

School Climate and Social–Emotional Learning: Predicting Teacher Stress, Job Satisfaction, and Teaching Efficacy

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The aims of this study were to investigate whether and how teachers' perceptions of social–emotional learning and climate in their schools influenced three outcome variables—teachers' sense of stress, teaching efficacy, and job satisfaction—and to examine the interrelationships among the three outcome variables. Along with sense of job satisfaction and teaching efficacy, two types of stress (workload and student behavior stress) were examined. The sample included 664 elementary and secondary school teachers from British Columbia and Ontario, Canada. Participants completed an online questionnaire about the teacher outcomes, perceived school climate, and beliefs about social–emotional learning (SEL). Structural equation modeling was used to examine an explanatory model of the variables. Of the 2 SEL beliefs examined, teachers' comfort in implementing SEL had the most powerful impact. Of the 4 school climate factors examined, teachers' perceptions of students' motivation and behavior had the most powerful impact. Both of these variables significantly predicted sense of stress, teaching efficacy, and job satisfaction among the participants. Among the outcome variables, perceived stress related to students' behavior was negatively associated with sense of teaching efficacy. In addition, perceived stress related to workload and sense of teaching efficacy were directly related to sense of job satisfaction. Greater detail about these and other key findings, as well as implications for research and practice, are discussed.

Keywords: social-emotional learning, school climate, teacher stress, job satisfaction, teaching efficacy

Teachers' sense of stress, teaching efficacy, and job satisfaction are three areas of research that have received much attention from researchers and policy makers over the past few decades (e.g., Shann, 1998; Tschannen-Moran & Woolfolk Hoy, 2007; Wilson, 2002). Research has shown that these variables not only relate to outcomes for teachers, such as motivation (Barnabé & Burns, 1994), engagement (Schaufeli & Bakker, 2004), and commitment to teaching (Weiqi, 2007; Weiss, 1999), they also affect students. Teachers who experience lower perceived stress and greater perceived teaching efficacy and job satisfaction encourage greater achievement (e.g., Caprara, Barbaranelli, Steca, & Malone, 2006; Ross, 1992) and self-efficacy (e.g., Ross, Hogaboam-Gray, & Hannay, 2001) among their students.

A revealing way to explore these three variables is via linkages with teachers' perceptions of school climate. School climate has been shown to be determined by the quality of relationships between individuals at a school, the teaching and learning that

takes place, collaboration between teachers and administrative staff, and the support present in a particular school (Cohen, McCabe, Michelli, & Pickeral, 2009). In turn, school climate influences all members of the school community. In the current study, we chose to focus on teachers' perceptions of school climate, rather than more objective measures of actual school climate. Our goal was to understand how teachers' interpretation of their contextual environment influences their experience of stress, teaching efficacy, and job satisfaction. According to Turner and Patrick (2008), attending to participants' perceptions of contexts is important because individuals do not all interpret the same context in identical ways. Furthermore, referring to sociocultural and social cognitive theories, N. E. Perry and Rahim (2011) argued that teachers' perceptions are critical for shaping the decisions they make in classrooms.

Ample research has shown that teachers' perceptions of school climate are a key predictor of teachers' sense of stress, teaching efficacy, and job satisfaction (e.g., Borg, 1990; Butt et al., 2005; De Nobile & McCormick, 2005; Herzberg, Mausner, & Snyderman, 1959; Hoy & Woolfolk, 1993; Kim & Loadman, 1994). Despite this, we still do not know how these experiences interact simultaneously in relation to school climate. Such understanding is necessary because emerging research has highlighted important relationships among these three teacher outcomes but also because perceptions of school-based variables such as school climate influence individuals and their experiences of stress, teaching efficacy, and job satisfaction in different ways. Therefore, the current study examines how teachers' perceptions of school climate operate as determinants of their sense of stress, teaching efficacy, and job satisfaction through an explanatory model.

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Another promising way to examine the three outcome variables is via their relationships with social–emotional learning (SEL). SEL is an area of the curriculum that is gaining much interest in recent practice and research. Teaching social and emotional skills alongside or embedded within the traditional academic curriculum is intended to foster thoughtful, socially responsible thoughts and actions among students (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). To date, research on SEL has mainly focused on student outcomes. We argue that SEL also has the potential to influence outcomes for the teachers who are teaching the SEL (e.g., enhancing teacher and student relationships). Research is beginning to emerge on the impact of SEL on teachers; however, in this research, the three teacher outcomes that we have identified have been not considered simultaneously. We aimed to rectify this in the current study by examining how teachers' beliefs about SEL operate as determinants of the three outcome variables. For analyses, structural equation modeling was used to examine the explanatory model of relationships between these variables.

Literature Review

To fully understand a teacher's working experiences, researchers need to examine several variables that tap into different aspects of his or her teaching work. As noted earlier, three such variables that have received ample attention in the literature, along with evidence of their significance for both teachers and students, are teachers' sense of stress, teaching efficacy, and job satisfaction. In this study, we examined all three together in order to gain a multifaceted understanding of teachers' experiences at work.

Work Stress

Teachers' work stress reflects the experience of unpleasant emotions as a result of teaching work (Kyriacou, 2001). This is not only highly relevant to teachers but also to school administrators and policy makers, given that the profession of teaching has been labeled as highly stressful by many researchers (Al-Fudail & Mellar, 2008; De Nobile & McCormick, 2005; Kyriacou, 2000, 2001). In fact, various international studies have shown that up to one third of teachers are stressed or extremely stressed (Borg & Riding, 1991; Geving, 2007; Kyriacou & Sutcliffe, 1979; Thomas, Clark, & Lavery, 2003). In these studies, many different sources have been cited as causes of teacher stress; however, two types of stress that have consistently been mentioned in the literature are stress related to students' behavior and discipline and stress related to workload (e.g., Borg & Riding, 1991; Boyle, Borg, Falzon, & Baglioni, 1995; Chaplain, 2008; Klassen & Chiu, 2010). Indeed, research has shown that these two types of stress are associated with several negative outcomes for teachers, including increased burnout (McCarthy, Lambert, O'Donnell, & Melendres, 2009) and reduced sense of teaching efficacy (Klassen & Chiu, 2010), job satisfaction (Klassen & Chiu, 2010), and commitment (Klassen & Chiu, 2011).

Teaching Efficacy

Sense of teaching efficacy has been defined as a teacher's "judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those

students who may be difficult or unmotivated" (Tschannen-Moran & Woolfolk Hoy, 2001, p. 783). Three factors of teaching efficacy that have been regularly examined in the literature include *efficacy for student engagement*, which refers to confidence in the ability to promote student motivation, understanding, and the valuing of learning; *efficacy for classroom management*, which refers to confidence in the ability to control disruptive behavior and have students follow classroom rules; and *efficacy for instructional strategies*, which refers to confidence in the ability to use effective strategies for teaching (Tschannen-Moran & Woolfolk Hoy, 2001).

The sense of teaching efficacy construct has been linked with important outcomes for teachers, including the use of effective teaching strategies (Guskey, 1988; Ross, 1994; Woolfolk Hoy & Burke-Spero, 2005), better classroom management (Tsouloupas, Carson, Matthews, Grawitch, & Barber, 2010), and greater teacher well-being (Egyed & Short, 2006; Smylie, 1988; Tschannen-Moran & Woolfolk Hoy, 2001). In addition, Klassen and Chiu (2010) found that teachers' experience of stress was an important contributor to their sense of teaching efficacy.

Job Satisfaction

Job satisfaction refers to a sense of fulfillment, gratification, and satisfaction from working in an occupation (Locke, 1969). More specifically, it refers to the degree to which an individual feels that his or her job-related needs are being met (Evans, 1997). Teachers' sense of job satisfaction has been associated with their motivation (Barnabé & Burns, 1994), well-being (Vansteenkiste et al., 2007), and commitment to teaching (Feather & Rauter, 2004). Because teachers constitute the greatest cost and human capital resource of a school (Perie & Baker, 1997), improving teachers' sense of job satisfaction can help to reduce costs associated with high levels of teacher stress that include teacher absenteeism and teacher illness (Billingsley & Cross, 1992).

Ample research has shown that teachers are generally satisfied with the aspects of their job that relate to their teaching work (e.g., work tasks, professional growth) but dissatisfied with the aspects that surround the performance of their job (e.g., working conditions, interpersonal relations, salary; Butt et al., 2005; Crossman & Harris, 2006; Dinham & Scott, 1998; Kim & Loadman, 1994). In addition, Caprara and colleagues (Caprara, Barbaranelli, Borgogni, & Steca, 2003; Caprara et al., 2006) found that teaching efficacy was a determinant of teachers' job satisfaction, and Klassen and Chiu (2010) found that both stress and teaching efficacy contributed to job satisfaction.

School Climate and Social–Emotional Learning

As described previously, the focus of the current study was how teachers' perceptions of school climate and SEL are related to their experiences of stress, teaching efficacy, and job satisfaction. Given the powerful impact of stress, teaching efficacy and job satisfaction on teachers' motivation, effectiveness, and well-being, it is imperative to understand how their perceptions of school and classroom factors influence these variables.

School climate. School climate has been a topic of research for many decades. Over this time, the construct has been referred to as the "esprit de corps" (A. C. Perry, 1908, p. 304), the "heart

and soul" (Freiberg, 1999, p. 11), and "the atmosphere, culture, resources, and social networks of a school" (Loukas & Murphy, 2007, p. 293). In the current study, we viewed school climate as the quality and character of a school (Cohen et al., 2009). The century-long interest in this area stems from the fact that school climate is a powerful characteristic that can foster resilience or become a risk factor for students, teachers, administrators, parents, and other members of the school community (Freiberg & Stein, 1999). Perceptions of school climate have been associated with burnout (Grayson & Alvarez, 2008) and work commitment (Collie, Shapka, & Perry, 2011) among teachers, as well as achievement (e.g., Brookover et al., 1978; MacNeil, Prater, & Busch, 2009) and school connectedness (Loukas, Suzuki, & Horton, 2006) among students.

In a review of school climate literature, Cohen, McCabe, Michelli, and Pickeral (2009) established that there are four dimensions of school climate: physical and social-emotional safety, quality of teaching and learning, relationships and collaboration, and the structural environment. According to school climate theorists (e.g., Moos, 1979; Tagiuri, 1968), these dimensions shape school climate. In turn, school climate influences the experiences of individuals within that system (Cohen et al., 2009). For example, research has shown that teachers' perceptions of school climate are an important contributor to their sense of stress (Borg, 1990; Skaalvik & Skaalvik, 2009), teaching efficacy (Hoy & Woolfolk, 1993; Pas, Bradshaw, & Hershfeldt, 2012), and job satisfaction (Taylor & Tashakkori, 1995).

As the literature we have cited shows, school climate is a powerful determinant of teacher and student outcomes. Decades' worth of research supports the importance of a positive school climate for both students and teachers. However, given that previous research has examined the impact of school climate perceptions on teacher outcomes separately, we have extended the literature in the current study by examining the outcomes together. Examining the outcomes concurrently to see how school climate influences them as they themselves interact is necessary given that emerging work has shown that stress influences both teaching efficacy and job satisfaction and that teaching efficacy, in turn, influences job satisfaction (e.g., Klassen & Chiu, 2010). In other words, rather than existing in isolation, these outcomes interact with one another. Furthermore, understanding how perceptions of school climate influence these outcome variables is important for teachers but also for students, who are inevitably impacted by their teachers' work experiences (e.g., Pakarinen et al., 2010). The current study investigated how teachers' perceptions of their school climate influence the three outcomes examined together in an explanatory model.

Social-emotional learning. The focus of SEL is on nurturing the social and emotional awareness and skills of students (Collaborative for Academic, Social, and Emotional Learning, 2003; Payton et al., 2008), including the ability to "recognize and manage their emotions; set and achieve positive goals; demonstrate caring and concern for others; establish and maintain positive relationships; make responsible decisions; and handle interpersonal situations effectively" (Payton et al., 2008, p. 6). Practice and research involving SEL has grown substantially in the past decade in response to educators, policy makers, and the public who have argued that schools should be teaching students more than just academic skills (Durlak et al., 2011). It has been argued that

schools should also teach skills that encompass social, emotional, and ethical behaviors (e.g., Learning First Alliance, 2001). Research has linked a number of positive student outcomes to SEL, including increases in happiness (Weare, 2000), self-efficacy beliefs (Zins & Elias, 2007), academic performance (Durlak et al., 2011; Zins, Bloodworth, Weissberg, & Walberg, 2007), and positive social behavior (Durlak et al., 2011).

Although the majority of research on SEL has involved students, emerging research is revealing that SEL is also associated with teacher outcomes. For example, research has shown that teachers' SEL practices are negatively associated with their burnout (Ransford, Greenberg, Domitrovich, Small, & Jacobson, 2009), their SEL beliefs are positively associated with their commitment to the profession (Collie et al., 2011), and their SEL skills are negatively associated with burnout and positively associated with job satisfaction (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010). We argue that this is because SEL influences teachers' experiences at school and in classrooms in ways that are not dissimilar to school climate (e.g., SEL not only impacts relationships between teachers and students but also between teachers). This interpretation is supported by Jennings and Greenberg's (2009) model of the prosocial classroom. In the model, school and contextual factors influence teachers' social-emotional competence and well-being. We argue that teachers' beliefs about SEL also influence their social-emotional competence and well-being—for instance, if a teacher does not believe he or she is competent in teaching SEL, then this will impact that teacher's ability to teach SEL. Therefore, we examined how teachers' beliefs about SEL impact their experiences of stress, teaching efficacy, and job satisfaction as part of the explanatory model.

Current Study

Although research is emerging on how teacher outcomes such as sense of stress, teaching efficacy, and job satisfaction are related, this research has not taken into account teachers' perceptions of school climate and SEL. As noted, these two school-based factors impact many of the issues that relate to the three teacher outcomes. The aim of the current study, therefore, was to propose and test an explanatory model of teachers' perceptions of these contextual variables and their sense of the three outcomes. This model is shown in Figure 1. Perceptions of school climate and SEL are shown as influencing the outcome variables. In addition, the outcome variables are shown to have differing relationships with one another. The design of our study does not allow for causal claims about the relationships tested. However, we decided the direction of the relationships in our analyses a priori from previous research and theorizing. For example, Wolpin, Burke, and Greenglass (1991) conducted longitudinal research to show that teachers' emotional exhaustion was causally prior to teachers' job satisfaction. Given that emotional exhaustion is considered the stress dimension of burnout (i.e., it reflects individual stress; Maslach, Scaufeli, & Leiter, 2001), we chose to use this conceptualization in the current study (i.e., with stress as a predictor of job satisfaction).

The two research questions addressed in the study were as follows: How do teachers' perceptions of school climate and SEL relate to their experiences of stress, teaching efficacy, and job satisfaction? And how do these three outcome variables interrelate and affect one another? As explained earlier, the first research

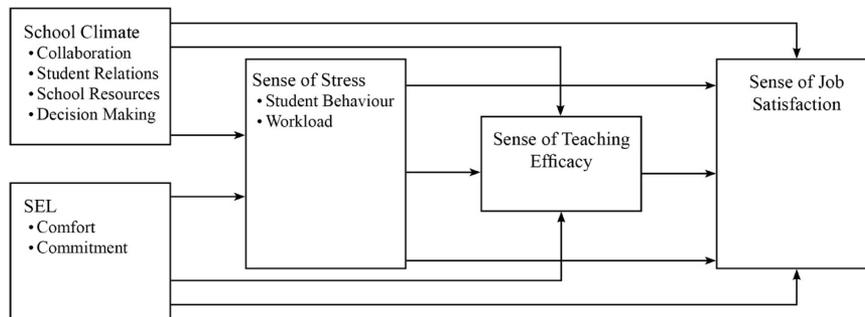


Figure 1. Model of relationships between study variables.

question enabled us to examine the outcomes in relation to two school-based variables, which has not been done before. The second research question enabled us to corroborate previous research about relationships among these variables. It also allowed us to extend previous research by examining interrelationships among outcomes while taking into account the influence of school-based variables. On the basis of our review of research, we hypothesized that the school-based variables would impact the three outcomes variables (e.g., Borg, 1990; Crossman & Harris, 2006; Hoy & Woolfolk, 1993; Skaalvik & Skaalvik, 2009) and that stress would impact teaching efficacy and job satisfaction (e.g., Klassen & Chui, 2010; Wolpin et al., 1991). In addition, we hypothesized that teaching efficacy would impact job satisfaction (e.g., Caprara et al., 2003).

Method

Sample

Participants were recruited from 17 different school districts in suburban, rural, and remote areas of British Columbia and Ontario, Canada. Although SEL is increasingly being promoted across Canada, these two provinces were chosen because they are the only two provinces that include the promotion of SEL in their educational mandates, thus providing a potentially richer variety of SEL experiences. There were 664 participants in total (80% female) and 54% were from British Columbia. The average years of experience for participants was 16.25 ($SD = 9.32$). The average age for female participants was 43.78 years ($SD = 9.52$) and 46.26 years ($SD = 9.55$) for males. The majority of participants worked at the elementary level (74%; the remainder taught at the secondary level) and were classroom teachers (77%). Some teachers also had other positions in the school as part of their workload. Other positions included working as support teachers (e.g., resource teachers, special education teachers, or counselors, 16%), teacher librarians (5%), administrators (i.e., principals, 1%), and substitute teachers (1%). All participants were teachers or undertook teaching roles in addition to their other positions and were, therefore, classified as teachers in the results.

With respect to school setting, 40% of the participants worked within 50 km of a regional city (i.e., a city with less than 1 million inhabitants), 30% worked within 50 km of a major city (i.e., a city with greater than 1 million inhabitants), 21% worked between 51 and 200 km of a regional or major city, and 9% worked over 200

km from a regional or major city. For the current study, data were collected during the 2009–2010 school year, beginning in October 2009 and ending in March 2010.

Procedures

Superintendents of school boards and presidents of local teachers' unions in British Columbia and Ontario were e-mailed preliminary details of the study. Seven school districts and 10 teachers' unions agreed to participate, which enabled us to collect data from teachers working in a variety of school settings and locations including suburban, rural, and remote areas. Teachers in these 17 districts were e-mailed details of the study along with a URL to the online questionnaire either via principals, union staff representatives, union presidents, or a district administrator (e.g., a district research coordinator). Teachers were given 3 weeks to complete the survey, and they were e-mailed a reminder after 2 weeks.

Although it was not possible to obtain accurate response rates due to the nature of the recruitment procedures for the study (i.e., it is impossible to know the extent to which principals and union representatives forwarded the e-mail invitation to teachers and how many teachers actually accessed the study's invitation e-mail), the sample for this study is remarkably similar in terms of demographics to the population from which it was drawn. For example, in British Columbia, the teaching population is 72% female, with an average age of 44 years for females and 45 years for males, and an average length of experience of 13.2 years (Ministry of Education, 2009). In Ontario, this population is 73% female, with an average age of 42 years for females and 44 years for males (other statistics for Ontario teachers were not available; Ontario College of Teachers, 2008a, 2008b). Further sample demographics were not collected as part of the study; however, we were able to compare the global population statistics from the participating school districts to the provincial averages, which is shown in Table 1.

These data, which have been successfully utilized to compare the characteristics of an online sample with the population from which it was drawn (e.g., Mertler, 2003), have made us fairly confident that we have a demographically representative sample. Furthermore, Mertler (2003) administered a questionnaire in a pen-and-paper format and an online format to two groups of teachers and found that there were no significant differences in the responses between the two groups. Finally, the fact that the average scores in this study were comparable to those found in other

Table 1
Population Statistics for Districts in British Columbia and Ontario Involved in the Current Study

Variable	Visible minorities (%)	Average income levels (\$)	Unemployment rates (%)
British Columbia			
Average for school districts in study	18.8	76,000 ^a	2.3
Province average	24.8	81,000 ^a	2.1
Ontario			
Average for school districts in study	22.8	67,000 ^b	6.4
Province average	2.2	69,000 ^b	5.8

Note. These statistics represent the total population living in the school districts that participated in the study. The British Columbia statistics are the 2010 population statistics (BC Stats, 2010) of these school districts. Similar data for Ontario were not available by school district; however, 2006 census data for regions in Ontario that are similar to the school district are reported (Statistics Canada, 2006).

^a Mean income. ^b Median income.

studies using the same measures also gave us confidence that our findings are representative. For example, Klassen et al. (2009) collected data on teachers in five different countries and reported teaching efficacy levels that were comparable to those found in the current study—efficacy for student engagement across the five studies corresponded to means ranging from 6.25 to 7.12 out of 9. The mean in the current study falls within that range (i.e., 6.72; see Table 2). Similarities also exist for teachers' sense of job satisfaction (Crossman & Harris, 2006), stress (Griffith, Steptoe, & Cropley, 1999), and school climate (Curry, 2009).

Measures

We used or adapted previously published measures to assess the two context variables and three teacher outcome variables. These scales are described below. From these scales, we created composites by taking the mean score of all the items in the subscale for that measure. Table 2 shows the reliability indexes, means, stan-

dard deviations, and ranges for the outcome and predictor variables.

Outcome variables.

Stress. Nine items from the Teacher Stress Inventory (Boyle et al., 1995) were used to measure two types of teacher stress: stress related to students' behavior and discipline (e.g., "How great a source of stress is maintaining class discipline?") and stress related to workload (e.g., "How great a source of stress is administrative work [e.g., filling in forms]?"). These items ask participants to rate the level of stress they experience carrying out different teaching tasks using a Likert-type scale ranging from *no stress* (0) to *extreme stress* (4). These items have shown evidence of validity and adequate reliability in previous work (e.g., Boyle et al., 1995; Klassen & Chiu, 2011).

Teaching efficacy. The Teachers' Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001) was used to measure teaching efficacy. This scale includes 12 items that measure three

Table 2
Reliability Indexes, Means, and Standard Deviations of the Outcome and Predictor Variables

Variable	α	M	SD	Range	
				Potential	Actual
Outcomes					
Workload stress	.72	2.34	0.96	0–4	0.3–4.0
Student behavior stress	.81	1.86	0.90	0–4	0.3–4.0
Teaching efficacy	.89	7.28	1.05	1–9	3.9–9.0
Efficacy for student engagement	.83	6.89	1.39	1–9	3.0–9.0
Efficacy for classroom management	.84	7.37	1.28	1–9	3.0–9.0
Efficacy for Instruction	.81	7.51	1.08	1–9	4.3–9.0
Job satisfaction	.84	5.10	0.90	1–6	1.0–6.0
Predictors					
School climate					
Collaboration	.79	3.34	0.97	1–5	1.0–5.0
Student relations	.88	3.82	0.84	1–5	1.0–5.0
School resources	.73	2.99	0.97	1–5	1.0–5.0
Decision making	.77	2.94	0.92	1–5	1.0–5.0
Social-emotional learning					
Social-emotional learning comfort	.85	3.70	0.96	1–5	1.0–5.0
Social-emotional learning commitment	.85	4.01	0.79	1–5	1.3–5.0

factors of teaching efficacy: efficacy for student engagement (e.g., “How much can you do to motivate students who show low interest in school work?”), classroom management (e.g., “How much can you do to control disruptive behavior in the classroom?”), and instructional strategies (e.g., “To what extent can you use a variety of assessment strategies?”). After conducting factor analyses, we combined the three efficacy subscales into a second-order factor of overall teaching efficacy as the subscales correlated highly with one another. Further details of this are provided in later text. Participants responded on a 9-point continuum ranging from *nothing* (1) to *a great deal* (9). This scale has been administered to variety of teacher samples in different contexts and has shown evidence of validity and adequate reliability (e.g., Klassen et al., 2009; Tschannen-Moran & Woolfolk Hoy, 2001).

Job satisfaction. Four items from the Job Satisfaction Survey (Spector, 1997) were used to measure teachers’ perceived satisfaction with the nature of teaching work. The items (e.g., “I feel a sense of pride in doing my job”) ask participants to rate their opinion of the nature of teaching work on a Likert-type scale that ranges from *disagree very much* (1) to *agree very much* (6). Spector (1997) found acceptable levels of reliability and provided evidence of validity for the scale.

Predictor variables.

School climate. Perceptions of school climate were measured using items taken from the Revised School Level Environment Questionnaire (Johnson, Stevens, & Zvoch, 2007). In total, 17 items were used to examine teachers’ perceptions of four factors of school climate: *collaboration*, which refers to the working relationships between teachers at the school (e.g., “There is good communication among teachers”); *student relations*, which refers to teachers’ perceptions of students’ behavior and motivation (e.g., “Most students are helpful and cooperative with teachers”); *school resources*, which refers to the availability of appropriate materials and equipment (e.g., “The school library has sufficient resources and materials”); and *decision making*, which refers to the level of input that teachers have in decision making at the school (e.g., “Teachers are frequently asked to participate in decisions”). These four factors of school climate are referred to in Cohen and colleagues’ (2009) four dimensions of school climate. Teachers responded to the statements on a scale ranging from *strongly disagree* (1) to *strongly agree* (5). This instrument was chosen because along with adequate reliability, Johnson et al. (2007) provided evidence for the validity of its inferences at both elementary and secondary school levels.

SEL. The Teacher SEL Beliefs Scale (Brackett, Reyes, Rivers, Elbertson, & Salovey, 2011) measures three beliefs about SEL: *comfort*, which refers to how comfortable a teacher is in implementing SEL (e.g., “I am comfortable providing instruction on social and emotional skills to my students”); *culture*, which refers to a teacher’s perception of the support and promotion of SEL in his or her school (e.g., “The culture in my school supports the development of children’s social and emotional skills”); and *commitment*, which refers to a teacher’s commitment to improving his or her skills in SEL (e.g., “I want to improve my ability to teach social and emotional skills to students”). After conducting factor analyses, we excluded the SEL culture variable from the model as it was deemed too similar to school climate. Further details of this are provided in the following section. Each belief includes four items and teachers responded to the items on a Likert-type scale

ranging from *strongly disagree* (1) to *strongly agree* (5). Brackett, Reyes, Rivers, Elbertson, and Salovey (2011) found acceptable levels of reliability and provided evidence of validity for the scale.

Data Analysis

The factor structure of the questionnaire items was tested using exploratory factor analyses (EFA) on half the data set. This was followed by confirmatory factor analysis (CFA) on the remaining half of the data set. Finally, the relationship between all factors were examined simultaneously with structural equation models (SEM). All analyses were conducted with Mplus Version 6.12 (Muthén & Muthén, 1998–2011). On the basis of Hu and Bentler’s (1999) work, we used the following fit indices and guidelines for model fit. Root-mean-square error of approximation (RMSEA) values of less than .10 were considered evidence of adequate fit and values less than .06 were considered evidence of a good fit. Comparative fit index (CFI) values greater than .90 were considered evidence of adequate fit, and values greater than .95 were considered evidence of good fit. Standardized root-mean-square residual (SRMR) values of less than .10 were considered evidence of adequate fit, and values of less than .08 was considered evidence of good fit. The chi-square model fit test is also reported. There was very little missing data for this study, ranging from 0.3% to 6.9% for all the variables. However, to increase power for the predictor variables, we conducted multiple imputation for missing values using Bayesian estimation through Mplus. For the outcome variables, methods robust to missing data were utilized for data analysis (i.e., no missing values were deleted).

Results

Teachers are organized within schools, which means that the data collected in this study are hierarchical in nature. In other words, teachers are nested within their schools such that teachers at the same school will tend to be more similar than teachers from other schools. To address the nested nature of the data, we originally attempted to conduct multilevel modeling; however, the model at the between-school level did not fit the data due to little variance at this level. This was likely due to the fact that 48% of participants were the only participant from their school (there were 126 schools involved in the study; the number of participants at each school ranged from one to 12). Instead, following the recommendations of Asparouhov and Muthén (2005) and Muthén and Muthén (1998–2011), we used robust (sandwich estimator) standard errors and a robust chi-square test with single-level models to account for the hierarchical data. This method reduces the chance of inflation of the parameter estimates, which can occur when the hierarchical nature of data are not taken into account. The robust methods were used for factor analyses and the structural equation modeling by using the “TYPE = COMPLEX” option in Mplus along with the school as the cluster variable.

Factor Analyses

Data from the measures were subjected to several EFAs. The EFAs were conducted with a randomly selected half of the data set. We performed factor analysis with robust weighted least squares and geomin oblique rotation. All items that showed low loadings

or loaded in ways that did not make theoretical sense were excluded, leaving between three and four items per construct (see Table A1 in the Appendix for the items that were used and their factor loadings). In addition, we chose to exclude the SEL culture variable because it was highly correlated with one of the school climate variables, decision making ($r = .70$), suggesting that it did not tap into a sufficiently distinct construct. Fit indexes for the final EFA showed the following: $\chi^2(313, N = 297) = 375.571$, $p = .009$, RMSEA = .026, CFI = .99, and SRMR = .018. These indices suggest good fit.

Following the EFA, we conducted CFA on the other half of the data set to examine all the items in one model. Latent variable correlations were examined, and high correlations among the three efficacy subscales were observed (r ranging from .66 to .85), suggesting that these three subscales would be better combined into one higher order factor of overall teaching efficacy. Using this second-order factor for efficacy, CFA was conducted once again. Fit indexes revealed good fit of the confirmatory measurement model: $\chi^2(617, N = 289) = 859.020$, $p < .001$, RMSEA = .037, and CFI = .97 (SRMR was not available for this estimation method). The latent variable correlations among the factors using the whole data set are shown in Table 3 and provide evidence that the factors are distinct constructs.

Structural Modeling

The relationships between the variables in Figure 1 were analyzed with SEM on the full data set. Nonsignificant paths with the lowest standardized coefficients were deleted one at a time until only significant paths remained in the model. The final model is shown in Figure 2. All of the path coefficients are statistically significant at $p < .05$. Standardized direct, total indirect, and total effects are shown in Table 4, along with the amount of variance explained by the model in the outcome variables. Fit indices suggested good fit: $\chi^2(628, N = 586) = 1183.809$, $p < .001$, RMSEA = .039, and CFI = .97 (SRMR was not available for this estimation method).

Student behavior stress. The model explained 32% of the variance in stress related to students' behavior and discipline. Participants' perceptions of the level of collaboration among

teachers at their school ($\beta = .30$, $p < .001$), students' behavior and motivation ($\beta = -.29$, $p < .001$), availability of school resources ($\beta = -.18$, $p = .012$), and input in decision making ($\beta = -.19$, $p = .001$), along with their comfort in implementing SEL ($\beta = -.21$, $p < .001$) and commitment to improving SEL skills ($\beta = .23$, $p < .001$), were reliably related to their sense of student behavior stress. Perceptions of students' behavior and motivation, availability of school resources, input in decision making, and comfort in implementing SEL were negatively associated with student behavior stress; however, perceptions of collaboration levels, as well as commitment to improving SEL skills, were positively associated with stress—as these perceptions increased, so did levels of stress associated with students' behavior and discipline.

Workload stress. The model explained 45% of the variance in workload stress. Of the predictor variables, participants' perceptions of the level of collaboration among teachers at their school ($\beta = .35$, $p < .001$), access to and adequate amounts of school resources ($\beta = -.18$, $p = .008$), and input in decision making ($\beta = -.67$, $p < .001$), along with their commitment to improving their skills in SEL ($\beta = .24$, $p < .001$), were linked to their sense of workload stress. Specifically, as teachers perceived they had greater input in decision making and adequate school resources, they expressed decreasing amounts of workload stress. In contrast, perceptions of collaboration levels, as well as commitment to improving SEL skills, were positively associated with workload stress.

Teaching efficacy. The model explained 38% of the variance in teaching efficacy. Participants' perceptions of the level of collaboration among teachers at their school ($\beta = .09$, $p = .047$), students' behavior and motivation ($\beta = .13$, $p = .013$), and comfort in implementing SEL ($\beta = .34$, $p < .001$) were all positively associated with perceived teaching efficacy. Among the outcomes, teachers who experienced greater stress related to students' behavior and discipline reported lower perceived teaching efficacy ($\beta = -.32$, $p < .001$), whereas workload stress was not related to teaching efficacy.

Job satisfaction. The model explained 46% of the variance in job satisfaction. Of the predictor variables, teachers' perceptions of students' behavior and motivation ($\beta = .17$, $p = .001$), their

Table 3
Latent Factor Correlations, Variances, and Covariances Between Independent and Dependent Variables in the Study

Variable	1	2	3	4	5	6	7	8	9	10
1. Collaboration	.649	.222	.262	.316	.095	-.036	-.051	-.080	.127	.127
2. Student relations	.307	.800	.287	.309	.200	-.003	-.264	-.081	.262	.278
3. School resources	.426	.421	.581	.283	.117	-.082	-.168	-.158	.142	.140
4. Decision making	.460	.406	.435	.726	.143	.007	-.100	-.292	.139	.241
5. SEL comfort	.157	.299	.204	.224	.561	.064	-.160	-.040	.273	.245
6. SEL commitment	-.065	-.005	-.154	.012	.123	.482	.083	.078	-.017	.031
7. Student behavior stress	-.083 ^a	-.387	-.289	-.153	-.280	.157	.583	.246	-.271	-.207
8. Workload stress	-.148 ^a	-.134	-.307	-.509	-.079	.167	.479	.454	-.063	-.200
9. Teaching efficacy	.211	.392	.250	.218	.488	-.032	-.475	-.125	.559	.298
10. Job satisfaction	.207	.409	.241	.373	.430	.058	-.358	-.392	.525	.576

Note. Correlations are shown in the lower left triangle, variances are on the diagonal, and covariances are in the upper right triangle. Correlations with an absolute value equal to or greater than $r = .083$ are significant at $p < .05$, those with an absolute value equal to or greater than $r = .123$ are significant at $p < .01$, and those with an absolute value equal to or greater than $r = .148$ are significant at $p < .001$. All other correlations are not significant. SEL = social-emotional learning.

^a Swing variables that change from a negative correlation in this table to a positive coefficient in the structural equation modeling analyses.

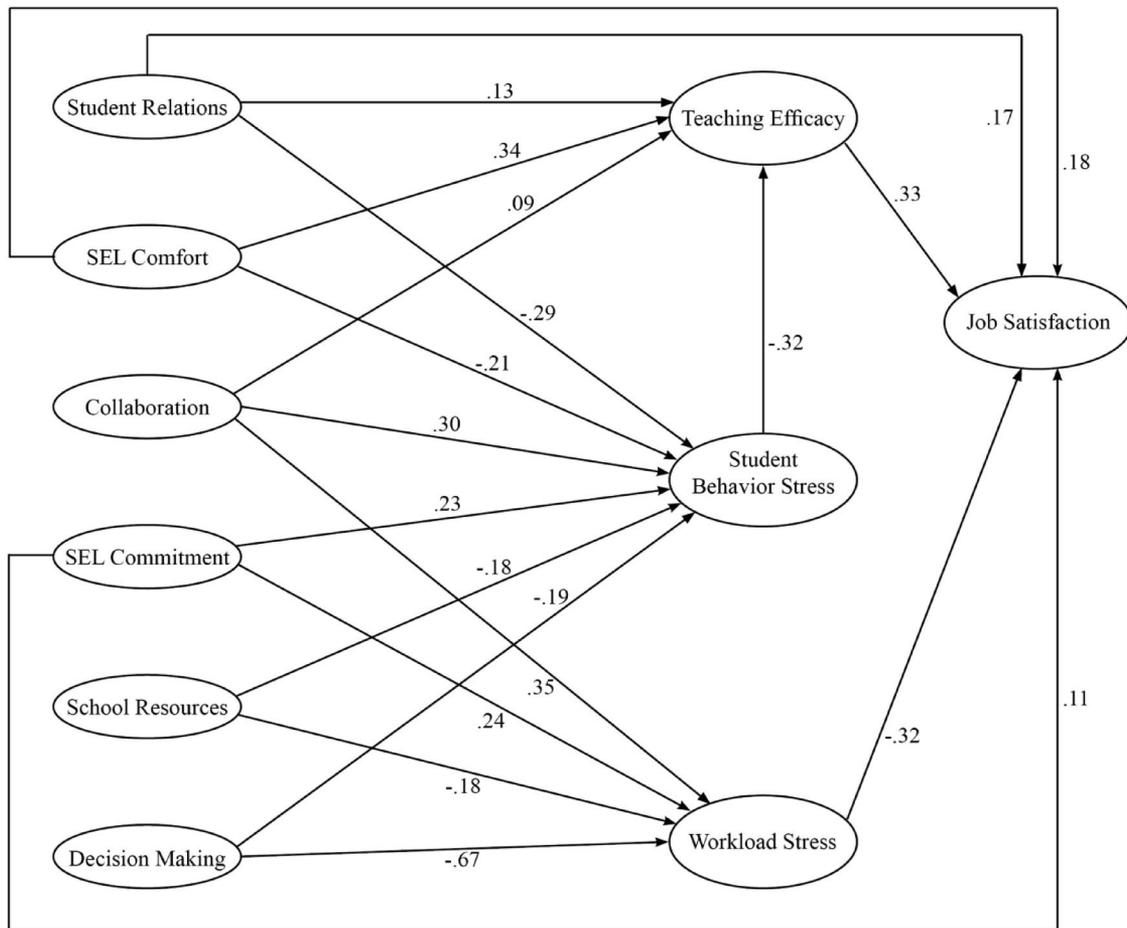


Figure 2. Structural equation model for teachers' perceptions of school climate and SEL and the relationship of these variables with sense of stress, efficacy, and job satisfaction. Paths that were not significant are not shown. All coefficients are significant ($p < .05$). Standardized regression coefficients are reported.

comfort in implementing SEL ($\beta = .18, p < .001$), and their commitment to improving SEL skills ($\beta = .11, p = .025$) were positively associated with job satisfaction. Among the outcomes, workload stress was negatively associated with job satisfaction ($\beta = -.32, p < .001$), whereas teaching efficacy was positively associated with job satisfaction ($\beta = .33, p < .001$).

Alternative model. We tested an alternative model where the relationships among school climate, SEL, teaching efficacy, and job satisfaction were fully mediated by the two types of stress. The justification for attempting this model was one of parsimony but also the possibility that teachers' experiences of efficacy and job satisfaction are related to school climate and SEL through their experiences of stress. If there was no significant difference in fit between this model and the final model described previously, then this alternative model would have been kept on the grounds of parsimony. However, the chi-square difference test was statistically significant, indicating the previously described model fit the data significantly better than the alternative model, $\chi^2(9) = 170.061, p < .001$. It appears that teachers' experiences of the three outcomes are impacted not only indirectly but also directly by perceptions of school climate and SEL.

Discussion

In the current study, we investigated the relations among teachers' perceptions of school climate and SEL, and their sense of stress, teaching efficacy, and job satisfaction. After confirming the factor pattern, we conducted SEM to answer our two research questions: (a) How are teachers' perceptions of school climate and SEL related to their sense of stress, teaching efficacy, and job satisfaction? and (b) How are teachers' sense of stress, teaching efficacy, and job satisfaction interrelated?

Research Question 1: School Climate and SEL

For the first research question, the SEM model indicated teachers' perceptions of school climate and SEL had positive and negative influences on the three outcome variables (see Figure 2). This finding emphasizes that teachers are not isolated individuals separate from their environment and also that their perceptions of this environment are highly important. Teachers are impacted by their perceptions of their working context, and this influences their

Table 4
Standardized Direct, Indirect, and Total Effects for the Predictor Variables on Each Outcome Variable

Independent variable	Stress			
	Student behavior	Workload	Teaching efficacy	Job satisfaction
Collaboration				
Direct	.303	.354	.090	—
Total indirect	—	—	-.097	-.115
Total	.303	.354	-.007	-.115
Student relations				
Direct	-.290	—	.126	.166
Total indirect	—	—	.093	.073
Total	-.290	—	.219	.239
School resources				
Direct	-.183	-.181	—	—
Total indirect	—	—	.058	.077
Total	-.183	-.181	.058	.077
Decision making				
Direct	-.189	-.672	—	—
Total indirect	—	—	.060	.234
Total	-.189	-.672	.060	.234
Social-emotional learning comfort				
Direct	-.209	—	.341	.182
Total indirect	—	—	.067	.135
Total	-.209	—	.408	.317
Social-emotional learning commitment				
Direct	.234	.242	—	.107
Total indirect	—	—	-.075	-.102
Total	.234	.242	-.075	.005
R^2 statistic	.317	.454	.382	.455

well-being and motivation. Several key findings from the first research question are discussed in the following text.

Comfort with SEL and commitment to improving SEL.

One of the most powerful school-based predictor variables in the model was a teachers' comfort in implementing SEL. It was negatively associated with stress related to students' behavior and discipline and positively associated with teaching efficacy and job satisfaction. These findings are supported by Jennings and Greenberg's (2009) model, which states that a teachers' social-emotional competence is important for four classroom characteristics: healthy teacher-student relationships, effective classroom management, a healthy classroom environment, and effective SEL implementation. In the current study, it is possible that teachers who are comfortable implementing SEL in their classroom also have higher social-emotional competence—that is, they are comfortable teaching SEL because they are comfortable with their own social-emotional abilities and understanding. As described by Jennings and Greenberg, these teachers may then experience more positive forms of the four classroom characteristics, which may help them to experience lower stress, greater teaching efficacy, and greater job satisfaction. For example, healthy classroom climates are important for effective teaching and learning experiences (e.g., Buyse, Verschueren, Verachtert, & Van Damme, 2009), which, in turn, may promote lower stress, greater teaching efficacy, and greater job satisfaction because students are on-task, and there are fewer behavioral issues.

In contrast to findings concerning comfort in implementing SEL, higher commitment to improving SEL skills had mixed results. It was positively associated with stress related to students'

behavior and workload; however, it was also positively related to job satisfaction. For stress, it is possible that the desire to improve skills may be associated with a reduced sense of teaching efficacy in relation to SEL—if teachers are committed to improving their SEL skills, they may feel that they currently lack these skills. Given that sense of teaching efficacy has been negatively associated with stress (e.g., Klassen & Chiu, 2011; Schwarzer & Hallum, 2008), then it makes sense that these teachers could report higher stress. This stress may be further exacerbated if the teacher values SEL highly (i.e., they 'buy in' to the teaching of SEL). In addition, the increasing focus that is being placed on SEL and the growing call for SEL by parents, the government, and the media (Durlak et al., 2011) may increase the pressure on teachers to implement SEL effectively and stress among teachers who do not feel that they have the appropriate SEL skills. A third possible explanation is that the desire to improve one's skills may increase the sense of "yet another task to do," which can increase the sense of workload pressure and related stress.

Regarding job satisfaction, it is possible that a desire to improve skills in SEL is associated with a sense of professional growth, which has been cited as a key source of job satisfaction for teachers (Crossman & Harris, 2006; Dinham & Scott, 1998). This may be because professional growth allows teachers to feel a sense of autonomy over their work or a more internal locus of control, which are both important for job satisfaction (e.g., Judge & Bono, 2001; Skaalvik & Skaalvik, 2009). Professional growth may also allow teachers to feel a sense of accomplishment, which has also been associated with job satisfaction (e.g., Kinman, Wray, & Strange, 2011). As a result, it is possible that commitment to

improving SEL skills relates to greater stress but also greater job satisfaction at the same time because it links with both positive and negative issues related to teachers' professional development (e.g., extra workload and expectations vs. greater sense of autonomy, accomplishment, and an internal locus of control).

These findings are important for policy makers and educators and add to the literature by indicating that SEL has an important impact not only on students but also on teachers. Rather than focusing primarily on the impact of SEL on students, more focus should be placed on how it affects teachers. After all, the SEL variables influenced the teacher outcomes of stress, teaching efficacy, and job satisfaction, which are related to important student outcomes including motivation (e.g., Pakarinen et al., 2010) and achievement (e.g., Caprara et al., 2006). Future research should examine how teachers' beliefs about and experiences with SEL impact their students.

The fact that commitment to improving SEL skills and comfort in implementing SEL were oppositely related to stress provides further important implications. In the short-term, learning new skills for SEL appears to be stressful; however, in the long term—once teachers' confidence for implementing SEL increases—they are likely to experience less stress, greater teaching efficacy, and greater job satisfaction. These findings highlight that educational innovations, even those we can agree should promote positive outcomes for students and teachers in the long run, can be difficult to implement in the short term. Administrators and policy makers need to consider how these innovations affect teachers, as well as students, and find ways to support teachers to develop and implement effective practices. Future longitudinal studies will be useful to explore these implications and the best ways of helping teachers gain the necessary SEL skills while minimizing stress.

Student relations. Of the school climate variables in the model, it was teachers' perceptions of students' behavior and motivation that was the most consistent, predicting all three outcome variables. Teachers who perceived better behavior and greater motivation among their students reported lower student behavior stress, greater teaching efficacy, and greater job satisfaction. For student behavior stress, the relationship is understandable. If a teacher perceives students as well behaved and motivated, then the teacher's stress related to students' behavior will clearly be lower. In addition, if a teacher perceives students to be highly motivated, then it is natural for the teacher to have greater confidence—or perceived teaching efficacy—in his or her ability to engage the students, manage the classroom, and use effective instructional strategies. In contrast, a teacher who perceives that students are not motivated for learning may experience low efficacy for teaching. Finally, when a teacher perceives students as motivated and well behaved, the teacher is able to spend less time on classroom management and more time on teaching, a highly satisfying aspect of his or her work (e.g., Butt et al., 2005).

These findings are important for educators and administrators alike and add to the literature by highlighting that teachers' perceptions of students are linked with teachers' experiences of stress, teaching efficacy, and job satisfaction. Educators themselves, as well as administrators, should be aware that teachers' perceptions of students' behavior and motivation are central to their experiences at work. Future research should examine in greater depth how teachers' perceptions are influenced by students' behavior

and motivation, and what steps schools can take to support teachers' positive perceptions of students.

Collaboration. Teachers' perceptions of the level of collaboration among colleagues for planning and teaching were positively associated with both types of stress, as well as teaching efficacy. The relationship with stress was contrary to what we expected—we assumed collaboration would be associated with reduced levels of perceived stress. This reasoning was based on previous research that has established a positive association between collaboration and sense of teaching efficacy (Shachar & Shmuelovitz, 1997), combined with the understanding that sense of teaching efficacy is negatively associated with stress (Klassen & Chiu, 2011). The latent factor correlations from the CFA also supported this hypothesis—the correlations between stress and collaboration were negative; however, they became positive coefficients through SEM, which suggests that there are suppression effects due to unobserved variables.

According to Johnson (2003), there are costs as well as benefits associated with collaboration. One cost is *work intensification*, which refers to more meetings and a greater workload as a result of planning and teaching in collaboration. In addition, Hargreaves and Dawes (1990) differentiated between collaborative cultures—where collaboration occurs naturally and is positive for teachers involved—and contrived collegiality—where collaboration is required and put in place by administrators and may increase administrative control. Collaboration, therefore, may be viewed positively or negatively by teachers depending on the climate of collaboration in their school. Unfortunately, the collaboration variable used in the current study does not differentiate between the different types of or perceptions toward collaboration (it only measures the level of collaboration). This may be the cause of the swinging betas and the positive relationship between collaboration and stress in the explanatory model. Future research should attempt to measure collaboration in ways that allow for teachers to indicate whether they find it a help or hindrance.

Contrasting the relationship with stress, teachers' perceptions of the level of collaboration among colleagues had a positive, direct relationship with their sense of teaching efficacy. An indirect relationship also emerged with student behavior stress as the mediator. Taken together, these two relationships suggest that if collaboration can be implemented in a way that does not lead to increased student behavior stress, then it will be positive for teaching efficacy. Otherwise, it will have a negative impact on teachers' outcomes. These findings add to the literature by revealing the simultaneously positive and negative impact of collaboration on teachers and, as noted before, highlight the importance of considering all possible effects when implementing collaborative planning and teaching initiatives. Furthermore, determining how collaboration can be implemented while minimizing the negative influence on teachers' stress levels would be a fruitful avenue for future research.

Research Question 2: Relationships Between Outcome Variables

For Research Question 2, the SEM model corroborated previous research by showing that the three outcomes were interrelated—teachers' experiences of one outcome appear to influence their experiences of the others. In addition, the second research question

allowed us to extend previous research by considering these interrelationships while taking into account school-based factors. As hypothesized, stress influenced teaching efficacy and job satisfaction, and teaching efficacy influenced job satisfaction. Several key findings from the second research question are discussed in the following text.

Student behavior stress. The stress that teachers experience in relation to students' behavior and discipline was negatively related to teaching efficacy. This result corroborates Klassen and Chiu's (2010) work, which showed a similar relationship, and provides further evidence of the profoundly negative impact that stress can have on teachers. For this relationship, it is likely that teachers who experience student behavior stress do not perceive themselves as successfully managing behavior, engaging students, or using effective instructional strategies. After all, student behavioral issues often occur when tasks are too hard, too easy, or not interesting, and this relates to the teachers' abilities in managing the classroom, engaging the students, and applying effective instructional strategies.

These findings are important for educators, teacher education programs, and policy makers, given that sense of teaching efficacy has not only been linked with important teacher outcomes, such as teacher effectiveness (Woolfolk Hoy & Burke-Spero, 2005) and teacher well-being (Schwarzer & Hallum, 2008) but also to students' success (Caprara et al., 2006). The findings highlight the critical importance of helping teachers gain skills for effectively working with students in the classroom so that they do not experience high levels of student behavior stress. These findings are also important because they provide evidence for the importance of considering teachers' sense of stress and efficacy in relation to one another, not in isolation. In other words, if a teacher is experiencing student behavior stress, he or she may be experiencing lower teaching efficacy as well. As these findings highlight, considering these outcomes together is an important step for understanding how they interrelate but also how they can be improved. To build on this, future research should continue to consider these outcomes simultaneously. In addition, research that examines the effectiveness of classroom management professional development programs should also consider the influence that these programs have on teachers' sense of stress and efficacy, along with other markers of effectiveness.

Job satisfaction. Workload stress and teaching efficacy were both directly related to teachers' sense of job satisfaction in ways that were supported by previous research (e.g., Caprara et al., 2006; Klassen, 2010). Specifically, perceptions of workload stress related negatively to job satisfaction, whereas perceptions of teaching efficacy related positively to job satisfaction. Of more interest was the indirect relationship between student behavior stress and job satisfaction that was mediated by teaching efficacy. This relationship indicates that, on its own, student behavior stress is not necessarily detrimental to job satisfaction. However, when it is coupled with a reduced sense of teaching efficacy, it has an impact on job satisfaction.

This finding provides important insights about the significance of teaching efficacy in the relationship between stress and job satisfaction. It appears that when student behavior stress is accompanied by feelings of inadequacy (i.e., reduced teaching efficacy), the stressors have a detrimental impact on job satisfaction. However, if the stressors are not accompanied by feelings of inade-

quacy or low confidence, then perhaps they are viewed as challenges and do not negatively influence job satisfaction. This finding highlights the pivotal importance of efficacy in the relationship between student behavior stress and job satisfaction. It also provides greater understanding about why student behavior stressors impact teachers differently. In other words, differing levels of confidence among teachers may cause individuals to react to similar classroom events in markedly different ways. Future research should attempt to explore in greater depth the influence of efficacy in relation to student behavior stress and job satisfaction.

The finding also sheds light on how a teacher's confidence may reduce the negative impact of stress. Selye (1974) asserted that stress can be both negative and positive for individuals and their work performance. In fact, Selye argued that stress is highly important for survival because it is invigorating and spurs individuals into action. However, there is a tipping point when the amount of stress becomes too great for an individual to handle. Future research in this area is needed to unravel these findings and to differentiate between the positive and negative stress that teachers experience.

The implications of this finding are important for educators and policy makers alike. Teaching is a stressful occupation (Kyriacou, 2000, 2001); however, if teachers have confidence in their ability to engage students, manage the classroom and use effective instructional strategies, the impact of student behavior stress does not appear to relate negatively to job satisfaction. Schools should, therefore, provide teachers with appropriate and sustained preservice and in-service professional development in effective and engaging teaching and classroom management strategies to help them build their confidence. Considering that job satisfaction is associated with important teacher outcomes (e.g., teacher motivation; Barnabé & Burns, 1994), this is a simple, but powerful step that schools and teacher education programs can take.

Limitations and Future Directions

There are several limitations to this study. First, the causal relationships examined in the study were not able to be supported due to the cross-sectional study design. Instead, directional relationships were decided a priori and were based on relationships supported in theory and previous research. Our findings support the directional relationships from previous research; however, longitudinal research is needed in order to support causality. Examining these variables longitudinally, over the course of a school year for example, with analysis techniques such as growth curve modeling would provide greater understanding not only about causality but also about how the variables fluctuate over time.

Second, despite efforts to confirm the representativeness of the data, the possibility remains that teachers who agreed to complete the questionnaire were unique in ways that we were not able to identify, which would lead to a response bias. For example, it is possible that only teachers who were highly functioning found time to complete the questionnaire. The results, therefore, may be overly positive compared with the actual population and, as such, may have captured only the tip of the iceberg about teachers' perceptions of their working conditions.

The third limitation is that it was not possible to know exactly how participants interpreted the questions, and if they, in fact, viewed the constructs as the researchers intended. This is a limi-

tation of all survey self-report research and can be helped in future research through the use of mixed methods designs or think-aloud protocols where participants talk through their thoughts as they answer a questionnaire. The factor analyses performed do, however, provide some support that the participants were responding as expected.

The fourth limitation is that the study is threatened by single-source bias. This means that there may be increased relationships between the variables in the study because data were collected via one source (self-report questionnaires). To reduce this type of bias, we clearly told participants that their responses would be anonymous, the scale items were measured such that ambiguous or unfamiliar questions were defined and examples were provided, and verbal labels were provided for the midpoints of scales wherever possible (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In future research, the use of mixed methods designs, where data are collected from various sources, or the inclusion of control variables, such as social desirability, would help provide a remedy for this limitation.

Finally, the school climate instrument did not consider relationships with students or colleagues. Research is highlighting the importance of teacher–student relationships (Klassen, Perry, & Frenzel, 2011) and principals' support (Price, 2012) in teachers' working environment. The student relations variable used in the current study referred to teachers' perceptions of students' behavior and motivation, but not teacher–student relationships. In addition, the collaboration variable considered only the work that teachers do together. Future work should consider teachers' perceived interpersonal relationships with students and other teachers as part of school climate examinations.

Final Conclusions

The results of the current study provide clear evidence of the importance of teachers' perceptions of school climate and SEL for their work experiences and have important practical and research implications. Three unique contributions of the research, along with key implications are highlighted below.

Taken together, the study's findings provide support for the argument that teachers' perceptions are an important consideration in research. Not only should teachers' perceptions be considered in relation to their experiences of outcomes related to well-being and motivation, but their perceptions of school-based contextual variables are also important in shaping their experiences. In other words, in addition to measuring actual school climate and SEL, educators, and researchers alike should be aware of the importance of teachers' perceptions of school climate and SEL in determining teachers' well-being and motivation when investigating and implementing school climate and SEL initiatives.

As noted previously, the findings related to SEL provide support for greater investigation of the impact of SEL on teachers, in addition to the ample research on SEL in relation to students. Teachers' beliefs about SEL are strongly related to their experiences of stress, teaching efficacy, and job satisfaction and should be a core consideration for schools and districts that are implementing SEL and researchers who are examining the effectiveness of SEL programs. Furthermore, the current study extends previous research on job satisfaction by highlighting the importance of SEL for this outcome. Both of the SEL beliefs were positively associ-

ated with job satisfaction, suggesting that in addition to the key sources generally examined, the social and emotional well-being of teachers and students is another important factor to consider in job satisfaction research.

The current study has provided corroborating evidence for previous research on the interrelationships among the three outcome variables (e.g., Klassen & Chiu, 2010). It has also extended previous research on teacher job satisfaction by highlighting the pivotal importance of low confidence in the relationship between student behavior stress and job satisfaction. In addition, the current study has provided support for a more integrated model of the three outcomes that takes into account teachers' perceptions of two important school-based variables. The findings clearly indicate that researchers and policy makers need to consider the complexity of relationships among variables when examining or implementing policy related to teacher well-being and motivation.

Finally, it is important to highlight that the implications of this research are not limited to teachers. Student learning, achievement, and well-being are also supported by positive school climates (Cohen et al., 2009) and effective SEL implementation (Durlak et al., 2011), and by teachers who experience reduced stress (Pakarinen et al., 2010), and greater teaching efficacy (Tschannen-Moran & Woolfolk Hoy, 2001) and job satisfaction (Perie & Baker, 1997). The current study, therefore, extends teacher research by showing how teachers' perceptions of school climate and SEL impact three important teacher outcomes that also are inextricably related to students' and schools' outcomes.

References

- Al-Fudail, M., & Mellar, H. (2008). Investigating teacher stress when using technology. *Computers & Education, 51*, 1103–1110. doi:10.1016/j.compedu.2007.11.004
- Asparouhov, T., & Muthén, B. (2005). *Multivariate statistical modeling with survey data*. Retrieved from http://www.fcsm.gov/05papers/Asparouhov_Muthen_IIA.pdf
- Barnabé, C., & Burns, M. (1994). Teachers' job characteristics and motivation. *Educational Research, 36*, 171–185. doi:10.1080/0013188940360206
- BC Stats. (2010). *Social-economic profiles: School districts*. Retrieved from http://www.bcstats.gov.bc.ca/data/sep/sd/sd_main.asp
- Billingsley, B. S., & Cross, L. H. (1992). Predictors of commitment, job satisfaction, and intent to stay in teaching: A comparison of general and special educators. *Journal of Special Education, 25*, 453. doi:10.1177/002246699202500404
- Borg, M. G. (1990). Occupational stress in British educational settings: A review. *Educational Psychology, 10*, 103. doi:10.1080/0144341900100201
- Borg, M. G., & Riding, R. J. (1991). Stress in teaching: A study of occupational stress and its determinants, job satisfaction and career commitment among primary schoolteachers. *Educational Psychology, 11*, 59. doi:10.1080/014434191011010104
- Boyle, G. J., Borg, M. G., Falzon, J. M., & Baglioni, A. J. (1995). A structural model of the dimensions of teacher stress. *British Journal of Educational Psychology, 65*, 49–67. doi:10.1111/j.2044-8279.1995.tb01130.x
- Brackett, M., Palomera, R., Mojsa-Kaja, J., Reyes, M. R., & Salovey, P. (2010). Emotion-regulation ability, burnout, and job satisfaction among British secondary-school teachers. *Psychology in the Schools, 47*, 406–417. doi:10.1002/pits.20478
- Brackett, M. A., Reyes, M. R., Rivers, S. E., Elbertson, N. A., & Salovey, P. (2011). Assessing teachers' beliefs about social and emotional learn-

- ing. *Journal of Psychoeducational Assessment*. Advance online publication. doi:10.1177/0734282911424879
- Brookover, W. B., Schweitzer, J. H., Schneider, J. M., Beady, C. H., Flood, P. K., & Wisenbaker, J. M. (1978). Elementary school social climate and school achievement. *American Educational Research Journal*, *15*, 301–318.
- Butt, G., Lance, A., Fielding, A., Gunter, H., Rayner, S., & Thomas, H. (2005). Teacher job satisfaction: Lessons from the TSW pathfinder project. *School Leadership and Management*, *25*, 455–471. doi:10.1080/13634230500340807
- Buyse, E., Verschueren, K., Verachert, P., & Van Damme, J. (2009). Predicting school adjustment in early elementary school: Impact of teacher-child relationship quality and relational classroom climate. *Elementary School Journal*, *110*, 119–141. doi:10.1086/605768
- Caprara, G. V., Barbaranelli, C., Borgogni, L., & Steca, P. (2003). Efficacy beliefs as determinants of teachers' job satisfaction. *Journal of Educational Psychology*, *95*, 821–832. doi:10.1037/0022-0663.95.4.821
- Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology*, *44*, 473–490. doi:10.1016/j.jsp.2006.09.001
- Chaplain, R. P. (2008). Stress and psychological distress among trainee secondary teachers in England. *Educational Psychology*, *28*, 195–209. doi:10.1080/01443410701491858
- Cohen, J., McCabe, E. M., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, *111*, 180–213.
- Collaborative for Academic, Social, and Emotional Learning. (2003). *Safe and sound: An educational leader's guide to evidence-based SEL programs (Illinois edition)*. Retrieved from <http://www.casel.org/publications/an-educational-leaders-guide-to-evidence-based-sel-programs-illinois-edition>.
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2011). Predicting teacher commitment: The impact of school climate and social-emotional learning. *Psychology in the Schools*, *48*, 1034–1048. doi:10.1002/pits.20611
- Crossman, A., & Harris, P. (2006). Job satisfaction of secondary school teachers. *Educational Management Administration and Leadership*, *34*, 29–46. doi:10.1177/1741143206059538
- Curry, C. (2009). *Correlation of emotional intelligence of school leaders to perceptions of school climate as perceived by teachers* (Unpublished doctoral dissertation). Indiana University of Pennsylvania, Indiana, PA.
- De Nobile, J., & McCormick, J. (2005, November). *Job satisfaction and occupational stress in Catholic primary schools*. Paper presented at the annual conference of the Australian Association for Research in Education, Sydney, Australia.
- Dinham, S., & Scott, C. (1998). A three-domain model of teacher and school executive career satisfaction. *Journal of Educational Administration*, *36*, 362–378. doi:10.1108/09578239810211545
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*, 405–432. doi:10.1111/j.1467-8624.2010.01564.x
- Egyed, C. J., & Short, R. J. (2006). Teacher self-efficacy, burnout, experience, and decision to refer a disruptive student. *School Psychology International*, *27*, 462–474. doi:10.1177/0143034306070432
- Evans, L. (1997). Understanding teacher morale and job satisfaction. *Teaching and Teacher Education*, *13*, 831–845. doi:10.1016/S0742-051X(97)00027-9
- Feather, N. T., & Rauter, K. A. (2004). Organizational citizenship behaviors in relation to job status, job insecurity, organizational commitment and identification, job satisfaction, and work values. *Journal of Occupational and Organizational Psychology*, *77*, 81–94. doi:10.1348/096317904322915928
- Freiberg, H. J. (1999). Introduction. In H. J. Freiberg (Ed.), *School climate: Measuring, improving, and sustaining healthy learning environments* (pp. 1–11). Philadelphia, PA: Falmer Press.
- Freiberg, H. J., & Stein, T. A. (1999). Measuring, improving and sustaining healthy learning environments. In H. J. Freiberg (Ed.), *School climate: Measuring, improving, and sustaining healthy learning environments* (pp. 11–29). Philadelphia, PA: Falmer Press.
- Geving, A. M. (2007). Identifying the types of student and teacher behaviors associated with teacher stress. *Teaching and Teacher Education*, *23*, 624–640. doi:10.1016/j.tate.2007.02.006
- Grayson, J. L., & Alvarez, H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *Teaching and Teacher Education*, *24*, 1349–1363. doi:10.1016/j.tate.2007.06.005
- Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., . . . Elias, M. J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, *58*, 466–474. doi:10.1037/0003-066X.58.6-7.466
- Griffith, J., Steptoe, A., & Cropley, M. (1999). An investigation of coping strategies associated with job stress in teachers. *British Journal of Educational Psychology*, *69*, 517–531. doi:10.1348/000709999157879
- Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education*, *4*, 63–69. doi:10.1016/0742-051X(88)90025-X
- Hargreaves, A., & Dawe, R. (1990). Paths of professional development: Contrived collegiality, collaborative culture, and the case of peer coaching. *Teaching and Teacher Education*, *6*, 227–241. doi:10.1016/0742-051X(90)90015-W
- Herzberg, F., Mausner, B., & Snyderman, B. (1959). *The motivation to work*. New York, NY: Wiley.
- Hoy, W. K., & Woolfolk, A. E. (1993). Teachers' sense of efficacy and the organizational health of schools. *Elementary School Journal*, *93*, 355. doi:10.1086/461729
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*, 1–55. doi:10.1080/10705519909540118
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, *79*, 491–525. doi:10.3102/0034654308325693
- Johnson, B. (2003). Teacher collaboration: Good for some, not so good for others. *Educational Studies*, *29*, 337–350. doi:10.1080/0305569032000159651
- Johnson, B., Stevens, J. J., & Zvoch, K. (2007). Teachers' perceptions of school climate: A validity study of scores from the Revised School-Level Environment Questionnaire. *Educational and Psychological Measurement*, *67*, 833–844. doi:10.1177/0013164406299102
- Joinson, A. (1999). Social desirability, anonymity, and Internet-based questionnaires. *Behavior Research Methods, Instruments & Computers*, *31*, 433–438. doi:10.3758/BF03200723
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, *86*, 80–92. doi:10.1037/0021-9010.86.1.80
- Kim, I., & Loadman, W. E. (1994). *Predicting teacher job satisfaction*. Columbus: Ohio State University.
- Kimman, G., Wray, S., & Strange, C. (2011). Emotional labour, burnout, and job satisfaction in UK teachers: The role of workplace social support. *Educational Psychology*, *31*, 843–856. doi:10.1080/01443410.2011.608650
- Klassen, R. M. (2010). Teacher stress: The mediating role of collective efficacy beliefs. *Journal of Educational Research*, *103*, 342–350. doi:10.1080/00220670903383069

- Klassen, R. M., Bong, M., Usher, E. L., Chong, W. H., Huan, V. S., . . . Georgiou, T. (2009). Exploring the validity of a teachers' self-efficacy scale in five countries. *Contemporary Educational Psychology, 34*, 67–76. doi:10.1016/j.cedpsych.2008.08.001
- Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology, 102*, 741–756. doi:10.1037/a0019237
- Klassen, R. M., & Chiu, M. M. (2011). The occupational commitment and intention to quit of practicing and preservice teachers: Influence of self-efficacy, job stress, and teaching context. *Contemporary Educational Psychology, 36*, 114–129. doi:10.1016/j.cedpsych.2011.01.002
- Klassen, R. M., Perry, N. E., & Frenzel, A. C. (2011). Teachers' relatedness with students: An underemphasized component of teachers' basic psychological needs. *Journal of Educational Psychology*. Advance online publication. doi:10.1037/a0026253
- Kyriacou, C. (2000). *Stressbusting for teachers*. London, England: Nelson Thornes.
- Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational Review, 53*, 27–35. doi:10.1080/00131910120033628
- Kyriacou, C., & Sutcliffe, J. (1979). Teacher stress and satisfaction. *Educational Research, 21*, 89–96. doi:10.1080/0013188790210202
- Learning First Alliance. (2001). *Every child learning: Safe and supportive schools*. Alexandria, VA: Author.
- Locke, E. (1969). What is job satisfaction? *Organizational Behavior & Human Performance, 4*, 309–336. doi:10.1016/0030-5073(69)90013-0
- Loukas, A., & Murphy, J. L. (2007). Middle school student perceptions of school climate: Examining protective functions on subsequent adjustment problems. *Journal of School Psychology, 45*, 293–309. doi:10.1016/j.jsp.2006.10.001
- Loukas, A., Suzuki, R., & Horton, K. D. (2006). Examining school connectedness as a mediator of school climate effects. *Journal of Research on Adolescence, 16*, 491–502. doi:10.1111/j.1532-7795.2006.00504.x
- MacNeil, A. J., Prater, D. L., & Busch, S. (2009). The effects of school culture and climate on student achievement. *International Journal of Leadership in Education, 12*, 73–84. doi:10.1080/13603120701576241
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology, 52*, 397. doi:10.1146/annurev.psych.52.1.397
- McCarthy, C. J., Lambert, R. C., O'Donnell, M., & Melendres, L. T. (2009). The relation of elementary teachers' experience, stress, and coping resources to burnout symptoms. *Elementary School Journal, 109*, 282–300. doi:10.1086/592308
- Mertler, C. A. (2003). Patterns of response and nonresponse from teachers to traditional and Web surveys. *Practical Assessment, Research & Evaluation, 8*(22). Retrieved from <http://PAREonline.net/getvn.asp?v=8&n=22>
- Ministry of Education. (2009). *Teacher statistics: 2009/10*. Vancouver, BC, Canada: Author.
- Moos, R. H. (1979). *Evaluating educational environments*. San Francisco, CA: Jossey-Bass.
- Muthén, L. K., & Muthén, B. O. (1998–2011). *Mplus user's guide* (6th ed.). Los Angeles, CA: Authors.
- Ontario College of Teachers. (2008a). *Annual report: Membership demographics*. Retrieved from http://www.oct.ca/annual_report/2008/en/stats_downloads.html
- Ontario College of Teachers. (2008b). *Membership demographics*. Retrieved from http://www.oct.ca/annual_report/2008/en/stats_demographics.html
- Pakarinen, E., Kiuru, N., Lerkkanen, M.-J., Poikkeus, A.-M., Siekkien, M., & Nurmi, J.-E. (2010). Classroom organization and teacher stress predict learning motivation in kindergarten children. *European Journal of Psychology of Education, 25*, 281–300. doi:10.1007/s10212-010-0025-6
- Pas, E. T., Brashaw, C. P., & Hershfeldt, P. A. (2012). Teacher- and school-level predictors of teacher efficacy and burnout: Identifying potential areas for support. *Journal of School Psychology, 50*, 129–145. doi:10.1016/j.jsp.2011.07.003
- Payton, J. W., Weissberg, R. P., Durlak, J. A., Dymnicki, A. B., Taylor, R. D., . . . Pachan, M. (2008). *The positive impact of social and emotional learning for kindergarten to eighth-grade students: Findings from three scientific reviews*. Retrieved from Collaborative for Academic, Social, and Emotional Learning website at <http://casel.org/publications/positive-impact-of-social-and-emotional-learning-for-kindergarten-to-eighth-grade-students-findings-from-three-scientific-reviews>
- Pearson, L. C., & Moomaw, W. (2005). The relationship between teacher autonomy and stress, work satisfaction, empowerment, and professionalism. *Educational Research Quarterly, 29*, 38–54.
- Perie, M., & Baker, D. (1997). *Job satisfaction among America's teachers: Effects of workplace conditions, background characteristics, and teacher compensation*. Washington, DC: National Center for Education Statistics.
- Perry, A. C. (1908). *The management of a city school*. New York, NY: Macmillan.
- Perry, N. E., & Rahim, A. (2011). Studying self-regulated learning in classrooms. In B. J. Zimmerman & D. H. Schunk (Eds.), *Handbook of self-regulation of learning and performance* (pp. 122–136). New York, NY: Taylor & Francis.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879–903. doi:10.1037/0021-9010.88.5.879
- Price, H. E. (2012). Principal–teacher interactions: How affective relationships shape principal and teacher attitudes. *Educational Administration Quarterly, 48*, 39–85. doi:10.1177/0013161X11417126
- Ransford, C. R., Greenberg, M. T., Domitrovich, C. E., Small, M., & Jacobson, L. (2009). The role of teachers' psychological experiences and perceptions of curriculum supports on the implementation of a social and emotional learning curriculum. *School Psychology Review, 38*, 510–532.
- Ross, J. A. (1992). Teacher efficacy and the effects of coaching on student achievement. *Canadian Journal of Education/Revue Canadienne de l'éducation, 17*, 51–65.
- Ross, J. A. (1994). The impact of an inservice to promote cooperative learning on the stability of teacher efficacy. *Teaching and Teacher Education, 10*, 381–394. doi:10.1016/0742-051X(94)90020-5
- Ross, J. A., Hogaboam-Gray, A., & Hannay, L. (2001). Effects of teacher efficacy on computer skills and computer cognitions of Canadian students in Grades K–3. *Elementary School Journal, 102*, 141–156. doi:10.1086/499697
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior, 25*, 293–315. doi:10.1002/job.248
- Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology, 57*, 152–171. doi:10.1111/j.1464-0597.2008.00359.x
- Selye, H. (1974). *Stress without distress*. Philadelphia, PA: Lippincott.
- Shachar, H., & Shmuelovitz, H. (1997). Implementing cooperative learning, teacher collaboration, and teachers' sense of efficacy in heterogeneous junior high schools. *Contemporary Educational Psychology, 22*, 53–72. doi:10.1006/ceps.1997.0924
- Shann, M. H. (1998). Professional commitment and satisfaction among teachers in urban middle schools. *Journal of Educational Research, 92*, 67–73. doi:10.1080/00220679809597578
- Skaalvik, E. M., & Skaalvik, S. (2009). Does school context matter? Relations with teacher burnout and job satisfaction. *Teaching and Teacher Education, 25*, 518–524. doi:10.1016/j.tate.2008.12.006
- Smylie, M. A. (1988). The enhancement function of staff development: Organizational and psychological antecedents to individual teacher change. *American Educational Research Journal, 25*, 1–30.

- Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes and consequences*. London, England: Sage.
- Statistics Canada. (2006). *2006 Community profiles*. Retrieved from <http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/index.cfm?Lang=E>
- Stephenson, D. (1990). Affective consequences of teachers' psychological investment. *Journal of Educational Research*, *84*, 53-57.
- Tagiuri, R. (1968). The concept of organizational climate. In R. Tagiuri & G. H. Litwin (Eds.), *Organizational climate: Exploration of a concept* (pp. 11-35). Boston, MA: Harvard University Press.
- Taylor, D. L., & Tashakkori, A. (1995). Decision participation and school climate as predictors of job satisfaction and teachers' sense. *Journal of Experimental Education*, *63*, 217. doi:10.1080/00220973.1995.9943810
- Thomas, N., Clark, V., & Lavery, J. (2003). Self-reported work and family stress of female primary teachers. *Australian Journal of Education*, *47*, 73-87.
- Tickle, B. R., Chang, M., & Kim, S. (2011). Administrative support and its mediating effect on U.S. public school teachers. *Teaching and Teacher Education*, *27*, 342-349. doi:10.1016/j.tate.2010.09.002
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, *17*, 783-805. doi:10.1016/S0742-051X(01)00036-1
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education*, *23*, 944-956. doi:10.1016/j.tate.2006.05.003
- Tsouloupas, C., Carson, R., Matthews, R., Grawitch, M., & Barber, L. (2010). Exploring the association between teachers' perceived student misbehavior and emotional exhaustion: The importance of teacher efficacy beliefs and emotion regulation. *Educational Psychology*, *30*, 173-189. doi:10.1080/01443410903494460
- Turner, J. C., & Patrick, H. (2008). How does motivation develop and why does it change? Reframing motivation research. *Educational Psychologist*, *43*, 119-131. doi:10.1080/00461520802178441
- Vansteenkiste, M., Neyrinck, B., Niemiec, C. P., Soenens, B., De Witte, H., & Van, D. B. (2007). On the relations among work value orientations, psychological need satisfaction and job outcomes: A self-determination theory approach. *Journal of Occupational & Organizational Psychology*, *80*, 251-277.
- Weare, K. (2000). *Promoting mental, emotional and social health: A whole school approach*. New York, NY: Routledge.
- Weiqi, C. (2007). The structure of secondary school teacher job satisfaction and its relationship with attrition and work enthusiasm. *Chinese Education and Society*, *40*, 17-31. doi:10.2753/CED1061-1932400503
- Weiss, E. M. (1999). Perceived workplace conditions and first-year teachers' morale, career choice commitment, and planned retention: A secondary analysis. *Teaching and Teacher Education*, *15*, 861-879. doi:10.1016/S0742-051X(99)00040-2
- Wilson, V. (2002). *Feeling the strain: An overview of the literature on teachers' stress* (SCRE Research Rep. No. 109). Glasgow, Scotland: Scottish Council for Research in Education.
- Wolpin, J., Burke, R. J., & Greenglass, E. R. (1991). Is job satisfaction an antecedent or a consequence of psychological burnout? *Human Relations*, *44*, 193-209. doi:10.1177/001872679104400205
- Woolfolk Hoy, A., & Burke-Spero, R. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education*, *21*, 343-356. doi:10.1016/j.tate.2005.01.007
- Zins, J. E., Bloodworth, M. R., Weissberg, R. P., & Walberg, H. J. (2007). The scientific base linking social and emotional learning to school success. *Journal of Educational and Psychological Consultation*, *17*, 191-210. doi:10.1080/10474410701413145
- Zins, J. E., & Elias, M. J. (2007). Social and emotional learning: Promoting the development of all students. *Journal of Educational and Psychological Consultation*, *17*, 233-255. doi:10.1080/10474410701413152

(Appendix follows)

Appendix

Table A1
Standardized Factor Loadings for the Items in Each Construct

Construct and items	Factor loadings (λ)
Collaboration	
Teachers design instructional programs together.	.81
I have regular opportunities to work with other teachers.	.76
Classroom instruction is rarely coordinated across teachers. (R)	.76
Student relations	
Most students are well mannered or respectful of the school staff.	.92
Most students are helpful and cooperative with teachers.	.88
Students in this school are well behaved.	.94
School resources	
Instructional equipment is not consistently accessible. (R)	.72
Video equipment, tapes, and films are readily available.	.54
The supply of equipment and resources is not adequate. (R)	.88
Decision making	
Teachers are frequently asked to participate in decisions.	.84
Decisions about the school are made by the principal. (R)	.76
I have very little to say in the running of the school. (R)	.83
Social-emotional learning comfort	
Taking care of my students' social and emotional needs comes naturally to me.	.68
I am comfortable providing instruction on social and emotional skills to my students.	.90
Informal lessons in social and emotional learning are part of my regular teaching practice.	.84
I feel confident in my ability to provide instruction on social and emotional learning.	.95
Social-emotional learning commitment	
I would like to attend a workshop to develop my own social and emotional skills.	.66
I want to improve my ability to teach social and emotional skills to students.	.86
I would like to attend a workshop to learn how to develop my students' social and emotional skills.	.99
Workload stress	
Too much work to do (e.g., lesson preparation and marking).	.68
Administrative work (e.g., filling in forms).	.75
Pressure from leadership and the school district.	.65
Student behavior stress	
Noisy students.	.78
Maintaining class discipline.	.89
Students' impolite behavior.	.78
Efficacy for management	
How much can you do to control disruptive behavior in the classroom?	.96
How much can you do to calm a student who is disruptive or noisy?	.78
How much can you do to get children to follow classroom rules?	.77
Efficacy for engagement	
How much can you do to motivate students who show low interest in school work?	.78
How much can you do to help your students value learning?	.96
How much can you do to get students to believe they can do well in school work?	.80
Efficacy for instruction	
To what extent can you craft good questions for your students?	.70
To what extent can you use a variety of assessment strategies?	.75
To what extent can you provide an alternative explanation or example when students are confused?	.77
How much can you assist families in helping their children do well in school?	.77
Job satisfaction	
I like doing the things I do at work.	.84
I feel a sense of pride in doing my job.	.86
My job is enjoyable.	.86

Note. (R) refers to reverse scored items.

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