

EMOTION-REGULATION ABILITY, BURNOUT, AND JOB SATISFACTION AMONG BRITISH SECONDARY-SCHOOL TEACHERS

MARC A. BRACKETT

Yale University

RAQUEL PALOMERA

University of Cantabria

JUSTYNA MOJSA-KAJA

Jagiellonian University

MARIA REGINA REYES AND PETER SALOVEY

Yale University

The topic of emotion regulation and its relationship with teacher effectiveness is beginning to garner attention by researchers. This study examined the relationship between emotion-regulation ability (ERA), as assessed by the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT), and both job satisfaction and burnout among secondary-school teachers ($N = 123$). It also examined the mediating effects of affect and principal support on these outcomes. ERA was associated positively with positive affect, principal support, job satisfaction, and one component of burnout, personal accomplishment. Two path models demonstrated that both positive affect and principal support mediated independently the associations between ERA and both personal accomplishment and job satisfaction. © 2010 Wiley Periodicals, Inc.

Teaching is one of the most stressful occupations (Johnson et al., 2005; Kyriacou & Sutcliffe, 1977). Frequently identified sources of stress and decreased job satisfaction include the following: inadequate salary and perceived low status of the profession (Carlson & Thompson, 1995; Kyriacou & Sutcliffe, 1978); role conflict and ambiguity (Dunham, 1992); time pressure (Chan, 1998); student misbehavior (Turk, Meeks, & Turk, 1982); relationships with supervisors (Litt & Turk, 1985); and large class size (Burke & Greenglass, 1994). Teachers also experience intense, emotion-laden interactions on a daily basis and have a great number of emotional demands compared to most other professionals (Brotheridge & Grandey, 2002). The stress and emotional demands associated with the teaching profession can lead to emotional and physical exhaustion, cynical attitudes about teaching, reduced feelings of personal accomplishment, and lower job satisfaction (Guglielmi & Tatrow, 1998; Shan, 1998; Vandenberghe & Huberman, 1999).

Abundant research has focused on these emotional demands and their impact on teachers' well-being, mental health, stress, burnout, and job satisfaction as well as on learning outcomes for students (Chan, 2006). Relatively little is known, however, about protective factors against teacher stress and burnout. Which psychological attributes might predict less emotional exhaustion and more positive emotions, increased feelings of personal accomplishment, and greater job satisfaction among teachers? Research suggests that emotion-regulation ability (ERA) may account for meaningful variance in the prediction of these outcomes.

The Health, Emotion, and Behavior (HEB) Laboratory is supported by a grant from the William T. Grant Foundation to Marc Brackett and by a grant from the National Cancer Institute (RO1-CA68427) to Peter Salovey.

We extend our gratitude to the many individuals who helped us with all aspects of the study, including Nicole Katulak, Susan Rivers, Jim Casey, David Caruso, and Michelle Cook, as well as other members of the HEB Laboratory. This research would not have been possible without the cooperation and support of Chris Gerry, Clare Ludlow, and the principals and teachers at New Line Learning Academy of Schools, Maideston, UK.

Correspondence to: Marc A. Brackett, Department of Psychology, Yale University, P.O. Box 208205, New Haven, CT 06520-8205. E-mail: marc.brackett@yale.edu

ERA is a core component of emotional intelligence and refers to the capacity to regulate one's own and others' emotional states (see Mayer & Salovey, 1997, for a description of the full theory). According to the theory of emotional intelligence, individuals with greater ERA have a larger repertoire of strategies to maintain desirable emotions and to reduce or modify unwanted emotions in both themselves and other people (Gross & John, 2002; Mayer & Salovey, 1997; Sutton & Harper, 2009). When managing feelings, one must be able to monitor, discriminate among, and label feelings accurately; select and employ strategies that will alter the feelings; and assess the effectiveness of these chosen strategies. For example, reappraisal, acceptance, and mindfulness practices are useful strategies for managing unwanted emotions, but suppression and rumination are less effective (Gross, 1998). Suppression and rumination are seen as less effective because they both require an expenditure of cognitive resources and serve to maintain negative feelings, reducing an individual's capacity to process incoming events.

According to emotional intelligence theory, ERA should influence how teachers express emotions, manage stress, and interact with others (Gross, 2002; Lopes, Salovey, Côté, & Beers, 2005). Therefore, ERA has the broadest relevance to both burnout and job satisfaction among teachers. Each component of burnout (emotional exhaustion, depersonalization, and reduced personal accomplishment) may result as a consequence of chronic work stress. Emotional exhaustion refers to feeling emotionally drained by intense interactions; depersonalization refers to negative or uncaring attitudes toward others; and personal accomplishment pertains to a decrease (or increase) in one's sense of proficiency in working with people (Maslach, 1986; Maslach & Jackson, 1986).

Because teachers are consistently required to manage their own emotional displays as well as the emotions of their students, teachers with higher ERA may be better equipped to deal with the myriad, intense emotion-provoking demands of their work (e.g., interruptions, rule violations, uncertainties, failures to achieve goals) that increase stress and exhaustion and decrease feelings of both personal accomplishment and job satisfaction.

Indeed, teachers believe that the ability to regulate emotions helps them to be more effective in achieving academic goals, building quality social relationships, and maintaining good classroom management and discipline practices (Sutton, 2004). Most teachers also are aware of the repercussions of poor emotion regulation. One inappropriate display of contempt for a student can destroy forever a teacher's relationship with that student.

A gap exists, however, between beliefs about the importance of effective emotion regulation and actual knowledge and use of effective emotion regulation strategies (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). Only recently have researchers been able to measure ERA reliably with performance tests (rather than self-report surveys) such as the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002; Mayer, Salovey, Caruso, & Sitarenios, 2003). The tasks on the MSCEIT that measure ERA require respondents to react to hypothetical scenarios and evaluate the effectiveness of various behaviors and subjective construals that can be employed to reduce, enhance, or maintain various emotions. For example, participants may judge the effectiveness of strategies to help a friend enhance a joyful mood or reduce feelings of sadness. ERA, as measured by the MSCEIT, is distinct conceptually and empirically from self-reports of related ("trait") personality traits such as neuroticism and self-rated emotional intelligence (Brackett & Mayer, 2003; Brackett et al., 2006; Lopes, Salovey, & Straus, 2003). Whereas self-report inventories measure a person's response tendency or self-efficacy about their emotional skills, the MSCEIT taps an individual's knowledge and capacity to reason with and about emotions (Brackett et al., 2006; Mayer, Roberts, & Barsade, 2008).

Accumulating research shows that scores on performance assessments of ERA, but not self-report inventories, have incremental validity (above existing measures of personality, well-being, and general intelligence) in the prediction of outcomes of personal and social importance (Mayer

et al., 2008). For example, individuals with higher ERA are better able to forecast their feelings for future events (Dunn, Brackett, Ashton-James, Schneiderman, & Salovey, 2007). Thus, teachers with higher ERA may be better at preventing negative emotion-related situations from occurring in their classroom because they can forecast how certain situations will make them (and their students) feel and take preventative action. Higher ERA also has been associated with both self- and peer ratings of interpersonal sensitivity, social support, and prosocial behavior, as well as job satisfaction among college students and business professionals (Lopes et al., 2004, 2005). Therefore, teachers with higher ERA may be better able to create pleasant emotional environments for students to learn, facilitating positive interactions with students, colleagues, and supervisors.

In the present study, we extended research on ERA, teacher effectiveness, burnout, and job satisfaction in important ways. To the best of our knowledge, this is the first study to employ performance measures of ERA to predict burnout and job satisfaction among teachers. We also seek to understand *how* ERA may affect burnout and job satisfaction through two mechanisms: positive (and negative) affect and support from the principal of their school (principal support).

Teachers who experience more positive affect while instructing students report greater job satisfaction (Weiss & Weiss, 1999) and less burnout (Rudow, 1999). Positive affect helps individuals to combat negative emotions, increase well-being, fuel resilience, and build durable personal resources (Fredrickson, 1998, 2001). Teachers who report greater social support, particularly from the principals with whom they work, also report greater job satisfaction (Burke, Greenglass, & Shwarzer, 1996; Schonfeld, 2001; Zellars & Perrewe, 2001) and less burnout (Leiter, 1991). Individuals who receive social support feel cared for, esteemed, and valued, and can rely on the availability of someone with whom to communicate during stressful times (Baruch-Feldman, Brondolo, Ben-Dayan, & Schwartz, 2002).

In light of this research, we formulated the following hypotheses to test the direct and indirect lines between ERA and job satisfaction/burnout among teachers: (a) ERA is positively related to job satisfaction and negatively related to burnout; (b) ERA is positively/negatively related to positive/negative affect, respectively; (c) ERA is positively related to principal support; (d) both positive and negative affect and principal support are related to job satisfaction in expected directions; (e) both positive and negative affect and principal support are related to burnout in expected directions; and (f) both positive and negative affect and principal support mediate the relationship between ERA and job satisfaction and burnout.

METHOD

Participants

Teachers ($N = 123$; 49 men, 74 women) across three secondary schools in Kent, England, volunteered to be a part of the research. The school district is located in a large suburb of London, England. The participants represent 93% of the teachers (across all areas of the curriculum in Grades 6–12) in the three schools. Participants were 96% White, had a mean age of 37.79 (standard deviation [SD] = 10.99) and 10.35 ($SD = 10.03$) years of teaching experience.

Measures

ERA. ERA was measured with the MSCEIT (version 2.0, 2002). The MSCEIT is a performance test in that there are more and less effective answers as determined by either expert or consensus scoring methods. The rationale for using expert and consensus criteria is described elsewhere (Legree, 1995; Mayer et al., 2003). Expert and consensus scores reflect the extent to which a person's responses match those of a sample of 21 experts from the International Society for Research on Emotion (ISRE) or a large sample of the general public (drawn from 5,000 individuals

from various nations), respectively. Specifically, item scores reflect the percentage of people in the comparison sample (experts or the general public) who provided the same response. For example, if 70% of the expert sample indicated that a particular emotion-regulation strategy was highly effective and a person chooses that answer, his or her score is incremented by .70. Because reliability is higher for expert than consensus ratings (Mayer et al., 2003), our analyses were based on expert scoring.

Confirmatory factor analysis of more than 2,000 adults' responses to the MSCEIT demonstrated that ERA is one of four emotional abilities measured by the test (Mayer et al., 2003). As reported in the test manual, the split-half reliability of this subscale is .81 (Mayer et al., 2003); the test–retest correlation over a 3-week period of this scale is .86 (Brackett & Mayer, 2003).

The ERA subscale of the MSCEIT assesses both intrapersonal and interpersonal ERAs through separate tasks totaling 29 items. Respondents rate the effectiveness (1 = *very ineffective*, 5 = *very effective*) of different strategies for regulating both one's own feelings in specified situations and managing emotionally challenging interpersonal situations. Standard scores were used in the analyses. These scores are interpreted in a similar fashion to standard scores in common IQ tests, with mean (M) = 100 and SD = 15. The test publisher does not authorize reproduction of actual test items, but the following is an abridged example of an item from the intrapersonal task.

Maria just came back from vacation. She is feeling peaceful and content. How well would each action preserve her mood?

(1) She started to make a list of things at home that she needed to do. (2) She began thinking about where and when to go on her next vacation. (3) She called a friend to tell her about the vacation . . .

Principal Support. Perceived social support from the principal was assessed with a scale developed by Baruch-Feldman and colleagues (2002). This scale has 10 items (e.g., “My immediate supervisor backs me up if there is a problem”), which are rated on a four-point Likert Scale (1 = *not at all*; 4 = *very much*). Higher scores indicate greater perceived support. Cronbach's alpha of this scale was .84.

Positive and Negative Affect. Positive and negative affect were assessed with the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988), a self-report instrument that contains two 10-item scales related to the experience of positive and negative affect within a specified time frame. In this study, participants rated the extent to which they experienced each emotion (e.g., joy, jitteriness, guilt) during the last 2 weeks at school using a five-point scale (1 = *very slightly*; 5 = *extremely*). The internal consistencies (α s for positive and negative affect were .80 and .91, respectively).

Job Satisfaction. Job satisfaction was assessed the self-report survey by Travers and Cooper (1993). This scale contains 15 items, which are rated on a 7-point scale (1 = *extremely dissatisfied*; 7 = *extremely satisfied*). The scale taps both the intrinsic and extrinsic aspects of teachers' work conditions. Higher scores indicate greater job satisfaction. Cronbach's alpha of the total score was .89.

Burnout. Job burnout was assessed with the Maslach Burnout Inventory-Educators Survey (MBI-ES; Maslach, Jackson, & Leiter, 1996), a 22-item scale designed to assess three aspects of the burnout syndrome: emotional exhaustion, depersonalization, and reduced feelings of personal accomplishment. Participants reported how frequently they experienced the different feelings and attitudes on a seven-point scale (1 = *never*; 7 = *every day*). In this study, Cronbach's alphas for the three subscales were .89, .56, and .82, respectively.

Table 1
Descriptive Statistics and Intercorrelations for All Measures

| Scale Name | <i>M</i> | <i>SD</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|----------|-----------|------|-------|-------|-------|-------|-------|-------|------|---|
| 1. ERA | 94.63 | 8.22 | — | | | | | | | | |
| 2. Principal Support | 2.95 | 0.62 | .21* | — | | | | | | | |
| 3. Positive Affect | 3.90 | 0.67 | .40* | .37* | — | | | | | | |
| 4. Negative Affect | 1.57 | 0.48 | -.10 | -.25* | -.14* | — | | | | | |
| 5. Job Satisfaction | 4.97 | 0.85 | .26* | .78* | .48* | -.28* | — | | | | |
| 6. Emotional Exhaustion | 3.26 | 1.20 | .04 | .22* | -.36* | .53* | -.33* | — | | | |
| 7. Depersonalization | 2.11 | 0.92 | -.16 | .18* | -.29* | .42* | -.23* | .54* | — | | |
| 8. Personal Accomplishment ¹ | 5.80 | 0.84 | .25* | .44* | .49* | -.27* | .38* | .37* | -.31* | — | |
| 9. Social Desirability | 3.78 | 0.51 | .24* | .24* | .33* | -.31* | .26* | -.39* | -.37* | .37* | — |

Notes. * $p < .05$; ¹This scale was reverse scored (higher scores indicate greater feelings of personal accomplishment).

Social Desirability. To ensure that response biases did not influence ERA scores, a shortened version (10-item) of the Marlowe–Crowne Social Desirability Scale was used (Strahan & Gerbasi, 1972). Participants responded to the items using a five-point scale (1 = *strongly disagree*; 5 = *strongly agree*). The internal consistency of the scale was .67.

Procedures

Informed consent was obtained from all participants. Participants completed a battery of assessments and surveys on a secure Web site. Data were collected in small groups during the school day. Trained research assistants greeted the participants in a designated area in the school and provided them with a consent form and a confidential code so their names could not be identified. Participants had up to 2 hours to complete the battery.

RESULTS

Alpha was set at .05 for all analyses. Univariate and bivariate analyses are presented in Table 1, which reports the *M* values, *SD* values, and intercorrelations for all measures. The *M* values, *SD* values, and ranges of scores on all variables were similar to values reported in past research with the exception of ERA scores, which were slightly lower (approximately 0.5 *SD*) than those reported in the normative sample (Mayer et al., 2002). Except for the correlations between ERA and negative affect, $r(121) = -.10$, not significant (*ns*), emotional exhaustion $r(121) = .02$, *ns*, and depersonalization, $r(121) = .16$, *ns*, which were not significant, the correlations between ERA and all other variables were statistically significant and fell into either the low or moderate range as defined by Cohen (1988). Finally, because ERA correlated significantly with social desirability, we calculated partial correlations to assess whether the inclusion of social desirability would diminish the findings. In all cases, ERA remained significant. These findings are consistent with those of other studies examining associations between ERA and different criteria controlling for social desirability (Barchard, 2001; Lopes et al., 2004).¹

Next, we tested whether the proposed mediators predicted any of the outcomes. In support of Hypothesis 4, both positive and negative affect and principal support correlated with both job

¹ Cronbach's alpha of the shortened version of the Marlowe–Crowne social desirability scale was surprisingly low in this study ($\alpha = .67$). Therefore, the correlations of this scale with other variables and its use as a covariate should be interpreted with caution.

satisfaction and burnout in expected directions. Finally, none of the demographic variables, including gender, age, and years of teaching experience, were significantly related to any of the other variables.

A major aim of the study was to examine whether positive and negative affect and principal support mediated the associations between ERA and both job satisfaction and burnout. Because ERA was not significantly related to negative affect, emotional exhaustion, and depersonalization, we dropped these variables from subsequent analyses. Also, due to the positive correlation between positive affect and principal support, we conducted a series of standard multiple regression models to examine the independent contributions of these variables to the two remaining outcomes (job satisfaction and personal accomplishment), prior to running the mediation analyses. The coefficients for both positive affect and principal support remained statistically significant for both job satisfaction, β s = .66 and .24, p s < .01, and personal accomplishment, β s = .38 and .29, p s < .01, respectively. Thus, the final models we examined tested whether positive affect and principal support (independently) mediated associations between ERA and job satisfaction and between ERA and personal accomplishment.

According to Baron and Kenny (1986), the following procedures demonstrate mediation: first, the antecedent (ERA) must significantly affect the mediating variables (positive affect and principal support). Second, the antecedent should have a statistically significant effect on the dependent variables (job satisfaction and personal accomplishment). Third, the strength of the relationship between the antecedent and dependent variables should decrease significantly when the effect(s) of the mediating variable(s) on the dependent variables are controlled.

Two path models were conducted to establish mediation. Model 1 (direct effects model) showed that ERA was related to all mediating and outcome variables, thus satisfying Baron and Kenny's (1986) first and second criteria. Model 2 (mediated effects model) depicted direct effects from ERA to the mediating variables, mediated effects of ERA on the dependent variables, and indirect effects of ERA on the dependent variables through the mediating variables. Both models were analyzed using LISREL 8.5 (Jöreskog & Sörbom, 2001). Model parameters were estimated using the maximum likelihood method. Evaluation of model fit was based on five criteria: chi-square (χ^2), root mean square error of approximation (RMSEA), comparative fit index (CFI), the standardized root mean square residual (SRMR), and the adjusted goodness-of-fit index (AGFI).

Table 2 shows the parameter estimates for Models 1 and 2. In Model 1, ERA was associated significantly with the mediators (positive affect, $\beta = .40$, $p < .001$, and principal support, $\beta = .21$, $p < .05$) and the two dependent variables (job satisfaction, $\beta = .26$, $p < .01$, and personal accomplishment, $\beta = .25$, $p < .01$). According to Kline (2005), standardized path coefficients that are less than .10 are small, approximately .30 are typical or medium, and greater than or equal to .50 are large. Based on these criteria, the obtained path coefficients in Model 1 were small. In addition, we estimated the correlation between the disturbance terms of the two mediators (based on conceptual grounds) and found that they were positively and moderately correlated, $r(121) = .29$, $p < .001$. Goodness-of-fit indices suggest poor fit with $\chi^2(5) = 123.66$, $p < .001$, RMSEA = .44, CFI = .25, AGFI = .14, and SRMR = .27. Figure 1 depicts the direct effects of Model 1 with standardized path coefficients.

Figure 2 illustrates changes made to the first model. In Model 2, direct effects from the mediators to the outcome variables were estimated. Obtained standardized parameters' magnitudes ranged from moderate to large, in contrast to those obtained in Model 1. Principal support was associated significantly with both job satisfaction, $\beta = .70$, $p < .001$, and personal accomplishment, $\beta = .30$, $p < .001$. Likewise, positive affect was associated with both job satisfaction, $\beta = .21$, $p < .001$, and personal accomplishment, $\beta = .36$, $p < .001$. In addition, ERA continued to be associated significantly with both principal support, $\beta = .21$, $p < .05$, and positive affect, $\beta = .40$, $p < .001$. The relationships between ERA and the two dependent variables, however, were not statistically

Table 2
Path Coefficients for Hypothesized Models

| | Model 1 | | | Model 2 | | |
|---|----------|-----------|---------|----------|-----------|---------|
| | <i>B</i> | <i>SE</i> | β | <i>B</i> | <i>SE</i> | β |
| Direct Effects | | | | | | |
| ERA → Principal Support | 0.016 | 0.007 | .21* | 0.016 | 0.007 | .21* |
| ERA → Positive Affect | 0.033 | 0.007 | .40* | 0.033 | 0.007 | .40* |
| ERA → Job Satisfaction | 0.027 | 0.009 | .26* | — | — | — |
| ERA → Personal Accomplishment | 0.026 | 0.009 | .25* | — | — | — |
| Principal Support → Job Satisfaction | | | | 0.954 | 0.079 | .70* |
| Principal Support → Personal Accomplishment | | | | 0.402 | 0.110 | .30* |
| Positive Affect → Job Satisfaction | | | | 0.267 | 0.078 | .21* |
| Positive Affect → Personal Accomplishment | | | | 0.455 | 0.108 | .36* |
| Mediated Effects^a | | | | | | |
| ERA → Job Satisfaction | | | | 0.003 | 0.006 | .03 |
| ERA → Personal Accomplishment | | | | 0.004 | 0.008 | .04 |
| Indirect Effects | | | | | | |
| ERA → Job Satisfaction | | | | 0.024 | 0.008 | .23* |
| ERA → Personal Accomplishment | | | | 0.021 | 0.006 | .21* |

Notes. *B* = unstandardized path coefficients; β = standardized path coefficients. ^a“Direct effects” from ERA to the outcomes in Model 2 are considered mediated effects because of the presence of mediators in the model. * $p < .05$.

significant (the mediated effects), suggesting complete mediation (Baron & Kenny, 1986). Specifically, ERA was not associated with job satisfaction, $\beta = 0.03, p > .10$, or personal accomplishment, $\beta = .04, p > .10$, after accounting for the influence of the mediators on these outcome variables. The indirect effects from ERA to job satisfaction, $\beta = .23, p < .01$, and from ERA to personal accomplishment, $\beta = .21, p < .001$, were significant, however, suggesting that ERA indirectly impacted teachers’ increased levels of job satisfaction and personal accomplishment through the impact of ERA on both positive affect and principal support.

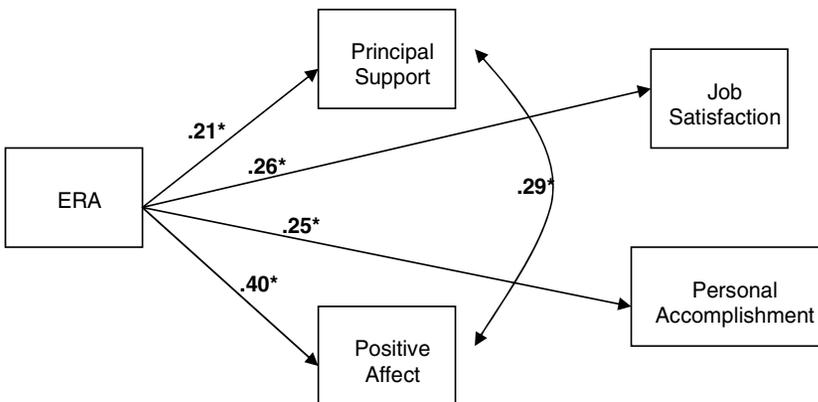


FIGURE 1. Direct effects model showing pathways from ERA to mediators and dependent variables. Values shown are standardized parameter estimates. Disturbance terms are not shown in model. * $p < .05$.

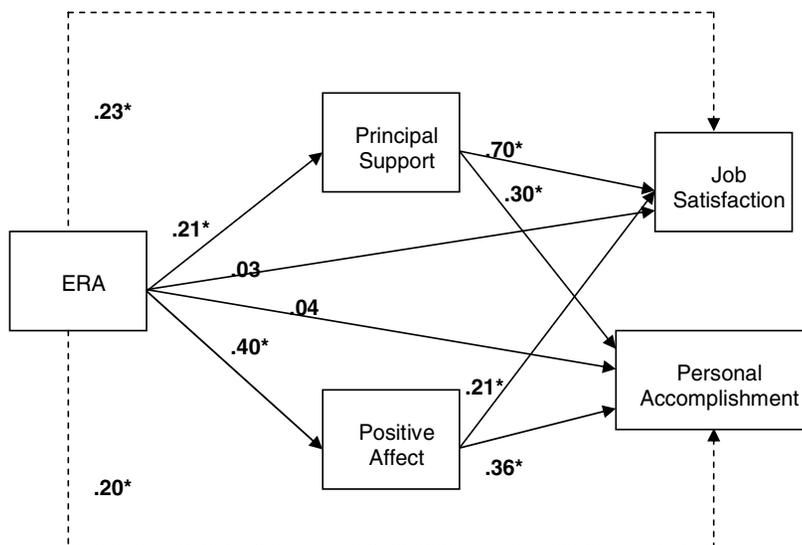


FIGURE 2. Direct/mediated (solid lines) and indirect (dashed lines) effects model showing pathways from ERA to mediators and dependent variables. Values shown are standardized parameter estimates. Disturbance terms and covariance between mediators were estimated but values are not shown in model. * $p < .05$.

Results support the mediational hypotheses: Teachers with higher ERA may be more satisfied with their jobs and feel more personally accomplished because they experience more positive emotions and have greater social support from their principals. Goodness-of-fit indices suggested excellent fit, with $\chi^2(1) = 0.70$, $p > .10$, RMSEA = .00, CFI = 1.00, AGFI = .97, and SRMR = .01. Chi-square change between the two models also was statistically significant, $\Delta\chi^2(4) = 122.96$, $p < .001$, suggesting that Model 2 has a better fit than Model 1.

DISCUSSION

This study marks one of the first efforts to investigate the relationship between emotion-related abilities, namely ERA, as assessed with a performance measure, and both job satisfaction and burnout among teachers. It also marks the first attempt to examine the mediating effects of affect and principal support on these central, work-related outcomes.

In partial support of our first hypothesis, we found that ERA was associated positively with job satisfaction and greater personal accomplishment, but not with depersonalization and emotional exhaustion. There are several possible explanations for these findings. Burnout is a multidimensional construct with components that are multiply determined (Schaufeli & Enzmann, 1998). A meta-analysis, for example, showed that personal accomplishment is decreased primarily due to a reduction in interpersonal resources such as social support (Lee & Ashforth, 1996). The ERA subscale on the MSCEIT taps one's ability to regulate emotions in both personal and interpersonal situations. Teachers with higher ERA—those who regulate their own emotions effectively and help others regulate emotions successfully—are likely to elicit positive responses from those with whom they interact, which in turn could lead to greater personal accomplishment. Teachers with higher ERA also may feel greater personal accomplishment because ERA likely contributes to the establishment of warm, caring relationships, the ability to deal effectively with student problems, and the creation of a relaxing classroom atmosphere, to the extent that it enhances positive emotions and preempts

conflict and tension. Indeed, the relationship between ERA and outcomes reflecting social adaptation has been established (Lopes et al., 2003, 2004).

The weak association between ERA and depersonalization may be attributed to the low reliability of the scale and how the construct is measured. On the MBI-ES, depersonalization is assessed in part by how much teachers worry about whether they are being hardened by their work. Higher scores on such items contribute negatively to one's total score on the depersonalization scale. Because teachers with higher ERA may be more introspective and concerned about the impact of their feelings on students, some items on the depersonalization scale may have a different meaning for teachers who are higher versus lower in ERA.

It is less clear why ERA was unrelated to emotional exhaustion. Emotional exhaustion is determined primarily by job demands or characteristics outside of an individual's control (Lee & Ashforth, 1996). Therefore, individual differences in ERA may not have a direct impact on emotional exhaustion. Moreover, emotional exhaustion assesses whether a person feels drained by work demands; it does not assess how well one is coping or dealing with these demands. Finally, the ERA subtest on the MSCEIT is not an omnibus measure of emotion regulation; the test assesses one's ability to regulate emotions in a limited number of emotionally provocative personal and social situations.

In partial support of our second hypothesis, higher ERA was associated with positive, but not negative, affect. Positive affect also mediated the relationships between ERA and both job satisfaction and personal accomplishment, as hypothesized. It appears that teachers with higher ERA may be more skilled at generating positive emotions using diverse strategies such as self-talk and cognitive reappraisal to undo negative emotional experiences, manage stress, and promote job satisfaction. Indeed, according to the broaden-and-build theory of positive emotions (Fredrickson, 1998, 2001), positive emotions are themselves a form of emotion regulation as they enhance creative problem solving (Isen, Daubman, & Nowicki, 1987). Positive emotions also have an adaptive function; they act as a buffer against stress (Tugade & Fredrickson, 2004), which may help teachers to acquire the necessary intellectual and social resources to prevent burnout and promote job satisfaction.

There are a few plausible explanations for the nonsignificant association between ERA and negative affect. First, the variance of the negative affect scale was highly restricted. Only 8% of the teachers in our study had mean scores greater than 2.0 on the five-point scale. It also may be that negative affect is more complex than positive affect (Parrott, 2002). The negative affect scale on the PANAS (Watson et al., 1988) employs a diverse set of terms, including emotions associated with high arousal such as "distressed" and "irritable," as well as self-conscious emotions such as "guilty" and "ashamed." Although teachers with higher ERA are expected to manage emotions with high arousal such as irritability, their management of self-conscious emotions such as guilt may be quite different from those of teachers with lower ERA. Guilt, for example, has an adaptive function. It is accompanied by beliefs that one should have thought, felt, or acted differently (Kubany & Watson, 2003). Teachers with higher ERA may be more open to reporting feelings of guilt and better able to regulate these feelings when they occur. Measuring negative affect with the PANAS may mask these important differences.

In support of our third hypothesis, ERA was associated positively with principal support. Moreover, as predicted, principal support mediated the relationships between ERA and both job satisfaction and personal accomplishment. ERA may contribute to social support through several mechanisms. The strategies that individuals employ to regulate emotions affect their relationships (Gross, 2002). Specifically, ERA may color the emotional tone of social encounters—displays of pleasant emotions elicit favorable reactions from others, whereas the expression of unpleasant emotions often pushes people away (Argyle & Lu, 1990; Furr & Funder, 1998). Because teachers with higher ERA may be less likely to lose control of their emotions and be more knowledgeable

about the appropriate display of emotion, they are likely to have better relationships with principals and colleagues. In turn, they may be more satisfied with their jobs and less prone to stress and its consequences, such as burnout.

This study is not without limitations. First, we included only a limited set of assessment tools. Additional indicators for all constructs in the study would expand these findings. For example, the measure of ERA tapped our participants' emotion knowledge, but did not address how frequently teachers need to regulate emotions to meet job demands. With respect to positive and negative affect, the PANAS may not capture subtle differences in the affective experiences of emotionally skilled individuals. Moreover, positive and negative affect were assessed at only one time point. The use of experience-sampling methods (Hektner, Schmidt, & Csikszentmihalyi, 2006) would likely provide a more reliable and detailed picture of teachers' daily affect over time, which could expand our findings. Beyond self-report measures of principal support, actual reports from principals also would corroborate the results found here. Finally, the data presented here were cross-sectional and represent teachers from one geographic area in Kent, England; longitudinal research with a larger, more diverse sample of teachers is necessary to test fully both the intercorrelations and causal ordering of the constructs in this study.

CONCLUSION

Teaching is an emotional practice, yet there is surprisingly little research on the emotional aspects of teachers' lives (Hargreaves, 1998; Sutton & Wheatley, 2003). The present findings expand research on the role and importance of ERA and on important work-related outcomes such as job satisfaction and burnout into the realm of the teaching profession. In particular, greater insight was obtained as to the importance of ERA and possible mechanisms (principal support and positive affect) by which ERA may contribute to greater job satisfaction and feelings of personal accomplishment. The present findings, together with prior research on teachers' emotion regulation (Sutton, 2004), raise the possibility that teacher-training programs focusing on developing emotion-regulation skills might result in a number of favorable outcomes for teachers (Brackett & Caruso, 2007), including increases in positive affect and greater support from principals. In turn, teachers may experience less burnout and greater job satisfaction, remain in the profession longer, and be more effective in the classroom.

REFERENCES

- Argyle, M., & Lu, L. (1990). The happiness of extraverts. *Personality and Individual Differences*, 11, 1011–1017.
- Barchard, K. A. (2001). Emotional and social intelligence: Examining its place in the nomological network. Unpublished doctoral dissertation, University of British Columbia, Canada.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
- Baruch-Feldman, C., Brondolo, E., Ben-Dayana, D., & Schwartz, J. (2002). Sources of social support and burnout, job satisfaction and productivity. *Journal of Occupational Health Psychology*, 7, 84–93.
- Brackett, M. A., & Caruso, D. R. (2007). Emotional literacy for educators. Carey, NC: SELmedia.
- Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin*, 29, 1–12.
- Brackett, M. A., Rivers, S. E., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology*, 91, 780–795.
- Brotheridge, C. M., & Grandey, A. A. (2002). Emotional labour and burnout: Comparing two perspectives of "people work." *Journal of Vocational Behavior*, 60, 17–39.
- Burke, R. J., & Greenglass, E. R. (1994). Towards an understanding of work satisfaction and emotional well-being of school-based educators. *Stress Medicine*, 10, 177–184.
- Burke, R. J., Greenglass, E. R., & Schwarzer, R. (1996). Predicting teacher burnout over time: Effects of work stress, social support, and self-doubt on burnout and its consequences. *Anxiety, Stress, and Coping*, 9, 261–275.

- Carlson, B. C., & Thompson, J. A. (1995). Job burnout and job leaving in public school teachers: Implications for stress management. *International Journal of Stress Management*, 2, 15–29.
- Chan, D. W. (1998). Stress, coping strategies and psychological distress among secondary school teachers in Hong Kong. *American Educational Research Journal*, 35, 145–163.
- Chan, D. W. (2006). Emotional intelligence and components of burnout among Chinese secondary school teachers in Hong Kong. *Teaching and Teacher Education*, 22, 1042–1054.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Dunham, J. (Ed.). (1992). *Stress in the workplace: Past, present, and future*. Philadelphia, PA: Whurr Publishers, Ltd.
- Dunn, E., Brackett, M. A., Ashton-James, C., Schneiderman, E., & Salovey, P. (2007). On emotionally intelligent time travel: Individual differences in affective forecasting ability. *Personality and Social Psychology Bulletin* 33, 85–93.
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology*, 2, 300–319.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56, 218–226.
- Furr, R. M., & Funder, D. C. (1998). A multimodal analysis of personal negativity. *Personality and Social Psychology*, 74, 1580–1591.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2, 271–299.
- Gross, J. J. (2002). Emotion regulation: Affective, cognitive and social consequences. *Psychophysiology*, 39, 281–291.
- Gross, J. J., & John, O. P. (2002). Wise emotion regulation. In L. F. Barrett & P. Salovey (Eds.), *The wisdom of feelings: Psychological processes in emotional intelligence* (pp. 297–318). New York: Guilford.
- Guglielmi, R. S., & Tatrow, K. (1998). Occupational stress, burnout and health in teachers: A methodological and theoretical analysis. *Review of Educational Research*, 68, 61–69.
- Hargreaves, A. (1998). The emotional practices of teaching. *Teaching and Teacher Education*, 14, 835–854.
- Hektner, J. M., Schmidt, J. A., & Csikszentmihalyi, M. (2006). *Experiencing sampling method: Measuring the quality of everyday life*. Newbury Park, CA: Sage.
- Isen, A. M., Daubman, K. A., & Nowicki, G. P. (1987). Positive affect facilitates creative problem solving. *Journal of Personality and Social Psychology*, 52, 1122–1131.
- Johnson, S., Cooper, C. L., Cartwright, S., Donald, I., Taylor, P., & Millet, C. (2005). The experience of work-related stress across occupations. *Journal of Managerial Psychology*, 20, 179–187.
- Jöreskog, K., & Sörbom, D. (2001). LISREL 8.5 (Computer software). Chicago: Scientific Software International.
- Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: The Guilford Press.
- Kubany, E. S., & Watson, S. B. (2003). Guilt: Elaboration of a multidimensional model. *The Psychological Record*, 53, 51–90.
- Kyriacou, C., & Sutcliffe, J. (1977). Teacher stress: A review. *Educational Review*, 29, 299–306.
- Kyriacou, C., & Sutcliffe, J. (1978). Teacher stress: Prevalence, sources and symptoms. *British Journal of Educational Psychology*, 48, 159–167.
- Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81, 123–133.
- Legree, P. J. (1995). Evidence for an oblique social intelligence factor established with a Likert-based testing procedure. *Intelligence*, 21, 247–266.
- Leiter, M. P. (1991). The dream denied: Professional burnout and the constraints of service organizations. *Canadian Psychology*, 32, 547–558.
- Litt, M. D., & Turk, D. C. (1985). Sources of stress and dissatisfaction in experienced high school teachers. *Journal of Educational Research*, 78, 178–185.
- Lopes, P. N., Brackett, M. A., Nezlek, J. B., Schütz, A., Sellin, I., & Salovey, P. (2004). Emotional intelligence and social interaction. *Personality and Social Psychology Bulletin*, 30, 1018–1034.
- Lopes, P. N., Salovey, P., Côté, S., & Beers, M. (2005). Emotion regulation ability and the quality of social interaction. *Emotion*, 5, 113–118.
- Lopes, P. N., Salovey, P., & Straus, R. (2003). Emotional intelligence, personality and the perceived quality of social relationships. *Personality and Individual Differences*, 35, 641–659.
- Maslach, C. (1986). *Burnout, the cost of caring*. New York: Prentice Hall Press.
- Maslach, C., & Jackson, S. E. (1986). *The Maslach Burnout Inventory* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., Jackson, S., & Leiter, M. P. (1996). *Maslach Burnout Inventory* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

- Mayer, J. D., Roberts, R., & Barsade, S. G. (2008). Human abilities: Emotional intelligence. *Annual Review of Psychology*, 59, 507–536.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3–31). New York: Basic Books.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) Item Booklet. Toronto, Canada: MHS Publishers.
- Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2003). Measuring emotional intelligence with MSCEIT V.2.0. *Emotion*, 3, 97–105.
- Parrott, W. G. (2002). The functional utility of negative emotions. In L. F. Barrett & P. Salovey (Eds.), *The wisdom in feeling: Psychological processes in emotional intelligence* (pp. 341–359). New York: Guilford Press.
- Rudow, B. (1999). Stress and burnout in the teaching profession: European studies, issues, and research perspectives. In R. Vandenberghe & A. M. Huberman (Eds.), *Understanding and preventing teacher burnout: A sourcebook of international research and practice* (pp. 38–58). New York: Cambridge University Press.
- Schaufeli, W. B., & Enzmann, D. (1998). *The burnout companion to study and practice: A critical analysis*. London: Taylor & Francis.
- Schonfeld, I. S. (2001). Stress in first year women teachers: The context of social support and coping. *Genetic, Social and General Psychology Monographs*, 127, 133–169.
- Shan, M. H. (1998). Professional commitment and satisfaction among teachers in urban middle schools. *The Journal of Educational Research*, 92, 67–73.
- Strahan, R., & Gerbasi, K. C. (1972). Short, homogeneous versions of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, 28, 191–193.
- Sutton, R. (2004). Emotional regulation goals and strategies of teachers. *Social Psychology of Education* 7, 379–398.
- Sutton, R. E., & Harper, E. M. (2009). Teachers' emotion regulation. In L. J. Saha & A. G. Dworkin (Eds.), *The new international handbook of teachers and teaching* (pp. 389–401). New York: Springer.
- Sutton, R. E., & Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and directions for future research. *Educational Psychology Review*, 15, 327–358.
- Travers, C. J., & Cooper, C. L. (1993). Mental health, job satisfaction and occupational stress among UK teachers. *Work and Stress*, 7, 203–219.
- Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology*, 86, 320–333.
- Turk, D. C., Meeks, S., & Turk, L. M. (1982). Factors contributing to teacher stress. Implications for research, prevention, and remediation. *Behavioral Counseling Quarterly*, 2, 1–26.
- Vandenberghe, R., & Huberman, A. M. (1999). *Understanding and preventing teacher burnout: A sourcebook of international research and practice*. Cambridge, UK: Cambridge University Press.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063–1070.
- Weiss, E. M., & Weiss, S. G. (1999). *Beginning teacher induction*. Washington, DC: ERIC Clearinghouse on Teaching and Teacher Education.
- Zellars, K. L., & Perrewe, P. L. (2001). Affective personality and the content of emotional social support: Coping in organizations. *Journal of Applied Psychology*, 86, 459–467.