

Effects of Teachers' Emotion Regulation, Burnout, and Life Satisfaction on Student Well-Being

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### **Abstract**

Theoretical perspectives suggest the importance of teachers' emotion regulation skills, occupational health (e.g., burnout), and well-being (e.g., life satisfaction) for students, yet few studies have empirically tested these associations. The current study tested whether teachers' cognitive reappraisal, expressive suppression, occupational burnout, and life satisfaction in the fall were related to the level, and trajectory across the school year, of three indicators of student well-being: student-reported positive outlook, student-reported emotional distress, and peer-reported prosocial behavior. Multilevel growth modeling was employed to examine data from 15 elementary teachers and their 320 students. Teachers' emotion regulation skills and life satisfaction were associated with students' well-being: when teachers used cognitive reappraisal, students reported low emotional distress; when teachers used expressive suppression, students reported a less positive outlook and peers reported few prosocial behaviors; teachers' life satisfaction was associated with high levels of prosocial behavior. Effects on the trajectory of student well-being were not significant.

**Keywords:** Elementary school teachers; teacher well-being; emotion regulation; occupational burnout; life satisfaction, student well-being; prosocial behavior

## Effects of Teachers' Emotion Regulation, Burnout, and Life Satisfaction on Student Well-Being

Teachers have long worked to improve students' reading, writing, and arithmetic skills, sometimes known as the "three Rs". Recent re-conceptualizations of the aims of education have highlighted the development of the whole child, bringing attention to the importance of cultivating students' social, emotional, and moral skills, and overall well-being (Domitrovich et al., 2017; Illinois State Board of Education, 2019; Weissberg et al., 2015; World Health Organization., 2003). Addressing the holistic needs of students, among other factors, contributes to the stressful and emotionally-demanding nature of teaching today (Greenberg et al., 2016; Johnson et al., 2005). Increasingly, theorists have drawn attention to how teachers' own emotion regulation skills, occupational health (e.g., burnout), and personal well-being (e.g., life satisfaction) may support or impede their ability to address the holistic needs of their students (Jennings & Greenberg, 2009; Roeser et al., 2013; Schonert-Reichl, 2017). Despite the potentially significant impact of these teacher-level experiences for their students' social and emotional well-being, to date, these associations have remained largely unexplored empirically. The current study aims to address this gap in the literature by investigating the effect of teachers' emotion regulation skills, occupational burnout, and life satisfaction on the level and development of their students' well-being across one school year.

### **Theoretical Models of Teacher Influence**

Two theoretical perspectives suggest the importance of teachers' emotion regulation skills, occupational burnout, and life satisfaction in relation to *students'* experiences at school. The first, developmental and ecological systems models (Bronfenbrenner, 1994; Eccles & Roeser, 2016), suggest the general importance of teacher- and school-level factors in

understanding the development of students' well-being. These models posit that individuals develop within social contexts. For school-aged children who spend many of their waking hours at school, the classroom is a particularly important social context that influences their social, emotional, and academic development (Roeser et al., 2000).

From this perspective, research has focused on how teachers influence students' development in the classroom through both individual-psychological processes and social practices. For example, teachers' feelings, beliefs, goals, seating practices, management of social dynamics, interactions with students, and emotional relationships with students have been linked with student outcomes (e.g., Farmer et al. 2011; Gest & Rodkin, 2011; Hughes & Chen, 2011; Luckner & Pianta, 2011). Of particular relevance to this study, research shows that teachers' emotionally supportive interactions with students at the classroom level are related to students' academic achievement and social-emotional skills (e.g., Hamre & Pianta, 2005; Mashburn et al., 2008). Teachers' one-on-one relationships with students have also been shown to promote students' academic performance, social competence, and less internalizing and externalizing behavior problems (e.g., Pianta & Stuhlman, 2004). One interpretation of this work is that the teacher, as the leader of the classroom, essentially creates the "weather" or the emotional climate in the classroom in which students learn and grow (Eccles & Roeser, 2016). Theoretically, teacher-level factors may influence students' well-being both directly, through modeling, and indirectly through the classroom climate they create and interactions they engage in with students.

Along these same lines, more specific theoretical models have recently been developed that focus attention on malleable teacher-level factors that may influence students' holistic development in school. These include Jennings and Greenberg's (2009) Prosocial Classroom

model and Roeser et al.'s (2013) model of the impacts of mindfulness training on teachers, teaching, and student outcomes. These approaches specifically emphasize the importance of teachers' emotion regulation skills, occupational health, and personal well-being for student well-being through both modeling and social-interactional processes. These models posit that when teachers are equipped with social and emotional skills, and experience high levels of occupational health and well-being, their students will have opportunities to emulate those qualities, and will also experience them directly in their interactions with the teacher. In contrast, when teachers lack social and emotional skills, and experience poor occupational health and well-being, their students will experience these both implicitly and interactionally. Although these associations have been theorized, few studies have examined them. Two recent studies have found teachers' depressive symptoms to be related to poorer student achievement and social-emotional development (McLean & Connor, 2015; Roberts et al., 2016). We aim to extend this line of research by testing the impact of teachers' emotion regulation skills, burnout, and life satisfaction on students' well-being across the school year.

### **Conceptualization of Student Well-Being**

Although there is no consensual developmental conceptualization of well-being during the childhood years, there is a general consensus that well-being is a multidimensional construct (e.g., Kazdin, 1993; Masters, 2004; Seligman, 2010). A similarity across various models is their emphasis on the *social* and *emotional* dimensions of well-being. Further, Kazdin posited that well-being is the absence of distress, and the presence of optimal functioning in these domains. The current study focused on three indicators of students' well-being: the presence of a positive outlook (e.g., optimism; emotional dimension), an absence of emotional distress (emotional dimension), and the presence of prosocial behavior towards others (social dimension).

Not only are these meaningful experiences for students in the moment, but research shows that positive outlook is related to subsequent self-esteem, life satisfaction, general well-being, and physical health (Alarcon et al., 2013; Fischer & Leitenberg, 1986). Emotional distress in childhood (e.g., anxious and depressive symptoms) is associated with subsequent academic, behavioral and emotional challenges in adolescence and adulthood (Garber et al., 2009; Kapornai & Vetro, 2008). Prosociality (e.g., doing kind acts for others) supports the development of positive relationships and predicts subsequent social adjustment (Crick, 1996). Because positive outlook, emotional distress, and prosocial behavior are indicators of emotional and social well-being and affect subsequent development, we focused here on how teachers' emotion regulation, burnout, and life satisfaction may be associated with these dimensions of students' well-being.

This study focused on children during middle childhood (fourth and fifth grades), which is considered to be a particularly influential period of development (e.g., Berry & Connor, 2010; Best et al., 2009; Del Giudice, 2018; Eccles, 1999), a time during which great weight is placed on students' social and emotional capabilities (e.g., Masten & Coatsworth, 1998; Meier et al., 2006), and a time during which previous research has demonstrated links between teacher-level influences and student outcomes (e.g., Luckner & Pianta, 2011). In the following sections, we review research on the effects of emotion regulation, burnout, and life satisfaction, with a specific focus on teachers where available, and examine how these experiences may be associated with students' social and emotional well-being.

### **Teachers' Emotion Regulation and Student Well-Being**

Emotions are ubiquitous in education. As Zembylas wrote, "emotion is inextricably linked to teachers' lives" (2005, p. 468). Teachers experience a range of positive and negative

emotions on a daily basis: joy when the struggling student finally understands the difficult concept; satisfaction when students get the right answer; pleasure when they witness a student helping a peer; frustration at a student's lack of effort; anger when a student violates classroom rules; annoyance when a colleague interrupts a class lesson (Sutton & Wheatley, 2003).

Teachers are expected to successfully navigate these situations and the emotions that arise from them in a way that optimizes a warm, responsive, and productive learning environment. Of interest in the current study were two strategies that teachers use to regulate these emotions, and the effects they have on students' well-being.

Cognitive reappraisal is an emotion regulation strategy that involves re-conceptualizing a potentially emotion-eliciting situation in a more positive or less emotional way. Gross's (2002) process model of emotion regulation theorizes that emotions unfold over time, and that regulation strategies may be evoked at various points in this process. Antecedent-focused strategies occur early in the process before emotion response tendencies become fully activated and influence the behavioral or physiological response to the situation. These strategies are theorized to be a healthy way of regulating emotions because they prevent the initial negative feelings from emerging and thereby modulate the expression of these feelings (Haga et al., 2009). Cognitive reappraisal is considered to be one such healthy, antecedent-focused strategy. Empirical evidence shows individuals' use of cognitive reappraisal in stressful situations reduces negative emotion and emotional distress, reduces the behavioral expressions of such emotions, and is associated with positive affect (Haga et al., 2009). Although most studies of cognitive reappraisal have focused on the intrapersonal benefits of engaging in this strategy (e.g., Haga et al., 2009; Martin & Dahlen, 2005), there is initial evidence of interpersonal benefits, such that individuals who engage in cognitive reappraisal are more likely to be liked by peers (Gross,



2002). In the school context, teachers who use this strategy may both appear more regulated and satisfied, as well as teach these strategies to their students either explicitly or implicitly (Bandura, 1971). For example, when a student breaks a class rule, instead being harsh and critical, and blaming the student, a teacher who engages in cognitive reappraisal would have a more compassionate response and may offer a positive interpretation of the event for themselves and other students (Jennings et al., 2012). Consequently, we hypothesized that students whose teachers engaged in cognitive reappraisal would mirror both this emotion regulation strategy, as well as the correlates of cognitive reappraisal, and would report lower levels of emotional distress and higher levels of positive outlook than students whose teachers engaged in less cognitive reappraisal.

Expressive suppression is another common emotion regulation strategy, and involves a modification of the behavioral expression of emotion (Haga et al., 2009). Although expressive suppression is most often used to downregulate a negative emotion, it is important to note that this strategy also includes the suppression of positive emotions (Gross & John, 2003). In theory, teachers who engage in expressive suppression show little emotion. Expressive suppression is considered a response-focused strategy because it occurs late in the regulatory process, after an emotion is already underway (Gross, 2002). Response-focused strategies require intense cognitive effort and are considered unhealthy and ineffective emotion regulation strategies. Empirically, individuals who attempt to suppress their emotions report exacerbated feelings of the negative emotion they are attempting to suppress (Gross & Levenson, 1993), and are more emotionally reactive than individuals who do not engage in this strategy (Haga et al., 2009). Expressive suppression is associated with higher levels of negative affect and depressive symptoms, and lower levels of positive affect and life satisfaction (Haga et al., 2009).

The functionalist theory of emotion asserts that emotions serve important purposes, and that emotionally expressive behavior is critical for interpersonal relations by helping individuals establish and maintain positive social bonds (Srivastava et al., 2009). Emotionally expressive behavior signals approachability and a desire to affiliate: individuals who express more positive emotion are rated by others as someone who they were inclined to approach, and who they had favorable expectations for interactions (Harker & Keltner, 2001). Emotional expression establishes rapport and facilitates feelings of closeness (Srivastava et al., 2009): partners of individuals instructed to suppress their emotions report feeling less rapport in the conversation (Butler et al., 2003). Interactions characterized by high levels of emotion suppression have physiological consequences for the partner: in one study, individuals who engaged with an emotionally suppressive partner experienced higher blood pressure than individuals whose partner was emotionally expressive (Butler et al., 2003).

We know of only one study that focused explicitly on expressive suppression in teachers. This study concluded that teachers do engage in expressive suppression in about a third of their lessons, and linked teachers' expressive suppression to their feelings of anger in the classroom (Keller et al., 2014). Thus, the dearth of research on expressive suppression and teachers led us to extrapolate the interpersonal consequences of expression suppression found in the larger field to this population of teachers and students, and the hypothesis that students of emotionally suppressive teachers be less likely to show prosocial behavior to one another.

### **Teachers' Occupational Burnout and Student Well-Being**

Burnout is the experience of exhaustion, cynicism, and inefficacy that results from chronic emotional and interpersonal job stressors (Maslach et al., 2001). Teachers' feelings of occupational burnout are associated with a host of undesirable outcomes, including irritability,

low self-efficacy, diminished job performance, turnover intentions, job absenteeism, and colleagues' feelings of burnout (Brouwers & Tomic, 2000; Herman et al., 2018). Teacher burnout is also related to poor quality interactions with students, namely, lower emotional support, poorer classroom organization, and lower instructional support (Braun et al., 2019; Jennings, 2015).

Far fewer studies have examined the impact of teacher burnout on student outcomes. The evidence that does exist suggests a process of emotional contagion, whereby the emotional experiences of one individual spills over to others. In one study that used a composite of burnout, stress, efficacy, and coping, Herman et al. (2018) found teachers with the poorest occupational health had students who exhibited lower prosocial behavior and higher disruptive behavior. Another study found teachers' experience of burnout to be related to students' levels of morning cortisol, a biological indicator of stress, which the authors posit is affected through teachers' less positive interactions with students and a stressful classroom environment (Oberle & Schonert-Reichl, 2016). In this study, we expected that students whose teachers report greater feelings of burnout would experience greater feelings of emotional distress and less prosocial behavior than students whose teachers are less burned out.

### **Teachers' Life Satisfaction and Student Well-Being**

Life satisfaction reflects an individual's cognitive appraisal of their life, and is conceptualized as a holistic indicator of well-being (Erdogan et al., 2012). Life satisfaction has also been conceptualized as a means to an end, as it is related to both physical and psychological well-being in various domains of life. For example, self-reported life satisfaction is associated with physiological measures of physical health, third-party assessments of psychological health, as well as sleep complaints, job turnover, job performance, and even mortality (Diener et al.,

2013; Erdogan et al., 2012). A theory explaining the relationship between life satisfaction and these outcomes has yet to be proposed.

Few studies have examined the consequences of one's own life satisfaction on the well-being of *others*. Extrapolating findings from the larger field of life satisfaction to teachers, we posit that teachers with high life satisfaction will have more energy to establish a warm, supportive, responsive, and caring environment for students. As such, we explored the possibility that teachers' life satisfaction would be associated with students' well-being across all dimensions.

### **Development of Student Well-Being Across the School Year**

The small body of research connecting teacher experiences to student well-being has largely utilized cross-sectional data, allowing researchers to draw conclusions about how teacher experiences are associated with the *level* of classroom quality or student experiences at a single point in time (e.g., Braun et al., 2018; Jennings, 2015; Oberle & Schonert-Reichl, 2016). A distinct, yet related question focuses on how teachers' experiences may influence students' *development*, or trajectory over time. However, the question of teacher influence on the trajectory of students' well-being has remained largely unstudied. The little existing longitudinal research in this domain suggests a more positive trajectory across the school year for students whose teachers experience greater well-being. For example, students of depressed teachers made fewer gains in social and emotional skills across the preschool year than students whose teachers were not depressed (e.g., Roberts et al., 2016). As the elementary school years are a critical time for cultivating important social and emotional competencies and well-being, (Berry & Connor, 2010; Best et al., 2009; Meier et al., 2006) it is of interest to understand whether teachers' experiences affect both the *level* of their students' well-being, as well as the *development* of their

well-being across the school year. The current study capitalizes on the longitudinal nature of these data by exploring both of these questions. Based on the dearth of longitudinal research on the constructs of focus in the current study, this question of teacher influence on students' trajectory was largely exploratory.

### **Present Study**

The present study employed multilevel growth modeling to address the following research questions (RQs):

RQ<sub>1</sub>: Are teachers' emotion regulation skills (e.g., cognitive reappraisal and expressive suppression), occupational burnout, and life satisfaction in the fall of the school year related to the level of their students' well-being (e.g., positive outlook, emotional distress, and prosocial behavior) at the end of the school year?

RQ<sub>2</sub>: Are teachers' emotion regulation skills, occupational burnout, and life satisfaction in the fall of the school year related to the trajectory of their students' well-being across the school year?

With regard to RQ<sub>1</sub>, we hypothesized that teachers who engaged in cognitive reappraisal would have students who reported low levels of emotional distress and high levels of positive outlook. In contrast, we hypothesized that teachers who engaged in expressive suppression would have students who reported low levels of prosocial behavior. With regards to burnout, we expected teachers with high levels of burnout to have students who report high levels of emotional distress and low levels of prosocial behavior. We hypothesized that teachers with higher life satisfaction would have students who experience well-being across outcomes. RQ<sub>2</sub> was largely exploratory. Previous research in this area generally suggests that students whose teachers report greater well-being experience more positive development across time than other

students. Thus, we explored the possibility that students whose teachers employ more cognitive reappraisal, less expressive suppression, were less burned out, and had greater life satisfaction would have more positive trajectories of positive outlook, emotional distress, and prosocial behavior across the school year.

## **Method**

### **Participants**

The current study took place in two public school districts in Western Canada – one located in a large urban city serving approximately 50,000 students (District 1), and the other located in a small suburban city, serving approximately 5,800 students (District 2). The data used in this study were part of a larger RCT examining the effectiveness of a social and emotional learning (SEL) program – Kindness in the Classroom. Elementary schools in each district that were approximately equivalent on school size, sociometric status (SES), and ethnic/racial diversity were first identified as potential sites for the study because of their focus on the promotion of students' SEL. The research study was first described to the principals of 17 schools (12 in District 1, and 5 in District 2) who were told that we would like to recruit up to two fourth and fifth grade teachers from their schools. The principals then shared the information about the research study with the fourth and fifth grade teachers in their schools. Teachers were made aware that once they decided to participate, they had a 50% chance of being randomized as a comparison classroom. Across the 17 schools, there was a total of 41 teachers who were recruited to participate, of whom 30 agreed to participate (73%).

Because the focus of the current study was on the naturally occurring associations between teachers' emotion regulation skills, occupational burnout, and life satisfaction, and student well-being, only teachers in the control condition were included in these analyses. As

such, participants included 15 fourth and fifth grade teachers ( $M = 16.42$  years,  $SD = 6.58$  years of teaching experience; 86% female; 67% white; 80% with a post baccalaureate diploma or graduate degree; 20% fourth, 13% fifth, and the remaining teaching a combined class of fourth and fifth grade students, which is typical for this region) from two districts in British Columbia, Canada, with teachers in the former district serving a larger, more diverse community. Except for two teachers in District 1 who taught at the same school, all teachers taught at different schools. Teachers from these two districts did not differ in gender composition, years of teaching, nor reports of cognitive reappraisal, expressive suppression, burnout, or life satisfaction (see Table 1). Consistent with the demographics of the area, teachers in District 1 were more ethnically diverse than teachers in District 2  $t(8) = 2.53, p = .04$ .

Each teacher was the lead teacher of only one class. Class sizes ranged from 23 to 29 students,  $M = 27, SD = 2$ . Students in these classes were recruited to participate in the study and participation was reasonably high with 80% of the eligible students receiving parent/guardian consent and giving assent. Participation (calculated by subtracting the number of non-consented/assented students and absent students at each time point from the total number of students in the class) for each classroom at each time point was:  $M_{T1} = 78\%$ ,  $\text{Range}_{T1} = 48\%$ - $96\%$ ;  $M_{T2} = 76\%$ ,  $\text{Range}_{T2} = 36\%$ - $93\%$ ;  $M_{T3} = 75\%$ ,  $\text{Range}_{T3} = 40\%$ - $93\%$ . Apart from one class with notably low participation at each time point (48%, 36%, and 40%, respectively), all other classes had participation rates of  $> 60\%$  at all time points. Of the participating students, 17 were omitted from analyses because they reported that reading English was “hard” or “very hard” for them, which called into question the validity of their survey responses. In total, 320 students ( $M = 9.93$  years,  $SD = 0.57$  years old at the start of the study; 48% female; 83% English as their first language; 46% fourth grade) were included in analyses.

## **Procedure**

Participating teachers provided their informed consent, and consent was also solicited from parents of students in these classes. Data were collected at three time points across a single school year: first two weeks in December (Time 1), first two weeks in March (Time 2), last week in May and first two weeks in June (Time 3). Note that the school year in Canada begins the first week of September (the day after Labor Day) and ends at the end of June. Teachers completed an online survey containing questions regarding their demographics, emotion regulation skills, occupational burnout, and life satisfaction at Time 1. At each of the three time points, trained research assistants blind to study condition administered demographic, self-report, and peer behavioral assessments to students during one 45-minute regular class period; each item on the questionnaires was read aloud while students completed the measures to control for any differences in reading abilities. Children were told that they were participating in a research study that was aimed at understanding “children’s experiences in school” and “their attitudes and beliefs about their classmates and themselves”, and then provided their informed assented to participate.

## **Measures**

### **Teachers’ emotion regulation skills, occupational burnout, and life satisfaction.**

Teachers reported on their use of two emotion regulation strategies, feelings of occupational burnout, and life satisfaction.

*Emotion regulation skills.* *Cognitive reappraisal* was assessed using the corresponding subscale of the Emotion Regulation Questionnaire (Gross & John, 2003). Teachers responded to items such as “When I want to feel less negative emotion (such as sadness or anger), I change what I’m thinking about.” Items were rated on a 1 to 7 scale (1 = *Strongly Disagree*; 7 = *Strongly*



*Agree*; 6 items;  $\alpha = .83$ ) and averaged to create a composite score with higher values indicating greater use of cognitive reappraisal strategies. *Expressive suppression*, the extent to which teachers suppressed the expression of both positive and negative emotions in the classroom, was measured using the corresponding subscale from the Emotion Regulation Questionnaire (Gross & John, 2003). Items included “I keep my emotions to myself,” and “When I am feeling positive emotions, I am careful not to express them.” Items were rated on a 1 to 7 scale (1 = *Strongly Disagree*; 7 = *Strongly Agree*; 4 items;  $\alpha = .69$ ) and were averaged to create a composite score with higher values indicating greater levels of expression suppression.

***Occupational burnout*** was measured using the Maslach Burnout Inventory (Maslach et al., 1996), which assessed three components of burnout: emotional exhaustion, lack of personal accomplishment, and depersonalization. Items included “How often do you feel emotionally drained from your work?” (emotional exhaustion), “How often do you deal very effectively with the problems of your students?” (personal accomplishment; reversed), and “How often do you feel that you treat some students as if they were impersonal objects?” (depersonalization), and were rated on a 1 to 7 scale (1 = *Never*; 7 = *Every Day*; 21 items;  $\alpha = .85$ ); all items were averaged to create a composite score of burnout, with higher values indicating stronger feelings of burnout.

***Life satisfaction*** was measured using the Satisfaction with Life Scale (Diener et al., 1985). Items included “In most ways my life is close to my ideal,” and “If I could live my life over, I would change almost nothing,” and were rated on a 1 to 7 scale (1 = *Strongly Disagree*; 7 = *Strongly Agree*; 5 items;  $\alpha = .88$ ).

**Student well-being.** Students self-reported on their optimism, happiness, anxiety symptoms, depressive symptoms, and emotion control. Students nominated classmates for

prosocial behavior.

**Positive outlook** was measured as the average of optimism and happiness. The optimism subscale of the Resilience Inventory (Noam & Goldstein, 1998) comprised of three items including “I have more bad times than good” (reversed;  $\alpha_{T1} = .59$ ;  $\alpha_{T2} = .52$ ;  $\alpha_{T3} = .67$ ). The happiness subscale of the EPOCH Measure of Adolescent Well-Being (Kern et al., 2016) was comprised of four items assessing students’ general tendency to be happy, including “I love life” (average  $\alpha_{T1} = .83$ ;  $\alpha_{T2} = .86$   $\alpha_{T3} = .89$ ). Students scored all items on a 1 to 5 scale (1 = *Not at all like me/Almost Never*; 5 = *Always like me/Almost always*). These subscales were averaged to create a measure of positive outlook, with higher scores indicating a more positive outlook ( $r_{T1} = .57$ ;  $r_{T2} = .52$ ;  $r_{T3} = .61$ ).

**Emotional distress** was measured as the average of anxiety symptoms, depressive symptoms, and emotion control (reversed). Anxiety and depressive symptoms were measured using the respective subscales of the Seattle Personality Questionnaire (Kusche et al., 1998). Three items assessed anxiety symptoms, including “I worry a lot that other people might not like me” ( $\alpha_{T1} = .83$ ;  $\alpha_{T2} = .88$ ;  $\alpha_{T3} = .89$ ). Three items assessed depressive symptoms, including “I feel that I do things wrong a lot” (average  $\alpha_{T1} = .65$ ;  $\alpha_{T2} = .71$ ;  $\alpha_{T3} = .78$ ). Emotion control was measured using the three-item emotion control subscale of the Resilience Inventory (Noam & Goldstein, 1998), items included “I get impatient when I have to wait for something” (reversed;  $\alpha_{T1} = .25$ ;  $\alpha_{T2} = .49$ ;  $\alpha_{T3} = .48$ ). Students scored all items on a 1 to 5 scale (1 = *Never/Not at all like me*; 5 = *Always/Always like me*). These three subscales were averaged to create a measure of emotional distress ( $\alpha_{T1} = .56$ ;  $\alpha_{T2} = .59$ ;  $\alpha_{T3} = .72$ ).

**Prosocial behavior.** Students nominated an unlimited number of classmates who fit two prosocial descriptors: “Students who share and cooperate,” and “Students who help other kids

when they have a problem.” Scores were standardized within class, such that each student received a score for the proportion of classmates who nominated them for each item. In accordance with Wentzel (1993), these items were averaged to create a measure capturing students’ tendency to act prosocially, as nominated by their peers ( $r_{T1} = .83$ ;  $r_{T2} = .83$ ;  $r_{T2} = .80$ ).

### **Data Analysis**

**Preliminary analyses.** Descriptive statistics are provided in Table 2; correlations among teacher- and student-level predictors are presented in Table 3. To account for the nesting of time within students within teachers, and to assess the development of students’ well-being over time, three-level growth modeling was employed to analyze these data. For each outcome, unconditional means models were run to determine the intraclass correlation (ICC), or amount of variance that was attributed to differences at the student and classroom level. Next, models were run to determine the suitability of random intercepts and random slopes. Time (centered at Time 3), student gender ( $0 = Male$ ,  $1 = Female$ ), first language ( $0 = English$ ,  $1 = Other$ ), grade ( $0 = Fourth$ ;  $1 = Fifth$ ), and District ( $0 = District 1$ ,  $1 = District 2$ ) were then added to the model as covariates. Student gender, language, grade, and district were included due to their significant association with student well-being and the desire to test the effect of teacher-level factors over and above these influences. The interaction of time by each covariate was tested to determine if any significant growth parameters existed within these covariates. Covariates and significant growth parameters were retained in future models.

Less than 6% of the data were missing (6.4% of student-level outcomes, 1.6% of student-level predictors, and 9.3% of teacher-level predictors). Due to this small amount of missingness, models use the `na.exclude` option in R Studio, which excludes any cases with missing data from analyses (Ding & Hall, 2007).

**RQ1: The effect of teachers' emotion regulation skills, burnout, and life satisfaction on the level of student well-being.** Preliminary analyses provided the structure for the final models, in which the contribution of each teacher-level predictor was assessed in relation to the three indicators of student well-being: positive outlook, emotional distress, and prosocial behavior. Teacher-level predictors were grand mean centered, such that the intercept of these models is interpreted as the outcome at Time 3 for a male fourth grade student, whose first language was English, who lived in District 1, and whose teacher reported an average level of cognitive reappraisal/expressive suppression/burnout/life satisfaction. Where significant, the effect of the teacher-level factor is also described in terms of its standardized beta. This beta can be interpreted as the difference in student-level outcome between a student of an average teacher, and a teacher who scored one standard deviation higher than the average.

**RQ2: The effect of teachers' emotion regulation skills, burnout, and life satisfaction on the development of student well-being across the school year.** To determine if teachers' emotion regulation skills, burnout, and life satisfaction affected the development of student well-being across time, a second model was run for each outcome that included the interaction of time by each teacher measure. Thus, the final row in each of Tables 4-7 reflect the results of the interaction effect in this second model.

## Results

### Preliminary Results

**ICCs.** Between-class differences accounted for 5%, 5%, and 26%, of the variance in students' positive outlook, emotional distress, and prosocial behavior, respectively, and 3%, 2%, and 26% of the variance in the slope. Although the classroom-level variation in the slope of positive outlook and emotional distress were relatively low, classroom-level variation in these

outcomes were generally consistent with other education-related research (Aguinis et al., 2013) and warranted further exploration of the hypothesized contribution of teacher-level factors.

**Testing for random intercepts and slopes.** For each outcome measure, an empty model was fit and compared to a model that allowed the intercept to vary by class and student. For all outcomes, allowing the intercept to vary resulted in a better fitting model. Next, this model was compared with a model that allowed the intercept and slope, representing the level and trajectory of the outcome, to vary. For each outcome, allowing for random intercepts and slopes resulted in a better fitting model. As such, the models that follow allowed all intercepts and slopes to vary.

**Testing for growth parameters.** Time, gender, language, age, and district were added to the model and the interaction of each covariate with time was tested separately. None of these growth parameters emerged as significant for the models predicting positive outlook and emotional distress. The interaction of time by gender, and time by district were significant predictors of prosocial behavior. These terms were included as covariates in the final models predicting prosocial behavior.

### **RQ1: The Effect of Teachers' Emotion Regulation Skills, Burnout, and Life Satisfaction on the Level of Student Well-Being**

**Emotion regulation skills.** We hypothesized that students whose teachers engaged in *cognitive reappraisal* would report higher levels of positive outlook and lower levels of emotional distress. This hypothesis was partially supported. Specifically, although teachers' cognitive reappraisal in the fall was not a significant predictor of students' positive outlook ( $b = 0.01$ ,  $SE = 0.05$ ,  $p = .85$ ; Table 4) nor prosocial behavior ( $b = 0.003$ ,  $SE = 0.03$ ,  $p = .92$ ), teachers' cognitive reappraisal did negatively predict students' emotional distress ( $b = -0.12$ ,  $SE = 0.04$ ,  $p = .01$ ) at the end of the school year. This effect translates to a standardized beta of -

0.15, indicating that students whose teachers reported one standard deviation higher on the cognitive reappraisal scale reported 0.15 standard deviations lower emotional distress than students of an average teacher.

The hypothesis that students whose teachers reported using *expressive suppression* would engage in fewer prosocial behaviors was supported. Teachers' expressive suppression in the fall of the school year negatively predicted students' positive outlook ( $b = -0.10$ ,  $SE = 0.04$ ,  $p = .02$ ; Table 5) and prosocial behavior ( $b = -0.06$ ,  $SE = 0.02$ ,  $p = .02$ ) at the end of the school year. These effects were equivalent to standardized betas of -0.15 and -0.38, respectively; students of teachers who reported one standard deviation higher levels of expressive suppression reported 0.15 standard deviations lower positive outlook, and peers reported 0.38 standard deviations lower prosocial behavior than students of the average teacher. In other words, in comparison to students of an average teacher, a teacher reporting one unit lower than average on the 1-7 scale of expressive suppression had students who were nominated as prosocial by an additional 6% of their peers. Teachers' expressive suppression was not a significant predictor of students' emotional distress ( $b = 0.05$ ,  $SE = 0.04$ ,  $p = .16$ ).

**Occupational burnout.** The hypothesis that teachers' burnout would be related to students' prosocial behavior and emotional distress was not supported. Teachers' occupational burnout was not a significant predictor of any of these dimensions of student well-being: positive outlook ( $b = -0.07$ ,  $SE = 0.07$ ,  $p = .39$ ; Table 6), emotional distress ( $b = 0.09$ ,  $SE = 0.06$ ,  $p = .13$ ), nor prosocial behavior ( $b = -0.03$ ,  $SE = 0.04$ ,  $p = .44$ ).

**Life satisfaction.** We explored the possibility that teachers' life satisfaction would be related to students' well-being. Teachers' life satisfaction was not a significant predictor of students' positive outlook ( $b = 0.16$ ,  $SE = 0.10$ ,  $p = .17$ ; Table 7) nor emotional distress ( $b =$

0.03,  $SE = 0.10$ ,  $p = .80$ ). Teachers' life satisfaction was a significant predictor of students' prosocial behavior ( $b = 0.12$ ,  $SE = 0.05$ ,  $p = .04$ ). A one unit increase on the 1 to 7 scale of teachers' life satisfaction was associated with a student being perceived as prosocial by an additional 12% of their classmates. This effect was equivalent to a standardized beta of 0.37; in other words, students whose teachers reported one standard deviation higher life satisfaction received 0.37 standard deviations more nominations for prosocial behavior than students of average teachers.

### **RQ2: The Effect of Teachers' Emotion Regulation Skills, Burnout, and Life Satisfaction on the Development of Student Well-Being Across the School Year**

In all cases, the interaction of time by teachers' emotion regulation skills, burnout, and life satisfaction were nonsignificant. To avoid redundancy, effects are reported in Tables 4-7. These null effects demonstrate that teachers' emotion regulation skills, burnout, and life satisfaction did not significantly affect the slope or *development* of their students' positive outlook, emotional distress, nor prosocial behavior across the school year.

### **Discussion**

This study aimed to examine the association between teachers' emotion regulation skills, occupational burnout, and life satisfaction, and the level (RQ<sub>1</sub>) and trajectory (RQ<sub>2</sub>) of their students' well-being (e.g., positive outlook, emotional distress, and prosocial behavior) across the school year. Results demonstrated that teachers' emotion regulation skills and life satisfaction were associated with the end of year level of, though not change across the year in, students' positive outlook, emotional distress, and prosocial behavior. Specifically, students reported less emotional distress when teachers used cognitive reappraisal to regulate their emotions. In contrast, students whose teachers reported using expressive suppression reported a

less positive outlook and peers reported less prosocial behavior than children whose teachers were less suppressive. Teachers' life satisfaction in the fall was associated with students' end of year prosocial behavior. The null effects of teachers' emotion regulation skills and life satisfaction on the trajectories of student well-being across the year suggest that these associations are established in the first few months of the school year and remain consistent throughout the year. Future studies might explore the time course of such impacts in greater temporal detail.

Building from developmental and ecological systems models (Bronfenbrenner, 1994; Eccles & Roeser, 2016), a body of literature has investigated the ways in which teachers' personal characteristics may influence their students' experiences in the classroom, beyond didactic instructional practices. Studies demonstrating that teachers' beliefs, seating practices, management of social dynamics, and interactions and relationships with students are related to student outcomes provide support for such models (e.g., Farmer et al., 2011; Gest & Rodkin, 2011; Hughes & Chen, 2011; Luckner & Pianta, 2011; Pianta & Stuhlman, 2004). More specifically, recent theoretical models have proposed the importance of teachers' emotion regulation skills, occupational health (e.g., occupational burnout), and well-being (e.g., life satisfaction) for the experiences of their students (Jennings & Greenberg, 2009; Roeser et al., 2013). The current study contributes to this literature base by providing empirical evidence linking teachers' emotion regulation skills and life satisfaction to students' social and emotional well-being, whereby supporting the ecological systems and Prosocial Classroom models. In addition, this study corroborates findings from previous research linking teacher-level factors to student-level outcomes in this age group, suggesting that elementary teachers may be particularly influential in the lives of their students (e.g., Luckner & Pianta, 2011). Together, this body of



literature suggests that efforts to improve teachers' emotion regulation skills and life satisfaction may be beneficial not just for teachers, but also for the well-being of their students.

### **RQ1: Teachers' Emotion Regulation Skills and Life Satisfaction Predicted Student Well-Being**

Results showed that students whose teachers used healthy, and avoided unhealthy, emotion regulation strategies reported greater well-being. With regards to cognitive reappraisal, results partially supported the hypotheses; teachers' use of cognitive reappraisal was associated with low levels of student emotional distress, but was unrelated to students' positive outlook. Gross' (2002) process model of emotion regulation provides one explanation for this association. Because cognitive reappraisal is an antecedent-focused strategy, teachers who employ this strategy likely step foot into the classroom with a more positive approach in emotional situations. It may be, for example, instead of getting frustrated and upset with the student when they do not get the correct answer to a question, a reappraising teacher takes the students' incorrect answers as a sign that the question needs to be phrased differently, or the material needs to be covered again. In other words, teachers who engage in cognitive reappraisal may affect their students' emotional distress by being kinder and more compassionate towards students in their interactions with them, rather than letting their emotions drive reactive behaviors. Further, they may also model the use of this healthy emotion regulation strategy for their students (Bandura, 1971).

The majority of research on cognitive reappraisal has focused on intra-personal correlates, or correlates for the individual themselves (e.g., Haga et al., 2009; Martin & Dahlen, 2005). One existing study with a more social lens suggests that those who engage in cognitive reappraisal are more liked by peers than individuals who engage in expressive suppression (Gross, 2002). The current study extends our understanding of cognitive reappraisal by

demonstrating inter-personal effects, or positive effects on the individual's *social partner*, which to date has remained largely unexplored (Gross, 2002). Future studies of cognitive reappraisal may also want to consider inter-personal consequences of this emotion regulation strategy, and the processes through which these associations may exist. In addition, examining the bi-directional relations between teachers' emotion regulation strategies and their students' aggregate emotional functioning seems important given the results reported here.

Results also supported the hypothesis that teachers who engaged in expressive suppression would have students exhibiting fewer prosocial behaviors. In addition, teachers' expressive suppression was also associated with students' low positive outlook. We can interpret this effect in light of Gross' (2002) process model of emotion regulation, which characterizes expressive suppression as a response-focused strategy that requires intense cognitive effort. It may be, for example, in the situation where students do not get the correct answer to a question, a teacher who engages in expressive suppression would exert energy in their attempt to disguise their frustration. As such, not only does expressive suppression disrupt social interactions (Butler et al., 2003), it may also divert energy away from teaching and towards emotion regulation (Gross, 2002). The energy that teachers may have put into being a positive and enthusiastic classroom leader and facilitating positive social interactions, is instead allocated to disguising the emotion they are currently experiencing. It may also be that such teachers are less expressive of positive emotions like care and compassion, even if they feel them. This reduces the modeling of such emotions for students and may explain why emotional suppression was more related to the absence of positive indicators of well-being (e.g., positive outlook, peer-rated prosocial behavior) in students in this study. The current study demonstrates that the use of this particular emotion regulation strategy make affect positive dimensions of students' well-being

through various processes, and is consistent with previous theory and empirical research that indicates that positive emotional expression is an important component of healthy human interactions (Butler et al., 2003; Laurenceau et al., 1998; Srivastava et al., 2009).

Contrary to our hypothesis, teachers' occupational burnout was unrelated to students' well-being in this study. These results contradict the predictions of theoretical models (Jennings & Greenberg, 2009) as well as recent research connecting burnout to poor teacher-student interactions and prosocial behavior in the classroom (Braun et al., 2019; Herman et al., 2018; Jennings, 2015). It is important to note that teachers in the current study reported relatively low levels of burnout in comparison to the range presented (i.e., reported that they experienced symptoms "a few times a year or less" and "once a month or less", where the range of possible answers extend from "never" to "every day"). It is also important to note that the teachers in the current study self-selected into an intervention study that was evaluating a new kindness curriculum for students. It may be that this self-selected group of teachers experienced less burnout than those who did not volunteer for the study. Thus, the external validity of these findings remains to be determined. It may also be the case that teachers' burnout has effects on other dimensions of student well-being that were not explored in the current study, such as academic motivation and school bonding. Additional research focusing on the impact of teachers' occupational burnout on student- and peer-reported outcomes is necessary to clarify the nature of these relationships.

The current study also explored whether teachers' life satisfaction was related to students' well-being. Results indicated that teachers who were more satisfied with their lives had classrooms where peers nominated each other as prosocial, but teacher satisfaction was unrelated to students' positive outlook or emotional distress. Findings only partially supported

our hypotheses. Previous theory has posited that individuals with high life satisfaction have a general positive and prosocial orientation toward life (Diener et al., 2013). The current study does not provide evidence that this positive outlook directly relates to students' own outlook, but it does provide support for the notion that teachers with high life satisfaction appear to facilitate a classroom environment where helping and sharing are normative. While most research on life satisfaction focuses on the correlates and consequences for those who are satisfied with their own life (e.g., Diener et al., 2013; Erdogan et al., 2012), this study extends the current literature base on life satisfaction by demonstrating one's own life satisfaction can have consequences for those *with whom they interact*. However, the specific processes underlying this association remain unknown. Further, it is unknown why teachers' life satisfaction may have positive effects on their students' prosocial behavior, while having no effect on students' emotional distress. A deeper exploration of the theory underlying the consequences of life satisfaction, and the processes through which it may be expressed to and affect others would help to elucidate these findings.

**RQ2: Teachers' Emotion Regulation Skills, Burnout, and Life Satisfaction Were Not Related to Changes in Student Well-Being Across the School Year**

Another key finding from this study is that these teacher-level factors were associated with the end of year *level* of student well-being, but not changes in student well-being across the year. ICCs indicated there were very little between-class differences in the slope of (i.e., change in) the student-reported measures, suggesting there was very little variance to predict by teacher characteristics. ICCs for peer-reported prosocial behavior indicated a large portion of the variance in the slope could be explained by between-classroom differences. Despite this measure showing the greatest promise for predictability by our between-classroom measure, the

teacher-level factors studied here did not predict change in students' peer-rated prosocial behavior over the year. In interpreting this finding, it is important to note that the data in this study were first collected from teachers in the late fall of the school year. Many teacher-focused resources assert the proposition that the start of the year is critical for teachers (e.g., Linsin, 2014). It is possible that the effects of these teacher-level factors work on a faster timescale than the timeline of the current study, such that the tone had been set at the start of the school year and had already affected student well-being by the first wave of data collection. Intensive longitudinal studies (i.e., those with many more assessment occasions) could test whether this is the case by collecting data from the very first day of school and assessing students and teachers at more frequent and theoretically meaningful intervals. Studies of this design may also help clarify the nature and bidirectionality of teachers' experiences and students' well-being across the school year.

### **Strengths, Limitations, and Future Directions**

The present study addressed whether teachers' use of emotion regulation skills, burnout, and life satisfaction would be associated with student well-being. Now that these associations have been empirically supported, the next step is understanding the *processes* through which these teacher-level factors are associated with student well-being, which was outside of the scope of this study. For example, teachers' emotion regulation skills may be related to student well-being through the modeling of adaptive coping strategies and their consequences for students, the energy that adaptive coping strategies may afford them to put forth in their classrooms, through the poor quality interactions that result from poor emotion regulation, via the classroom climate teachers are able to establish, or the trusting relationships that expressive teachers are able to build with their students. Additional investigation into the processes through which these

associations may exist will provide valuable information that will help to revise our theoretical understanding of teachers' influence, and help to understand why effects are seen in some domains and not in others (Jennings & Greenberg, 2009).

Results from the current study should be considered tentative due to several study limitations. First, the current study has a relatively small and self-selected sample of teachers and thus, the results may not be generalizable across elementary teachers. Additional studies with more diverse groups of teachers and students will help us to understand whether these associations are generalizable to the larger population. Spillover effects are also an important issue in intervention studies. In this study, all teachers worked relatively independently (i.e., did not share students with other teachers). Thus, although in most cases there was one intervention teacher and one control teacher at each school who may have been in communication, it was unlikely that control students were receiving the intervention curriculum. It is also noteworthy that teachers in the control group were implementing alternative SEL programs as part of their usual practice.

Although the theoretical models that served as the basis for this study discuss teachers' emotion regulation skills, occupational burnout, and life satisfaction as having an important socializing impact on students' well-being, the reverse is also likely true. As Skinner & Belmont (1993) found, patterns of interaction in the classroom are reciprocal in nature, with students' behavioral engagement influencing teachers' behavior. Indeed, a small body of research has suggested that teachers' feelings of closeness and conflict with students contributes to their own experiences of burnout (e.g., Corbin et al., 2019; Spilt et al., 2011). We may imagine a teacher whose students act more prosocially may have fewer classroom management challenges, which may result in greater feelings of personal accomplishment and weaker feelings of emotional

exhaustion than a teacher whose students have many interpersonal challenges. Further, pending such findings, it may be helpful for future research to consider controlling for influential student-level factors when examining the contribution of teacher-level factors on students' well-being. We look forward to future studies that test the theorized associations among teachers' skills, occupational health, well-being, teaching practices, and student well-being, as well as the directionality of those associations.

One strength of the present study is its multi-informant design that yielded unique information about the associations between teachers' self-reported emotion regulation and life satisfaction and student well-being as reported by students and peers. The few studies that have examined the consequences of teachers' occupational health and well-being on student outcomes have primarily focused on teacher-reported measures, which may be affected by various kinds of bias (Kokkinos et al., 2005). Although the current study employed both student-reported and peer-nominated measures of student well-being, it was not without measurement challenges. The relatively low reliability of the emotional well-being outcome suggests the need for stronger measures to capture this phenomenon. It is also noteworthy that student-reported measures had less classroom-variance in both their level and slope than the peer-reported measures, suggesting that the peer-reported measures may be more robust to detect teacher-level effects. Additional research may consider the use of measures with greater variance at the classroom levels. Despite these limitations, the results of the present study suggest that teachers' own skills and well-being are manifested in the classroom and *do* have meaningful effects on students' self-reported and peer-reported experiences at school. These results indicate that professional development programs aimed at reducing teacher burnout and improving teacher well-being may have salutary benefits on both the classroom climate and students' own well-being (e.g., Jennings &

Greenberg, 2009; Roeser et al., 2012).

### **Practice Applications**

An investigation into the effects of teachers' emotion regulation skills and experiences of burnout are of practical significance due to the unique demands of this profession. Because teachers are responsible for the academic, social, and emotional development of students who are immature in all of these dimensions, are significantly outnumbered, and receive little support from additional adults, transgressions, as well as accomplishments, occur on a daily basis. As a result, teachers are constantly confronted with emotional situations and regularly face opportunities to engage in emotion regulation strategies, making this is a particularly interesting population to study the consequences of emotion regulation strategies. In addition, because teachers report exceptionally high levels of stress (Johnson et al., 2005; Markow et al., 2013), teachers are a high risk population whose notably low health and well-being may have far reaching consequences, as demonstrated in the current study. This study calls for additional research into the emotional skills training that teachers may, or may not, be receiving during their teacher preparation courses and in ongoing professional development.

Although the present study is one of the first to provide empirical support for the theorized associations between teachers' emotion regulation skills and well-being and students' well-being, fortunately, interventions to promote skill building and well-being in this at-risk group are already underway (Jennings et al., 2013; Roeser et al., 2013). Results from the present study suggest the effects of such interventions may be seen not only at the teacher-level but will likely have positive spillover effects for students. Providing future research continues to demonstrate these associations, practitioners may reconsider interventions that support teachers' skills, occupational health, and well-being as a critical component of professional development



programs, and as an important element in efforts to promote the social and emotional success of their students.

### **Conclusion**

Existing theoretical perspectives suggested that teacher characteristics, such as their emotion regulation skills, occupational health, and personal well-being, affect the well-being of their students. The current study was one of the first to empirically test these associations. Findings demonstrated that teachers' emotion regulation skills and life satisfaction were associated with the level, although not trajectory across the school year, of several indicators of students' social and emotional well-being. Overall, results provide empirical support for theoretical perspectives emphasizing the importance of teachers' emotion regulation skills, occupational health, and personal well-being; suggest that these teacher-level factors can have wide-ranging consequences for students; and elucidate key malleable targets for intervention in professional development programs aimed at improving the well-being of teachers.

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ELEMENTARY TEACHERS AND STUDENT WELL-BEING

Table 1

*Descriptive Statistics for Teacher- and Student-Level Measures by District*

	Total			City 1			City 2			t-Test		
	<i>N</i>	Mean	<i>SD</i>	<i>N</i>	Mean	<i>SD</i>	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	df	<i>p</i>
<b>Teacher-Level</b>												
<b>Demographics</b>												
Years Teach	13	16.42	6.57	10	17.00	6.83	3	14.33	6.43	0.63	3	0.57
Gender (0 = <i>Male</i> ; 1 = <i>Female</i> )	13	0.86	0.38	10	0.90	0.32	3	0.67	0.58	0.67	2	0.56
Ethnicity (0 = <i>White/European</i> ; 1 = <i>Other</i> )	12	0.33	0.49	9	0.44	0.53	3	0.00	0.00	2.53 *	8	0.04
Grade (0 = <i>Fourth</i> ; 1 = <i>Fifth</i> )	15	0.54	0.34	11	0.42	0.32	4	0.85	0.15	-3.52 **	11	0.00
<b>Emotion Regulation, Burnout, and Life Satisfaction (Time 1)</b>												
Cognitive Reappraisal	15	5.04	0.93	11	4.94	0.71	4	5.29	1.50	-0.45	4	0.68
Expressive Suppression	15	2.78	1.10	11	2.34	0.87	4	2.88	1.69	-0.60	4	0.58
Burnout	15	2.65	0.65	11	2.71	0.55	4	2.49	0.97	0.44	4	0.68
Life Satisfaction	8	5.60	0.61	5	5.60	0.76	3	5.60	0.40	<.001	6	1.00
<b>Student-Level</b>												
<b>Covariates</b>												
Gender (0 = <i>Male</i> ; 1 = <i>Female</i> )	320	0.48	0.50	230	0.47	0.51	90	0.52	0.50	-0.91	164	0.36
Language (0 = <i>English</i> ; 1 = <i>Other</i> )	299	0.17	0.37	211	0.23	0.42	88	0.02	0.15	6.20 **	292	<.01
Grade (0 = <i>Fourth</i> ; 1 = <i>Fifth</i> )	320	0.54	0.50	230	0.42	0.49	90	0.86	0.35	-8.76 **	226	<.01

ELEMENTARY TEACHERS AND STUDENT WELL-BEING

**Well-Being**

**Positive Outlook**

Time 1	299	3.97	0.73	211	3.94	0.73	88	4.06	0.71	-1.29		169	0.20
Time 2	289	4.01	0.69	207	4.00	0.67	82	4.04	0.76	-0.41		133	0.69
Time 3	286	3.99	0.77	207	3.99	0.74	79	3.98	0.85	0.13		125	0.89

**Prosocial Behavior**

Time 1	312	0.43	0.18	224	0.40	0.18	88	0.50	0.19	-4.21	**	150	<.01
Time 2	318	0.47	0.19	229	0.45	0.18	89	0.52	0.20	-2.91	**	147	<.01
Time 3	317	0.50	0.18	228	0.51	0.18	89	0.48	0.17	1.18		171	0.24

**Emotional Distress**

Time 1	299	2.52	0.65	211	2.52	0.63	88	2.52	0.68	-0.04		154	0.97
Time 2	289	2.50	0.68	207	2.52	0.69	82	2.46	0.65	0.75		156	0.45
Time 3	286	2.52	0.68	207	2.51	0.74	79	2.55	0.77	-0.34		136	0.74

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*Note.* *N* = Participants with data; *SD* = Standard deviation. \*  $p < .05$ ; \*\*  $p < .01$

ELEMENTARY TEACHERS AND STUDENT WELL-BEING

Table 2

*Descriptive Statistics for Teachers' Emotion Regulation, Burnout, and Life Satisfaction, and Student Well-Being Over Time*

	<i>N</i>	Min	Max	Mean	<i>SD</i>	$\alpha$
<b>Teachers' Emotion Regulation, Burnout, and Life Satisfaction (Time 1)</b>						
Cognitive Reappraisal	15	3.50	6.83	5.04	0.93	0.83
Expressive Suppression	15	1.00	5.00	2.48	1.10	0.69
Occupational Burnout	15	1.38	3.84	2.65	0.65	0.85
Life Satisfaction	8	4.40	6.40	5.60	0.61	0.66
<b>Student Well-Being</b>						
<b>Positive Outlook</b>						
Time 1	299	1.93	5.00	3.97	0.73	0.72
Time 2	289	1.00	5.00	4.01	0.69	0.68
Time 3	286	1.13	5.00	3.99	0.77	0.75
<b>Emotional Distress</b>						
Time 1	299	1.11	4.33	2.52	0.65	0.56
Time 2	289	1.11	4.56	2.50	0.68	0.59
Time 3	286	1.11	4.89	2.52	0.75	0.72
<b>Prosocial Behavior</b>						
Time 1	312	0.04	0.96	0.43	0.18	0.90
Time 2	318	0.06	0.93	0.47	0.19	0.91
Time 3	317	0.02	0.92	0.50	0.18	0.89

*Note.* *N* = Participants with data; *SD* = Standard deviation.

ELEMENTARY TEACHERS AND STUDENT WELL-BEING

Table 3

Correlations Among Teachers' Emotion Regulation, Burnout, and Life Satisfaction, and Student Well-Being Over Time

		Teacher-Level				Student-Level												
						Covariates				Positive Outlook			Emotional Distress			Prosocial Behavior		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<b>Teachers' Emotion Regulation, Burnout, and Life Satisfaction (Time 1)</b>																		
1	Cognitive Reappraisal	-																
2	Expressive Suppression	-0.26	-															
3	Occupational Burnout	-0.52	0.47	-														
4	Life Satisfaction	0.17	-0.49	-0.44	-													
<b>Student-Level</b>																		
<b>Covariates</b>																		
5	Gender (0 = Male; 1 = Female)	-0.02	0.01	0.01	0.03	-												
6	Language (0 = English; 1 = Other)	0.04	-0.03	-0.04	-0.01	0.09	-											
7	Grade (4 = Fourth; 1 = Fifth)	0.16	-0.07	-0.10	0.19	0.11	0.04	-										
8	District (0 = District 1; 1 = District 2)	0.07	0.18	-0.04	0.02	0.18	-0.21	0.41	-									
<b>Well-Being</b>																		
<b>Positive Outlook</b>																		
9	Time 1	-0.03	-0.09	-0.07	0.11	0.06	-0.03	0.05	0.16	-								
10	Time 2	0.01	-0.13	-0.12	0.22	0.00	-0.07	0.18	0.14	0.72	-							
11	Time 3	-0.08	-0.10	-0.05	0.22	0.00	0.01	0.06	0.05	0.63	0.71	-						
<b>Emotional Distress</b>																		

ELEMENTARY TEACHERS AND STUDENT WELL-BEING

12	Time 1	-0.17	0.00	0.02	0.05	0.18	0.04	-0.19	-0.08	-0.42	-0.41	-0.33	-					
13	Time 2	-0.18	0.11	0.10	0.01	0.21	-0.01	-0.09	-0.10	-0.35	-0.51	-0.38	0.72	-				
14	Time 3	-0.13	0.12	0.07	-0.03	0.16	0.06	-0.11	0.00	-0.32	-0.48	-0.49	0.64	0.69	-			
<b>Prosocial Behavior</b>																		
15	Time 1	-0.01	-0.35	-0.22	0.40	0.46	-0.12	0.36	0.25	0.24	0.26	0.21	-0.01	-0.02	-0.07	-		
16	Time 2	0.04	-0.49	-0.29	0.38	0.42	-0.08	0.23	0.16	0.24	0.21	0.17	0.00	-0.01	-0.07	0.88	-	
17	Time 3	-0.14	-0.35	-0.09	0.35	0.38	0.03	0.12	-0.19	0.19	0.19	0.21	0.03	0.05	-0.08	0.78	0.80	-

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ELEMENTARY TEACHERS AND STUDENT WELL-BEING

Table 4

*Teachers' Cognitive Reappraisal and Student Well-Being*

	Positive Outlook		Emotional Distress		Prosocial Behavior	
	Beta	SE	Beta	SE	Beta	SE
Intercept	3.97 **	0.27	2.46 **	0.22	0.44 **	0.13
<b>Covariates</b>						
Time (0 = Time 3)	0.01	0.03	0.00	0.02	0.06 **	0.01
Gender (0 = Male; 1 = Female)	0.06	0.07	0.22 **	0.07	0.13 **	0.02
Language (0 = English; 1 = Other)	-0.23 *	0.10	0.07	0.09	-0.04 *	0.02
Grade (0 = Fourth; 1 = Fifth)	0.02	0.09	-0.18 *	0.08	0.04 *	0.02
District (0 = District 1; 1 = District 2)	0.07	0.11	0.09	0.09	-0.05	0.06
<b>Teacher Well-Being</b>						
Cognitive Reappraisal	0.01	0.05	-0.11 *	0.04	0.00	0.03
Cognitive Reappraisal*Time	0.00	0.03	-0.01	0.03	-0.01	0.01
BIC	1513 / 1521		1375 / 1382		-1393 / -1388	

*Note.* Unstandardized betas are reported. *SE* = standard error. \*  $p < .05$ ; \*\*  $p < .01$ . Models predicting prosocial behavior control for time by gender, and time by district.



ELEMENTARY TEACHERS AND STUDENT WELL-BEING

Table 5

*Teachers' Expressive Suppression and Student Well-Being*

	Positive Outlook			Emotional Distress			Prosocial Behavior		
	Beta		SE	Beta		SE	Beta		SE
Intercept	3.94	**	0.13	2.52	**	0.12	0.40	**	0.05
<b>Covariates</b>									
Time (0 = Time 3)	0.01		0.03	0.00		0.02	0.06	**	0.01
Gender (0 = Male; 1 = Female)	0.06		0.07	0.23	**	0.07	0.13	**	0.02
Language (0 = English; 1 = Other)	-0.23	*	0.10	0.08		0.10	-0.04	*	0.02
Grade (0 = Fourth; 1 = Fifth)	0.01		0.08	-0.19	*	0.08	0.04	*	0.02
District (0 = District 1; 1 = District 2)	0.11		0.10	0.03		0.10	-0.02		0.05
<b>Teacher Well-Being</b>									
Expressive Suppression	-0.10	*	0.04	0.05		0.04	-0.06	**	0.02
Expressive Suppression*Time	-0.02		0.02	0.02		0.02	0.01		0.01
BIC	1508 / 1514			1380 / 1385			-1402 / -1398		

*Note.* Unstandardized betas are reported. *SE* = standard error. \*  $p < .05$ ; \*\*  $p < .01$ . Models predicting prosocial behavior control for time by gender, and time by district.

ELEMENTARY TEACHERS AND STUDENT WELL-BEING

Table 6

*Teachers' Occupational Burnout and Student Well-Being*

	Positive Outlook			Emotional Distress			Prosocial Behavior		
	Beta		SE	Beta		SE	Beta		SE
Intercept	3.98	**	0.22	2.48	**	0.19	0.44	**	0.10
<b>Covariates</b>									
Time (0 = Time 3)	0.01		0.03	0.00		0.02	0.06	**	0.01
Gender (0 = Male; 1 = Female)	0.07		0.07	0.22	**	0.07	0.13	**	0.02
Language (0 = English; 1 = Other)	-0.23	*	0.10	0.08		0.10	-0.04	*	0.02
Grade (0 = Fourth; 1 = Fifth)	0.02		0.09	-0.20	*	0.08	0.04	*	0.02
District (0 = District 1; 1 = District 2)	0.06		0.11	0.08		0.10	-0.06		0.06
<b>Teacher Well-Being</b>									
Burnout	-0.07		0.07	0.09		0.06	-0.03		0.04
Burnout*Time	-0.02		0.04	0.02		0.04	0.00		0.01
BIC	1513 / 1520			1380 / 1386			-1393 / -1386		

*Note.* Unstandardized betas are reported. *SE* = standard error. \*  $p < .05$ ; \*\*  $p < .01$ . Models predicting prosocial behavior control for time by gender, and time by district.

ELEMENTARY TEACHERS AND STUDENT WELL-BEING

Table 7

*Teachers' Life Satisfaction and Student Well-Being*

	Positive Outlook		Emotional Distress		Prosocial Behavior	
	Beta	SE	Beta	SE	Beta	SE
Intercept	3.84 **	0.55	2.63 **	0.55	0.49	0.26
<b>Covariates</b>						
Time (0 = Time 3)	-0.03	0.03	0.02	0.03	0.08 **	0.01
Gender (0 = Male; 1 = Female)	0.04	0.10	0.28 **	0.09	0.13 **	0.02
Language (0 = English; 1 = Other)	-0.03	0.16	0.04	0.15	-0.04	0.03
Grade (0 = Fourth; 1 = Fifth)	-0.05	0.12	-0.22	0.12	0.06 *	0.03
District (0 = District 1; 1 = District 2)	0.16	0.13	-0.02	0.13	-0.14	0.06
<b>Teacher Well-Being</b>						
Life Satisfaction	0.16	0.10	0.03	0.10	0.12 *	0.05
Life Satisfaction*Time	0.06	0.04	-0.03	0.04	-0.01	0.02
BIC	907 / 912		891 / 896		-752 / -746	

*Note.* Unstandardized betas are reported. *SE* = standard error. \*  $p < .05$ ; \*\*  $p < .01$ . Models predicting prosocial behavior control for time by gender, and time by district.