TEACHERS' EMOTION REGULATION AS A PROTECTIVE FACTOR AGAINST

BURNOUT

by

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Abstract

Burnout, a phenomenon which involves emotional exhaustion, depersonalization, and reduced personal accomplishment, is one reason that many educators report leaving the teaching profession. Many of the risk factors associated with burnout have been explored at great length but very little attention has been paid to the protective factors that might mitigate burnout. Accordingly, this study examined the role emotion regulation, both the general knowledge of emotion regulation skills and the reported use of cognitive reappraisal and expressive suppression, two common emotion regulation strategies, plays in relation to job satisfaction and burnout. Participants were 233 K-12 teachers who were enrolled in the Summer Principals Academy graduate program for aspiring teacher leaders at Teacher College, Columbia University, between 2008 and 2012. Participants completed self-reported measures regarding their use of cognitive reappraisal and expressive suppression, job satisfaction and two aspects of burnout (personal accomplishment and emotional exhaustion). Participants also completed a performance measure of Emotional Intelligence, which included a knowledge test of overall emotion regulation ability. Results of simultaneous hierarchical regression analyses indicated that, contrary to hypotheses, emotion regulation was not, a protective factor against teachers' experience of burnout in the present sample. The study begs replication, however, as the present sample was not fully representative of the general teaching population (i.e., participants were highly satisfied with their jobs and were studying to become school administrators).

Preface

Chapter 2 and 3 are based on work conducted by Dr. Marc Brackett and research assistants from the Yale Health, Emotion and Behavior Lab at Yale University. I was responsible for analyzing the data used in this thesis.

UBC Research Ethics Board approval was obtained for this research (UBC BREB# H15-00386).

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cheerleaders- my parents and sister- for the belief that I could do this and the many

delicious treats they shared along the way.

Chapter 1: Introduction

Burnout, a phenomenon that results from emotional exhaustion,
depersonalization, and reduced personal accomplishment, has been long recognized as an
occupational hazard in education (Beer & Beer, 1992) and is an issue facing teachers
world-wide (Chan, 2006; Loonstra, Browers, & Tomic, 2009; Maslach, 1986). It is
estimated that nearly half of all new Canadian teachers will leave the profession in the
first five years and, in the USA, as many as 13% of teachers leave the profession each
year, reasons for leaving include stress and burnout (Haynes, 2014; Kutsyuruba, Godden,
& Tregunna, 2014). Although much research has explored the causes of educator
burnout, far less is known about the protective factors that might mitigate educators'
experience of burnout. The capacity to regulate emotions effectively is one such
protective factor.

Emotion regulation is the ability to process emotions and emotion-related
information and involves unconscious and conscious attempts to modulate the cognitive,
behavioural, and physiological aspects of an emotion (Gross, 2002; Mayer & Salovey,
1997). Emotion regulation is a key component of emotional intelligence (EI), which has
been shown to enhance social relationships, cognitive functioning, and general well-being
(Brackett, Warner, & Bosco, 2005; Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006;
Mayer & Salovey, 1997; Mayer, Roberts, & Barsade, 2008; Rivers, Brackett, Katulak, &
Salovey, 2007).

To effectively regulate emotions, one must accurately discriminate and label
feelings, choose and use strategies to change the feelings and reflect on the effectiveness
of those strategies (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010). Emotion

regulation influences teachers' ability to meet academic and social goals, which in turn contributes to their sense of personal and professional accomplishment (Sutton, 2004). Teachers who are able to regulate their emotions effectively are more likely to experience job satisfaction and a sense of personal accomplishment in the workplace (Brackett et al., 2010). Because factors that contribute to stress and burnout in education are unavoidable, it is essential that efforts to prevent and mitigate burnout, such as fostering emotion regulation skills, garner further investigation to avoid the negative effects of burnout on both teachers and learners (Chan, 2006).

The research study herein sought to examine the relation between emotion regulation and both job satisfaction and burnout. Accordingly, in the pages that follow, the study begins with a review our current understanding of emotional intelligence, with a focus on emotion regulation and the use of two regulatory strategies: expressive suppression and cognitive reappraisal. The next section explores stress and burnout for educators, and the associated effects of emotional exhaustion and reduced personal accomplishment. The final section of the first chapter introduces the purpose of the current study and the specific research questions examined.

1.1 Theory of Emotional Intelligence

The theory of Emotional Intelligence (EI) conceptualizes the relation between cognition and affect (Salovey & Mayer, 1990). Although, historically, cognition and affect have sometimes been viewed as independent (DeSousa, 1987; Llyod, 1979), it is now widely acknowledged that emotions and cognition work in tandem as emotions convey information that facilitates cognition and cognition can influence emotions (Mayer, Salovey, Caruso, Cherkasskiy, 2011). According to Mayer and Salovey (1997),

"Emotional intelligence involves the ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotions and emotional knowledge; and the ability to reflectively regulate emotions to promote emotional and intellectual growth" (p. 10). The Mayer and Salovey (1997) model of EI specifies four discrete, inter-related mental abilities: 1) perceiving emotions, 2) using emotions to facilitate thought, 3) understanding emotions, and 4) managing emotions. The four branches of EI are arranged hierarchally, according to the sophistication of the mental processes believed to be involved, from the most basic skill of perceiving emotions to the more complex skill of utilizing strategies to manage emotions.

Perceiving emotions, the first branch of EI, includes the ability to accurately recognize emotions and their associated expressive cues in one's self and others. The recognition of emotions includes accurately identifying facial expressions, body language (including posture and gestures), tone of voice (pace, pitch, volume), and physiology (racing heart, sweaty palms). Accurately perceiving emotions also involves differentiating between genuine and fake expressions of emotion. The second branch of EI, using emotions to facilitate thought, refers to how emotions assist intellectual processing. This branch includes the ability to leverage the adaptive aspect of an emotion to support thinking, decision-making, planning, logical reasoning and/or learning. Utilizing emotions also includes skills such as attending to specific information or generating emotions to empathize with others (Brackett, Rivers, & Salovey, 2011). Understanding emotions, the third branch of EI, involves the skills of labeling emotions, knowing the causes of emotions and moods, and recognizing how emotions might shift in

strength and duration. Managing emotions in order to enhance emotional and intellectual growth is the final branch of emotional intelligence and builds on the subsequent abilities. Managing emotions includes knowing and using strategies to prevent, reduce, increase, or change an emotional response in one's self or others (Brackett et al., 2011).

Research on EI indicates several associated positive outcomes including better workplace performance, higher academic achievement, better relationship quality, and a greater sense of well-being (see Mayer, Roberts, & Barsade, 2008 for a review). Furthermore, reviews of EI research conclude that high EI is associated with greater social competence, more positive social relationships, and greater empathy and social skills (Brackett et al., 2006; Mayer, Roberts, & Barsade, 2008; Mayer, Salovey, & Caruso, 2008).

1.2 Emotion Regulation

Emotions are relatively brief responses to specific stimuli, objects or events that unfold over a short time period and include behavioral, feeling (experiential) and physiological aspects (Gross 1998b; Lang, 1995). Emotions and emotional experiences can be modulated through regulatory strategies. According to the Mayer and Salovey (1997) model of EI, one must have emotion skills in order to effectively manage one's emotions. Similarly, Izard et al. (2011) suggest that the knowledge of emotions empowers an individual to exercise emotion regulation skills. Emotion knowledge includes the accurate understanding of emotion expression (face, body, voice), feelings (internal, subjective states), and utility of emotions.

Emotion regulation involves neural, cognitive, and behavioural processes to modulate, or attempt to modulate, the experience of an emotion -- which emotions are

experienced and when they are experienced. This includes the intensity and duration of the emotional experience and how the emotions are expressed (Gross 1998a; Gross 1998b; Izard et al. 2011; Oschner & Gross, 2004). Emotion regulation involves the conscious or unconscious use of strategies to sustain, increase, or decrease pleasant and unpleasant emotions in response to environmental demands (Mayer & Salovey, 1995). Gross (1998b) points out that emotion regulation is such a common occurrence that it does not garner much awareness except when it is absent.

Emotion regulation involves three core features: 1) the activation of an emotion regulation goal (that is, what the individual is trying to accomplish), 2) the use of regulatory strategies to reach the goal, and 3) the shift in an emotional experience (latency, strength, and/or duration of an emotion) (Gross & Thompson, 2007). Decreasing negative emotions (down-regulation) and increasing positive/pleasant emotions (up-regulation) seem to be the most common emotion regulation goals (Gross & Thompson, 2014). In the Yale Center for Emotional Intelligence's emotional literacy program (see www.RULER.org), emotion regulation involves a set of "PRIME" skills and goals. The acronym PRIME stands for preventing, reducing, initiating, maintaining and enhancing emotions. Emotion regulation includes knowing and using strategies to effectively prevent and reduce unwanted emotions, and initiate, maintain and enhance helpful or desired emotions.

Gross (1998b) distinguishes two main types of emotion regulation strategies, preventative and responsive. *Preventative* regulation is antecedent-focused; strategies are employed to shift the emotional experience before the experience has occurred. Preventative regulation strategies include situation selection and modification, attention

deployment and cognitive change. *Responsive* regulation happens "in the moment" when an individual has been emotionally activated (Gross, 1998b), with intent to responsively increase, decrease, maintain or inhibit emotional experiences (Gross, 1998a).

To assist in the conceptualization of the strategic processes involved in emotion regulation, Gross and Thompson (2007) developed the Modal Model of Emotions. According to this model, a situation occurs, which can be internal or external, real or imagined, and is attended to by the individual who then appraises that situation, resulting in an emotional response. An emotional response often leads to a change in the environment, which then affects further emotional responses and interactions. Each step in the process of emotion generation has the potential for regulatory intervention, resulting in five opportunities for the use of regulatory strategies: situation selection, situation modification, attentional deployment, cognitive change, and response modulation (see also Gross, 1998b). The first four strategies (situation selection, situation modification, attentional deployment, and cognitive change) can be used preventatively, before an individual emotionally activated. The fifth strategy, response modulation, occurs "in the moment" and is responsively applied during emotional activation.

Cognitive change is an emotional strategy that refers to the way in which an individual appraises his/her emotion(s) and, in so doing, shifts their emotional experience. Cognitive reappraisal, one of the most common of the cognitive change regulatory strategies (Mikolajczak, Tran, Brotheridge, & Gross, 2009), involves mentally changing the storyline of a particular situation, reducing distress by viewing a stressful situation through a positive lens (Gross, 1998a). For example, a teacher might be faced with a student who continually misbehaves and is off-task. The teacher's sense of

frustration might escalate if the teacher thinks, "This student is being defiant and purposely trying to goad me into yelling at him/her." This mental narrative is not helpful to the situation and the emotions can quickly escalate from frustration to anger. Alternatively, the teacher could reduce frustration by reminding himself/herself that the student may be currently experiencing family strife and that they need to be extra patient with such misdemeanors. Cognitive reappraisal is consistently used to down-regulate unpleasant emotions (Gross, 1998b) and can also be used to regulate any emotional experience. Given the many stressful situations teachers encounter each day, as in the example, many teachers to employ strategies (Sutton, 2004) to regulate their feelings stress, utilizing effective emotion management strategies, such as cognitive reappraisal may mitigate their experience of burnout.

Response modulation strategies are typically employed *after* an individual has become emotionally activated and involves altering one's physiological, behavioural, and experiential responses. Teachers might instruct students on how to use progressive muscle relaxation or mindful breathing to modulate their physiological and experiential components of their emotional response. Many teachers are constantly regulating their emotional expression (Sutton, 2004) through a strategy called *expressive suppression* (Gross & Thompson, 2014). Expressive suppression is used to inhibit expressive displays of emotion when an individual is emotionally activated. The felt, internal experience is disparate from the displayed emotional expression. For example, a conflict at an early morning staff meeting may evoke a sense of frustration and irritation for a teacher. If the teacher needs to speak with a student immediately following the meeting, the teacher might use expressive suppression to avoid displaying their frustration to the students.

Teachers are generally aware that an inappropriate display of emotions can have lasting negative consequences (Brackett et al., 2010). Suppressing an emotional expression may not decrease the felt experience of the emotion and requires effort, called emotional labour (Hochschild, 1983). Although expressive suppression can be an adaptive strategy (as in the example above), chronic use of the strategy can be a drain on emotional resources. One hypothesis of the current study is that teachers who heavily rely on expressive suppression as an emotion regulation strategy may experience burnout in the form of emotional exhaustion.

Not all emotion regulation strategies have the same effects. Several strategies may be helpful in the short-term, but are associated with negative outcomes when used habitually. In particular, suppression, avoidance, and rumination are seen as potentially maladaptive responses to emotional stimuli that can lead to further distress and risky behavior (i.e., substance abuse). Chronic suppression has been associated with internalizing disorders (i.e., hypersensitivity to depression and anxiety-related thoughts) (Wegner & Zanakos, 1994); avoidance has been associated with mood and substance use problems (Wenzlaff & Wegner, 2000). Rumination has been found to impede productive problem solving (Hong, 2007). Results of a meta-analysis (Aldao, Nolen-Hoeksema, & Schweizer, 2010) confirm that maladaptive emotion regulation strategies for adults include suppression, avoidance, and rumination, are associated with psychopathology.

Conversely, employing effective emotion regulation strategies, such as cognitive reappraisal or problem solving, has been associated with positive relationships, better academic and work performance and overall health and well-being (John & Gross, 2004; Lopes, Brackett, Nezlek, Schütz, Sellin, & Salovey, 2004; Ryff & Keyes, 1995).

Individuals who are skilled at regulating emotions experience increased positive and decreased negative affect (see Gross & Thompson, 2007 for review). When teachers experience more positive affect, they report greater levels of job satisfaction (Weiss & Weiss, 1999), which may help to foster pleasant experiences with co-workers and the people they serve. These pleasant experiences would likely enhance their social relationships and further their sense of job satisfaction. Thus, emotion regulation plays a key role in the relational aspect of teaching and may also influence one's sense of personal accomplishment and job satisfaction.

The current study examined the relationship between educators' knowledge of emotion regulation, their reported use of regulation strategies, and their experience of job-satisfaction and burnout. Consistent with Gross's (1998b) concept of antecedent and preventative emotion regulation strategies, this study explores one antecedent cognitive strategy -- cognitive reappraisal, and one responsive strategy -- expressive suppression. These two strategies are commonly used (Gross & John, 2003; Gross, Richards, & Oliver, 2006) to regulate all types of emotions -- both pleasant and unpleasant, with varying outcomes. Both regulation strategies have the potential to be adaptive, although chronic suppression is also associated with negative outcomes (e.g., Wegner & Zanakos, 1994). Research has shown that cognitive reappraisal and expressive suppression are statistically unrelated strategies (Gross & John, 2003), which suggests that individuals report using one, both or neither of the strategies (Carson, 2006). Although it is recognized that teachers employ a variety of cognitive strategies both preventatively and responsively to regulate their emotions (e.g., self-talk, visualization, reappraisal, etc.) (Sutton, 2004), the current study explores both one's knowledge of overall emotion

regulation as well as their self-reported use of two, specific and commonly-used emotion regulation strategies (cognitive reappraisal and emotional suppression) to explore the relationship between emotion regulation and job outcomes.

1.3 Emotion Regulation and Teaching

Throughout any given day, teachers are required to manage their emotional experiences, including their emotional displays. To this end, it is essential that teachers know and use a repertoire of effective regulation strategies such as cognitive reappraisal and expressive suppression. Teachers who have high EI and effectively regulate their emotions in response to a particular situation are more likely to experience more positive outcomes than if they are dysregulated (Brackett et al., 2010). For example, a teacher who is emotionally activated when a student does not complete their classwork may think, "This student is so frustrating; she wastes so much class time!" Such an appraisal might enhance the strength and increase the duration of the emotional experience and the teacher will feel further activated, perhaps snapping at the student and embarrassing her in front of her peers. The interaction may create a reaction cycle, where the student may become defensive and rude, further distressing the teacher. The residual stress from this situation may influence the teacher's attention and deter his/her focus from the lesson, creating a negative cascade effect. Conversely, a teacher who is better able to regulate his/her emotions might think, "This student may be having a tough time at home right now; no wonder she is daydreaming during class and not completing her work." The use of positive, cognitive reappraisal helps to decrease the emotional activation while shifting the response and, in turn, the situation (Gross, 1998b).

Many teachers recognize the importance of emotion regulation and believe that modulating unpleasant emotions helps to maintain their focus on academic learning and reduce the interference in their teaching (Sutton, 2004). In her study of middle school teachers' beliefs about emotion regulation, Sutton (2004) found that the majority of teachers believed that their ability to regulate their emotions was related to their effectiveness as an educator. In a more recent survey of American teachers' emotion regulation and sense of efficacy, Sutton and Knight (2006) found that 97 percent of the 413 teachers surveyed believed that expressing positive emotions made them more effective as teachers. This was especially true among teachers with more experience (six or more years). Sutton's findings are consistent with earlier studies indicating that teachers tend to regulate unpleasant emotions more than pleasant emotions because they believe unpleasant emotions decrease their effectiveness as an educator (Hargreaves, 2000; Sutton, 2004). A teacher's knowledge of and ability to employ strategies to reduce unpleasant emotions, while increasing or maintaining pleasant emotions, would likely be positively associated with his/her experience of job satisfaction and personal accomplishment. In contrast, teachers who consistently suppress their true emotions tend to experience a higher level of burnout (Chang, 2009b).

1.4 Burnout in Education

Burnout is a psychological condition that can occur when individuals work in environments where they serve others in some way (Maslach, 1993). Exposure to chronic stress and repeated or prolonged emotional experiences can influence teacher well-being and in turn lead to burnout (Maslach, Schaufeli, & Leiter, 2001; Spilt, Koomen, & Thiijs, 2011). Maslach (1986) distinguished three aspects of burnout: 1) emotional exhaustion,

2) depersonalization, and 3) reduced personal accomplishment. Emotional exhaustion, the core aspect of the Maslach trichotomy (Maslach & Jackson, 1981), occurs when an individual is emotionally overextended, feels drained of their emotional resources, and feels strained at work (Maslach, 1986; Maslach & Jackson, 1986). For teachers, this happens when an overwhelming sense of tiredness prevents them from providing their students with adequate emotional and physical support (Maslach, Jackson, & Leiter, 1996). Teachers who suffer from emotional exhaustion claim that they experience an increased sense of fatigue, a feeling that grows over time as emotional resources are drained (Grayson & Alvarez, 2008). Depersonalization or cynicism refers to an indifferent attitude or a detached response to the role generally or to the people with whom you work specifically, especially those who are the recipients of your care or service (Maslach, 1986; Maslach & Jackson, 1986). For teachers, depersonalization manifests as a distant, cold attitude towards students, parents, and/or colleagues (Grayson & Alvarez, 2008). When depersonalization occurs, there is a general loss of interest and sense of purpose in the work (Hakanen, Bakker, & Schaufeli, 2006). Finally, reduced personal accomplishment refers to a decreased sense of efficacy, competence, and achievement, and a general sense of inadequacy (Maslach, 1986; Maslach & Jackson, 1986; Pietarinen, Pyhalto, Soini, & Salmela-Aro, 2013). The current study focuses on overall burnout as well as two specific burnout dimensions, emotional exhaustion and personal accomplishment, as per the limitations of the existing dataset.

Workplace stress and pressure predict the burnout experience (Maslach, Schaufeli, & Leiter, 2001; Russell, Altmaier, Van Velzen, 1987). Teaching is considered a highly stressful profession and as many as a one-third of teachers surveyed around the

world perceive the role as highly stressful (Borg, 1991; Chan, 2006; Johnson et al., 2005;). Frequently identified risk factors that contribute to stress and burnout in education include age, gender, years of experience, level of education (Maslach & Jackson, 1981; Pishghadam & Sahebjam, 2012); personality (Langelaan, Bakker, Van Doornen, & Schaufeli, 2006; Pishghadam & Sahebjam, 2012); interpersonal conflict (Pietarinen et al., 2013); perceived lack of social support (Brouwers, Evers, & Tomic, 2001); school climate (Grayson & Alvarez, 2008); classroom environment (Dorman, 2003); relational demands (Kyriacou, 2001; Veldman et al., 2013); staff relationships and school management (Chan, 2006); student misbehavior (Chang & Davis, 2009; Pyhältö, Pietarinen & Salmela-Aro, 2011); student-teacher relationships (Chang, 2009) and workload (Smith & Bourke, 1992).

The consequences of stress and burnout can be both immediate and long-term, including teacher attrition (Grayson & Alvarez, 2008), absenteeism (Jackson, Schwab, & Schuler, 1986), decreased job-satisfaction and motivation (Hakanen et al., 2006), low self-esteem, depressive symptoms (Beer & Beer, 1992; Maslach, Schaufeli, & Leiter, 2001; Schonfeld, 2001), negative affect and teacher ill-being (Hakanen et al., 2006); negative relationships with students (Chang, 2009a). The relationship between teachers and students is an important factor related to job-satisfaction (Veldman et al., 2013; Chang, 2009a). Increasing levels of stress, job dissatisfaction, and draining emotional demands can negatively affect teachers' inter-personal relationships and in turn, impact student behavior and academic outcomes; emotional exhaustion can result in negative attitudes towards students (Chang, 2009a; Dorman, 2003).

In an appraisal of the literature to date, Chang (2009a) recognized that, although teacher burnout generally and factors that contribute to burnout specifically have been explored at great length, the emotional aspects of teaching have been grossly overlooked. Similarly, Sutton and Wheatley (2003) noted that there is surprisingly little research on the specific role of educators' emotions in the burnout process. Although many studies examine the positive outcomes associated with high levels of teacher EI (for example, job satisfaction (Platsidou, 2010) and empathic concern (Meirave & Adi, 2014)), only a few studies to date have explored the role of teachers' emotion regulation (Carson, 2006; Chan, 2006; Chang, 2009b; Sutton & Knight, 2006). Two of these studies are unpublished dissertations (Carson, 2006; Chang 2009b) and only one study has explored the role of emotion regulation ability and teachers' experience of burnout and job satisfaction using an ability, versus self-report, measure (Brackett et al., 2010). A review of these four studies provides a basis for the present research.

Sutton and Knight (2006) conducted a series of studies to examined teachers' beliefs about and use of emotion regulation strategies and their sense of efficacy. Their findings demonstrated that K-8 teachers' self-reported use of cognitive reappraisal as an emotion regulation strategy was positively related to their sense of efficacy in engaging students and managing their classroom. Although Sutton and Knight's study did not explore the link between emotion regulation and job satisfaction or burnout, one could argue that self-efficacy is a similar construct to personal accomplishment. As such, the current study explored the link among emotion regulation, personal accomplishment and job satisfaction.

In her unpublished dissertation, Chang (2009b) investigated teachers' emotional experiences within the context of educators' appraisals and the ways they regulate their emotions. Surprisingly, Chang found that teachers who reported using cognitive reappraisal as a strategy also reported experiencing higher intensity unpleasant emotions. However, when examining the relationships between emotion regulation strategies and reported burnout, Chang found that cognitive reappraisal was not significantly associated with burnout although the reported use of expressive suppression was significantly positively related to burnout. That is, teachers who employed expressive suppression were more likely to experience burnout.

In his dissertation, Carson (2006) explored the relationships among teachers' self-reported burnout, daily emotional-state experiences, and emotional regulation. Teachers (N=44) were asked to report their emotions at different times throughout the day. Carson found that frequent experiences of unpleasant emotions were significantly related to greater teacher burnout. However, overall burnout was not significantly related to use of either expressive suppression or cognitive reappraisal. Carson suggests that teachers who experience high levels of burnout also experience high levels of unpleasant emotions, and once the unpleasant emotions are activated, the teachers might expect the unpleasant emotions are here to stay, so there is no purpose in engaging a regulatory strategy. Also contrary to expectations, teachers who reported using greater levels of cognitive reappraisal were not found to report lower levels of burnout. As the study focused on teacher's affective experiences, Carson posits that teachers with low levels of burnout experience higher levels of pleasant affect, thus they do not need to utilize emotion regulation strategies such as cognitive reappraisal.

There are several limitations of Carson's (2006) study. First, the sample was small (*N*=44) and homogenous (100% Caucasian), which calls into question the generalizability of the findings. Another limitation is that Carson only considered two regulation strategies, as it is possible that the teachers who experience lower levels of burnout might employ emotion regulation strategies other than cognitive reappraisal and expressive suppression. The current study addressed this shortfall by utilizing a measure of overall emotion regulation knowledge in addition to reported use of specific emotion regulation strategies (cognitive reappraisal and expressive suppression) in relation to burnout.

In a study of Chinese secondary school teachers in Hong Kong, Chan (2006) examined the relationships among four components of perceived EI and three components of burnout. Teachers reported on their emotion knowledge and awareness as well as their use of positive regulatory strategies (e.g., maintaining a positive emotion, using a good mood to keep trying). Results of structural equation modeling indicated that the four components of self-reported EI differentially impacted specific components of burnout. Relevant to the current study, one component of EI, positive regulation using strategies to maintain pleasant emotions, was a significant predictor of emotional exhaustion. That is, teachers who reported greater use of positive regulation reported less emotional exhaustion and burnout. Chan's (2006) study is not without limitations. The scales used to assess EI and burnout were abbreviated scales with only three items used to measure emotion regulation, which provides a superficial understanding of the construct.

Although previous studies have typically relied on self-reports of use of particular emotion regulation, Brackett et al. (2010) assessed knowledge of effective emotion regulation strategies to predict job satisfaction and burnout. Specifically, the Mayer-Salovey-Caruso Intelligence Test (MSCEIT) was used to assess teachers' knowledge of emotion regulation in in a small sample of British secondary-school teachers (*N*=123). The MSCEIT assesses various aspects of a person's knowledge and ability to reason with and about emotions (Brackett et al., 2006; Mayer, Roberts, & Barsade, 2008). Of interest for the present study was the *Managing Emotions* subscale of the MSCEIT, which assesses interpersonal and interpersonal emotion regulation. Respondents select from a variety of context-specific thought and action strategies that best fit a particular situation. Based on the theory of emotional intelligence, Brackett et al. (2010) hypothesized that emotion regulation ability would be positively associated with job satisfaction and negatively associated with burnout. Results showed that overall performance on the *Managing Emotions* subscale was significantly but only modestly correlated with job satisfaction (r (121) = .26, p < .05) and one dimension of burnout, personal accomplishment (r (121) = .25, p < .05), but not significantly correlated with emotional exhaustion or depersonalization. The present study replicates this analysis to explore the relationships among emotion regulation, job satisfaction and burnout.

The primary purpose of the Brackett et al. (2010) study was to explore how overall knowledge of effective emotion regulation strategies affected burnout and job satisfaction through the mechanisms of positive and negative affect and support from administrators. Results of these further analyses demonstrated that positive affect and principal support mediated the relationship between emotion regulation, personal

accomplishment and job satisfaction. The findings suggest that teachers with greater knowledge of how to best regulate emotions are more satisfied with their jobs and have a greater sense of personal accomplishment in their work because they tend to experience positive emotions and receive more social support from their administrators.

To summarize, previous studies have provided some evidence to support the hypothesis that teachers' emotional regulation strategies are related to job satisfaction and burnout, although the results have been mixed across studies. Specifically, with regard to the positive aspects of the job, Sutton and Knight (2006) found that reported use of cognitive reappraisal strategies was associated with self-efficacy regarding student support and management, and Brackett et al. (2010) found that overall emotion regulation knowledge was associated with reported job satisfaction and personal accomplishment. With regard to the more negative aspects of burnout, Chan (2006) found that self-reported emotional appraisal and positive regulation were associated with less burnout and emotional exhaustion, but in a small N study, Carson (2006) failed to demonstrate significant relationships between burnout and either emotional suppression or cognitive reappraisal. One factor that differentiates these studies is the way in which emotion regulation has been assessed. Self-reports of how frequently one uses a limited number of specific emotion regulation strategies were employed in the Sutton and Knight, Carson and Chan studies, whereas Brackett and colleagues utilized a much broader assessment of teachers' knowledge of the likely effectiveness of a range of emotion regulation strategies. In extending this literature, the present study included both types of measures in exploring the links between emotional regulation and both positive and negative components of burnout in a sample of experienced teachers.

1.4 Research Questions

Extending previous research on emotion regulation as a predictor of educator job satisfaction and burnout, the present study utilized both self-report measures of specific emotion regulation strategies as well as a broader measure of teachers' knowledge of effective emotion regulation. To this end, the goals of the current study were two-fold: (1) to explore the relationship between self-reports of two common emotion regulation strategies (emotional suppression and cognitive re-appraisal) and a broader measure of teachers' knowledge of effective emotion regulation approaches; and (2) to examine the nature of the relationship between overall emotion regulation knowledge, use of specific emotion regulation strategies (cognitive reappraisal and expressive suppression), job satisfaction, and both positive and negative aspects of burnout (emotional exhaustion and personal accomplishment). The current study investigated the following hypotheses: (a) that overall emotion regulation knowledge is positively related to cognitive reappraisal and negatively related to expressive suppression; (b) that overall emotion regulation and cognitive reappraisal are positively related to job satisfaction and personal accomplishment and negatively related to emotional exhaustion; (c) that overall emotion regulation knowledge, cognitive reappraisal and expressive suppression predict job satisfaction and burnout. The following research questions guide this investigation:

1) What is the relationship between knowledge and self-report measures of emotional regulation?

2) What is the relationship between teachers' emotion regulation, as assessed by their reported use of specific emotion regulation strategies (reappraisal and suppression) as well as their overall emotion regulation knowledge, and job

outcomes such as job satisfaction and burnout (specifically, emotional exhaustion

and personal accomplishment)?

Chapter 2: Method

The data used in the present study were collected between 2008 and 2012 as part of an on-going study by Dr. Marc Brackett and colleagues at Yale University's laboratory at the Center for Emotional Intelligence. Ethics approval to conduct the present study using these data secondarily was obtained from the University of British Columbia's Behavioural Research Ethics Board (UBC BREB# H15-00386).

2.1 Participants

Data were collected from a multicultural sample of 233 K-12 teachers (67% female teachers) who were enrolled in the Summer Principals Academy graduate program for aspiring teacher leaders at Teacher College, Columbia University between 2008 and 2012. After excluding participants from the analysis who had missing data on relevant scales, the final sample included 179 teachers (65% female teachers; M= 29 years, SD= 4.67). Participants were adult educators with varying degrees of experience (M= 6.98 years, SD = 3.49) who were hoping to become school administrators at the time of this study. Informed consent was gathered from all participants.

2.2 Procedure

As a perquisite to their graduate program, participants completed a battery of assessments through a secure, on-line site. Research assistants at the Yale Center for Emotional Intelligence collected signed consent from the participants. A copy of the survey is provided in Appendix B. Selected measures from this battery were used in the present study, as described below.

2.3 Measures

Self-report measures were used to assess teachers' use of two types of emotion

regulation strategies (emotion suppression and cognitive reappraisal), as well as their

current perceptions of job satisfaction, and two of three aspects of burnout (personal

accomplishment and emotional exhaustion). Unfortunately, teacher reports of the third

recognized component of burnout, depersonalization, was not available within the present

data set.

2.3.1 Overall Emotion Regulation Knowledge

Participants in the present study completed the MSCEIT (version 2.0, Mayer,

Salovey, & Caruso, 2002), a 141-item measure of overall emotional intelligence, based

on the Mayer and Salovey (1997) model that assesses four broad emotional

competencies: 1) perceiving emotions 2) using emotions to facilitate thought 3)

understanding emotions, and 4) managing emotions. The subscale for managing emotions

was used in the present study to assess teachers' overall knowledge about effective

emotion-regulation strategies. Specifically, respondents were required to solve emotion-

related problems by rating the effectiveness of various options from a given set of more

and less effective responses, as determined by either expert or consensus scoring. That

is, teacher responses to the measure were identified as "correct" or "incorrect" in two

different ways: (1) how well they matched the responses provided by a sample of experts

(21 individuals from the International Society for Research on Emotion), or (2) consensus

from a large sample of the general public (5,000 individuals) (for more information about

the rationale for using expert and consensus scoring see Mayer, Salovey, Caruso, &

Sitarenios, 2003). In the present study, teacher responses were evaluated using

comparisons with expert scoring.

Specifically, we used the scaled score for the Managing Emotions subscale, which includes 29 items on intrapersonal and interpersonal emotion regulation to assess overall knowledge of effective emotion regulation strategies. Participants were given vignettes about various emotion-eliciting situations, some intrapersonal and some interpersonal, and were asked to identify the most effective ways to regulate their own and others' emotions in that situation, by evaluating the effectiveness of specific strategies using a five-point Likert scale (1 = very ineffective, 5 = very effective). As is common in performance measures such as IQ ($M = 100$ and $SD = 15$), standard scores obtained on this measure were used to assess a single composite index for Managing Emotions, following scoring procedures outlined in the assessment manual (Mayer, Salovey, & Caruso, 2002).

It is not possible to provide examples from the MSCEIT as the publisher requests actual test items not to be reproduced. An example of a vignette that was originally considered for inclusion in the Managing Emotions scale, but not included in the final version of the measure is as follows: "Debbie just came back from vacation. She was 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…" (Lopes et al., 2004).

The-Managing Emotions subscale has excellent reliability (.83 for General or consensus scoring, .81 for Expert scoring, Mayer, Salovey, Caruso, & Sitarenios, 2003). Brackett and Mayer (2003) report three-week test–retest reliability of .86. In this study,

the mean scores obtained (*M*=99.5, *SD*=11.42) were comparable to those observed in previous research (Brackett et al., 2010), but internal consistency could not be computed (item-level data were not made available to the author).

2.3.2 Specific Emotion Regulation Strategies

Specific use of emotion regulation strategies were assessed using the 10-item Emotion Regulation Questionnaire (ERQ, Gross & John, 2003). The ERQ was designed to measure two distinct, but commonly used emotion regulation strategies: cognitive reappraisal and expressive suppression. Cognitive reappraisal is a strategy that focuses one's attention on changing their internal narrative about a particular emotionally charged situation and was measured with six items (e.g., "When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about" and "When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm."). Expressive suppression is a responsive strategy used when one is emotionally activated, the goal being to display an emotion that is different than the one being experienced. Expressive suppression can be an adaptive strategy to manage emotions in the moment, although it can be maladaptive if it is used to handle chronic stress (Wegner & Zanakos, 1994). Expressive suppression was measured with four items (e.g., "I control my emotions by not expressing them" and "When I am feeling negative emotions (such as sadness or anger), I make sure not to express them."). Responses to each item were made on a seven-point Likert scale (1= strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = neither agree nor disagree, 5 = somewhat agree, 6 = agree, 7 = strongly agree). The average rating provided for items in each subscale was computed as a

composite for each emotion regulation strategy, with higher scores demonstrating greater use of that strategy.

The ERQ has been shown to demonstrate good internal consistency (α =79 for Cognitive Reappraisal, .73 for Expressive Suppression) and a 2-month test-retest reliability of .70 (Gross & John, 2003). Good internal consistency was also demonstrated for respondents in the present study (Cognitive Reappraisal: *M*=5.03, *SD*=.93, α =.85 and Expressive Suppression: *M*=3.58, *SD*=1.24, α =.82).

2.3.3 Job Satisfaction

Job satisfaction was measured with the Job Satisfaction Scale (JSS), a five-item scale adapted from the three-item Job Satisfaction Subscale of the Michigan Organizational Assessment Questionnaire (MOAQ-JSS, Cammann, Fichman, Jenkins, & Klesh, 1979, 1983). The MOAQ-JSS assesses global job satisfaction and is not focused on one particular aspect of a job (e.g., workload, colleagues, etc.). The JSS asks the respondent to consider how satisfied or dissatisfied they feel about different aspects of their teaching role, using a seven-point scale (1= not very true, 4 = somewhat true, 7 = very true). Items from the original measure include, "All in all, I am satisfied with my job," "In general, I don't like my job" and "In general, I like working here." The scale was adapted for this study by adding the following two items: "I am satisfied with my rate of pay" and "I am satisfied with my job security." The mean rating given to each items in each subscale was computed as an overall job satisfaction scores, with higher scores indicating greater job satisfaction. The MOAQ-JSS has been shown to demonstrate acceptable levels of reliability, including high internal consistency (α = .84, *N* = 30,623) and test-retest reliability (*r* = .50, *N* = 746) (Bowling & Hammond, 2008).

The alpha coefficient for the sample in the present study also indicated high internal consistency (*M*=5.75, *SD*= 1.18, α = .81).

2.3.4 Burnout

Two aspects of burnout were assessed with Maslach's Burnout Inventory-Educators Survey (MBI-ES, Maslach, Jackson & Leiter, 1996). The MBI-ES is a 22-item scale designed to assess three aspects of the burnout syndrome: emotional exhaustion, depersonalization, and reduced feelings of personal accomplishment. All items are written as statements about personal feelings or attitudes towards the workplace. Participants in this study completed the subscales for emotional exhaustion and personal accomplishment[1]. The nine items of the Emotional Exhaustion subscale assess feelings of being emotionally overextended at work (e.g., "I feel emotionally drained from my work," "I feel used up at the end of the workday" and "I feel burned out from my work."). The eight items of the Personal Accomplishment Scale measure feelings of competence and achievement at work (e.g., "I have accomplished many worthwhile things in this job" and "I can easily create a relaxed atmosphere with my students" and "I feel very energetic at my job."). For each item on the two scales, respondents indicated the frequency with which they experience each feeling on a 7-point, Likert scale (1 = never, 2 = a few times a year or less, 3 = once a month, 4 = a few times a month, 5 = once a week, 6 = a few times a week, 7 = every day). Responses across relevant items were summed to compute overall indices of emotional exhaustion and personal accomplishment. High scores on the emotional exhaustion subscale indicate high degrees of burnout, whereas a high score on the personal accomplishment subscale

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[1] As noted above, the third component of burnout, depersonalization, was not available within the present data set.

is associated with a low degree of burnout (that is, higher feelings of personal accomplishment indicate lower levels of burnout). The MBI-ES has been show to demonstrate good internal consistency (α =.90 for Emotional Exhaustion, α =.79 Depersonalization, and α =.71 for Personal Accomplishment) (Maslach & Jackson, 1986). The alpha coefficient for the sample in the present study also demonstrated strong internal consistency (Emotional Exhaustion *M*=3.86, *SD*=1.11, α=.88; Personal Accomplishment *M*=6.06, *SD*=.74, α =.82).

Chapter 3: Results

3.1 Preliminary Results

  Descriptive statistics (means and standard deviations) of emotion regulation and job outcome variables were computed to determine comparability to that observed in previous research and to evaluate assumptions regarding the data for analyses. Scores for overall emotion regulation knowledge, expressive suppression and emotional exhaustion were normally distributed. However, scores for the following scales were not normally distributed: cognitive reappraisal (skewness = .737, *SE=*.183; kurtosis = 1.03, *SE=*.363), personal accomplishment (skewness = -.844, *SE=*.183; kurtosis = .152, *SE=*.363), and job satisfaction (skewness = -1.03, *SE=*.183; kurtosis = .607, *SE=*.363). In an effort to convert the moderately negatively skewed data to normality, scores were transformed using a "reflect and square root" transformation. Subsequent analyses were run on both the transformed and raw scores, and results were the same regardless of whether untransformed or transformed data were used. Reported here are the results for the untransformed data.

  A series of independent t-tests were conducted to examine differences in job outcomes and emotion regulation variables with regard to sex, with a Bonferroni correction used to compensate for the multiple comparisons made. One significant difference was observed, with scores for expressive suppression being significantly higher for male teachers (*M=*3.94, *SD=*1.28) than female teachers (*M=3.41 SD=*1.19), *t(*174)=-2.73, *p=*.008. Thus, male teachers reported using expressive suppression as a regulatory strategy more often than female teachers. Although only one significant sex

difference was observed, efforts were made to explore subsequent analyses for the whole group and for male and female teachers separately.

Preliminary correlational analyses were conducted to evaluate whether emotion regulation and job outcome measures varied as a function of years of teaching experience. No significant variation by experience was found. Nevertheless, teaching experience was used as a control variable in subsequent regression analyses.

Preliminary correlational analyses were also conducted to examine the relationships among the job outcome variables of emotional exhaustion, personal accomplishment and job satisfaction. As presented in Table 3.1, the results demonstrate that the outcome variables were only modestly related, but in the expected directions.

Table 3.1: Intercorrelations Among Job Outcome Variables (N=179)

	Emotional Exhaustion	Personal Accomplishment	Job Satisfaction
Emotional Exhaustion	--		
Personal Accomplishment	-.20**	--	
Job Satisfaction	-.54**	.29**	--

**p<.01 (1-tailed)

3.2 Primary Analysis

To address the first research question regarding the relationship between broader, knowledge measures of emotion regulation and self-reports of use of specific emotional regulation strategies, correlational analyses were conducted. As indicated in Table 3.2, self-reported expressive suppression and cognitive reappraisal were significantly but only slightly correlated, suggesting that they are measuring distinct constructs within a related area. Moreover, overall emotion regulation knowledge, as assessed by the MSCEIT was negatively correlated with suppression but not significantly related to cognitive

reappraisal. Although there is a significant correlation between overall emotion

regulation and expressive suppression, the magnitude of the relationship was low which

suggests that the emotion regulation scales are measuring related but clearly distinct

constructs.

Table 3.2: Intercorrelations Among Emotion Regulation Variables (*N*=179)

	Overall Emotion Regulation Knowledge	Cognitive Reappraisal	Expressive Suppression
Cognitive Reappraisal	-.11	-	
Expressive Suppression	-.21**	.13*	-

** *p*<.01 (1-tailed). **p*<.05 (1-tailed).

A simultaneous multiple regression analysis was conducted to determine if overall

emotion regulation knowledge, as assessed by the MSCEIT, was predicted from

expressive suppression and cognitive reappraisal, controlling for sex and teaching

experience. As indicated in Table 3.3, the results indicated that cognitive reappraisal and

expressive suppression did not predict overall emotion regulation knowledge, even after

controlling for sex of teacher and years of experience. Thus, emotion regulation, as

measured by the MSCEIT and by the ERQ, appeared to be tapping different constructs

despite similar labels. Accordingly, each is considered as a separate index of emotion

regulation in all subsequent analyses.

Table 3.3: ERQ Strategies Predicting MSCEIT Overall Emotion Regulation Knowledge Controlling for Sex and Experience (*N*=179)

Variable	β	t	Sig	R	R^2	ΔR^2
Step 1				.07	.01	-.01
Sex	-.07	-.87	.39			
Years Teaching	.03	.34	.73			
Step 2				.13	.02	-.01
Sex	-0.72	-.92	.36			
Years Teaching	.02	.26	.80			
Cognitive Reappraisal	.10	1.31	.19			
Expressive Suppression	.02	.27	.79			

Correlational analyses were first conducted to address the second research question, exploring the relationship between the three indices of emotion regulation (overall emotion regulation knowledge and two different emotion regulation strategies of expressive suppression and cognitive reappraisal) and the three indices of job outcomes (job satisfaction, emotional exhaustion and personal accomplishment). Results are presented in Table 3.4 below. Personal accomplishment was significantly related to overall emotion regulation knowledge. All other correlations were not significant.

Table 3.4: Intercorrelations among Emotion Regulation Indices and Job Outcomes (*N*=179)

	Overall Emotion Regulation (MSCEIT)	Cognitive Reappraisal (ERQ)	Expressive Suppression (ERQ)
Emotional Exhaustion	-.03	.03	.12
Personal Accomplishment	.20**	.09	-.11
Job Satisfaction	.07	.04	-.11

**p<.01 (1-tailed).

A series of three heirarchical multiple regression analyses were conducted to further assess whether the three indices of emotion regulation predicted each of the three

job outcomes considered in the present study (job satisfaction, emotional exhaustion and personal accomplishment). Sex and years of teaching experience were entered in step one to control for variation as a function of these variables. The emotion regulation variables of overall emotion regulation knowledge (MSCEIT), expressive suppression and cognitive reappraisal (ERQ) were entered in step 2 for each of the analyses.

With regard to the prediction of job satisfaction, the full model of sex and years of teaching (Step 1), and overall emotion regulation knowledge, expressive suppression and cognitive reappraisal (Step 2) did not significantly predict reported job satisfaction, $R^2 = .028$, $F(5, 165) = .936$, $p > .05$; adjusted $R^2 = -.002$. See Table 3.5 for full details.

Table 3.5: Hierarchical Regression Predicting Job Satisfaction from Sex, Years of Teaching, Overall Emotion Regulation Knowledge, Expressive Suppression and Cognitive Reappraisal (*N*=179)

Variable	β	t	Sig	R	R^2	ΔR^2
		Job Satisfaction				
Step 1				.13	.02	.02
Sex	.08	1.00	.32			
Years Teaching	.11	1.42	.16			
Step 2				.17	.03	.01
Sex	.10	1.24	.22			
Years Teaching	.09	1.20	.23			
Overall Emotion Regulation Knowledge	.04	.52	.61			
Cognitive Reappraisal	.04	.44	.66			
Expressive Suppression	-.09	-1.04	.30			

A second hierarchical multiple regression was conducted to determine if overall emotion regulation knowledge, expressive suppression and cognitive reappraisal predicted teacher reports of emotional exhaustion over and above sex and years of teaching. The full model of sex and years teaching (Step 1), overall emotion regulation knowledge, expressive suppression and cognitive reappraisal (Step 2) predicting

emotional exhaustion was not statistically significant, $R^2 = .031$, $F(5, 167) = 1.06$, $p >$

.05; adjusted $R^2 = .002$. See Table 3.6 for full details.

Table 3.6: Hierarchical Regression Predicting Emotional Exhaustion from Sex, Years Teaching, Overall Emotion Regulation Knowledge, Expressive Suppression and Cognitive Reappraisal ($N=179$)

Emotional Exhaustion						
Variable	β	t	Sig	R	R^2	ΔR^2
Step 1				.12	.02	.02
Sex	-.08	-1.09	.28			
Years Teaching	-.10	-1.30	.20			
Step 2				.18	.03	.02
Sex	-.11	-1.36	.18			
Years Teaching	-.09	-1.14	.25			
Overall Emotion Regulation Knowledge	-.04	-.49	.62			
Cognitive Reappraisal	.04	.53	.60			
Expressive Suppression	.10	1.23	.22			

Finally, a third hierarchical multiple regression was conducted to determine if

overall emotion regulation knowledge, expressive suppression and cognitive reappraisal

predicted self-reported personal accomplishment over and above sex and years of

teaching. As indicated in Table 3.7, the full model of sex and years teaching (Step 1),

overall emotion regulation knowledge, expressive suppression and cognitive reappraisal

(Step 2) did not significantly predict personal accomplishment, $R^2 = .052$, $F(5, 167) =$

1.826, $p > .05$; adjusted $R^2 = .023$. The only significant predictor ($p<.05$) of personal

accomplishment was overall emotion regulation knowledge.

Table 3.7: Hierarchical Regression Predicting Personal Accomplishment from Sex, Years Teaching, Overall Emotion Regulation Knowledge, Expressive Suppression and Cognitive Reappraisal (*N*=179)

	Personal Accomplishment					
Variable	β	t	Sig	R	R^2	ΔR^2
Step 1				.06	.00	.00
Sex	-.02	-.25	.80			
Years Teaching	.06	.75	.46			
Step 2				.23	.05	.05
Sex	.02	.21	.84			
Years Teaching	.04	.46	.65			
Overall Emotion Regulation Knowledge	.17	2.11	.04			
Cognitive Reappraisal	.08	1.06	.29			
Expressive Suppression	-.09	-1.17	.25			

Chapter 4: Discussion

The first goal of this study was to explore the relationship between self-report measures of use of emotion regulation strategies of cognitive reappraisal and expressive suppression and a knowledge measure of overall emotion regulation ability. In partial support of hypotheses, expressive suppression was significantly and negatively related to overall emotion regulation knowledge, and was significantly positively related to cognitive reappraisal, although the magnitude of these correlations was quite small. No association was observed between overall emotion regulation knowledge and self-reported use of cognitive reappraisal to regulate emotions. That overall emotion regulation knowledge, as assessed on the MSCEIT, was significantly but weakly related to expressive suppression but not significantly related to reported cognitive reappraisal strategies, suggests that the various measures of emotion regulation used currently in the literature assess somewhat different aspects of emotion regulation. Furthermore, these findings raise questions regarding the validity, specifically concurrent validity, of these measures of emotion regulation, something that requires further exploration. Future research would also benefit from consideration of other emotion regulation measures, as only two measures of regulatory strategies were used in the present study. Given evidence that that teachers use many different strategies throughout the day (Sutton, 2004), it would be helpful to explore other strategies such as positive self-talk or mindfulness.

A second goal of the present study was to examine the nature of the relationship between emotion regulation (overall emotion regulation knowledge and reported use of emotion regulation strategies of cognitive reappraisal and expressive suppression) and job

outcomes, including job satisfaction and aspects of burnout (emotional exhaustion and personal accomplishment). Similar to Brackett et al.'s (2010) finding that overall emotion regulation was significantly but only modestly correlated with job satisfaction ($r(121) = .26$) and feelings of personal accomplishment ($r(121) = .25$), the present study also found that emotion regulation was significantly, but modestly, correlated with personal accomplishment ($r(179) = .20, p<.01$). It is worth noting that, although a significant relationship was expected but not observed between emotion regulation and job satisfaction in the present study, the weak effect size (magnitude) of the relationship ($r(179) = .07, ns$) is similar to that observed Brackett et al.'s (2010) study. Additionally, only overall emotion regulation knowledge was a significant predictor of feelings of personal accomplishment, although the overall model was nonsignificant in predicting personal accomplishment.

There may be several reasons why this relationship was observed. The overall emotion regulation measure (MSCEIT) taps participants' knowledge of both intrapersonal and interpersonal emotion regulation skills, that is, the ability to regulate one's own emotions personally as well as helping others regulate their emotions effectively. Teachers who have developed such skills and knowledge are likely to engage in positive social interactions, which in turn could lead to an increased sense of support and relational connection that could be important factors in feeling efficacious. As well, a teacher with higher levels of emotion regulation knowledge and ability would likely have a robust knowledge of effective regulatory strategies, enhancing their ability to choose a specific strategy appropriate to the goals of a given situation. To this end, it may not matter so much if a teacher uses the specific strategies of cognitive reappraisal or

expressive suppression, as the teacher may be using many different strategies in addition to or as an alternative to these two. A teacher with higher overall emotion regulation knowledge is likely effective at regulating the emotional climate of the classroom, which may allow students to feel safe and connected and, in turn, elicit a sense of personal accomplishment on behalf of the educator.

In contrast to the Brackett et al. (2010) findings, however, the present study did not demonstrate a significant relationship between job satisfaction and overall emotion regulation knowledge. This failure to replicate could be attributed to possible ceiling effects for the present sample, as the teachers who participated in this study were likely exceling in their teaching role and planning to go into administration. Participants in the Brackett et al. (2010) study were more representative of the general population.

Also in contrast to hypotheses, overall emotion regulation knowledge and emotion regulation strategies were not significantly related to emotional exhaustion. It was expected that emotion regulation might serve as a protective factor for emotional exhaustion, but this did not appear to be the case. Emotional exhaustion is a key aspect of the burnout trichotomy and occurs from feeling emotionally overextended and drained of emotional resources from strain and demands in the workplace (Maslach, 1986; Maslach & Jackson, 1986). The emotional exhaustion scale measures the effects of strain in the workplace. It is possible that knowing and using emotion regulation strategies may not reduce emotional exhaustion, as no amount of emotion regulation could change the possible source of the exhaustion (e.g., budgetary cut-backs, increased workload, etc.). It is also possible that, although emotion regulation may be an important skill to reduce emotional exhaustion, perhaps one's susceptibility to emotional stress plays a more

important role. In Chan's (2006) study, emotion regulation was negatively related to emotional exhaustion, specifically self-reported use of positive regulations strategies. Chan's (2006) use of an abbreviated measure of EI may explain why the present study did not replicate Chan's findings. It was also expected that using expressive suppression would predict emotional exhaustion as the strategy itself is emotionally laborious, but this was not found to be the case, replicating Carson's (2006) findings. As Carson (2006) posits, is possible that teachers who are emotionally exhausted are using other strategies generally (ignoring the problem, employing wishful thinking). Further exploration is needed to determine the regulatory strategies utilized by individuals who are emotionally exhausted.

Finally, the findings of the current study suggest that there is a need to reconsider the role of emotion regulation as related to burnout. Although the theory of Emotional Intelligence would predict that emotion regulation serve as a protective factor against the negative aspects of burnout such as emotional exhaustion, this was not found in the present and earlier studies (Brackett et al., 2010; Carson, 2006). In the current study, emotion regulation was positively associated with the more positive aspect of personal accomplishment, consistent with Brackett et al.'s (2010) earlier finding. Together, these findings suggest that emotion regulation may be a promotive factor of positive aspects of job outcomes such as personal accomplishment but not a protective factor against negative aspects of job outcomes such as emotional exhaustion. As such, we may need to reconsider how emotion regulation may contribute to enhancing positive work experiences rather than mitigating negative work experiences.

4.1 Limitations and Future Directions

There are several limitations to this study that cannot be overlooked. First, the participants in the study were teachers enrolled in a Masters program for future school administrators. As such, this group may have been highly motivated educators as they are seeking to further their career within the field, and not a fair representation of the general teaching population. Consistent with these arguments, participants' reports of job satisfaction and personal accomplishment were skewed, with participants who generally felt satisfied with their jobs and reported a high sense of personal accomplishment. As a result, there may have been ceiling effects in the analyses. Furthermore, the present sample included a limited representation of male teachers (almost twice as many female teachers as male teachers) and was relatively homogenous in terms of race (Caucasian). Thus, further replication is warranted, utilizing a broader and more representative sample of teachers.

The design of the current study was not without limits. This study included assessments of only a limited number of emotion-regulation strategies, of which there are many more. And although the present measure of overall emotion regulation knowledge assessed a broader selection of effective strategies, it is not documented which strategies are actually used. Further research should be conducted to explore other relevant emotion regulation strategies such as positive self-talk or mindfulness.

Educators need the skills to successfully navigate the demanding world of teaching to avoid the debilitating effects of emotional exhaustion and burnout (Dorman, 2003). Overall emotion regulation is one skill that is theorized to play a role as a protective factor against burnout. However, it is a challenge to address the complexity and nuance of emotion regulation within education using only knowledge and self-report

measures of emotion regulation. In the future, a mixed-methods design that both utilizes

knowledge and self-report measures of emotion regulation, as well as direct observation

of teachers within their classroom context and teacher interviews or written reflections

about emotion regulation may further address not only which strategies teachers use to

regulate their emotions, but also the different contexts in which teachers consciously

regulate their emotions. Such research would extend the current study and may serve to

inform intervention initiatives in the form of teacher professional learning and

development. It is clear that further research is needed to explore how to best help

educators to overcome burnout and leverage protective factors that might allow them to

thrive in their workplace.

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