teacher, one student said: “She lets us have one more minute for recess.” Frequently, students also reported the perception of their teacher as “nice” or described acts of generosity that contributed to their feelings of closeness: “Because she treats me good.” Being perceived as mean, not listening, or not treating students with respect was associated with several students reporting they did not feel close to their teacher: “Because sometimes she moves my paw and I didn’t even do nothing.” Similarly, several students reported concerns that their poor behavior would lead to feeling more distant from their teacher: “One day if you’re bad they [the circles] can separate.” Finally, students reported they felt close to their teacher because she provided instrumental support for classroom activities: “Me and Ms. T are very close because she helps me in the morning with my journal.”

**Factors Affecting Students’ Perceptions of Influence.** Children noted two additional factors that contribute to teachers having influence over them: trust and seeing their teacher as a role model. Many students reported their teacher had influence over them because she was their favorite teacher. Students who reported their teacher had influence over them were more likely to perceive they could rely on or trust their teacher to follow through with promises. One student commented that it was good for teachers to have influence over students because “they always promise stuff” and “making good on her promises means you can trust them.” Additionally, some students reported feeling influenced by their teachers because they literally wanted to grow up to be like them. When children said they wanted to be like their teacher, they were very literal. They meant they wanted to become a teacher when they grew up: “When I get older like [my teacher], I want to teach everybody to learn.”

**Closeness and Influence in the Context of Positive Behavior Support.** A reoccurring theme throughout the interviews was the relationship between teacher influence and the Positive Behavior Support (PBS) systems in place in the classroom (Burke et al., 2004; Scott et al., 2008). The two passages below are excerpts from the same interview. In this passage, the child describes how the PBS system affected her behavior, her feelings of closeness towards others in her class, and her perceptions of Mrs. G’s influence.

**Interviewer:** Why do you feel close to people who are good to you?

**Child:** Because, so I can stay on green.

**Interviewer:** So you can stay green. What does ‘stay on green’ mean?

**Child:** Like you stay on green or yellow means, yellow means miss 15 minutes of recess. And red you can’t go to recess.

*... (later in the interview)...

**Interviewer:** So, why did you pick the little tiny circle for Mrs. G?

**Child:** Because it means Mrs. G can be little.

**Interviewer:** Mrs. G can be little, okay. Why would you want her to be little?

**Child:** Because. So I can play and no one can step on my shoes and no one can step on my face.

**Interviewer:** Oh I see. So I think I hear that sometimes Mrs. G keeps you from doing things you want to do?

**Child:** Yes.

**Interviewer:** So that’s why you wish she had less influence since she was a little circle?

**Child:** Yes.

**Interviewer:** But sometimes is she a really a little bit bigger than that?

**Child:** Yes.

This passage typifies conversations we had with the children; that they chose to behave in ways their teacher desired in order to receive rewards. In most cases, having a “green day” meant receiving tickets that could be cashed in for privileges. Students also noted they were given opportunities to get back to “green” when they had trouble controlling their behavior. In essence, the children were corroborating the extant literature on effectiveness of the PBS system for reducing disciplinary problems in the classroom. Notably, the child above wishes her teacher had less influence suggesting that while the PBS system helped control children’s behavior, it may not influence them to make more cooperative choices as a function of understanding and internalizing interpersonal or classroom norms (Freiberg, 1999). Such statements helped us to understand that the children...
may not yet distinguish between influence and control (Brophy & McCaslin, 1992).

**How did the Students’ Perceptions of Equity Affect Teacher Closeness and Influence?**

An emergent theme in the data was how the children’s perceptions of equity influenced their relationship with their teacher, including feelings of closeness and influence. Students reported they felt close to their teacher because she gave them as much attention as the other students in the classroom. One student specifically mentioned that being called on often, and as much as the other students, was important to his feeling close to his teacher. Fairness also involved understandings of sharing (i.e., food, toys, and possessions with their siblings and/or friends), turn taking, treating friends with respect, and getting the same amount. However, the children’s understandings of fairness and sharing were complex. In the passage below, one child responds that her teacher is not fair because she shares with the class:

**Interviewer:** So, what does it mean to be fair?
**Child:** It means she [the teacher] gets something and I don’t.

**Interviewer:** So, do you think your teacher is fair?
**Child:** No.

**Interviewer:** Why not?
**Child:** ‘Cause she shares stuff, she shares a lot of stuff with me.

**Interviewer:** So, do you think she’s fair or you don’t?
**Child:** Not fair.

**Interviewer:** And, why isn’t she fair?
**Child:** ‘Cause she shares stuff with us.

The interviewer went on to clarify one additional time that the teacher was not fair because she shared. This left us scratching our heads: How could sharing be considered not fair? Then it dawned on us that when children come from households that have limited resources, observing that others have more material possessions might feel unfair. Another child alluded to this unfairness when he said: “If it’s fair, you get something that they have, that they’re playing with, and that they don’t trust you to play with it. You have to ask the teacher, ‘Can I play with that toy?’ And they might say yes and let you go.” For both of these students, sharing and fairness involved having access to someone else’s material possessions.

Other children experienced fairness as having to silently set aside their desires for those of another child. In these cases fairness involved disappointment; disappointment they were expected not to voice: “[Fairness] means everything you get, you don’t make a fit.” One child described how it was not fair that his sister had to share her old, broken bike but did not have to share her new bike. Another child described how he did not want to share his new computer game with his siblings because, “It’s not fun to share because they keep hogging it.”

For some students, being a fair teacher involved giving “good” students rewards and punishing “bad” students. Equity involved rewarding and praising only the children who were perceived as deserving in the class. One student responded that it was good for a teacher to be fair in this way because, “bad people don’t need to get privileges like good people, like me and Kimmie.” For some children, it was unfair to reward a child who had misbehaved in class or who was mean to other children. Children also noted that a fair teacher rewarded only the most deserving students: “She only gives the people with the most points the pizza party.” Other students perceived their teacher to be unfair because she did not give privileges. When asked why he did not get excited in math, one student responded because his teacher “doesn’t fill out my [behavior] card, even when I do the right thing.”

Perceptions of equity also shaped the extent to which they were influenced by their teacher. Perceptions of influence appeared related to their teachers’ enforcement of rules and grading practices; with consistency in enforcing rules associated with greater influence. One student noted, “She makes everyone follow the rules, that is why she has influence.” Similarly, consistent press to have all students meet performance expectations was associated with greater influence. One student said some teachers “influenced kids to learn better because they’d make everyone get good grades.” This finding corroborates links among minority students’ perceptions of teachers’ high expectations with fewer disciplinary referrals and higher achievement (Hoy et al., 2006). When asked if teachers having influence could ever be a “bad thing,” one student said, “It will never be a bad thing. If a teacher has no influence, then that means the children, the students, will have bad grades.”

**Caring Teachers as Unique.** During our final passes through the data, we noticed a poignant theme noted by a handful (n = 4) of children who described how their relationship with their teacher was special and different from the teachers they had in the past (i.e., kindergarten or preschool) or other teachers in the school.

**Child:** I’m not really excited about [other teachers].

**Interviewer:** What aren’t you excited about [them]?

**Child:** Having other teachers, substitutes. I’m afraid it’s going to turn out awful.

**Interviewer:** So, you’re not excited about getting other teachers beside Ms. G? You just want to stay with her?

**Child:** Yes.

**Interviewer:** So, does that mean you trust Ms. G?

**Child:** Yes, but not other teachers. Not mean teachers or [teachers] that lie.
When asked what it means to feel close to a teacher, another child responded, “It means that we like the teacher so much that we don’t want her to leave. But sometimes, when she leaves, we think that she won’t come back.” These passages harkened back to the broader context of minority teacher-student relationships (Baker, 1999; Mantzicopoulos, 2005). The relationships between minority students and their teachers tend to be marked with higher rates of emotional negativity. Moreover, when minority students experience conflict in their relationships with teachers, this conflict appears to have a more deleterious effect on their achievement and motivation compared to their White counterparts (Pianta, Steinberg, & Rollins, 1995). These findings reminded us that the experience of close teacher relationships for African-American students from low-income families may indeed be rare and that children may experience them as tenuous and fragile.

Closeness, Influence, Equity, and Math Motivation

During the interview, the children were asked, “How do you feel about mathematics?” and “What are the kinds of things your teacher does to help you feel motivated in math?” The children noted they felt motivated to do math when there were opportunities to solve problems in different ways and with interesting manipulatives. These findings corroborate the extant motivation literature concerning the importance of designing engaging activities (Schunk, Pintrich, & Meece, 2008). Additionally, some children perceived engagement during math to be associated with a variety of rewards and consequences. When asked why he was motivated to do math, one young man reported: “Because she gives us free time on days when we got to do math and that makes me feel happy.” Similarly, another student noted math work was sometimes used a punishment, “When we don’t listen to the teacher, she says we have to do our math or reading packet. I’m kinda mad then.” These findings corroborate the (albeit short-term) benefits of reward structures (Schunk et al., 2008). Two children noted they were motivated to do math in order to go to college (Murdock, 1999). Both children had referenced older siblings who were aspiring to go to college. One child noted that collaborative grouping during math was motivating: “I like when we do partners because some people don’t know what to do and we help them. And when we’re done we get to help other people, we get to go to other groups.” And, several children described how their teachers’ ability to adapt the level of challenge in the class affected their motivation. These findings emphasize the importance of teachers integrating nationally endorsed “best practices” into their mathematics instruction (Learner Centered Psychological Principles; APA, 1997).

Feedback was also important to students’ motivation during math time. Students were also more likely to report feeling motivated during math if they perceived their teacher would provide instrumental support during math activities. Several noted they felt close to their teacher because she “helps me and helps other people” or they noted receiving help during a specific math activity (e.g., “She helps you find a pattern.”). Another student noted the importance of emotional support during math activities: “She hugs you if you don’t know the answer.”

Students noted receiving both approval (e.g., “When I add or minus, I get a ‘Yes’ and smiley faces.”) as well as disapproval (e.g., “Only she put a sad face, that means you’re not doing so good.”) during math time (Beaman & Wheldall, 2000). Students who perceived receiving approval during math were more likely to say they were motivated during math. Kamins and Dweck (1999) caution that personal feedback, “even when positive, can create vulnerability and a sense of contingent self-worth” (p. 35). The critical finding regarding student motivation involved student perceptions of the teacher’s feedback about their aptitude in math (Kamins & Dweck, 1999). Again and again, when asked what their teacher did to help them feel motivated in math, students used the same phrase, “She let us be smart.”

In sum, the students who felt motivated during math perceived their teacher had created a context which allowed them to feel smart. Close examination of the data from children who were motivated to engage in math revealed an underlying discourse of privilege: they had access to the resources they needed, they engaged in activities they enjoyed, they were appropriately challenged and rewarded, and they received feedback that permitted them to feel smart in math. Many children reported a link between feeling close to their teacher and being smart. One student put it poignantly that feeling close to the teacher “helps you learn” and helps you “be smart.”

DISCUSSION

This exploratory study examined low-income, African-American first-grade students’ understandings of teacher warmth/closeness and demand/influence. Four central findings emerged from the study. First, the majority of the children in our sample had emerging understandings of one or both concepts, indicating there is a great deal of malleability with regard to how students think about their relationships with their teachers. Awareness of this malleability means elementary school teachers can help first-grade students come to understand the nature of teacher relationships by helping them to broaden their understandings of what it means to feel emotionally connected to another person, teachers in particular, as well as the variety of ways people attempt to influence each other.

Second, the children in our study drew from relatively subtle teacher behaviors and communications to judge the quality of their relationship. Our findings may have implications for how elementary teachers monitor their expressions of enthusiasm and approval, make decisions about physical
proximity, select students for classroom responsibilities, and enact motivational strategies. Each of these factors, and the extent to which they were perceived as equitably dispersed across members of the class, were noted as affecting the children’s judgments of their relationship.

Third, findings suggest that teachers need to become more knowledgeable about how the children’s perceptions of teacher behaviors as “unfairness” affect their relationships with their students (Eccles et al., 2006). In order to be successful with low-income, African-American children, teachers need to understand, and empathize, with the experience of limited resources at home. The reality is that it is not fair that children from low-income families get fewer opportunities to use and play with computers. It is not fair when they are asked to share their few possessions with other children. It is not fair when they are asked to settle for less than they know other children receive. And it is not fair to ask them to be silent about the inequities they observe in the classroom (Delpit, 1988). If we want children to value diversity, the classroom needs to become a stage where children have opportunities to understand equity, including social inequity, and experience “fairness.”

Finally, we also asked the students questions about how their interactions with their teacher contribute to their motivation during math, and our results corroborate the extant literature on classroom motivation (Schunk et al., 2008). However, the finding that stood out as critical was the children’s perceptions of the teacher’s feedback about their aptitude in math (Kamins & Dweck, 1999). Children connected approval feedback to their feelings of closeness and their perceptions of themselves as “smart.” Just as teachers can communicate low expectations by offering inappropriate criticism or failing to give feedback altogether (Brophy, 2004), we worry these approval messages may contribute to feelings of contingent self-worth in math.

Implications for the Structure and Function of Teacher Management and Care

Findings from our project suggest the children were evolving in their understanding of care. Whereas children with more developed conceptions of closeness reported their perceptions of the immediacy behaviors of tone, noticing, approval, and support, few children noted that their feelings of closeness were enhanced by teachers’ use of disclosure, nor did they mention that their teachers understood something authentic or personal about them. These types of behaviors communicate to students that their teacher “cares” about them and also are consistent with Noddings’ (1995) and Goldstein’s (1999) definitions of caring. When the children perceived that their teacher engaged in behaviors to support their learning, it contributed to their feelings of care for their teacher: “Ms. G helps teach us and that’s why sometimes we care about her.” That said, in their attempts to communicate care about their students’ performance, findings suggest teachers need to be cautious about providing feedback that leads children to develop contingent self-worth in math. Over time, feelings of contingent self-worth in math may lead children to psychologically distance themselves from the field.

Teacher Influence or Teacher Control?

Findings from our study regarding the children’s experience with the Positive Behavior Support system suggest they may not yet distinguish between influence and control (Brophy & McCaslin, 1992). While the PBS system may have helped to control the children’s behavior, it did not appear to influence them to make more cooperative choices as a function of understanding and internalizing interpersonal or classroom norms. Findings from the field are consistent and clear—children need to feel autonomous in order to thrive (Reeve, 2006; Stefanou, Perencevich, DiCintio, & Turner, 2004). The PBS system afforded teachers and children the illusion of control—that children have the choice to comply.

While few children in our study knew the word “influence,” most of them were able to articulate the ways in which they were influenced by members of their family. Moreover, many of them were able to articulate ways in which they perceived their teachers influenced them—and their reports were fraught with accounts of dominant communications (Wubbels et al., 2006) and controlling strategies. Few students identified their teachers as providing rationales for learning math (i.e., math is important, needing math as an adult or for college), expressing high expectations for math achievement (Case, 1997; Noblett, 1993; Ware, 2006), or by serving as math role models. If we want low-income, minority children to choose careers that involve mathematical thinking and skills, we ultimately need to help them develop more complex understandings of influence and to experience influential teachers who compel them to pursue math without controlling their behavior.

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Teacher Control and Affiliation: Do Students and Teachers Agree?

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ABSTRACT

Using an interpersonal circumplex model, we examined whether teachers and students in secondary education apply a similar frame of reference when thinking about how a teacher relates to students. We also examined the alignment of teacher and student perceptions of two dimensions of the teacher-student relationship: Control and Affiliation. Results showed that although teachers and students use a similar framework, they do not agree on the amount of teacher Control and Affiliation in a given classroom. This study contributes to our understanding of teacher self-reports by comparing student and teacher perceptions of the teacher-student relationship.

INTRODUCTION

In effective classrooms students are actively involved in learning processes, feel comfortable, and their efficacy and adaptive patterns of engagement are promoted (Davis, 2003; Freeman, Anderman, & Jensen, 2007; Patrick, Turner, Meyer, & Midgley, 2003; Woofolk-Hoy & Weinstein, 2006). The way teachers affiliate with students and control classroom processes is an important factor in explaining the effectiveness of classrooms for student learning (Cornelius-White, 2007; Davis, 2003; den Brok, Brekelmans, & Wubbels, 2004; Pace & Hemmings, 2007; Pianta, 2006).

How a teacher relates to students may be studied by observations or by perceptions of the persons involved. Research based on perceptions often focuses either on teacher perceptions or student perceptions. The correspondence between these two points of view has received far less attention (den Brok, Bergen, & Brekelmans, 2006). The present study investigates (a) whether teachers and students in secondary education apply the same frame of reference to their perception of how teachers relate to students, and (b) the degree of alignment between teacher and student perceptions. Comparing teacher and student perceptions may contribute to insights in how teacher self-reports on the teacher-student relationship should be valued. Teacher self-reports continue to be an important point of action in many teacher professional development programs (Wubbels, Brekelmans, den Brok, & van Tartwijk, 2006), and teacher perceptions are used in scientific studies as an indicator of the teacher-student relationship (e.g., Pianta, 2006).

TEACHER CONTROL AND AFFILIATION

Previous research has indicated that the dimensions of dominance vs. submission and hostility vs. affection are primary for understanding various interpersonal outcomes (Fiske, Cuddy, & Glick, 2007; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005). In the current study, these two dimensions are utilized to describe how a teacher relates toward students in class. To study these dimensions, the interpersonal circumplex model is widely used (Blackburn & Renwick, 1996; Fabrigar, Visser, & Browne, 1997; Gaines et al. 1997; Gurman & Pincus, 2000). The two dimensions in the circumplex model have been given different names, such as Dominance versus Love (Leary, 1957), Control versus Affiliation (Kiesler, 1983; Tiedens & Jimenez, 2003), Agency versus Communion (Locke, 2000), or Competence versus Warmth (Fiske et al., 2007; Judd et al., 2005). Wubbels and colleagues (Créton, Wubbels, & Hooymayers, 1989; Wubbels et al., 2006) adopted the Leary circumplex model (Leary, 1957) to the classroom context. Figure 1 is a graphic representation of this model (Teacher Interpersonal Circle), labeling the dimensions as Control and Affiliation1. Affiliation is conceived as the warmth and care, and Control

1In publications on research with this model the “Teacher Interpersonal Circle” is also called “Model of Interpersonal Teacher Behavior,” with Influence and Proximity as labels for the two dimensions.
as the authority or interpersonal influence a teacher conveys in class. The eight octants arranged around the interpersonal circle represent distinct combinations of the two dimensions, Control and Affiliation. In Table 1 an overview is provided of typical behaviors that relate to each of the eight octants of the circle.

Research based on the Teacher Interpersonal Circle used both teacher and student perceptions of a teacher’s Control and Affiliation in class. Studying teacher perceptions underlines the active role that teachers play in classrooms. Studying teacher perceptions of teaching can contribute to the understanding of the interplay between teacher intentions and teacher behavior. Studying student perceptions underlines the active role that students play in their own learning in classrooms. Studying student perceptions of teaching can contribute to the understanding of the interplay between teacher behavior and student outcomes (e.g., Shuell, 1996). Research based on the Teacher Interpersonal Circle has shown that students who perceive more teacher Control and Affiliation show greater cognitive achievement, stron-

<table>
<thead>
<tr>
<th>Octant</th>
<th>Typical behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Noticing what’s happening, organizing, giving orders, setting tasks, determining, clear procedures, structuring, explaining, holding the attention, acting confidently, showing enthusiasm</td>
</tr>
<tr>
<td>Helping/friendly</td>
<td>Assisting, showing interest, behaving in a friendly or considerate manner, being able to make a joke, inspiring</td>
</tr>
<tr>
<td>Understanding</td>
<td>Listening with interest, empathizing, showing confidence and understanding, accepting apologies, looking for ways to settle difference, being patient, open, trustful</td>
</tr>
<tr>
<td>Student freedom</td>
<td>Giving opportunity for independent work, waiting for class to let off steam, giving freedom and responsibility, approving of something</td>
</tr>
<tr>
<td>Uncertain</td>
<td>Keeping a low profile, apologizing, waiting and seeing how the wind blows, being hesitant</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>Waiting for silence, considering pros and cons, keeping quiet, showing dissatisfaction, looking glum, questioning, criticizing, being suspicious</td>
</tr>
<tr>
<td>Admonishing</td>
<td>Getting angry, taking pupils to task, expressing irritation and anger, forbidding, correcting, punishing</td>
</tr>
<tr>
<td>Strict</td>
<td>Keeping reins tight, checking, judging, getting class silent, maintaining silence, being strict, setting norms and rules</td>
</tr>
</tbody>
</table>

**TABLE 1**

*Typical Behaviors of a Teacher that Relate to Each of the Eight Octants of the Teacher Interpersonal Circle*
Teacher Control and Affiliation: Do Students and Teachers Agree?

DO STUDENTS AND TEACHERS AGREE?

Some of the few studies aligning teacher self-perceptions and student perceptions reported considerable differences. On average, teachers think they convey more Control and Affiliation than do their students (Brekelmans, Wubbels, & den Brok, 2002; den Brok, Levy, Rodriguez, & Wubbels, 2002; den Brok et al., 2006; Fisher & Rickards, 2000; Harkin & Turner, 1997; Rickards & Fisher, 2000; Wubbels & Brekelmans, 1997; Yuen, 1999). Some studies however found that student and teacher perceptions were not that different (Ben-Chaim & Zoller, 2001; Fisher & Rickards, 2000; Rickards & Fisher, 2000; Wubbels & Levy, 1991).

Wubbels, Brekelmans, and Hooymayers (1992) found that, compared to student ratings, about two-thirds of the 143 teachers in their study viewed themselves as conveying more Control and Affiliation in class, whereas one-third rated themselves as conveying less Control and Affiliation than students perceived. Wubbels et al. (1992) assumed the agreement between teacher perceptions and student perceptions was an indicator of the teachers’ ability to understand how students perceived their behavior. They also assumed student perceptions of the amount of Control and Affiliation was an indication of the quality of teacher interpersonal competence. Taking this line, Wubbels et al. interpreted teacher reports of higher levels of Control and Affiliation, relative to their students, as overestimation and wishful thinking about their relationships with students, and teacher reports of relatively lower levels of Control and Affiliation as underestimation and a form of protection from disappointment. They found that the higher the differences between teacher and student perceptions, the lower were the levels of Control and Affiliation according to students.

These studies implicitly assumed that the frame of reference teachers and students used to describe teacher interpersonal behavior is identical. Yet teachers and students may have different understandings of the dimensions of Control and Affiliation. For example, teachers might see “asking students what they want” as conveying “uncertainty” (i.e., relatively low levels of Control and Affiliation) whereas students might interpret such a question as conveying a relatively high level of Affiliation.

Moreover, research has highlighted the divergence between self-ratings and others’ ratings, showing that self-perceptions are clearly less associated with actual behavior (e.g., the observed amount of friendly remarks made by a teacher) than are the ratings of others (e.g., “this teacher is friendly”; Kolar, Funder, & Colvin, 1996). Dunning, Johnson, Ehrlinger, and Kruger (2003) suggested that this discrepancy stems from two sources: less skilled professionals usually overestimate their performance because they are less able to reflect accurately on what they do, and highly skilled performers underestimate their skills. They hypothesized that the latter result stemmed from skilled professionals’ overestimation of other people and underestimation of, or modesty, regarding their own skills. Kolar et al. (1996) used the “fish and water effect” hypothesis to explain people’s lack of awareness of their own behavioral patterns. For the same reason that fish are said to find it difficult to detect water, it would be difficult to detect one’s own stable (positive and negative) behavioral tendencies. Leising, Rehbein, and Sporberg (2006) confirmed this hypothesis, demonstrating that during interaction with others, dominant participants underestimated their dominance, and submissive participants underestimated their submissiveness.

Grounded in research on perceptions of teachers and students of the teacher-student relationship and in social psychology research demonstrating patterns of discrepancy in self-perceptions relative to actual behavior, this study has two purposes. First, we explicitly examined the assumption that teachers and students use equal frames of reference by testing the validity of the Teacher Interpersonal Circle simultaneously for student and teacher data. Second, we compared teacher self-perceptions and student perceptions of teacher Control and Affiliation. To add to the existing knowledge base we (a) used a large sample \((n = 6,060)\) teachers and the reports of one class of their students and (b) analyzed how the perceptions of more and less competent teachers (based on the level of Control and Affiliation reported by students) differed in their correspondence with student perceptions. In this way the study contributes to insights in the value of self-reports of teachers.

METHOD

Participants

An existing database was used that included data of more than 18,000 Dutch secondary classroom groups that rated their teachers as part of annual teacher evaluations between 1990 and 2008. Over this time period the average
Teacher Control and Affiliation: Do Students and Teachers Agree?

Control and Affiliation of teachers was rather stable. For every teacher with more than one measurement, one measurement was randomly selected. The resulting sample consisted of 6,060 cases including a teacher’s self-perception and one specific group of student perceptions of this teacher’s Control and Affiliation. Teachers were from more than 300 different secondary schools (public and special) in The Netherlands (lower and higher general secondary education and pre-university education). They represented all different subject areas (math, science, language, social studies) and had 1 to 43 years of experience (M = 7.9, SD = 8.6). Fifty-one percent of the teachers were male. Students represented age group 12 to 18.

Instrumentation

Teacher self-perceptions and student perceptions of teacher Control and Affiliation were estimated using a 24-item selection of the Questionnaire on Teacher Interaction (QTI; Wubbels, Créton, & Hooymayers, 1985; Wubbels et al., 2006), which included three items for each of the eight octants of the Teacher Interpersonal Circle. The question printed on the student form was “What do you think of your teacher?”; the question on the teacher form was “How do you teach this class?”; examples of items include “this teacher is hesitant,” “this teacher is patient,” or “this teacher is strict” (to be rated on a five-point Likert-type scale ranging from “never” to “always”). Control and Affiliation scores were calculated based on factor loadings. These factor loadings reflect the position of the items on the interpersonal circle. Cronbach’s alphas for Control and Affiliation for the current dataset were .85 and .81 for the teacher data and .79 and .88 for the student data (not aggregated and based on theoretical factor loadings reflecting a model with equidistant octants).

In the current study, students were treated as multiple informants of their teachers (den Brok, Brekelmans, & Wubbels, 2006; Lüdtke, Robitzsch, Trautwein, & Kunter, 2009). As a result, “studies of scale homogeneity or scale intercorrelation should be carried out with the classroom group as unit of analysis” (Cronbach, 1973, p. 9.18, as cited in Lüdtke et al., 2009). To check the psychometric quality of the aggregated student perceptions, intraclass correlations (ICCs) were calculated (Miller & Murdock, 2007; Raudenbush & Bryk, 2002). The ICC1 estimates the proportion of total variance that can be attributed to between-class differences and indicates how reliable individual ratings represents the class mean (.30 is regarded as high); the ICC2 provides an estimate of the reliability of the class-mean ratings (.70 is regarded as a sufficient level). For Control the ICC1 and ICC2 were .46 and .92, and for Affiliation .51 and .94. Furthermore, the Average Deviation index (AD; Burke & Dunlap, 2002; LeBreton & Senter, 2008) was calculated, which provides information on the agreement of students within a classroom by indicating the average deviation of a student rating from the class mean of Control and Affiliation (upper limit cut-off score for the AD index is .20). For the current sample the AD indices for Control and Affiliation were .07 (SD = .02) and .09 (SD = .03). Thus, overall, it was acceptable to regard class aggregated student ratings as reliable indicators of teacher Control and Affiliation in a given class.

RESULTS

Student and Teacher Frame of Reference

In order to test whether teachers and students apply the same frame of reference when rating how a teacher relates to students in class, measurement invariance across teacher self-perceptions and student perceptions was investigated with a multi-group confirmatory factor analysis (MPLUS software; Muthén & Muthén, 2001). The question of measurement invariance concerns whether a set of indicators (i.e., the eight octant scores of the Teacher Interpersonal Circle) assess the same constructs (i.e., Control and Affiliation) in different groups (i.e., teachers and students). Put another way, does the QTI measure the same thing when teachers, rather than students, complete it (Kline, 2005). Results are presented in Appendix A.

First, a model (i.e., a free circumplex model, Gaines et al., 1997) was tested with equal restrictions for the teacher and student data. This model restricted the factor loadings of the eight octants on the Control and Affiliation dimensions to be equal for teachers and students, while factor variances were allowed to be different. This model indicated a reasonable fit (Kline, 2005) to the data ($\chi^2(28) = 1209.49$; CFI = .98; TLI = .97; RMSEA = .08; SRMR = .06). As a second step, a model was tested that allowed the eight factor loadings for Control and the eight factor loadings for Affiliation to be different for the teacher and student data, while still assuming a similar factor structure for teachers and students (i.e., the same general outline of the circumplex). This model produced a better fit to the data ($\chi^2(16) = 738.18$; CFI = .99; TLI = 0.97; RMSEA = .08; SRMR = .05), as a $\chi^2$-Difference test ($\chi^2(12) = 471.32; p < .0001$) indicated. Thus, the unrestricted model, which allowed different factor loadings of the eight octants on the Control and Affiliation dimensions, is to

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3We compared the mean scores for Control and Affiliation dividing the 25-year period in five periods of five years. Differences turned out to be small (Control: $\varepsilon^2 = .02$; Affiliation: $\varepsilon^2 = .01$).

4Factor loadings based on an equidistant eight octant circumplex model are clockwise going from the leading to the strict octant for the Control dimension: .92, .38, -.38, -.92, -.92, -.38, .38, .92 respectively; for the Affiliation dimension: .38, .92, .92, .38, -.38, -.92, -.92, -.38 respectively.

4For details on the calculation of ICC1 and ICC2 see Lüdtke et al. (2009) or Snijders and Bosker (1999).
be favored. Differences between the octants that contribute to low levels of Affiliation (i.e., the left side of the model), the other octants were more in line for teacher and student data suggesting partial measurement invariance. Thus, results of statistical analysis showed that teachers and students seem to apply, at least partially, a different frame of reference when rating how a teacher relates to students in class. A visualization of these results is provided in Figure 2, where the differences between the theoretical circumplex and the circumplexes according to the results of the performed multigroup CFA are shown. The figure shows that the theoretical eight octant scores, and the students’ and teachers’ octant scores are all in the same octant.

Second, Pearson’s correlations were calculated between teacher Control and Affiliation according to the theoretical factor loadings on the one hand and teacher self-perception and student perceptions on the other. These correlations were .97 and above.

We concluded that although there are some differences between the teachers’ and students’ frames of reference, these frames are similar when using Control and Affiliation dimension scores based on theoretical loadings for both teacher perceptions and student perceptions. We therefore used these theoretical scores to compare the amount of Control and Affiliation teachers and students perceive a teacher conveys in class.

**Student and Teacher Perceptions of Control and Affiliation**

On average, teacher perceptions of Control ($M = 0.15$, $SD = 0.30$) and Affiliation ($M = 0.40$, $SD = 0.25$) were higher.

---

**APPENDIX A**

*Estimates of the Unconstrained Multi-Group CFA of Teacher Control and Affiliation Across Teachers’ Self-Perception and Students’ Perception Data*

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Teacher</th>
<th>Student</th>
<th>Teacher</th>
<th>Student</th>
</tr>
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<tr>
<td></td>
<td>Estimate</td>
<td>Standardized</td>
<td>Estimate</td>
<td>Standardized</td>
</tr>
<tr>
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</tr>
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<tr>
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<td>-0.59</td>
</tr>
<tr>
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<td>-0.85</td>
<td>-2.11**</td>
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</tr>
<tr>
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<td>-0.38</td>
<td>-0.23</td>
</tr>
<tr>
<td>OD</td>
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<tr>
<td>DO (CO-fixed)</td>
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<td>0.92</td>
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<td>.69</td>
<td>.01**</td>
<td>.51</td>
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</table>

*p<.05. **p<.01.*
than student perceptions of Control ($M = 0.12, SD = 0.24$) and Affiliation ($M = 0.29, SD = 0.28$). Table 2 presents results on disagreement between teacher perceptions and perceptions of their students in terms of the percentage of teachers who underestimated, overestimated, or equally estimated their level of Control and Affiliation, as compared to their students. Perceptions of teachers that remained within the range of measurement error from student perceptions were regarded as equal estimations.

Relative to the reports of their students, 66% of the teachers overestimated their Affiliation and 55% overestimated their Control; 33% of the teachers underestimated their Affiliation and 43% underestimated their Control. On average, the (absolute) difference between student and teacher perceptions was 0.19 ($SD = 0.16$) for Control and 0.22 ($SD = 0.18$) for Affiliation. On both dimensions these differences are larger than half a standard deviation in student perceptions of Control and Affiliation (0.6-0.9 SD, medium to large effect; Cohen, 1988). So, on average the correspondence between teacher and student ratings on both interpersonal dimensions was rather low.

Differences in perception scores were then related to teacher interpersonal competence (i.e., student perceptions of a teacher’s Control and Affiliation). To be able to differentiate between overestimation and underestimation we used real difference scores (in contrast with Wubbels et al., 1992, who used absolute difference scores). Consistent with the research of Dunning et al. (2003) and Leising et al. (2006), we expected a negative correlation between the level of Control and Affiliation and the difference between teacher perceptions and student perceptions. For teachers rated as having relatively high levels of Control and Affiliation, we expected underestimation; for teachers whose students rated them with relatively low levels of Control and Affiliation, we expected overestimation. Figure 3 displays the relationship for both Control and Affiliation.

Indeed, for both Control and Affiliation, a significant negative linear association between difference in perception and interpersonal competence was found. This association was stronger for Affiliation ($r = -.56, p < .001$) than for Control ($r = -.24, p < .001$). For Affiliation, more than 30% of the variance in difference in perception scores could be explained by (student perceptions of the) teacher’s interpersonal competence, while for Control, this was only 6%.

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Percentage of Teachers</th>
<th>$M$ (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overestimation</td>
<td>55.4</td>
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<tr>
<td>Equal estimation</td>
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<tr>
<td>Underestimation</td>
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</tr>
<tr>
<td><strong>Affiliation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overestimation</td>
<td>66.0</td>
<td>0.25</td>
</tr>
<tr>
<td>Equal estimation</td>
<td>0.8</td>
<td>0.00</td>
</tr>
<tr>
<td>Underestimation</td>
<td>33.3</td>
<td>-0.16</td>
</tr>
</tbody>
</table>

Figure 2. Circumplex models according to theory, and results for students’ and teacher perceptions.
DISCUSSION

The present study had two goals: it tested the assumption that teachers and students use the same framework to interpret teacher Control and Affiliation, and it investigated the correspondence between teacher self-perceptions and student perceptions of teacher Control and Affiliation. Results show that the Teacher Interpersonal Circle is a valid model to describe both teacher perceptions and student perceptions. In terms of teacher Control and Affiliation, teachers and students apply a similar frame of reference when thinking about how teachers relate to students in class. Second, although both parties apply similar frames of reference, teachers and students do not agree on the amount of Control and Affiliation a teacher conveys in class. The results showed that teacher interpersonal competence (i.e., the average degree of Control and Affiliation students of a classroom group perceive) is an important variable when explaining why some teacher self-perceptions divert more than others from the student perceptions. It may also explain why some teachers underestimate rather than overestimate the quality of their classroom practice. Difference scores showed that more interpersonally competent teachers (i.e., those rated as using more Control and Affiliation, according to students) did not necessarily share their students’ perceptions more than less interpersonally competent teachers. Rather, in line with Dunning et al. (2003) and Leising et al. (2006), the higher, but also the lower, a teacher’s Control or Affiliation according to students, the larger the difference with the perceptions of their students, but in a different direction. Put another way, teachers with a high level of interpersonal competence are more likely to underestimate their Control and Affiliation in class, while less competent teachers are more likely to overestimate themselves (compared to their students’ ratings). This effect was more pronounced for Affiliation than for Control. More pronounced disagreement on the Affiliation than the Control dimension might be related to the fact that the teacher-student relationship is more clearly defined for Control than for Affiliation due to the clear hierarchical nature of the teacher-student relationship.

The current study shows that it is important to make a clear distinction between teachers who overestimate and underestimate themselves for their relationships with students, rather than to just think in terms of correspondence between teacher and student perceptions. Underestimation may stem from a certain degree of modesty, perhaps resulting from the better understanding of the complexity of establishing positive classroom interactions, and may function for the teacher as stimulation to inspire him- or herself to improve classroom interaction (c.f., Wubbels et al., 1992). Possible source-
es for overestimation are self-enhancement in order to keep up a positive self-image (Kenny, 1994) and limited ability to reflect accurately on one’s practice (Dunning et al., 2003).

Limitations and future research

The data used in the present study was collected as part of teacher evaluations, which may have resulted in a certain bias in teachers’ self-perceptions. Teachers, who are less skilled in terms of Control and Affiliation, may have reported even more positive self-images in such a context. Nonetheless, the general pattern of over- and underestimation is in line with earlier studies (Dunning et al., 2003; Leising et al., 2006; Wubbels et al., 1992).

A second limitation is the self-perception instruction teachers were given when completing the QTI. The question printed on the teacher-form was: “How do you teach this class?” while item formulations were similar to the student-form of the QTI (e.g., “This teacher is patient”). It may be argued that rather than measuring perceptions of actual behavior, the instrument may have captured teachers’ intentions. Future research could address this issue by explicitly asking teachers to describe how they think students perceive their Control and Affiliation and then comparing the results (meta-accuracy; Kenny, 1994). Further, item wording of the questionnaire was in terms of a third person. Hofstee (1994), on the basis of theoretical and empirical considerations, recommends that when self-report is used, “the writing of personality questionnaires [should be done] in the third person singular” (p. 159). This practice is intended to improve the accuracy of self-judgment by forcing one to take the psychological position of an outside observer on oneself. Future research could compare the effect of (a) first person (e.g., item wording “I am friendly”), (b) third person (e.g., item wording “He/She/This teacher is friendly”), and (c) explicitly addressing the meta-accuracy in studying teacher self-reports (e.g., item wording “Students see me as a friendly teacher”). Relating personal characteristics such as gender and teaching experience, and class characteristics, including educational level, to differences between student and teacher perceptions can also add to the understanding of teacher self-reports.

Practical and scientific relevance

This study showed that although teachers and students view teacher Control and Affiliation through the same lens, what they see through that lens can be quite different. This finding has consequences for researchers, as well as teacher educators and school management, especially when interpreting (only) teacher self-reports about their practice.

In using teacher self-reports of classroom processes one should keep in mind that the interpretation of teacher perceptions is not straightforward. Students might perceive their teachers as, for example, far more skilled than teachers themselves.

As high perceptions of Affiliation and Control in the teacher-student relationship are associated with teacher effectiveness, the associations found between teacher perceptions and interpersonal competence also show the potential to contribute to teacher effectiveness through teacher professional development. Although our results do not allow for causal interpretations, they may justify further research into the reciprocal effects of the development of teacher perceptions of their relationships with students and teacher interpersonal competence. Such research can inform professional development programs designed to help strengthen teacher effectiveness. Dunning et al. (2003), for example, hypothesize that being less competent not only impairs actual practice, but also impairs the ability to accurately reflect on one’s practice.

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Teacher Control and Affiliation: Do Students and Teachers Agree?


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Classroom Emotional Climate, Teacher Affiliation, and Student Conduct

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Maria Regina Reyes  
Susan E. Rivers  
Nicole A. Elbertson  
Peter Salovey  
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ABSTRACT

Using a multi-method, multi-level approach, this study examined the link between classroom emotional climate and student conduct, including as a mediator the role of teacher affiliation, i.e., students’ perceptions of their relationships with their teachers. Data were collected from 90 fifth- and sixth-grade classrooms (n = 2,000 students) and included classroom observations, student ratings of teacher affiliation, and conduct grades on report cards. As predicted, when controlling for teacher characteristics and the organizational and instructional aspects of the classroom, there was a direct, positive relationship between classroom emotional climate and conduct that also was mediated by teacher affiliation. Effects were robust across grade level and student gender. We highlight the role of emotionally supportive classroom environments in promoting teacher affiliation and better conduct among students.

INTRODUCTION

Student misbehavior is one of the most significant stressors and causes of burnout among teachers (Boyle, Borg, Falzon, & Baglioni, 1995; Byrne, 1994; Evertson & Weinstein, 2006; Friedman, 2006; Travers & Cooper, 1996). When students misbehave, they are disruptive to their classmates and teacher, less engaged in lessons, and consequently perform worse in school (Finn, Pannozzo, & Voelkl, 1995; Freiberg, Huzinec, & Templeton, 2009). One factor that influences student behavior is the classroom climate, which is often delineated as the: (a) classroom emotional climate (CEC), the extent to which teachers promote positive emotions and make students feel comfortable; (b) classroom instructional climate (CIC), the extent to which teachers implement lessons that promote higher-order thinking; and (c) classroom organizational climate (COC), the extent to which teachers structure students’ time effectively (Pianta, La Paro, & Hamre, 2008).

The present study is grounded in evidence showing that a civil classroom emotional climate that meets students’ basic needs such as belongingness is linked to greater engagement in learning and fewer disruptive behaviors (Battistich, Solomon, Kim, Watson, & Schaps, 1995; Ryan & Patrick, 2001). Specifically, it examines the link between CEC and student conduct. This work is important because explanations for why “non-instructional” aspects of the classroom may result in less misconduct have not been well established.

CLASSROOM EMOTIONAL CLIMATE

The academic objectives of schools cannot be met unless teachers provide students with a socially and emotionally healthy classroom environment (Noddings, 1992). This claim is supported by evidence that emotionally supportive classrooms are related to greater student motivation, interest, enjoyment, and engagement (Curby et al., 2009; Marks, 2000; Woolley, Kol, & Bowen, 2009), better student coping strategies (Ruus et al., 2007), less violent behavior (Sprott, 2004), and greater school adjustment and academic achievement (Luo, Huang, & Najjar, 2007; Pianta, Belsky, Vandergrift, Houts, & Morrison, 2008; Rudasill, Gallagher, & White, 2010; Ruus et al., 2007).

The quality of social and emotional interactions in a classroom—between and among students and teachers—creates the CEC (Pianta et al., 2008). CEC encompasses various objective characteristics of the classroom as detected and rated by observers trained in assessing classroom climate. According to the Teaching Through Interactions Framework (Hamre & Pianta, 2007), these characteristics include: (a) teacher sensitivity to student needs, (b) warm, friendly, respectful, and nurturing teacher-student relationships, (c) regard for students’ perspectives and encouragement of active participation, and (d) the absence of abrasive disciplinary
practices and cynicism. In contrast, classrooms rated low in CEC tend to have teachers who are unresponsive to students’ needs, an absence of emotional bonds between teachers and students, and an atmosphere of mistrust and disrespect.

Why would CEC be instrumental to student conduct? Theories from multiple disciplines converge on possible reasons. Self-determination theory, for example, posits that students are more likely to be engaged and well behaved in school when their needs for relatedness, competence, and autonomy are met (Connell & Wellborn, 1991). Another possible explanation can be found in research on teacher credibility, defined as the teacher’s competence, trustworthiness, and caring, which relates these teacher characteristics with various student outcomes, including conduct (Finn et al., 2009). The theory of emotional intelligence (Mayer & Salovey, 1997; Salovey & Mayer, 1990) also can explain why CEC might be associated with student conduct. Teachers who are both sensitive and responsive to their students’ needs and refrain from using harsh discipline practices likely are employing the skills of emotional intelligence. In order to be sensitive to students’ needs, it is necessary for teachers to perceive students’ emotional states accurately. For example, correctly identifying a student’s escalating anger and acting quickly on that information may prevent the student from engaging in disruptive behavior. Another skill of emotional intelligence, the ability to regulate emotions, likely influences teacher-student interactions and student conduct. For example, teachers who are limited in their ability to regulate emotions—both their own and their students’—tend to have students who experience and express more negative emotions in class, often reflected in disruptive behavior (Sutton & Harper, 2009).

TEACHER AFFILIATION

Students’ relationships with supportive teachers are expected to promote a sense of connectedness in the classroom, which should result in less problematic behavior and enhanced prosocial behavior (Jennings & Greenberg, 2009). Student reports of teacher affiliation have been positively linked to engagement in the learning process (Furrer & Skinner, 2003; Klem & Connell, 2004; Murray & Greenberg, 2001; Osterman, 2000; Wentzel, 1998) and to time on task (Hamre & Pianta, 2001). Student reports of teacher affiliation also have been linked to fewer problems (Crosnoe, Johnson, & Elder, 2004) and risk-taking behaviors, resulting in greater school attendance and academic achievement (Centers for Disease Control and Prevention, 2009). In contrast, students who report experiencing inadequate relationships with their teachers may feel disconnected or alienated, and students who feel alienated from school are more likely to engage in antisocial and delinquent behaviors and to fail academically (U.S. Department of Education, 1998). Including student perceptions rather than observers’ or teachers’ reports of affiliation is important because previous research has demonstrated weak or nonsignificant correlations between adolescents’ subjective reports of caring and observers’ reports (Feldman, Wentzel, & Gehring, 1989).

THE PRESENT STUDY

The literature suggests that teachers who create a healthy CEC are more likely to foster students’ feelings of connectedness or positive student-teacher relationships and, in turn, better classroom behavior. This study tests this idea by (a) employing multi-method assessments to reduce common-method variance among the predictor (observed ratings of CEC), mediator (student ratings of affiliation), and outcome variables (conduct grades on report cards), and (b) employing a multilevel mediational approach (Krull & MacKinnon, 1999; MacKinnon, 2008) to examine whether student reports of teacher affiliation mediates the relationship between CEC and year-end conduct grades.

Following the steps in mediation analysis (Baron & Kenny, 1986; MacKinnon, 2008), we tested the following hypotheses: (a) classrooms with higher observed CEC ratings have students with higher year-end conduct grades (direct link between predictor-outcome); (b) classrooms with higher CEC ratings have students with higher ratings of teacher affiliation (predictor-mediator); (c) ratings of affiliation predict student behavior grades; and (d) the relationship between CEC and conduct grades is no longer a significant predictor when student-rated affiliation is introduced into the model. In addition, we hypothesized that all these relationships would remain statistically significant when teacher characteristics and both classroom organizational and instructional climates were held constant.

METHOD

Participants

Participants were 63 teachers and 2,000 students from 90 fifth- and sixth-grade English language arts (ELA) classrooms in 44 schools from a diverse, urban school district in the northeastern United States. These schools’ student populations, on average, were 12% non-native speakers of English, 28% recipients of free or reduced lunch, and 31% low reading achievement. They were 50% female and racially/ethnically diverse with approximately 33% Black/African American, 29% Hispanic, 25% White/Caucasian, 12% Asian/Pacific Islander, and < 2% multiracial or Native/Aboriginal. The average student-to-teacher ratio in these schools was 25:1. Teachers were 89% female, 83% White/Caucasian, 9% Hispanic, and 8% Black/African American.
and had been teaching for a mean of 15 years with a mean of over nine years of experience at their current school. Approximately 41% of the teachers had earned master’s degrees and 36% had earned bachelor’s degrees. About 14% were working toward master’s degrees and 3% had earned degrees higher than a master’s.

**Procedure**

Observational data were collected using digital camcorders and mini-DV tapes. Consenting teachers received video equipment (camera, tapes, and a tripod) and brief instructions to record their entire ELA class on three separate days during a two-week period. They positioned the cameras at an angle where at least their profiles and most of their students’ profiles were visible. Students with no parental consent were seated so as not to be visible on the camera. Teachers returned their tapes directly to the researchers using pre-addressed, prepaid mailers.

Ten members of the research team attended a two-day training to become certified coders on the Classroom Assessment Scoring System (CLASS), used to code the videos (see technical manual for more information; Pianta et al., 2008). Each video included approximately 30 minutes of footage from the class sessions. Because the CLASS is designed to code 10- to 20-minute segments, we converted the mini-DV footage into digital video for storage on a DVD providing assurance that all coders would start and end coding at exactly the same point. Footage was divided into two segments of equal length (M = 14.8 minutes, SD = 1.39). As a rule, segments lasting less than 10 minutes were discarded, as were those tapes in which students were not visible throughout the segment or the audio quality was poor. For each classroom, we acquired up to six segments (two segments for each of the three sessions).

The team of certified coders participated in weekly reliability checks with one or more of three master coders. Reliability testing consisted of coding five videotaped classroom segments with at least 80% of the codes assigned within one point of the master code. Coders were required to maintain this reliability level in order to continue coding. As another means of ensuring reliability, we quadruple-coded a randomly selected 40% of the segments. The coding protocol yielded an average of 13 sets of CLASS scores per classroom with a range of three to 16 sets of scores with each classroom segment being coded between one and four times by a unique rater. Coders were not aware of which segment or day they were observing.

Student ratings of teacher affiliation were drawn from surveys administered by research assistants who collected data during the regular school day. Research assistants read the items and response options aloud; students responded to each item by coloring a bubble that corresponded to their response choice. ELA teachers were not present during data collection. Year-end ELA conduct grades were obtained from report cards.

**Measures**

**Classroom climate.** The CLASS assesses three domains of classroom climate: Classroom Emotional Climate (CEC), Classroom Organizational Climate (COC), and Classroom Instructional Climate (CIC; Pianta et al., 2008). Each domain is a composite of three or four dimensions scored on a seven-point scale (1-2 = low, 3-5 = mid, 6-7 = high) based on the presence or absence, frequency, and quality of specific observable indicators.

- **CEC** consists of the dimensions of positive climate (degree of warmth and connection observed in the classroom), negative climate (degree of negativity observed in the classroom; reverse-coded), teacher sensitivity (teacher’s awareness of and responsiveness to students’ academic and social needs), and regard for student perspectives (degree to which the classroom is focused on students’ interests and motivations).
- **COC** consists of the dimensions of behavior management (teachers’ efficient and effective use of behavior management techniques), productivity (teachers’ management of time to maximize learning opportunities), and instructional learning formats (teachers’ use of methods to maximize students’ engagement).
- **CIC** consists of the dimensions of concept development (teachers’ promotion of higher-order thinking in the classroom), quality of feedback (degree to which teachers’ feedback promotes further understanding and participation), and language modeling (degree to which teachers support students’ language development).

 Coders assigned dimension scores for each segment based on the observed indicators. We then calculated a composite domain score for each segment in a classroom by averaging the dimension scores that comprise each domain. Domain (and dimension) scores were further averaged across all segments of a given classroom to obtain a total classroom climate score. Inter-rater reliability was established by calculating intra-class correlation values, which indicated adequate to high levels of inter-rater agreement: .83, .83, and .78, for CEC, COC, and CIC, respectively.

**Teacher Affiliation.** The eight-item Affiliation with Teacher Survey (Cook, Greenberg, & Kusche, 1995) assessed students’ perceptions of their relationship with their teacher. Students rated, on a five-point Likert scale (1 = disagree a lot, 5 = agree a lot), the extent to which they agreed with items such as “My ELA teacher understands me” and “I like my ELA teacher this year.” Cronbach’s α for this sample was .92.

**Conduct.** Student conduct in ELA was obtained from
### TABLE 1

Intercorrelations among Variables in Two-Level Model with Students Nested Within Classrooms

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<th>Level 1 – students (N = 2,000)</th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>1. Black/AA</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Hispanic</td>
<td>-.44***</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Other race/ethnicity</td>
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<td>-.25***</td>
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<td></td>
</tr>
<tr>
<td>4. Boy</td>
<td>-.03</td>
<td>.02</td>
<td>.02</td>
<td>1.00</td>
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<td></td>
</tr>
<tr>
<td>5. Teacher Affiliation</td>
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<td>-.05*</td>
<td>.12***</td>
<td>-.08***</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>6. Student Conduct</td>
<td>-.20***</td>
<td>.06**</td>
<td>.09***</td>
<td>-.22***</td>
<td>.24***</td>
<td>1.00</td>
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<table>
<thead>
<tr>
<th></th>
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<th>SD</th>
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</thead>
<tbody>
<tr>
<td>Level 2 – classrooms (N = 90)</td>
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<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>2. CEC</td>
<td>-.22*</td>
<td>1.00</td>
</tr>
<tr>
<td>3. COC</td>
<td>-.24*</td>
<td>.60***</td>
</tr>
<tr>
<td>4. CIC</td>
<td>-.12</td>
<td>.68***</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
</table>

Note. Correlations are based on one of the multiply imputed datasets. Results did not vary across different datasets.

Student race/ethnicity was dummy coded where reference variable = White/Caucasian.

* p < .05, ** p < .01, *** p < .001

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report cards. ELA teachers rated students’ behavior using a descriptive scale ranging from unsatisfactory to excellent. The scale was converted into a five-point Likert scale (1 = unsatisfactory, 2 = needs improvement, 3 = satisfactory, 4 = good, and 5 = excellent).

**Covariates.** Student-level covariates included gender and three dummy variables for race/ethnicity (White/Caucasian, Black/African American, Hispanic, other race or ethnicity). Classroom-level covariates included grade level and CLASS scores on COC and CIC. Exploratory analyses indicated that no other teacher characteristics were associated with outcomes.

**Analytic Strategy**

Due to the nested design of the study, we analyzed all data using hierarchical linear modeling (HLM) with full-information maximum-likelihood estimation. Students
Classroom Emotional Climate, Teacher Affiliation, and Student Conduct

(Level 1) were nested within classrooms (Level 2). To test for multilevel mediation, we followed established procedures (MacKinnon, 2008) that are similar to those in simple mediation (Baron & Kenny, 1986), but are interpreted in a multilevel fashion (Krull & MacKinnon, 1999; Preacher & Hayes, 2008). Dummy-coded variables were uncentered. All other variables were grand-mean centered. Alpha was set at \( p < .05 \). Missing data were estimated (15% for conduct and 7% for teacher affiliation) using multiple imputation procedures in NORM (Shafer, 2000).

RESULTS

Table 1 presents correlations and descriptive statistics. Among the primary Level 1 variables of interest, higher ratings of teacher affiliation were associated with higher ratings of student conduct, as predicted. Among Level 2 variables, the significant negative correlation between grade level (dummy coded, 1 = sixth grade) and CEC and COC indicates that sixth-grade classrooms had lower scores on scales than fifth-grade classrooms. There were moderate to strong positive correlations among CEC, COC, and CIC.

To test the primary hypothesis that student ratings of teacher affiliation mediate the relationship between observed CEC and student conduct, we ran a multilevel mediation model (MacKinnon, 2008) using HLM (Raudenbush & Bryk, 2002). We set the significance level at \( p < .05 \). First, we established that the independent variable, CEC, was associated with the primary outcome, student conduct. As shown in Table 2 (Step 1), higher levels of observed CEC were associated with higher student conduct (\( t = 2.18, p = .032, ES = .22 \)). We then established associations between CEC and the mediator, teacher affiliation. As shown in Table 2 (Step 2), higher levels of observed CEC were related to higher student ratings of teacher affiliation (\( t = 2.31, p = .02, ES = .28 \)). The third step was to establish the effect of the mediator on the primary outcome of interest when controlling for the independent variable. As shown in Table 2 (final column), higher ratings of teacher affiliation were associated with higher ratings of student conduct (\( t = 7.71, p < .001, ES = .18 \)) when CEC was controlled. Finally, to test the last step in mediation, we examined the association between CEC (the predictor) and student conduct (the outcome) to ensure this association would become nonsignificant or of a significantly lesser magnitude when taking the mediator, teacher affiliation, into account. As shown in Table 2 (final column), the association between CEC and student conduct became nonsignificant (\( t = 1.72, p = .09, ES = .17 \)).

To further establish the significance of this mediation (i.e., the indirect effect of CEC on student conduct through teacher affiliation is significant, path \( ab \)), we conducted a Sobel’s test, which was statistically significant (Sobel’s \( z = 2.22, p = .030 \)), supporting the mediation model. Figure 1 illustrates the mediation process. As shown in Table 2, the final step had a significantly better fit than the first step as specified by the significant \( \Delta \chi^2 \). Adding teacher affiliation into the final step significantly increased the Level 1 \( R^2 \) from \( \sigma^2 = 7.66 \) to 11.22, as well. These findings suggest that CEC is associated with student conduct through teacher affiliation.

Of note was one additional finding. COC was associated negatively with student conduct (\( t = -2.18, p = .030, ES = .20 \)). This may have been the result of suppression in the statistical model, given the nonsignificant association between COC and student conduct in the absence of CEC (\( \gamma = -0.04, SE = 0.07, p = .56 \)). Variables were constrained to be equal across classrooms. No teacher characteristics were associated with or moderated by the variables of interest.

DISCUSSION

This study tested whether students’ perceptions of their
Classroom Emotional Climate, Teacher Affiliation, and Student Conduct

### TABLE 2

**Mediation Analyses: Association Between Emotional Climate and Conduct Through Teacher Affiliation**

<table>
<thead>
<tr>
<th></th>
<th>Step 1&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Step 2&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Steps 3 &amp; 4&lt;sup&gt;c&lt;/sup&gt;</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>(ICC% = 16.36)</td>
<td>(ICC% = 24.24)</td>
<td></td>
</tr>
<tr>
<td>Conduct</td>
<td>( \gamma )</td>
<td>( \gamma )</td>
<td>( \gamma )</td>
</tr>
<tr>
<td></td>
<td>( \text{SE} )</td>
<td>( \text{SE} )</td>
<td>( \text{SE} )</td>
</tr>
<tr>
<td>Intercept</td>
<td>4.36***</td>
<td>4.05***</td>
<td>4.30***</td>
</tr>
<tr>
<td></td>
<td>0.07</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>Level 1</strong></td>
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<tr>
<td>Black/AA</td>
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<td>-0.18*</td>
<td>-0.29***</td>
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<tr>
<td></td>
<td>0.07</td>
<td>0.08</td>
<td>0.06</td>
</tr>
<tr>
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<td>-0.09</td>
</tr>
<tr>
<td></td>
<td>0.06</td>
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<td>0.06</td>
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<td>0.09</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>0.07</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td>Boy</td>
<td>-0.42***</td>
<td>-0.16**</td>
<td>-0.39***</td>
</tr>
<tr>
<td></td>
<td>0.04</td>
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<tr>
<td>Teacher Affiliation</td>
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<td>--</td>
<td>0.17***</td>
</tr>
<tr>
<td></td>
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<tr>
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<td>0.08</td>
</tr>
<tr>
<td>CEC</td>
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<td>0.30*</td>
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</tr>
<tr>
<td></td>
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<td>0.13</td>
<td>0.09</td>
</tr>
<tr>
<td>COC</td>
<td>-0.19*</td>
<td>-0.14</td>
<td>-0.16*</td>
</tr>
<tr>
<td></td>
<td>0.09</td>
<td>0.11</td>
<td>0.08</td>
</tr>
<tr>
<td>CIC</td>
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<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>0.08</td>
<td>0.11</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>Fit Statistics</strong></td>
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<tr>
<td>( R^2 % (\tau_{00}) )</td>
<td>28.37</td>
<td>28.93</td>
<td>28.62</td>
</tr>
<tr>
<td>( R^2 % (\sigma^2) )</td>
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<td>1.07</td>
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<td>AIC</td>
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<td>4,844.29</td>
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<tr>
<td>( \Delta \chi^2 (df) )</td>
<td>--</td>
<td>--</td>
<td>46.80 (1)***</td>
</tr>
</tbody>
</table>

**Note.** AIC = Akaike Information Criterion. Change in \( \chi^2 \) compares the direct effects model (Step 1) and the mediated effects model (Steps 3 & 4). CEC = Classroom Emotional Climate; COC = Classroom Organization Climate; and CIC = Classroom Instructional Climate. \* \( p < .05 \), \** \( p < .01 \), \*** \( p < .001 \)

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relationships with their teachers, referred to as teacher affiliation, mediated the association between observed CEC and student conduct. Observations, student ratings, and report card grades collected from fifth- and sixth-grade classrooms showed a positive relationship between CEC and student conduct that was mediated by teacher affiliation, even when controlling for teacher and classroom characteristics, including the other CLASS dimensions. As hypothesized, CEC, as rated by outside observers, predicted teacher ratings of student conduct in the classroom, and student-rated teacher affiliation mediated the association between CEC and student conduct. That is, classroom environments rated with objective indicators to be emotionally supportive had a positive impact on student conduct, suggesting that in these emotionally supportive classrooms, students liked and respected their teachers more and, in turn, behaved better. These
findings align with a growing body of research evidencing the influence of emotional aspects of the classroom in student motivation, engagement, performance, and conduct in school (e.g., Battistich, Schaps, & Wilson, 2004; Brock et al., 2008; Curby et al., 2009; NICHD, 2005; Pianta et al., 2008) as well as the effect of students’ subjective experience of student-teacher relations on student outcomes (Kosir, So- can, & Pecjak, 2007).

Understanding factors associated with student conduct is important, not only for enhancing classroom management and student productivity within the classroom, but also for individual student outcomes over time. For example, in two national samples representing the school experiences of over 3,000 students, both misbehavior and low academic achievement contributed to increased cigarette use over time (Bryant, Schulenberg, Bachman, O’Malley, & Johnston, 2000). Similarly, student misbehavior in kindergarten has been shown to predict behavior problems in elementary school and middle school (Hamre & Pianta, 2001). Even when controlling for family and socioeconomic variables and IQ, disruptive behavior as early as kindergarten is related to school problems such as lower grades, placement in special classrooms, and school dropout (Jimerson, Carlson, Rotert, Egeland, & Sroufe, 1997; Parker & Asher, 1987). Although dropout rates have decreased over the last 30 years, 8.7% of students in the U.S. drop out of school (Planty et al., 2009), and the rates are even higher among minority students and those from low-income families (Chapman, Laird, & KewalRamani, 2010). When they feel disconnected or alienated, failing students are more likely to drop out (Finn, 1989), emphasizing the need for the potential protective factor of supportive teacher-student relationships (Crosnoe et al., 2004).

Insight into the links among classroom climate, teacher-student relationships, and the impact of climate and teacher affiliation on student behavior also has important implications for teachers. Teacher stress, burnout, and well-being have been linked consistently to student conduct (Blase, 1982; Byrne, 1994; Friedman, 1995; Hastings & Bham, 2003). When students misbehave, teachers’ stress and burnout levels increase, thereby hampering their ability to manage their classrooms effectively (Brouwers & Tomic, 2000). This progression of events can have a cascade effect on classroom quality with classroom management and student behavior spiraling downward. When teachers are aware that the emotional support and relationships they offer to students can affect students’ behavior, they may invest more energy into the emotional and social aspects of learning.

Accordingly, results from the current study have implications for school-based interventions. Interventions that target classroom emotional climate by increasing teacher affiliation may be most effective in improving student behavior (Brackett et al., 2009; Brackett, Rivers, Reyes, & Salovey, in press). Although educators and researchers have suspected for years that emotions play a fundamental role in teaching and learning (Ginott, 1971; Sutton & Weatley, 2003), few systematic efforts have been made to train educators on emotion-related skills (Brackett et al., 2009; Elbertson, Brackett, & Weissberg, 2010), and relatively few teacher preparation programs or professional development opportunities for teachers already in the profession include emotions in their content (Fleming & Bay, 2004). However, in the last decade, educators, parents, and the public have acknowledged the need for broadening the nation’s educational agenda to include improving schools’ social and emotional climates (Metlife, 2004–5; Public Agenda, 1994, 2002; Rose & Gallup, 2000), and social and emotional learning programs have been designed to address this gap in education (Zins, Weissberg, Wang, & Walberg, 2004). The current study offers support for the importance of these types of programs.

**LIMITATIONS AND FUTURE DIRECTIONS**

The strength of this study resides in its multi-method, hierarchical mediational approach, but it also has some limitations to consider. Student behavior was assessed through students’ report card grades in the category of conduct. The conduct score was selected intentionally because (a) it was a rating with which teachers were already familiar and which could be gathered from all teachers across schools and (b) it would be provided by the same teacher whose classroom climate was being assessed. To determine the relationship between the emotional climate a teacher creates and the conduct of the students within that same emotional climate, the measure of student conduct had to be specific to the particular classroom which was observed and rated. However, we do not know the factors that teachers use to assign a conduct score to each student. For instance, an unsatisfactory score could refer to passiveness or aggression; an excellent score could simply indicate compliant behavior, or it could mean the student participates eagerly. Further, teacher evaluations of student performance often are based on expectations the teacher holds for students (Jussim & Eccles, 1992). It is possible that the teachers’ ratings of students’ behavior could be biased according to expectations that teacher holds related to the emotional climate of the classroom. For instance, a teacher who channels more of her efforts into enhancing the emotional climate of the classroom may have higher expectations for her students in terms of their behavior in the classroom. Although this is possible, research in schools has shown that teacher expectations predict student outcomes because those expectations accurately reflect the student’s potential or likelihood to excel or fail in that area (Brophy, 1983; Jussim & Eccles, 1995). Future studies could enhance the assessment of student conduct by including multiple as-
sessments of a range of behaviors by more than one rater, possibly including a third-party observer, or qualitative data such as interviews with key informants.

The analyses yielded one unexpected finding: COC and student conduct were associated negatively. COC refers to the teacher’s use of behavior management techniques, time, and instructional formats in order to optimize learning. A negative relationship between COC and student conduct is counterintuitive because the degree to which a teacher devotes behavioral strategies, time, and instruction effectively to learning seems likely to have positive effects on student conduct. One possible explanation for the negative relationship between COC and conduct is that it resulted from suppression in the statistical model, as COC and student conduct were unrelated in the absence of CEC. However, another plausible explanation is that teachers devote more effort to the organizational aspects of the classroom when student conduct is poor in order to better control student behavior. Future research examining the relationship between COC and classroom conduct could shed light on the dynamic interplay of student behavior and teachers’ approaches to managing the organizational climate of the classroom.

Although the results of this study suggest that CEC should be targeted in teacher preparation, this study does not address the question of whether CEC or other dimensions of classroom climate can be developed in teachers through formal training, or whether shifts in CEC or other dimensions of classroom climate as a result of such training increase teacher affiliation or enhance student behavior. These questions are currently being tested in our laboratory. Initial findings suggest that the infusion of such trainings can in fact shift scores on CEC by about 12% after just eight months (Brackett, Rivers, Reyes, & Salovey, 2010). The extent to which shifts in CEC scores are associated with greater affiliation and better student conduct has yet to be tested.

CONCLUSION

A growing body of research, including the current study’s findings, emphasizes the need for a shift in the focus of education and, especially, teacher training. For over a decade, during a crucial period of social and emotional development, schools and classrooms are the child’s environment for supporting and enriching these developmental needs. However, after centuries of neglecting this reality of schooling, the term “emotion” is not even mentioned in most writing advocating educational reform (Hargreaves, 1998) or in national legislation aimed at improving education (e.g., NCLB, 2001). Nevertheless, it is apparent to both researchers and educators alike that emotions are paramount to learning and to student outcomes within the classroom and beyond. The focus of training and professional development for teachers as well as of academic interventions should shift to include the social and emotional aspects of learning (Brackett et al., 2009; Jennings & Greenberg, 2009; Zins et al., 2004). When teachers can create a warm and open classroom environment that supports the emotions of students, students feel more connected, behave better, and are more apt to succeed in school and grow into successful adolescents and adult citizens.

REFERENCES

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The William T. Grant Foundation (Grant #8364) supported this research. The authors express their appreciation to all members of the Health, Emotion, and Behavior Laboratory.

Journal of Classroom Interaction Vol. 46.1 2011
ABSTRACT

Cultivating Awareness and Resilience in Education (CARE) is a professional development program designed to reduce stress and improve teachers’ performance. Two pilot studies examined program feasibility and attractiveness and preliminary evidence of efficacy. Study 1 involved educators from a high-poverty urban setting ($n = 31$). Study 2 involved student teachers and 10 of their mentors working in a suburban/semi-rural setting ($n = 43$) (treatment and control groups). While urban educators showed significant pre-post improvements in mindfulness and time urgency, the other sample did not, suggesting that CARE may be more efficacious in supporting teachers working in high-risk settings.

INTRODUCTION

Teacher quality has become a top priority of our national policy agenda to improve student academic achievement (Wilson et al., 2008). Additionally, there is strong public support for a broad educational agenda that includes enhancing academic achievement and students’ social-emotional competence, character and civic engagement (Public Agenda, 1994, 1997, 2002; Metlife, 2002; Rose & Gallup, 2000). Although there is some evidence that teachers’ social-emotional skills and well-being are characteristics of quality teachers capable of fulfilling this broad agenda (Jennings & Greenberg, 2009), little research has explored this question.

The purpose of the present study was to examine whether a professional development intervention can improve social-emotional skills and well-being and consequently improve teachers’ ability to develop and maintain a well-managed learning environment and provide optimal emotional and instructional support to their students.

One model that advances understanding of links between teachers’ social and emotional competence (SEC) and well-being and classroom and student outcomes is Jennings and Greenberg’s (2009) Prosocial Classroom theoretical model (see Figure 1). In this model, the link between SEC and student outcomes is mediated by teacher-student relationships, classroom management, and social and emotional learning (SEL) program implementation. To successfully address the management, instructional, and emotional challenges of the classroom, teachers must employ a high degree of social and emotional competence. When teachers lack this personal resource, classroom management can suffer, resulting in lower levels of on-task student behavior and performance (Marzano, Marzano & Pickering, 2003). As the classroom climate deteriorates, the demands on the teacher increase, triggering in the teacher what has been referred to as a “burnout cascade” (Jennings & Greenberg, 2009, p. 492). Under these conditions, teachers’ responses to student behavior may become hostile and punitive, reactions that may derail student motivation and contribute to a self-sustaining cycle of classroom disruption. Over time, high levels of distress may lead to burnout (Tsouloupas, Carson, Matthews, Grawitch, & Barber, 2010) and a downward spiral of deteriorating teacher performance and student behavior and achievement (Osher et al., 2007). In contrast, teachers who regularly experience more positive emotions in their work lives may be more resilient (Cohn, Brown, Fredrickson, Milkels, & Conway, 2009; Gu & Day, 2007) in response to these stressors and more able to create and maintain supportive learning environments. This evidence supports the need for specialized professional development that promotes teachers’ SEC and well-being in the service of maximizing their capacity to create and maintain optimal classroom organization and to provide instructional and emotional support to their students.
The CARE Program Model

The Cultivating Awareness and Resilience in Education (CARE) professional development program was produced by a team of educators and researchers at the Garrison Institute. CARE was designed to reduce teachers’ distress and promote improvements in teachers’ well-being, motivational orientation/efficacy, and mindfulness. Qualitative data suggests that the program results in such improvements that may also contribute to teachers’ abilities to provide organizational, instructional, and emotional support to their students (Jennings, 2011). The CARE program includes three primary content areas described below that are presented in a series of four day-long sessions presented over four to five weeks.

**Emotion skills instruction**

Because emotional exhaustion is a major contributor to teacher burnout and often interferes with teachers’ functioning, CARE introduces emotional skills instruction drawn from the neuroscience of emotion. This involves a combination of didactic instruction and experiential activities (e.g., reflective practices and role-plays) to support teachers’ recognition of emotional states and the exploration of their “emotional landscape”—habitual emotional patterns. They also practice self-induction of positive emotions (Cohn et al., 2009) to promote resilience and help reappraise emotionally provocative situations. CARE aims to support teachers to be more sensitive to students’ needs, more aware of classroom emotional climate and better able to regulate their emotions while managing provocative behavior.

**Mindfulness/stress reduction practices**

Mindfulness-based interventions (MBIs) are effective in reducing both stress and illness (Gross, 2009) as well as improving psychological functioning (Weinstein, Brown, & Ryan, 2009). Mindful awareness practices focus on a “nonelaborative, nonjudgmental, present-centered awareness in which each thought, feeling, or sensation that arises in the attentional field is acknowledged and accepted as it is.”

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**Figure 1. A Model of Teacher Well Being and Social and Emotional Competence, Support and Classroom and Student Outcomes**

Mindfulness involves two primary components: self-regulation of attention and non-judgmental awareness. Self-regulation of attention allows for metacognitive awareness of one’s emotional and cognitive experience as it occurs. This meta-awareness combined with a non-judgmental awareness characterized by curiosity, openness, and acceptance supports emotional and cognitive self-awareness and self-regulation. Indeed, mindfulness enhances regulatory processes that buffer against psychological distress (Jimenez, Niles, & Park, 2010). As MBIs promote flexibility (Kashdan & Rottenberg, 2010) and self-reflection, they may be well suited for helping teachers overcome the tendency to make automatic, reactive appraisals of student behavior that contribute to emotional exhaustion (Chang, 2009). Thus, developing greater mindful awareness may support both effective classroom management and caring.

CARE introduces a series of mindfulness activities, beginning with short periods of silent reflection and extending to activities that bring mindfulness into aspects of daily living such as standing, walking, being present in front of a group, listening to others, etc. Through these activities, teachers learn to bring greater awareness to their classroom organization and their relationships with students, parents and colleagues.

Caring and listening practices

To promote empathy and compassion, CARE introduces “caring practice” and “mindful listening.” Caring practice involves silent reflection focused on generating feelings of care for oneself and others by mentally offering well-being, happiness, and peace—first to oneself, then to a loved one, then to a neutral colleague or acquaintance, and finally to a person who one finds challenging, such as a difficult student, parent, or colleague. Practiced over time, this activity produces increases in daily experiences of positive emotions and decreased illness and depressive symptoms (Fredrickson, Coffey, Pek, Cohn, & Finkel, 2008). Mindful listening exercises develop the skill to simply listen to another and notice (without acting upon) emotional reactions such as urges to interrupt, offer advice, or judge. These exercises help teachers more effectively listen to students and to be more sensitive to their needs, especially during conflict in which a calm, supportive presence can support conflict resolution.

The Present Study

This paper presents data collected during the first year of a two-year intervention development project presenting CARE as an in-service professional development program for working teachers. The program was piloted with two samples of very different participants: teachers working in a high-poverty urban setting (Study 1) and student teachers and some of their mentors working in a semi-rural/suburban college town setting (Study 2). We hypothesized that educators who received the CARE program would show increases in measures of well-being, motivational orientation/efficacy, and mindfulness. Among those enrolled in Study 2, we hypothesized that classrooms would show improvements in classroom organization, instructional support, and emotional support compared to control teachers’ classrooms.

METHODS

STUDY 1

Participants

CARE was presented to two cohorts of educators working in an urban region of the northeast who were recruited from four low performing elementary schools in high poverty neighborhoods (85% economically disadvantaged, 95% minority). Cohort A (n = 15) consisted of seven regular classroom teachers, six specialists (learning support, special education, preschool supervisor, vocational high school teacher), one counselor, and one psychologist who received CARE in the fall of 2009. Cohort B (n = 16) consisted of seven regular classroom teachers and nine specialists who received CARE in the spring of 2010. Cohort B participants included two men, while Cohort A was composed of all women. The primarily European American sample included two African Americans and one Asian American. Participants had a mean age of 40 years (SD = 11.8). A majority (n = 30) had bachelor’s degrees, 14 had graduate degrees, and their years of experience ranged from 1 to 37 years (M = 13.23, SD = 10.23).

Procedures

After teachers were recruited and consent was obtained, they completed a battery of questionnaires prior to and after the CARE program to assess changes in well-being, motivational orientation/efficacy, and mindfulness. At post-test, participants completed an additional questionnaire and participated in a focus group to assess the teachers’ perceptions of program satisfaction, feasibility, and effectiveness. CARE was presented to both cohorts by two of the program’s developers. Cohort A (n = 15) received CARE in the fall of 2009 presented in the form of two weekends separated by one month during which participants received phone coaching from program facilitators to help them practice the skills they learned the first weekend and to apply these skills to classroom challenges. The structure for the Cohort B program format was modified in response to feedback from the Cohort A focus groups. Cohort A participants reported that they felt the two weekends were spaced too far apart and
they wanted more frequent contact with facilitators. Therefore, Cohort B’s schedule was modified as follows: two-day weekend workshop, two-week intersession with phone coaching, one-day workshop, two-week intersession with phone coaching, one-day workshop. One participant from each cohort dropped out of the program after the first weekend. During each program, each remaining participant was assigned to one facilitator who provided the phone coaching for 20 to 30 minutes over the phone approximately two times over the course of the program.

Within a few weeks after each CARE program ended, the participants attended focus groups (six to eight per group) led by neutral university research staff blind to the study aims. They were asked questions about their impressions of the program, if and how their levels of emotional and physical awareness had changed as a result of their attendance, and how this change of awareness may translate to different behavior, changes in relationships with students and adults, changes in ways they manage their classrooms, and changes in their work-related stress levels. Focus groups were audio recorded and transcribed.

**Measures**

A battery of self-report measures was used to assess program impact on teachers’ well-being, motivational orientation/efficacy, and mindfulness. Cronbach’s alphas indicated acceptable internal reliability for most measures (.70 or above).

**Measures of well-being.** Six dimensions of well-being were measured using four different instruments.

**Positive and Negative Affect Schedule (PANAS).** The PANAS (Watson, Clark, & Tellegen, 1988) assesses two dimensions of affect. Multiple time frame items have been used with the PANAS. Our participants were asked to rate how they “felt during the past few weeks” on 20 emotions (such as “hostile” and “enthusiastic”) using a five-point Likert-type scale (1 = “very little or not at all,” 5 = “extremely”). The mean ratings for the 10 items belonging to the positive and negative subscales were computed. Each subscale score ranged from 1 to 5 and higher scores reflect more positive/negative affect.

**The Center for Epidemiologic Studies Depression Scale (CES-D).** The CES-D (Radloff, 1977) is a well-validated, reliable measure of depressive symptoms. Participants are asked to consider their depressive symptoms over the past week and then rank the frequency of these feelings using a Likert-type scale where 0 = “rarely (less than one day)” to 3 = “most of the time (five to seven days).” The 20-item scale includes items such as “I felt that everything I did was an effort,” and “I felt lonely.” After reverse scoring the appropriate items, scores are summed and higher scores reflect greater depressive symptoms.

**The Time Urgency Scale (TUS).** The TUS (Landy, Ras- tegary, Thayer, & Colvin, 1991) is a well-validated measure developed to assess a multidimensional construct of time pressure. The scale is composed of 33 items: 24 are part of five subscales to measure speech patterns (five items such as “I talk more rapidly than most people”), eating behavior (five items such as “I eat rapidly, even when there is plenty of time”), competitiveness (six items such as “I go ‘all out’”), task-related hurry (three items such as “I often feel very pressed for time”), and general hurry (five items such as “I usually work fast”). The remaining nine items can be included in the mean to create a total scale score. Participants are asked to respond to 33 statements that describe their behavior with respect to time usage using a Likert-like scale where 1 = “strongly disagree” and 5 = “strongly agree.”

**The Daily Physical Symptoms (DPS).** The DPS (Larsen & Kasimatis, 1997) questionnaire is a physical symptom checklist containing 27 items. Participants were asked about whether or not they experienced each particular symptom “today” and if so, to rate the severity on a 1 to 10 scale, 1 being very mild to 10 being very severe. Symptoms included pain such as headache and backache, gastrointestinal problems such as nausea and diarrhea, cold and flu symptoms such as cough and sore throat, and other symptoms such as eye-related and ear-related symptoms. One score was constructed by calculating the sum of the items.

**Measures of motivational orientation and teaching efficacy.** Four facets of motivation and efficacy were assessed with two different measures.

**Problems in Schools Questionnaire (PIS).** The PIS (Deci, Schwartz, Sheinman, & Ryan, 1981) is based on Ryan and Deci’s (2000) self-determination theory, and assesses whether teachers are oriented toward controlling their students’ behavior versus supporting their autonomy as it relates to promoting intrinsic motivation. The measure is composed of eight vignettes, followed by four items representing four possible behavioral approaches to the problem that is posed in the vignette: highly autonomy supportive (HA), moderately autonomy supportive (MA), moderately controlling (MC), and highly controlling (HC). A composite weighted score represents general autonomous supportive versus controlling orientation (Reeve, Bolt, & Cai, 1999). Respondents are asked to rate the degree of appropriateness of each of the four options on a seven-point Likert-like scale where 1 = “very inappropriate” and 7 = “very appropriate” for each of the eight situations resulting in a total of 32 ratings.

**Teachers’ Sense of Efficacy Questionnaire (TSES).** The TSES (Tschannen-Moran & Woolfolk Hoy, 2001) is a 24-item measure of three components of teaching efficacy: ef-
### TABLE 1

**Study 1 Pre-Post Comparisons from Urban Cohorts A and B Self-Report Measures**

<table>
<thead>
<tr>
<th>Well-being</th>
<th>α</th>
<th>M-pre</th>
<th>SD-pre</th>
<th>M-post</th>
<th>SD-post</th>
<th>d</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>PANAS Positive Affect</td>
<td>.91</td>
<td>3.40</td>
<td>.78</td>
<td>3.56</td>
<td>.58</td>
<td>.21</td>
<td>.38</td>
</tr>
<tr>
<td>PANAS Negative Affect</td>
<td>.85</td>
<td>1.95</td>
<td>.62</td>
<td>1.81</td>
<td>.66</td>
<td>.23</td>
<td>.24</td>
</tr>
<tr>
<td>CES Depressive Symptoms</td>
<td>.89</td>
<td>10.89</td>
<td>7.36</td>
<td>9.12</td>
<td>8.21</td>
<td>.24</td>
<td>.27</td>
</tr>
<tr>
<td>TUS Task-Related Hurry</td>
<td>.87</td>
<td>3.71</td>
<td>1.00</td>
<td>3.47</td>
<td>.91</td>
<td>.24</td>
<td>.01</td>
</tr>
<tr>
<td>TUS General Hurry</td>
<td>.53</td>
<td>3.50</td>
<td>.56</td>
<td>3.35</td>
<td>.63</td>
<td>.27</td>
<td>.08</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Motivation/Efficacy</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PIS Motivating Score</td>
<td>--</td>
<td>1.74</td>
<td>2.61</td>
<td>1.77</td>
<td>3.83</td>
<td>.01</td>
<td>.85</td>
</tr>
<tr>
<td>TSES Student Engagement</td>
<td>.86</td>
<td>6.66</td>
<td>1.12</td>
<td>6.85</td>
<td>1.16</td>
<td>.17</td>
<td>.67</td>
</tr>
<tr>
<td>TSES Instructional Practices</td>
<td>.91</td>
<td>7.15</td>
<td>1.18</td>
<td>7.60</td>
<td>.84</td>
<td>.38</td>
<td>.11</td>
</tr>
<tr>
<td>TSES Classroom Management</td>
<td>.90</td>
<td>7.06</td>
<td>1.22</td>
<td>7.44</td>
<td>.98</td>
<td>.31</td>
<td>.33</td>
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</table>

<table>
<thead>
<tr>
<th>Mindfulness</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FFMQ Observing</td>
<td>.79</td>
<td>2.95</td>
<td>.67</td>
<td>3.58</td>
<td>.54</td>
<td>.94</td>
<td>.00</td>
</tr>
<tr>
<td>FFMQ Describing</td>
<td>.89</td>
<td>3.46</td>
<td>.77</td>
<td>3.71</td>
<td>.69</td>
<td>.32</td>
<td>.00</td>
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<tr>
<td>FFMQ Awareness</td>
<td>.91</td>
<td>3.31</td>
<td>.78</td>
<td>3.47</td>
<td>.70</td>
<td>.21</td>
<td>.10</td>
</tr>
<tr>
<td>FFMQ Non-Judging</td>
<td>.96</td>
<td>3.55</td>
<td>.98</td>
<td>3.93</td>
<td>.71</td>
<td>.39</td>
<td>.06</td>
</tr>
<tr>
<td>FFMQ Non-Reactivity</td>
<td>.83</td>
<td>2.83</td>
<td>.68</td>
<td>3.36</td>
<td>.50</td>
<td>.78</td>
<td>.00</td>
</tr>
<tr>
<td>Interpersonal Mindfulness</td>
<td>.83</td>
<td>3.51</td>
<td>.46</td>
<td>3.73</td>
<td>.30</td>
<td>.48</td>
<td>.02</td>
</tr>
</tbody>
</table>

Efficacy for instructional strategies (“how much can you use a variety of assessment strategies?”), efficacy for classroom management (“How well can you keep a few problem students form ruining an entire lesson?”) and efficacy for student engagement (“How much can you do to foster student creativity?”). For each item, the respondent was asked to rate the extent to which he or she can demonstrate a particular capability utilizing a nine-point Likert-type scale where 1 = “nothing” and 9 = “a great deal.” Three scale scores were produced from the items, and a composite score of all the items was also obtained.

**Measures of mindfulness.** Six dimensions of mindfulness were assessed: five within one instrument and the sixth in a second instrument.

The Five Facet Mindfulness Questionnaire (FFMQ). The FFMQ (Baer, Smith, Hopkins, Krietemeyer, & Toney,
Focus group conversations for either the Problems in Schools Questionnaire (PIS) or the teaching efficacy measures, no significant effects were found on positive and negative affect (PANAS), depressive symptoms (CES-D), or the Daily Physical Symptoms Inventory (DPS), although all scores except DPS changed in the expected direction. For the motivational orientation and teaching efficacy measures, no significant effects were found for either the Problems in Schools Questionnaire (PIS) or the Teachers’ Sense of Efficacy (TSES) (student engagement, instructional practices, or classroom management subscales), however all scores changed in the expected direction. The strongest effects were found for measures of mindfulness. Results suggest substantial ($p < .10$) improvement at post-test for the five facets of the Five Facet Mindfulness Questionnaire ranging in effect size from $d = .21$ to .94 (see Table 1). Interpersonal Mindfulness in Teaching (IMT) improved at post-test with an effect size of $d = .48$.

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

**Focus Group Findings.** Focus group conversations revealed that participants were not only overwhelmingly satisfied with their experience in the CARE program but had adopted new habits such as noticing anxiety and stopping to take some deep breaths, choosing to prioritize self-care and cultivating greater caring and empathy for others. Participants reported that CARE was helpful in increasing their emotional awareness and acceptance of their emotional states, helpful in lessening their distress levels in general and that the skills learned in the program helped them recognize and regulate emotions related to managing challenging student behaviors. Many reported improvements in the relationships with their students, co-workers, and families as a result of applying CARE techniques. Participants reported new awareness of their emotional triggers both in school and in their personal lives, and many reported being more mindful of slowing down and being newly able to respond appropriately to challenging situations rather than automatically reacting out of strong emotions. Several reported feeling calmer at work and choosing to verbalize their emotional states with their students, leading to greater understanding between teachers and students and faster resolution of disruptive or conflict situations.

**STUDY 2**

**Participants**

Student teachers were recruited to participate along with their mentor teachers. Eleven student teacher/mentor pairs plus 21 individual student teachers were enrolled. One
mentor and three students dropped out of the study leaving 39 individuals with complete data and 29 classrooms total. Schools were located in primarily upper- and/or middle-class suburban or semi-rural neighborhoods (16% economically disadvantaged, 12% minority). The sample was primarily European American and nearly entirely female; one student teacher was male. Student teachers had a mean age of 21 years ($SD = .5$); mentor teachers had a mean age of 43 years ($SD = 12$). Mentor teachers were highly educated: five had completed a graduate degree, five had some graduate training and one had a bachelor’s degree only. Years of experience ranged from four to 38 years ($M = 16.7, SD = 11.8$).

**Procedures**

After obtaining consent, all participants completed the same online questionnaire used in Study 1, and their classrooms were observed and coded. Immediately after the baseline assessments, the 32 classrooms were randomly assigned for the associated student teacher or student teacher/mentor pair to receive CARE in the winter of 2009 or in the late spring of 2010 (waitlist control). Stratification was employed to ensure a balance of student teacher/mentor pairs and suburban and semi-rural classrooms in both groups. At the pre-test period, two groups were created from 43 subjects: a treatment group consisting of 16 students and five mentors and a control group consisting of 16 students and six mentors. At the post-test period, after four subjects (three students and one mentor) dropped, 39 remaining subjects comprised a treatment group consisting of 13 students and four mentors and a control group consisting of 16 students and six mentors. The CARE program was presented to the treatment group by the same two program developers as in Study 1 (utilizing the original two-weekend format as it had not yet been revised) during January and February 2010. Due to a heavy snowstorm, the third day of the program was cancelled; the missed material was condensed and covered on the final day. At post-test, participants completed the same battery of online measures and an additional questionnaire on program satisfaction. Separate focus groups were then held for students and for mentor teachers. These focus groups were led by the same team of individuals and followed the same protocol as in Study 1. At post-intervention, treatment group and control group classrooms were observed again one time during the morning work period and coded by researchers who were blind to the study participants’ assignments.

**Measures**

**Self-report.** Teacher well-being, motivation/efficacy, and mindfulness were assessed by the same questionnaires and protocol utilized in Study 1. At the end of the program, participants also completed the same program satisfaction questionnaire.

**Observations.** Each classroom was observed and rated pre- and post-intervention using the CLASS (Pianta, La Paro, & Hamre, 2003), a well-validated measure of classroom climate. The CLASS rating system consists of 10 items that form three factors: (a) Organization; (b) Instructional Support; and (c) Emotional Support. Each item is rated on a scale from 1 to 7 (low to high quality). Before the classroom observations began, research staff attended a three-day training workshop in the CLASS led by a certified CLASS instructor and were subsequently tested and certified reliable. Classrooms were each observed once during each assessment period, and 20% of the observations were double-coded to ensure inter-rater reliability. 80% reliability was maintained throughout each observation period.

**Analyses and Results**

**Well-being, motivation/efficacy, mindfulness.** Comparisons between the CARE treatment group and control group were made at the post-test period using covariance adjusted estimates. Each self-report measure was adjusted for its baseline measurement at the pre-test period. Least-square mean comparisons were then made to test for a treatment effect. As a descriptive comparison to Study 1, repeated-measures t-test analyses were performed on the CARE treatment group only to test for changes between pre-post assessment periods. CARE teachers showed a mild non-significant reduction in negative affect ($p = .17$) compared with the control group. The results of the ANCOVA model suggested significant treatment effect on Problems in Schools (PIS) motivating total score ($p < .05$) where CARE teachers showed more autonomy supportive orientation at post-test compared to the controls (see Table 2). The results of the non-experimental analysis involving simple pre-post differences confirmed the increase in teachers’ PIS motivating score and also the increases in the instructional practices of the Teacher’s Sense of Self-Efficacy scale and the observing factor of the Five Facet Mindfulness scale.

**Program satisfaction.** Of the participants who completed the program satisfaction survey ($n = 16$), 88% ($n = 14$) reported that they “strongly agreed” or “agreed” that this type of program should be integrated into preparation and in-service training for all teachers. A majority of participants reported that CARE improved their self-awareness (81%, $n = 13$) and their ability to establish and maintain supportive relationships with the children they work with (69%, $n = 11$). 81% ($n = 13$) of these participants reported being “satisfied” or “highly satisfied” with the CARE program content, while 75% ($n = 12$) reported being “satisfied” or “highly satisfied” with the program in general.
TABLE 2

Study 2 Covariance Adjusted Post-Treatment Mean Comparisons from Suburban-Semi-Rural Sample Self-Report Measures

<table>
<thead>
<tr>
<th>Well-being</th>
<th>alpha</th>
<th>M-ctrl</th>
<th>M-CARE</th>
<th>d</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>PANAS Positive Affect</td>
<td>.86</td>
<td>3.65</td>
<td>3.70</td>
<td>.11</td>
<td>.72</td>
</tr>
<tr>
<td>PANAS Negative Affect</td>
<td>.89</td>
<td>1.96</td>
<td>7.78</td>
<td>.43</td>
<td>.17</td>
</tr>
<tr>
<td>CES Depressive Symptoms</td>
<td>.94</td>
<td>10.74</td>
<td>9.99</td>
<td>.09</td>
<td>.78</td>
</tr>
<tr>
<td>TUS Task-Related Hurry</td>
<td>.82</td>
<td>3.84</td>
<td>3.85</td>
<td>.02</td>
<td>.95</td>
</tr>
<tr>
<td>TUS General Hurry</td>
<td>.69</td>
<td>3.37</td>
<td>3.27</td>
<td>.27</td>
<td>.38</td>
</tr>
<tr>
<td>Daily Physical Symptoms</td>
<td>--</td>
<td>14.17</td>
<td>14.90</td>
<td>.05</td>
<td>.87</td>
</tr>
</tbody>
</table>

**Motivation/Efficacy**

| PIS Motivating Score        | --    | 1.72   | 2.71   | .63  | .05  |
| TSES Student Engagement     | .91   | 6.89   | 6.81   | .07  | .81  |
| TSES Instructional Practices| .95   | 7.04   | 7.32   | .26  | .40  |
| TSES Classroom Management   | .92   | 7.24   | 7.08   | .19  | .54  |

**Mindfulness**

| FFMQ Observing              | .79   | 3.12   | 3.25   | .19  | .53  |
| FFMQ Describing             | .91   | 3.49   | 3.55   | .11  | .73  |
| FFMQ Awareness              | .85   | 3.58   | 3.46   | .21  | .49  |
| FFMQ Non-Judging            | .85   | 3.54   | 3.61   | .09  | .78  |
| FFMQ Non-Reactivity         | .81   | 3.14   | 3.10   | .08  | .80  |

**Observation.** Comparisons between the CARE treatment group and control group CLASS factor scores were made at the post-test period using covariance adjusted estimates. Each CLASS factor score was adjusted for its baseline measurement at the pre-test period. Least-square mean comparisons were then made to test for a treatment effect. Contrary to our hypothesis, the results suggested no significant treatment effects for any of the three factors.

**Focus Group Findings.** Analyses of the student teacher focus groups indicate that participants reported finding the CARE program helpful in broadening their awareness of their emotions, emotional triggers, and their distress level in their classrooms and in their personal lives. They reported recognizing habits such as rushing (walking fast and eating fast), but felt powerless to change these things due to schedule and workload. These participants reported liking the program but also raised concerns, noting their difficulty concentrating during some of the longer practice segments, difficulty with the program length, and some felt uncomfortable with some of the exercises. These participants reported...
few changes in classroom dynamics or student relationships as a result of the program, citing that the district they work in already employs a level of community building that left little room for improvement, and the children they work with rarely present challenging behaviors.

The mentor teacher focus group revealed that these teachers felt much less of a need for stress reduction; primary motivating factors for participating in the study were supporting their interns and receiving compensation. Mentor teachers reported being interested in learning about their own distress and learning stress reduction skills, but after the program was completed some stated that they already knew much the material covered and that the program served as a “good reminder.” Some reported increased empathy for other teachers and interns, and none reported changes in student relationships or classroom management techniques as a result of the program.

DISCUSSION

The purpose of the present study was to examine whether the CARE professional development program improves teachers’ and student teachers’ social-emotional skills (motivation/efficacy and mindfulness) and well-being and consequently improves their ability to develop and maintain a well-managed learning environment and provide optimal emotional and instructional support to their students. Results from Study 1 demonstrated improvements for pre-post intervention in well-being. Two dimensions of time urgency (task-related hurry and general hurry) showed significant ($p < .10$) pre-post improvement in this sample, suggesting that teachers felt reduced stress associated with time demands. Changes in motivational orientation/efficacy pre-post intervention were not significant but were in the expected direction of improvement. The most consistent significant effects were found among measures of mindfulness. We found significant ($p < .10$) improvement at post-test for the five facets of the Five Facet Mindfulness Questionnaire ranging in effect size from $d = .21$ to .94, and the Interpersonal Mindfulness in Teaching (IMT) scores improved at post-test with an effect size of $d = .48$. As expected, urban teachers found the program to be enjoyable and beneficial to their teaching. Overall, participants were highly satisfied with the program and found it helpful in improving their classroom management and relationships with students. A majority reported improvements in their students’ behavior and academic performance. The results of the focus groups supported the program satisfaction findings and revealed that as a result of CARE, teachers developed a greater awareness of their stress and emotional reactivity and had developed skills to better self-regulate during their busy working lives. While we were unable to collect classroom observational data during Study 1, we are currently doing so with a sample in the same urban setting and it will be interesting to see if CARE has effects on classrooms in these settings.

In contrast, the results from the suburban/semi-rural sample were more modest. CARE teachers showed a mild, non-significant reduction in negative affect ($p = .17$) as compared with the control group. Regarding treatment effects among measures of motivational orientation/efficacy, we found a significant treatment effect on the Problems in Schools (PIS) motivating total score ($p < .05$) where CARE teachers showed more autonomy supportive orientation at post-test compared to the controls. We found no significant treatment effects on the measures of mindfulness. The Study 2 sample did not report the same high level of satisfaction as found among the Study 1 teachers. Furthermore, Study 2 participants did not report high levels of engagement with the program nor the same beneficial personal or professional outcomes. Finally, data collected via classroom observations did not show treatment effects.

Several factors may explain the differences in findings across the two samples. The urban and suburban/semi-rural school environments are extremely different. The urban district has very high levels of poverty and large numbers of children with behavioral and academic difficulties that put them at risk of school failure. Many of the teachers from this district felt they had marginal institutional support. As an added stressor, the district had recently experienced political turmoil resulting in the firing of several top administrators, some schools were closed, and teachers’ jobs came under threat. In contrast, student teachers and mentors of the suburban/semi-rural school environments have lower numbers of children at-risk and reported receiving stronger institutional support. This district is stable and well-funded and has very low teacher turnover. Indeed, mentor teachers were chosen based upon their outstanding performance and these mentor teachers reported that they felt CARE did not provide new information but served as a reminder.

While student teachers reported having high levels of distress associated with the pressure of academic performance (lesson plans, coursework, and performance evaluations), it is interesting that CARE did not appear to be as relevant to their current needs as it did to the urban sample. The context of CARE delivery where some mentors were present with student teachers may have inhibited the uptake of the material by the student teachers. It may be especially important to consider social hierarchies when planning and delivering CARE to groups in the future, as the presence of superiors may inhibit participation. Furthermore, it is possible that the presence of the mentor teacher in the classroom provided a buffer for the students that protected them from the occupational distress that working teachers often report.

These contrasting results suggest that CARE may be
best suited for individuals who have already established their teaching/professional identity but experience challenging occupational stressors that interfere with their performance. The CARE program may also be particularly suited to supporting teachers working with at-risk populations of students. As CARE was designed to support teachers who are exposed to high levels of emotional stress and who find that emotional reactivity interferes with their teaching, it is possible that CARE may need to be modified to be more helpful to student teachers.

These studies were designed to be exploratory and to provide pilot data for further refinement to the intervention and research protocol. Nevertheless, several limitations complicated our ability to adequately test the study hypotheses. The primary limitation of these studies was the small sample sizes: 31 participants in Study 1 and 43 participants (21 in the CARE group and 22 in the control group) in Study 2. These sample sizes substantially reduced the power to detect significant differences pre to post in Study 1 and between the experimental and control groups in Study 2. Despite these sample size limitations, Study 1 results were encouraging. Furthermore, we learned that the social dynamic of presenting the CARE program to individuals at various power differentials may pose challenges to program uptake. Student teachers may have experienced added anxiety participating in such a program alongside mentors who were in an evaluative position. Mentors may have felt primarily motivated to support their mentees rather than to engage in personal exploration and learning. Furthermore, these conditions may have limited participants’ openness to disclose challenges and/or difficulties during both the program and the focus groups.

Although further work is required to gain a more complete understanding of CARE’s effects under various conditions, the results of Study 1 suggest that CARE is a promising intervention to support teachers experiencing the emotional stress of working in challenging settings. In this manner, CARE may begin to address an important professional development need long ignored by the education research community. While research has demonstrated that teachers may deal with highly stressful emotional situations in ways that compromise their ability to provide support to students, especially in high-risk settings, there is a paucity of research aimed at supporting teachers’ SEC and well-being as means of promoting resilience and improving their performance and the performance of their students.

This research contributes to our understanding of competent classroom management and teacher care and begins to reveal how these constructs may be interrelated. In recent years there has been a move towards a more authoritative and proactive approach to classroom management (as opposed to controlling negative behaviors through coercive measures; Angell, 1991; Brophy, 2006; Glasser, 1988, 1998a; Levin & Nolan, 2006). This approach encourages cooperation and engagement through the careful application of teacher care in the form of establishing warm and supportive relationships and learning communities, providing firm but sensitive limit-setting and employing ongoing preventive strategies (Kohn, 1996; Marzano et al., 2003; Noddings, 2005; Watson, 2003; Watson & Battistich, 2006). Particularly relevant to this study is the suggestion that authoritative approaches rely on teachers’ and students’ self-regulation for the development and maintenance of a learning environment where students cooperate out of a sense of shared commitment and responsibility rather than as a means to avoid punishment or earn rewards (Weinstein, 1999; Woolfolk Hoy & Weinstein, 2006). This major paradigm shift has necessitated a greater degree of teacher SEC than was essential for classroom management in the past. Indeed, this shift was presaged by the work of Jacob Kounin who discovered a construct he identified as “withitness” (Kounin, 1977) associated with the teachers’ high degree of awareness of individual and group social and emotional dynamics and the ability to influence and regulate these dynamics proactively. His research suggested that SEC may help teachers maintain attentive and responsive monitoring, which prevents disruptive behavior and supports student on-task behavior. The pilot studies here indicate that teachers’ own development is a key issue if we are to improve the conditions of schooling, support teacher caring and commitment, and improve the academic and social-emotional growth of students.

REFERENCES


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Funds for the research reported in this article were provided by a grant from the U.S. Department of Education Institute of Educational Sciences #R305A090179.