

RESEARCH ARTICLE

Costs and Benefits of Supportive versus Disciplinary Emotion Regulation Strategies in Teachers

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Abstract

Using 659 K-12 teachers, this study explored the extent to which well-being outcomes were affected by differential emotion regulation strategies (surface versus deep acting) for positive emotion expression (supportive display rules) versus negative emotion expression (disciplinary display rules). Analyses showed that almost half of the teachers reported disciplinary display rules as important for effectively doing their job (as compared with 97% for supportive display rules), and these perceptions were associated with increased disciplinary surface and deep acting strategies. A confirmatory factor analysis supported the proposed four-factor structure of emotional regulation strategies, and provided the best fit in relation to two alternative models (surface versus deep acting and supportive versus disciplinary). A structural equation model revealed that both supportive surface acting and disciplinary surface acting positively predicted emotional exhaustion, and both negatively predicted personal accomplishment. However, only supportive deep acting had a positive relationship with personal accomplishment. Disciplinary deep acting was unrelated to the study outcomes. These findings indicate that disciplinary emotion regulation may have the same costs to emotional exhaustion in teachers as supportive regulation, but fewer benefits in terms of increasing personal accomplishment. Copyright © 2010 John Wiley & Sons, Ltd.

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Keywords

emotional labour; burnout; job stress; teachers; self-regulation; psychological well-being

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Introduction

The self-regulation of employee emotions is of importance to organizations wishing to simultaneously optimize employee performance and well-being. Employees who effectively manage their thoughts, behaviours and emotions are more productive (Bagozzi, 1992; Law, Wong, & Song, 2004; Locke & Latham, 2002) and experience less work strain (Pomaki, Maes, & ter Doest, 2004; Slaski & Cartwright, 2002). However, prolonged

emotion regulation because of a mismatch between felt emotions and emotions that one is required to display on the job can lead to negative psychological outcomes, particularly emotional exhaustion (Brotheridge & Grandey, 2002; Brotheridge & Lee, 2003; Grandey, 2003). Increased emotional exhaustion has also been linked with a number of negative work outcomes, such as lower affective commitment and greater turnover intentions (Cropanzano, Rupp, & Byrne, 2003).

In organizational research, a two-part structure has emerged for measuring emotion regulation strategies in the workplace (i.e. emotional labour). Focused on bringing emotional expression and experience in line with organizational display rules, this structure discriminates between surface acting and deep acting (Grandey, 2000; Gross, 1998). Most emotional labour research focuses on the display rule requirement of positive emotions, with an emphasis on service positions (e.g. Brotheridge & Grandey, 2002; Brotheridge & Lee, 2003; Grandey, 2003). However, occupations with more complex display rules may require more emotional labour because of greater opportunities for experiencing dissonance (Morris & Feldman, 1996). Although some studies have explored more complex display rules in various occupations (Bakker & Heuven, 2006; Diefendorff, Richard, & Yang, 2008), little research has explicitly tested emotion regulation strategies (i.e. surface and deep acting) to meet these varying demands (Diefendorff, Croyle, & Gosserand 2005). Moreover, research has yet to differentiate between emotion regulation strategies for expressing positive emotions versus expressing negative emotions.

The current study explored the prevalence of supportive (displaying positive emotions) versus disciplinary (displaying negative emotions) display rule perceptions in K-12 teachers and the extent to which these perceptions were associated with emotion regulation strategies. We tested a model that utilized a four-factor structure (supportive deep acting, disciplinary deep acting, supportive surface acting and disciplinary surface acting) of emotion regulation strategies to determine the relative contribution of positive and negative emotion expression in predicting emotional exhaustion and personal accomplishment in teachers. Following previous self-regulation research, we proposed that more attention to the effects of disciplinary emotion expression on employee well-being may be warranted, given its contrast with supportive emotion expression.

Display rules and the emotional labour process

Emotional regulation refers to the effort an individual applies to monitor and alter the experience and expression of emotional states (see Carver & Scheier, 1982; Gross, 1998). Regulating emotions in the workplace is often referred to as emotional labour, a topic that has

steadily increased in popularity since the term's inception by Hochschild (1983). Comprehensive conceptualizations of the emotional labour process differentiate between display rule perceptions, internal states, internal processes and external behavioural displays (Diefendorff & Gosserand, 2003; Mann, 1999; Rubin, Tardino, Daus, & Munz, 2005). These conceptual distinctions lend themselves to a Control Theory framework (see Carver & Scheier, 1982), which has received theoretical elaboration in relation to the emotional labour process from Diefendorff and Gosserand (2003). From a Control Theory perspective, the perception of one's emotional expressions is an input, and display rules are standards that guide appropriate emotional expression. When there is a discrepancy between the two (i.e. an expression-display rule discrepancy; Brotheridge & Lee, 2002; Zerbe, 2000), emotion regulation strategies are required to adjust one's emotional expression (Gross, 1998). However, this behavioural adjustment does not necessarily correspond with one's current emotional experience, which may lead to emotional dissonance. Emotional dissonance occurs when there is a discrepancy between employees' felt emotions and perceived emotional display (i.e. experience-expression discrepancy; Brotheridge & Lee, 2002; Zerbe, 2000). Upon experiencing dissonance, individuals can alter their current emotional experience to conform to their emotional expression, continue with the appropriate emotional expression without altering their emotional experience or they can abandon the appropriate emotional expression altogether. Successful regulation strategies result in an outward emotional display that matches the display rule. Thus, individuals can appropriately regulate their expressive behaviour for display rules, while not necessarily changing their emotional experiences.

Display rule perceptions have been used to successfully measure expression (but not suppression) requirement variations between jobs (Brotheridge & Grandey, 2002; Schaubroeck & Jones, 2000), even when controlling for individual differences in negative affectivity. This supports the conceptualization of display rules as guiding expressions or outward appearances of an emotion (Ashforth & Humphrey, 1993; Ekman, 1973; Rafaeli & Sutton, 1989; Sutton, 1991). Therefore, it is logical that employees primarily monitor their emotional displays based on emotions that they are expected to demonstrate (e.g. express positive or negative emotions), rather than by emotions they are expected to

suppress (e.g. suppress negative or positive emotions). For example, service workers have primarily positive display rules, and bill collectors have primarily negative display rules. The perceived requirement to suppress emotions is based on the result of the comparison between an expression requirement and current felt emotions or displays. Because most emotional labour research focuses on the display of positive emotions, the term 'negative display rules' is sometimes incorrectly used to refer to suppression (rather than expression) of negative emotions (see Brotheridge & Lee, 2002; Diefendorff *et al.*, 2005; Schaubroeck & Jones, 2000). To avoid confusion, we use the modifying term 'supportive' to describe (1) *display rules* for expressing positive emotions and (2) *emotion regulation strategies* that employees use to display positive emotions. Likewise, the term 'disciplinary' will describe (1) *display rules* for expressing negative emotions and (2) *emotion regulation strategies* that employees use to display negative emotions.

Emotional regulation strategies and burnout

Following emotional dissonance, an employee will engage in one of two emotion regulation strategies to conform to an organizational display rule (Diefendorff & Gosserand, 2003). Surface acting enhances the display of a positive emotion (or hides the expression of a negative emotion), whereas deep acting requires an individual to make an effort to actually experience a particular emotion by redirecting one's attention from or reappraising the situation (Hochschild, 1983; Grandey, 2000; Gross, 1998). Surface acting focuses on merely modifying the outward appearance of emotions, which only reduces the gap between perceived emotional expression and the display rule (also called 'emotive faking'; Zerbe, 2000). Alternatively, deep acting attempts to modify the experience of the emotion itself thereby reducing both the perceived expression-display rule discrepancy and the emotional experience-expression discrepancy (i.e. reducing emotive dissonance; Brotheridge & Lee, 2002; Grandey, 2000; Zerbe, 2000). Because of the differences in process, surface and deep acting demonstrate different associations with burnout facets (i.e. emotional exhaustion, depersonalization, personal accomplishment). Surface acting has been associated with higher reports of emotional exhaustion, depersonalization and diminished personal accomplishment, whereas deep acting has

been shown either (1) to have no relationship with the burnout facets; or (2) to have a positive relationship with feelings of personal accomplishment (Brotheridge & Grandey, 2002; Brotheridge & Lee, 2003; Grandey, 2003; Martínez-Iñigo, Totterdell, Alcover, & Holman, 2007; Montgomery, Ponagopolou, de Wildt, & Meenks, 2006; Näring, Briët, & Brouwers, 2006). Although most findings have occurred in cross-sectional designs, longitudinal research has revealed the same trends between emotion regulation strategies and burnout (Goldberg & Grandey, 2007; Totterdell & Holman, 2003). Despite research demonstrating how emotion regulation strategies affect the psychological well-being of the employee, there are some remaining links to be explored with respect to disciplinary display rules.

First, current measurements of surface acting and deep acting do not distinguish between regulating for supportive display rules versus regulating for disciplinary display rules. For example, questions ask 'how frequently do you pretend to have feelings that you don't really have' instead of 'pretend to have positive emotions you don't really have' or 'pretend to have negative emotions you don't really have'. Therefore, it is difficult to determine to what extent emotion regulation strategies are employed to express positive versus negative emotions. Second, by not specifying display rule differences in emotion regulation strategies, it is unclear as to what extent well-being outcomes are affected by the act of regulating for supportive versus disciplinary display rules.

The social-functional approach to emotion regulation

Research examining psychological outcomes of surface and deep acting consists of primarily service occupations (Brotheridge & Grandey, 2002; Brotheridge & Lee, 2003; Grandey, 2003), which rely on data representing supportive organizational display rules that require the expression of positive emotions (and the corresponding suppression of negative emotions). This has led to a research bias that overlooks the prevalence of disciplinary display rules in certain occupations (e.g. police officers and bill collectors; Barber, Grawitch, & Trares, 2009; Sutton, 1991), and emotion regulation strategies geared towards negative emotion expression. Following the social-functional approach to emotions (see Cacioppo & Gardner, 1999), many employees in an organizational environment may use negative emotions

as a social influence tactic in dealing with subordinates or co-workers. The expression of appropriate levels of negative emotions in leaders can signal a desire for change in subordinate behaviour (Tiedens, 2001). Though disciplinary emotion regulation may not be used with customers, it is prevalent in some intra-organizational contexts (Fitness, 2000) and vital for goal attainment in situations outside of work (Tamir, Mitchell, & Gross, 2008; Tamir, 2009).

In a teaching context, negative emotional expression can be expected in daily interactions to influence student behaviour. It is noteworthy that student discipline is a prevalent work stressor for teachers in several studies, perhaps because of the emotional exhaustion that accompanies time and effort put into disciplining misbehaving students (Kokkinos, 2007). More specifically, research has suggested that student misbehaviour affects teacher emotions and influences feelings of emotional exhaustion and personal accomplishment (Chan, 2006; Evers, Tomic, & Brouwers, 2004; Friedman, 1995; Ingersoll & Smith, 2003; Sutton & Wheatley, 2003). Therefore, contrasted with customer service display rules that only require positive emotion expression, it is possible that teachers may also feel the need to express negative emotions (that they are not currently experiencing) to handle student misbehaviour. This can result in teachers needing to alternate between conforming to supportive display rules and disciplinary display rules depending on the classroom situation. Positive emotional expression would be necessary for typical educational experiences that require student support (e.g. encouraging student participation and providing positive feedback). Alternatively, negative emotional expression would be necessary for situations in which student misbehaviour needs to be addressed, but the teacher is not genuinely experiencing negative emotions (e.g. the teacher finds silly, but disruptive behaviour amusing). Therefore, it may be important to specify supportive versus disciplinary emotion regulation to better understand emotional labour in teachers.

The current study

The purpose of the current study was to expand on past emotional labour literature by (1) examining the prevalence of both supportive and disciplinary display rule perceptions in teachers; (2) providing evidence for a link between differential display rule perceptions and the use of corresponding emotion regulation strategies (i.e.

surface and deep acting); and (3) exploring the predictive utility of a structure of emotional labour using supportive and disciplinary display rules to predict emotional exhaustion and personal accomplishment. As it is currently measured, strategies for emotion regulation do not distinguish between surface and deep acting in response to the display of positive and negative emotions. Therefore, it is unknown if disciplinary emotion regulation and supportive emotion regulation are associated with their respective display rules and the extent to which they independently predict emotional exhaustion and personal accomplishment.

Perceived display rule prevalence and associations with emotion regulation

Consistent with conceptualizations emotion regulation in service positions (e.g. Brotheridge & Grandey, 2002; Brotheridge & Lee, 2003; Grandey, 2003), we expected to find supportive display rule perceptions among teachers. However, additional disciplinary display rules were plausible given their presence in other social work professions (Bakker & Hueven, 2006; Barber *et al.*, 2009; Diefendorff *et al.*, 2008; Sutton, 1991) and the occasional need for disciplinary behaviours in K-12 teachers (Kokkinos, 2007). Nevertheless, it was also likely that supportive display rule perceptions would be more prevalent among teachers because the primary goal of teaching revolves around the education of students. As such, we proposed that:

H1: Supportive display rule perceptions will be more prevalent than disciplinary display rule perceptions in K-12 teachers.

It is also important to validate a differential link between the two display rule perceptions and emotion regulation strategies because, according to a Control Theory framework for emotional labour (Carver & Scheier, 1982; Diefendorff & Gosserand, 2003), individuals only regulate their behaviour in relation to a perceived standard. Therefore, we expected that:

H2a: Supportive display rule perceptions will be associated with supportive emotion regulation (surface and deep acting).

H2b: Disciplinary display rule perceptions will be associated with disciplinary emotion regulation (surface and deep acting).

Supportive versus disciplinary surface acting and outcomes

During surface acting, employees only attempt to alter their expressions (not their felt emotions). Control Theory proposes that this dissonance leads to a larger discrepancy between felt emotions and display rules, which requires more effortful regulation to alter (and sustain) one's emotional expression (Carver & Scheier, 1982; Diefendorff & Gossierand, 2003). Thus, prolonged dissonance due to surface acting should leave one with fewer emotional resources to reduce the gap between felt emotions and perceived display requirements, leading to higher emotional exhaustion and diminished feelings of personal accomplishment. Building on empirical evidence linking general surface acting and burnout (e.g. Grandey, 2003; Martínez-Iñigo *et al.*, 2007; Montgomery *et al.*, 2006), we expected that the relationship between surface acting and emotional exhaustion would operate similarly, regardless of the felt emotion and perceived display rule because of greater emotional dissonance (Diefendorff & Gossierand, 2003). Thus, we expected that:

H3a: Increased use of supportive surface acting strategies would predict higher levels of emotional exhaustion and lower levels of personal accomplishment.

H3b: Increased use of disciplinary surface acting strategies would predict higher levels of emotional exhaustion and lower levels of personal accomplishment.

Supportive versus disciplinary deep acting and outcomes

Contrary to surface acting, employees that engage in deep acting attempt to alter both their emotional expression and experiences. As proposed by Control Theory (Carver & Scheier, 1982; Diefendorff & Gossierand, 2003), this strategy is more likely to reduce the discrepancy between felt emotions and their emotional expression, which requires less effortful regulation. This discrepancy reduction may serve to decrease emotional dissonance over time, as well as increase psychological identification with the job by aligning one's emotional experiences with display rule requirement perceptions. The current consensus is that deep acting may be a more desirable regulation strategy in that,

unlike surface acting, it consistently fails to be associated with negative psychological outcomes and is sometimes associated with increased personal accomplishment (Brotheridge & Grandey, 2002; Brotheridge & Lee, 2003; Näring, *et al.*, 2006). Because there has been no research examining disciplinary deep acting, we relied on previous general deep acting and socio-functional literature to formulate our hypothesis. Specifically, regulating for negative emotional expression may predict personal accomplishment, as it may signal goal attainment of disciplinary display rules (Cacioppo & Gardner, 1999; Tamir, 2009; Tamir *et al.*, 2008). Thus, we expected that:

H4a: The increased use of supportive deep acting strategies would predict higher levels of personal accomplishment.

H4b: The increased use of disciplinary deep acting strategies would predict higher levels of personal accomplishment.

Method

Participants and procedures

Superintendents from eight school districts (four in the Midwest and four in the southeast United States) were contacted by phone to participate in the current study. Superintendents from five school districts agreed to participate. All classroom teachers from the approved school district were emailed a link to an online survey via an administrative assistant. After completing the survey, participants were given the option of being entered into a small monetary raffle as an incentive. Surveys were initially received from 743 respondents, but 67 were excluded from analyses for indicating that they were either an administrative staff member (e.g. principal, secretary) or were not classroom teachers (e.g. special education, counselors, librarians). An additional 17 respondents were excluded for not completing a substantial portion of the survey. Missing variables were imputed using a matched imputation method with other variables on the scales (a total of 52 cases were imputed across four variables). A total of 659 teachers from five school districts, one in the Midwest ($n = 63$) and four in the southeast (District 1, $n = 77$; District 2, $n = 110$; District 3, $n = 149$; District 4, $n = 260$) were used for all statistical analyses. The average response rate was approximately 21%, which is not unexpected for both electronic survey

administration and public service employees (Cook, Heath, & Thompson, 2000; Kaplowitz, Hadlock, & Levine, 2004). Our sample consisted mostly of female respondents (86.6%), which approximated the gender distribution of K-12 teachers in the United States at the time of data collection (78.3%; United States Bureau of Labor Statistics, 2008). Most respondents identified themselves as Caucasian (90.9%), and as teachers with a Bachelor's (56.4%) or Master's degree (42.2%) as their highest education level. Almost half classified themselves as elementary teachers (49.5%), followed by high school (31.0 %) and middle school/junior high (19.6%).

Measurement of perceived display rule requirements

Supportive and disciplinary display rule perceptions were measured with one item each, adapted from Schaubroeck and Jones (2000) to represent perceptions of supportive and disciplinary display rules. Respondents indicated their agreement with the following statements: 'I feel that the expression of positive emotions is important for effectively doing my job' and 'I feel that the expression of negative emotions is important for effectively doing my job'. Participants were informed that positive emotions were associated with supportive aspects of the job (showing pleasure to influence student behaviour), and negative emotions

were associated with disciplinary aspects of the job (showing displeasure to influence student behaviour). Ratings were recorded on a five-point scale ranging from 1 ('strongly disagree') to 5 ('strongly agree').

Measurement of emotion regulation strategies

Emotion regulation strategies were assessed by adapting surface and deep acting items from Brotheridge and Lee (2003) and Grandey (2003) to reflect the regulation of both positive and negative emotions (Table I). For example, an original surface acting item read 'pretend to have feelings I don't really have'. The adaptation for supportive emotion regulation for this same item read 'pretend to have positive emotions I don't really have', whereas disciplinary emotion regulation item read 'pretend to have negative emotions I don't really have'. Thus, the revised version included 12 items (compared with the original six) to differentiate between supportive and disciplinary emotion regulation. For each item, respondents indicated how often they engaged in emotional labour behaviours on an average day at work. Teachers were also provided examples of supportive (e.g. providing positive feedback when you are not in a good mood) versus disciplinary (disciplining a student for behaviour you find humorous or doesn't offend you) emotion regulation to help frame the questions (see full description of item framing in Table I). Possible

Table I. Emotional labour item means and standard deviations

Factor	Item (abbreviation)	M	SD
Supportive surface acting	Resist the expression of negative emotions (SSA1)	2.22	0.93
	Hide felt negative emotions (SSA2)	2.32	0.90
	Pretend to have positive emotions (SSA3)	2.04	1.06
Supportive deep acting	Make an effort to experience positive emotions (SDA1)	2.58	0.97
	Really try to experience positive emotions (SDA2)	2.78	0.93
	Try to actually experience positive emotions (SDA3)	2.75	0.94
Disciplinary surface acting	Resist the expression of positive emotions (DSA1)	1.41	1.00
	Hide felt positive emotions (DSA2)	1.48	1.01
	Pretend to have negative emotions (DSA3)	1.40	1.02
Disciplinary deep acting	Make an effort to experience negative emotions (DDA1)	1.32	1.02
	Really try to experience negative emotions (DDA3)	1.29	1.00
	Try to actually experience negative emotions (DDA3)	1.20	0.99

Note: Supportive Item Framing: The following items ask how you manage your emotional reactions to be consistent with the supportive aspects of your job. For example, you might need to provide positive feedback to a student who performed well on an exam, even though you are necessarily in a good mood that day. Disciplinary Item Framing: The following items deal with situations in which you may need manage your emotions to be consistent with the disciplinary aspects of your job. For example, sometimes you may have to discipline a student for behaviour that personally, you find to be humorous or does not offend you.

M: mean; SD: standard deviation.

item responses ranged from 0 ('almost never occurs') to 4 ('occurs very frequently').

Measurement of emotional exhaustion and personal accomplishment

Burnout was measured using four items from two subscales (emotional exhaustion and personal accomplishment) of the Maslach Burnout Inventory (MBI; Maslach and Jackson, 1986). The full MBI has been shown to lack invariance across intermediate and secondary teachers, so items were chosen that had the best structure invariance and factor loadings above 0.60 across teaching groups and sex according to Byrne (1992, 1994). Responses were provided on a seven-point scale ranging from 0 ('Never') to 6 ('Every day'). Specific items can be found in Table III. Depersonalization was not included because of conceptual and empirical overlap with emotional exhaustion (Byrne, 1992; Byrne, 1994; Kalliath, O'Driscoll, Gillespie, & Bluedorn 2000).

Control variables

One of the issues inherent in structural equation modelling is common method variance. Podsakoff, MacKenzie, Lee and Podsakoff (2003) noted that common method variance can inflate weak or non-existent relationships among self-reported variables, and therefore it is important to use statistical controls to better approximate the true relationships between variables of interest. In our study, emotionality, private self-consciousness and public self-consciousness were identified a priori as variables that could serve as statistical controls because of their association with emotional labour predictors and outcomes (Zammuner & Galli, 2005).

Emotionality

Individuals who report higher emotionality have a predisposition towards experiencing emotions intensely and frequently. This may result in more emotional exhaustion because they have to overcome more intense emotional reactions to conform to emotional display rules. Emotionality is a sub-facet of neuroticism and is related to emotional expressiveness, both of which are studied in relation to emotional labour (Diefendorff & Richard, 2003; Diefendorff *et al.*, 2005). Emotionality was measured with five items from the Emotionality sub-facet of Neuroticism from the International Personality Item Pool item bank resembling the NEO Per-

sonality Inventory-Revised (Goldberg, 1999; Goldberg *et al.*, 2006). Responses were recorded on a five-point scale ranging from 1 ('extremely uncharacteristic' of me) to 5 ('extremely characteristic' of me).

Self-monitoring

Self-monitoring has been used as a control variable in past emotional labour research (Diefendorff, *et al.*, 2005), though only in terms of monitoring oneself in relation to others. In this study, we incorporated a more detailed measure of self-monitoring in terms of private and public self-consciousness. Individuals with higher levels of private self-consciousness tend to focus attention inward (monitoring their own thoughts and emotions), while those higher in public self-consciousness are focused towards social interaction and are more apt to monitor their behaviours in relation to others. Respondents high in private self-consciousness may report higher frequencies of emotion regulation strategies because they are more attuned to their emotional states, while those with higher public self-consciousness may actually use emotion regulation strategies more frequently for impression management. Private and public self-consciousness was measured using the Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975) in which the respondents rate their level of agreement to a variety of statements on a scale ranging from 1 ('extremely uncharacteristic' of me) to 4 ('extremely characteristic' of me). Three items from the public self-consciousness subscale were chosen and adapted that represented impression management with others, and five items were chosen from the private self-consciousness scale that had factor loadings above 0.60.

Results

Descriptive statistics

Emotional labour items and bivariate correlations

The means and standard deviations (SD) for items in the revised emotional labour scale are listed in Table I. In general, supportive emotional labour items had the most reported mean (M) frequency, with an average frequency rating between 'occasionally occurring' to 'occurs frequently'. These were followed by the use of disciplinary emotional labour strategies, with an average frequency ranging between 'seldom occurs' and 'occasionally occurs'.

Bivariate correlations are presented in Table II. Female respondents were more likely to engage in supportive surface acting and deep acting, disciplinary deep acting and to experience more emotional exhaustion than males. Caucasian teachers were more likely to engage in supportive surface acting, experience emotional exhaustion and report feelings of personal accomplishment. Older teachers reported less supportive surface acting, less emotional exhaustion and more personal accomplishment, but tenure was not associated with any emotional labour strategies or outcomes.

In terms of control variables, teachers higher in emotionality were statistically more likely to report higher levels of emotional exhaustion. Teachers who scored higher on private self-consciousness also reported greater supportive surface acting, disciplinary surface acting, supportive deep acting and emotional exhaustion, while teachers scoring higher on public self-consciousness reported more supportive surface acting, supportive deep acting and personal accomplishment. Though the two surface acting factors and the two deep acting factors demonstrated a moderate correlation with each other, the relatively small magnitude indicates that the two surface acting factors and the two deep acting factors possess a fair amount of independence.

Perceived display rule prevalence and associations with emotion regulation

To test our first hypothesis, we examined five-point Likert scale responses for the supportive and disciplinary display rule items to assess the prevalence of agreement with display rule requirements. Agreement (strongly agree/agree) for perceptions of supportive display requirements were indicated in 97% ($M = 4.50$, $SD = 0.72$) of the sample, with 257 teachers indicating that they agree and 379 indicating that they strongly agree that displaying positive emotions was important for effectively doing their job (neutral = 9; disagree = 1; strongly disagree = 13). Perceptions of disciplinary display requirements were less common but still indicated in 40% ($M = 2.89$, $SD = 1.23$) of the sample, with 208 teachers indicating that they agree and 53 indicating that they strongly agree that displaying negative emotions was important for effectively doing their job (neutral = 116; disagree = 180; strongly disagree = 102). A paired-samples *t*-test indicated the difference between perceptions of supportive and disciplinary display rule perceptions was statistically significant, $t(658) = 28.61$,

$p < 0.001$. Thus, H1 was supported. One-way analyses of variance suggested that there were no significant differences in display rule perceptions (supportive and disciplinary) across schools, but there was a difference across teaching classification, $F(2, 56) = 7.76$, $p < 0.001$, with elementary teachers reporting significantly higher perceptions of supportive display rule requirement than high school teachers. A *t*-test showed no difference in ethnicity or education level, but females indicated higher perceptions of supportive display rule requirement, $t(657) = 2.30$, $p < 0.05$, than did males.

Our second set of hypotheses proposed an association between differential display rule perceptions and emotion regulation strategies. Bivariate correlations suggested that perceptions of supportive and disciplinary display rules were associated with the appropriate corresponding emotion regulation strategies (Table II). Supportive surface acting and supportive deep acting were significantly associated with perceptions of supportive display requirements (H2a supported), whereas disciplinary surface acting and disciplinary deep acting were significantly associated with perceptions of disciplinary display rules (H2b supported).

Predicting outcomes with supportive versus disciplinary emotion regulation factors

To test our third and fourth set of hypotheses, confirmatory factor analyses (CFAs) and structural equation models (SEMs) were developed using Amos 6.0 (Arbuckle, 2005). First, a CFA was conducted to test a four-factor structure of emotional labour: supportive surface acting, supportive deep acting, disciplinary surface acting and disciplinary deep acting (see Table III). Although the initial model had adequate fit, one supportive surface acting item (pretend to have positive emotions) loaded poorly ($\beta = 0.52$) on its latent construct. When excluding this item, the final four-factor model achieved adequate to good fit. The Bayesian Information Criterion (BIC) was used to compare the two non-nested models. A difference of 50.32 between Model 1 and Model 1a indicated very strong evidence of a difference in model fit (Raftery, 1995). Both Model 1 and Model 1a also performed better than two alternative models consisting of two-factor solutions, both of which showed poor fit. Model 2 consisted of only surface and deep acting strategies, while Model 3 represented only supportive and disciplinary regulation strategies.

Table II. Bivariate correlations: demographics, control variables, emotion regulation strategies and psychological outcomes

Factor	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Sex	—														
2. Race	-0.04	—													
3. Age	-0.02	0.12**	—												
4. Tenure	0.03	0.04	0.62**	—											
5. Emotionality	0.12**	-0.02	-0.04	0.03	(0.71)										
6. Private self-consciousness	0.02	-0.01	-0.09*	-0.09*	0.30**	(0.62)									
7. Public self-consciousness	0.04	-0.02	-0.09*	-0.04	0.18**	0.42**	(0.74)								
8. Supportive display rules	0.09*	-0.04	0.01	0.01	0.09*	0.17**	0.09*	—							
9. Disciplinary display rules	-0.02	-0.01	-0.06	0.01	0.02	0.08*	0.06	-0.02	—						
10. Supportive surface acting	0.09*	-0.12**	-0.10*	-0.08	0.05	0.14**	0.09*	0.11**	0.03	(0.76)					
11. Supportive deep acting	0.13**	0.00	-0.03	-0.04	0.08*	0.20**	0.19**	0.19**	-0.01	0.33**	(0.91)				
12. Disciplinary surface acting	0.03	0.03	-0.06	-0.04	-0.04	0.08*	0.03	0.03	0.13**	0.30**	0.05	(0.81)			
13. Disciplinary deep acting	0.08*	0.04	-0.07	-0.03	0.01	0.02	0.04	-0.02	0.09*	0.08*	0.10*	0.45**	(0.93)		
14. Emotional exhaustion	0.10*	-0.15**	-0.10**	-0.04	0.11**	0.13**	0.01	-0.04	0.17**	0.24**	0.08*	0.17**	0.08*	(0.88)	
15. Personal accomplishment	0.07	0.10**	0.08*	0.05	0.05	0.02	0.13**	0.10*	-0.11*	-0.04	0.21**	-0.04	-0.01	-0.24**	(0.77)

Note: Sex was coded as 0 = male, 1 = female; race was coded as 0 = white, 1 = non-white; Cronbach's alphas are presented on the diagonal in parentheses. Supportive surface acting initially had an alpha equal to 0.69 before dropping one poor item.

*Significant at the 0.05 level; ** significant at the 0.01 level.

Table III. Emotion regulation strategy confirmatory factor analysis fit indices

Model	χ^2	df	χ^2/df	RMR	IFI	GFI	AGFI	CFI	RMSEA (90% CI)	BIC
1: Hypothesized Four-Factor Model	125.84**	50	2.52	0.085	0.913	0.932	0.895	0.912	0.048 (0.038; 0.059)	307.58
1a: Hypothesized Four-Factor Model (poor item dropped)	88.50**	40	2.21	0.068	0.943	0.947	0.913	0.942	0.043 (0.031; 0.055)	257.27 [†]
2: Alternative Two-Factor Model A (surface acting and deep acting)	439.90**	43	10.23	0.275	0.534	0.737	0.597	0.527	0.118 (0.109; 0.129)	589.17
3: Alternative Two-Factor Model B (supportive and disciplinary regulation)	285.72**	43	6.65	0.153	0.719	0.829	0.738	0.711	0.093 (0.083; 0.103)	435.01

Note: Bold values indicate acceptable fit for each index; [†] indicates best fitting model for the BIC; ** $p < 0.001$.

AGFI: Adjusted Goodness of Fit Index; BIC: Bayesian Information Criterion; CFI: Comparative Fit Index; df: degrees of freedom; GFI: Goodness to Fit Index; IFI: Incremental Fit Index; RMR: Root Mean Square Residual.

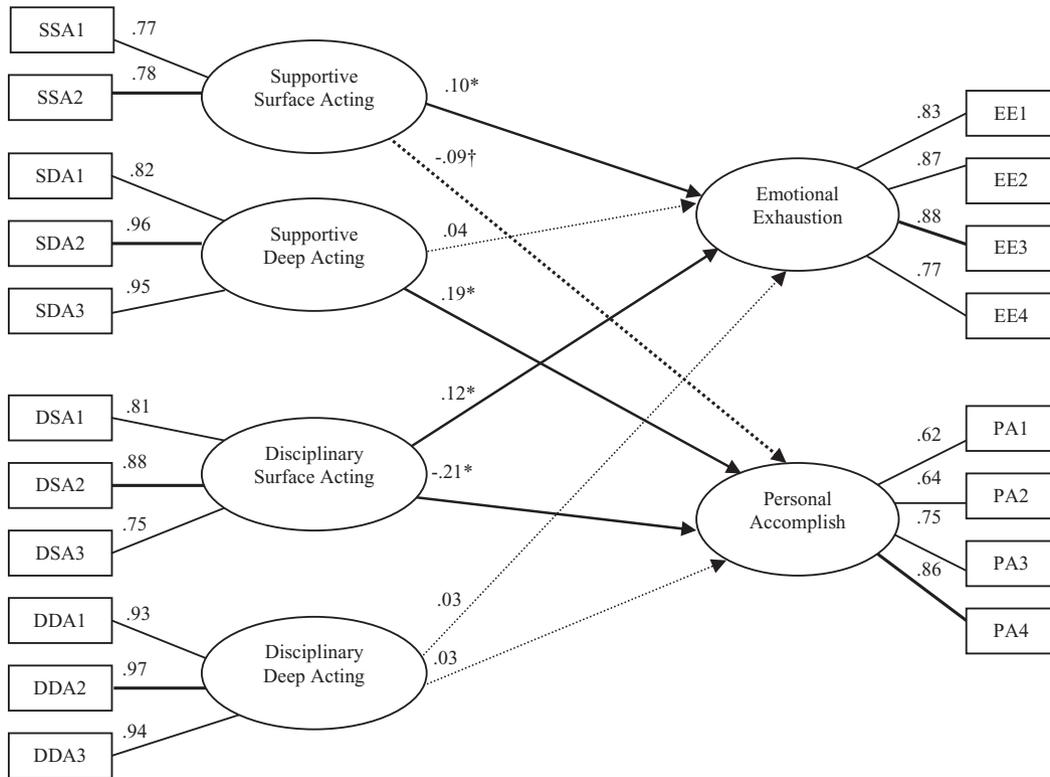
Table IV. Predictor estimates of emotional exhaustion and personal accomplishment

Predictor	Emotional exhaustion						Personal accomplishment					
	B	B _{SE}	β	z-score	p-value	R ²	B	B _{SE}	β	z-score	p-value	R ²
1. Supportive surface acting	0.24	0.11	0.10	2.11	0.035	0.009	-0.14	0.08	-0.09	-1.90	0.057	0.008
2. Disciplinary surface acting	0.27	0.12	0.12	2.25	0.024	0.013	-0.31	0.07	-0.21	-4.34	0.000	0.042
3. Supportive deep acting	0.09	0.09	0.04	1.01	0.311	0.002	0.27	0.07	0.19	4.03	0.000	0.035
4. Disciplinary deep acting	0.05	0.09	0.03	0.58	0.560	0.001	0.02	0.05	0.03	0.44	0.658	0.000
5. Emotionality	0.39	0.14	0.11	2.82	0.005	0.003	0.01	0.09	0.00	0.09	0.926	0.000
6. Private self-consciousness	0.39	0.14	0.11	2.74	0.006	0.012	0.09	0.13	0.04	0.70	0.486	0.001
7. Public self-consciousness	-0.16	0.10	-0.06	-1.55	0.122	0.011	0.25	0.08	0.14	3.12	0.002	0.019

Note: Emotional exhaustion items were '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'. Personal accomplishment items were 'I feel I'm positively influencing other people's lives through my work', 'I can easily create a relaxed atmosphere with my students', 'I feel exhilarated after working closely with my students' and 'I have accomplished many worthwhile things in this job'.

Next, we incorporated emotional exhaustion and personal accomplishment as model criteria. Because of the exploratory nature of our four-factor structure, we specified paths from all four emotion regulation factors to each outcome. This preliminary model achieved adequate fit, χ^2 (140) = 288.87, $p < 0.001$; Root Mean Square Residual (RMR) = 0.106; Goodness to Fit Index (GFI) = 0.939; Adjusted Goodness to Fit Index (AGFI) = 0.917; Comparative Fit Index (CFI) = 0.921; Root Mean Square Error of Approximation (RMSEA) = 0.040 [$p < 0.001$, 90% confidence interval (CI) = 0.034; 0.047], with the emotion regulation strategies accounting for 3.4% of the variance in emotional exhaustion and 9.7% of the variance in personal accomplishment. This model was further revised by loading emotionality, private self-consciousness and

public self-consciousness onto each latent variable. This is similar to a partial correlation method in hierarchical regression, and it is suggested as a useful technique for statistically controlling for common method variance in self-report measures (Podsakoff et al., 2003). This model achieved adequate fit, χ^2 (179) = 355.02, $p < 0.05$; RMR = 0.098; GFI = 0.941; AGFI = 0.917; CFI = 0.927, RMSEA = 0.039 ($p < 0.001$, 90% CI = 0.033; 0.045). Parameter estimates can be found in Table IV, and standardized regression weights are presented in Figure 1. In this model, the emotion regulation predictors accounted for 2.5% of the variance in emotional exhaustion and 8.5% of the variance in personal accomplishment (with the control variables accounting for 2.6% and 2.0% of the variance, respectively). Therefore, the emotion regulation strategies



Note: * is significant at the .05 level; † is significant at the .10 level; Analysis controlled for emotionality, private self-consciousness, and public self-consciousness; Item SSA3 performed poorly and was dropped from analyses; Statistically significant paths are represented by solid lines

Figure 1 Predicting outcomes with supportive versus disciplinary emotion regulation factors

remained significant predictors of emotional exhaustion and personal accomplishment even after controlling for potential confounds.

In partial support of H3a, supportive surface acting was significantly associated with increased emotional exhaustion ($\beta = 0.10, z = 2.11, p < 0.05$), but only a marginally-significant predictor of decreased personal accomplishment ($\beta = -0.09, z = -1.90, p = 0.057$). In full support of H3b, disciplinary surface acting was a significant predictor of increased emotional exhaustion ($\beta = 0.12, z = 2.25, p < 0.05$) and decreased personal accomplishment ($\beta = -0.21, z = -4.34, p < 0.001$). H4a was supported, such that supportive deep acting possessed a significant positive relationship with personal accomplishment ($\beta = 0.19, z = 4.03, p < 0.001$). However, H4b was not supported, as disciplinary deep acting was unrelated to personal accomplishment. Thus, it appears that although both supportive and disciplinary surface acting strategies operated similarly with respect to the

outcomes, this was not the case for deep acting strategies.

Discussion

Our study extends emotional labour research by exploring the prevalence of supportive and disciplinary emotional display rule perceptions in teachers, and how perceived differences in display rule requirements may result in different emotion regulation strategies. Additionally, our findings provide some insight as to the relative contribution of each of these emotion regulation strategies in the prediction of emotional exhaustion and personal accomplishment. These results contribute to the literature by adding further specificity to the measurement of emotion regulation strategies. Greater specificity may result in intervention efforts tailored towards the management of supportive versus disciplinary display rule requirements at work.

Although the perception of supportive display rule requirements in teaching was most pervasive, almost half of our respondents indicated that they perceived that negative expression of emotion was important for job effectiveness. This variability may be due to a number of factors (e.g. lack of organizationally sanctioned display rule requirements, perceived misfit with primary aspects of the job, differences in personality), and validates further exploration into antecedents of disciplinary display rules. Consequently, teachers who reported more disciplinary display rule perceptions also tended to engage in surface and deep acting strategies to express negative emotions, and this relationship was distinct from supportive display rule perceptions and regulation strategies. This finding established a link between differential display rule perceptions and emotion regulation strategies that is more specific and aligned with display rules as expression (rather than suppression) requirements than past research (Brotheridge & Lee, 2002; Diefendorff *et al.*, 2005; Schaubroeck & Jones, 2000).

In support of a Control Theory approach to emotion regulation (Carver & Scheier, 1982; Diefendorff & Gosserand, 2003), disciplinary surface acting played as much of a role in the prediction of emotional exhaustion and personal accomplishment as supportive surface acting. That is, both forms of surface acting (faking positive and negative emotional expression) in response to emotional dissonance led to higher emotional exhaustion and lower personal accomplishment. Though this might seem counterintuitive given the lower frequencies of disciplinary surface acting, this supports the notion that conforming to disciplinary display rules also requires effortful processing (Rothman, Baldwin, & Hertel, 2004). An alternate explanation may be that the transition back to a supportive mode (rather than the disciplinary surface acting itself) may lead to emotional exhaustion or reduced personal accomplishment. For example, although disciplining a student may be emotionally exhausting, switching back to a supportive role (sometimes in a very short period of time) with the same student can be even more difficult given a recent negative interaction, as this may create emotional dissonance. Either way, the implication may be that focusing on ways to reduce surface acting in teachers with respect to positive emotional expression may not be enough. Training teachers to manage appropriate negative emotional expression, especially transitioning to and from

a disciplinary role, should also be included as part of their professional development.

Our findings also confirmed previous research regarding the positive relationship between deep acting and personal accomplishment (Brotheridge & Grandey, 2002; Brotheridge & Lee, 2003; Näring *et al.*, 2006), but we found that this relationship was only present for supportive deep acting (i.e. when teachers made an effort to experience positive emotions). Because we also found that supportive display rule perceptions were more prevalent, results support the proposition that teachers may identify more with their supportive role in their job; therefore, frequently engaging in supportive deep acting increases feelings of personal accomplishment. This is in contrast to other occupations in which workers may more strongly identify with (or get more rewards for) negative emotional expression on the job (e.g. police officers and bill collectors; Barber *et al.*, 2009; Sutton, 1991). Thus, future research should explore the effects of role identification (Grawitch, Barber, & Kruger, 2010; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997) or display rule commitment (see Gosserand & Diefendorff, 2005) in relation to supportive and disciplinary emotion regulation and burnout facets.

Although disciplinary deep acting did not have a significantly negative effect on emotional exhaustion in teachers, it also did not have a significantly positive or negative effect on feelings of personal accomplishment. Further research is needed to explore the effects of disciplinary deep acting in other contexts because disciplinary deep acting may differ from supportive deep acting due to the nature of negative emotions. For example, the current theoretical approach used in this study does not include the role of genuine negative emotion expression, which is also associated with emotional exhaustion (Glomb & Tews, 2004) and may also arise because of student misbehaviour. If the goal of deep acting is to approximate a genuine emotional expression, then disciplinary deep acting might be associated with increased emotional exhaustion over time. Future studies may compare the effects of regulating genuine negative emotions and disciplinary deep acting in teachers or other occupations, as they appear to be qualitatively and empirically different forms of emotional labour. For example, our study focused on regulating for disciplinary deep acting that entails increasing negative and suppressing positive emotional expression (as in the case when a student does something inappropriate, yet

humorous), but regulating genuine negative emotional expression for discipline includes suppressing extreme frustration and anger. Likewise, the comparison between genuine positive emotional expression and supportive deep acting may also warrant further investigation.

Limitations

This study relied on self-report data to assess the relationship between emotional labour and work outcomes. Although this is useful for exploring new relationships between variables, this method is best supplemented by objective measures of performance (such as teaching effectiveness as evaluated by supervisors or records), observations or ratings of display rule compliance, and/or a longitudinal design. Moreover, like any self-report measure, a teacher's report of emotional labour is strongly influenced by retrospective perceptions. However, this limitation was somewhat mitigated by controlling for factors that can influence retrospective perceptions of experiences (i.e. self-consciousness).

Second, the described directionality of the relationships has been presented with respect to theory and past longitudinal findings (Goldberg & Grandey, 2007; Totterdell & Holman, 2003), but causality cannot be supported in the current design. Greater emotional exhaustion may also lead to the tendency to engage in surface acting (both supportive and disciplinary) rather than engage in the more effortful requirements of deep acting. Alternatively, personal accomplishment at work due to other factors may influence one's tendency to engage in supportive deep acting. Additionally, the magnitude of the effects of all emotion regulation strategies on emotional exhaustion and personal accomplishment were relatively small, indicating that a variety of other factors may also influence these outcomes.

Finally, this study only used one-item measures to assess supportive and disciplinary display rule perceptions, which could not be incorporated into the SEM. Because of the exploratory nature of our study, our focus was more on validating the distinction between supportive and disciplinary emotion regulation. Thus, the one-item measures were primarily used to validate the assumptions that disciplinary display rule perceptions are actually prevalent among teachers, and that these perceptions are associated with disciplinary (but not supportive) emotion regulation strategies. We encourage future researchers to expand upon display rule measurement for supportive and disciplinary deep acting that may be used to test a mediational model

linking display rule perceptions, emotional regulation strategies and psychological outcomes. For example, using discrete emotions from Glomb and Tews (2004) with respect to positive (e.g. happiness, liking and enthusiasm) and negative (e.g. irritation, disliking and aggravation) emotions with item framings from other display rule measures (e.g. 'I feel that the expression of is important for effectively doing my job; Schaubroeck & Jones, 2000).

Conclusions and study contributions

Our research examining the emotion regulation experiences among teachers can serve as a springboard for future research in other occupations that require supportive and disciplinary display rules (e.g. lawyers and police officers). In other contexts, our approach to supportive and disciplinary emotional labour can include questions surrounding the complexities of effective leadership in which one attempts to strike a supportive/disciplinary balance in managing employees. For example, effective mentoring and supervision requires delivering negative feedback for improvement (Larson, 1989), which may be difficult when the supervisor has a positive relationship with the employee. Future researchers should differentiate between supportive and disciplinary display emotion regulation strategies, and how each may independently contribute to employee well-being. Our findings indicate that disciplinary emotion regulation has the same costs to emotional exhaustion in teachers as supportive regulation, but fewer benefits in terms of increasing personal accomplishment. However, future studies should examine whether this is the case in other occupations, and with other outcomes such as short-term and long-term performance.

The current research suggests that teachers generally view the teaching role as one requiring supportive emotional displays. However, how teachers conform to each perceived role requirement may have implications for their emotional exhaustion and sense of personal accomplishment. Our findings suggest that it is not sufficient to only consider whether conforming to role requirements involves generalized surface and deep acting in occupations with complex display rule requirements. Thus, our research may stimulate renewed interest in research examining emotion regulation strategies that fulfill the need to switch from one display rule to another depending upon different, and often conflicting, contextual requirements.

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