

The International Journal of Human Resource Management

ISSN: 0958-5192 (Print) 1466-4399 (Online) Journal homepage: <http://www.tandfonline.com/loi/rijh20>

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To cite this article: Benjamin R. van Gelderen, Elly A. Konijn & Arnold B. Bakker (2017) Emotional labor among police officers: a diary study relating strain, emotional labor, and service performance, *The International Journal of Human Resource Management*, 28:6, 852-879, DOI: [10.1080/09585192.2016.1138500](https://doi.org/10.1080/09585192.2016.1138500)

To link to this article: <http://dx.doi.org/10.1080/09585192.2016.1138500>



Published online: 08 Feb 2016.



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Emotional labor among police officers: a diary study relating strain, emotional labor, and service performance

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ABSTRACT

Using emotional labor and conservation of resources (COR) theory, this diary study aims to gain insight into the role of daily strain in emotional labor and service performance on a day-to-day basis. Strain was taken into account both as an antecedent (at the start of the work shift), and as a consequence (at the end of the work shift) of emotional labor (surface acting, deep acting) and emotional dissonance. The participants were 53 Dutch police officers who completed a three-day diary questionnaire (i.e. 159 measurement occasions). The results of multilevel analyses showed that, as hypothesized, daily strain at the start of the work shift was positively related to daily surface acting and unrelated to daily deep acting. Furthermore, daily surface acting mediated the relationship between strain at the start of the work shift and (a) service performance and (b) strain at the end of the work shift. Additionally, as predicted, daily surface acting was particularly related to emotional dissonance when strain at the start of the work shift was high.

KEYWORDS

Deep acting; emotional labor; performance; police officers; strain; surface acting

Practitioner points:

- Employees should focus on starting the work day with enough energy to enhance their well-being and organizational performance.
- Emotion regulation strategies and ways of dealing with personal resource levels should be included in the training of police officers to help them better cope with emotionally demanding interactions during the work day.

Employees in most service professions engage in emotional labor on a regular basis (Grandey, 2000). Flight attendants, bank employees, nurses and police officers have in common that they may encounter emotionally taxing situations in which they need

to display emotions that differ from how they really feel. Emotional labor refers to the management of feelings in order to create a socially desirable display in accordance with situational demands during service transactions (Ashfort & Humphrey, 1993; Hochschild, 1983). Research of the past three decades has shown that emotional labor is detrimental to employee well-being because of the stress of managing emotions during work (Grandey, 2000). Thus far, emotional labor research has predominantly focused on the unfavorable relationship between emotional labor and employee well-being in terms of strain and burnout (e.g. Hülshager & Schewe, 2011; Kammeyer-Mueller et al., 2012; Tschan, Rochat, & Zapf, 2005). However, emotional labor may also influence employee performance positively, for example, by smoothing the interaction with the client and facilitating task effectiveness (Ashfort & Humphrey, 1993; Klumper, DeGroot, & Choi, 2013). Hence, in filling this research gap, both well-being and performance should be considered important aspects in studying daily emotional labor.

The aim of the present study is to examine how two emotional labor strategies, surface acting (i.e. faking or suppressing emotions) and deep acting (i.e. a cognitive change to feel the appropriate emotions), are related to both strain and service performance – on a day-to-day basis. Most previous emotional labor studies that tested the relationship between emotional labor and strain or performance, used a survey or between-person approach. The advantage of a daily diary or within-person approach is that recall bias is reduced and employees' daily emotional experiences are studied in their natural work context (Bolger, Davis, & Rafaeli, 2003).

We use conservation of resources (COR) theory (Hobfoll, 1988, 1989) to argue that strain at the start of the work shift is predictive of low-effort emotional labor (i.e. surface acting), and may (in)directly determine service performance and strain at the end of the work shift. We argue that a lack of energy at the start of the work leaves less energy to apply deep acting and may inflict surface acting. This viewpoint contributes to emotional labor literature in explaining *why* surface acting may have detrimental effects; strain at the start of the work shift plays a crucial role.

Police officers frequently encounter emotionally demanding interactions on a daily basis (Van Gelderen, Bakker, Konijn, & Demerouti, 2011). Also, police officers have to deliver a high-quality customer service when helping or advising crime victims. In addition, police officers may also have to display negative emotions when correcting an offender or suppress negative emotions when trying to keep up a professional appearance when being treated rude. Emotion work may thus have impact on police officers' psychological well-being as well as on service performance. Police officers are therefore included in our study as a relevant target group.

Theoretical background

Police officers frequently interact with civilians or suspects, and these interactions often result in emotionally taxing situations (Johnson et al., 2005; Van Gelderen, Heuven, Van Veldhoven, Zeelenberg, & Croon, 2007). Most service organizations

prescribe display rules (Ekman, 1973) indicating which emotions are appropriate to display in public (Zapf, 2002). This is also the case for police officers. During emotionally taxing interactions with civilians, police officers who strive to successfully accomplish their task may display unfelt but instrumental emotions or suppress emotions that may hinder effective interactions with civilians (Van Gelderen et al., 2011). Emotional labor thus forms an important part of the police officers' job. However, the mainstream viewpoint in emotional labor research states that surface acting is harmful for the employee and for service performance. For instance, Mesmer-Magnus, DeChurch, and Wax (2012) conducted a meta-analysis of 109 independent studies and showed that discordance in felt vs. displayed emotions was associated with detrimental effects on health and performance. We extend previous studies on emotional labor to capture a more complete picture of the chain between strain, emotional labor and performance on a daily basis. Furthermore, in the present study, we presume that employees who experience a high level of strain at the start of the work shift are more inclined to use the emotion regulation technique of surface acting, which will be elaborated on below.

Surface acting, deep acting and emotional dissonance among police officers

Surface acting refers to changing the outer expression of emotions without changing the underlying felt emotions (Grandey, 2000). When the employee feels an emotion that should not be displayed or must display an emotion that is not felt, he or she may alter the emotional expression but not the feeling underlying this expression. Surface acting is thus the expression of an 'as-if' emotion to mask negative, inappropriate or unfelt emotions directed at outward expression. For example, a police officer may display facial and behavioral expressions of empathy in helping a civilian to recover from an incident, while personal feelings may, for example, reflect irritation. Thus, a high-quality service is delivered while the empathy displayed may not always be felt. This strategy may be used in particular when the situation at hand seems relatively unimportant to the police officer in view of other, more relevant or more severe crimes and emergency situations or, when felt emotions are inappropriate or too intense to be expressed in the situation at hand.

In time, the regulation technique of surface acting may result in the awareness of an inward state of imbalance between how one actually feels and how one displays this feeling. This person-role conflict state is also referred to as emotional dissonance (Abraham, 1998). Emotional dissonance arises as a consequence of the persisting discrepancy between inner feelings and outer expressions during an interaction (Zapf, 2002) and can be considered a structural discrepancy between displayed and felt emotions as part of the work role (Heuven & Bakker, 2003). Van Dijk and Kirk Brown (2006) argued that emotional dissonance is distinct from surface acting and may arise as the consequent experience from performing emotional labor (i.e. surface acting). Thus, we perceive surface acting

as a technique directed at an outward expression of an ‘as-if’ emotion, while emotional dissonance is directed at an inner state and reflects a felt state of imbalance.

Deep acting refers to a cognitive change in which emotions are felt prior to their display or suppression. The goal of this strategy is to balance felt emotions with displayed emotions (Grandey, 2000). To successfully apply deep acting, the person must actively alter the inner feelings to actually feel the required emotion (Zapf, Vogt, Seifert, Mertini, & Isic, 1999). Thus, employees who engage in deep acting must use thoughts, images and memories to bring about a specific emotion (Ashfort & Humphrey, 1993; cf. professional actors in rehearsal, Konijn, 2000). Grandey (2000) has argued that deep acting is an antecedent-focused emotion regulation technique (see also Gross & John, 2003). This part of the emotion regulation process involves modifying felt emotions before the emotion is fully activated. When relating deep acting to policing, a police officer may, for instance, realize beforehand that s/he may feel irritated or angry when interacting with intoxicated and rude civilians. To act professionally and prevent escalation, it may be better not to display this irritation or anger. Before allowing such emotions to develop, the police officer may alter the thoughts (i.e. cognition) by, for example, perceiving the civilian’s behavior as a regular part of the job or by realizing that the civilian’s behavior is related to the function of the police officer and is not to be taken personally. Consequently, when in such taxing situations, the police officer’s felt emotions may be balanced by the appropriate emotions to be displayed. An important question is to what extent strain influences the use and success of emotional labor strategies.

Initial strain and emotional labor

Given that previous emotional labor research found a predominantly negative relationship between surface acting and employee well-being, one may wonder why employees are inclined to surface act. COR-theory (Hobfoll, 1988, 1989) can be used as a model that explains the process of peoples’ resource gains and losses during the day as a result of coping with stressors. One of the basic premises of COR-theory is that people who are low on resources (e.g. are more exhausted) are more vulnerable to future resource losses. Accordingly, people experience stress when resources are threatened and therefore strive to maintain their resources (Hobfoll, 1988). In addition, the self-regulation of emotions requires intense effort (Martínez-Inigo, Totterdell, Alcover, & Holman, 2007), especially deep acting. Deep acting is less automatic and more onerous in that it involves a conscious cognitive process before the emotion is actually felt (Zapf, 2002). In contrast, surface acting is a more automatic response to a work situation in which felt emotions differ from the emotions that ought to be displayed (Zapf, 2002). It can thus be argued that due to the described ‘resource-loss spiral’, employees with a low energetic resource level will avoid the more effortful emotional regulation technique of deep acting because

this costs more energy, which may lead to further resource losses. Also, more exhausted employees are less able to regulate their emotions (Aspinwall & Taylor, 1997) and may thus be more inclined to change only their outward emotional expression (i.e. surface acting) instead of effortful thought to alter cognitions preceding emotional expression (i.e. deep acting). Put differently, when an employee is more exhausted it is less likely that a cognitively more effortful regulation technique like deep acting will be initially applied. Namely, exhausted employees will respond to stress with strategies that minimize future resource losses (Hobfoll, 1988; Wright & Cropanzano, 1998). Following this line of reasoning, we predict:

Hypothesis 1a: Strain at the start of the work shift is positively related to daily surface acting.

Hypothesis 1b: Strain at the start of the work shift is negatively related to daily deep acting.

Initial strain, emotional labor and service performance

Emotional labor among police officers includes not only the need to ‘keep on smiling’ to deliver the impression of high-quality service, but also interactions with civilians and offenders. Performance can be described in different ways. Performance can relate to employee behavior or actions intended to directly achieve performance, but also to produced services that support the organization’s goals (Roe, 1999). Performance in the current study is focused at customer services supporting organizational goals and implies police officers’ discretionary actions that enhance the effective functioning of the organization, irrespective of the need to be productive (MacKenzie, Podsakoff, & Fetter, 1991). This service performance relates to behaviors that enhance desirable outcomes by serving and helping the customer (cf. Bowen & Waldman, 1999; Liao & Chuang, 2004). Examples of service performance behavior include asking questions, giving suggestions and listening to the customers’ needs (Borucki & Burke, 1999). This kind of performance is covered by the concept of extra-role performance (Williams & Anderson, 1991). Extra-role performance usually refers to helping colleagues at work to increase organizational effectiveness. However, performance of police officers in the current study is aimed to enhance helping civilians in terms of customer services (e.g. taking adequate time to listen to civilians’ problems and giving civilians the correct information). Hence, analogous to extra-role performance, we coin the term service performance.

Previous emotional labor research showed that emotional labor is related to improved performance in the form (or impression of) a high-quality service (cf. Barger & Grandey, 2006; Totterdell & Holman, 2003). For example, a study by Tsai and Huang (2002) showed that employees’ affective delivery influenced customers’ willingness to return to the store. Furthermore, employee authenticity was found to be positively related to customer satisfaction when the task was performed well

(Grandey, Fisk, Mattila, Jansen, & Sideman, 2005). Previous research has also established a positive link between deep acting and job performance (Hülshager, Lang, & Maier, 2010). It can be argued that deep acting is specifically positively related to service performance, and surface acting is negatively related to service performance.

The presumed positive relationship between deep acting and service performance can be supported by an action theoretical framework related to emotional labor (Frese & Zapf, 1994). Zapf (2002) argued that deep acting can be used to prepare for a complex customer interaction and that deep acting need not to be carried out in combination with another conscious process, such as fulfilling the primary task. Put differently, deep acting can be applied before actually fulfilling the primary work goals. Therefore, deep acting may be a more suitable tool for enhancing the overall effective functioning of the organization. Furthermore, when applying deep acting before an interaction, one is not responding to or preparing a concrete primary working situation to represent a specific goal, but instead trying to cognitively alter one's feelings to promote organizational effectiveness during (forthcoming) customer interactions. Thus, deep acting seems to align with preparation for service performance. In addition, Gross and John (2003) showed that reappraisers (e.g. deep acting) experience and express more positive emotions, which is helpful for a positive service performance. On the basis of this literature, the following hypothesis can be formulated:

Hypothesis 2a: Daily deep acting is positively related to daily service performance.

In contrast, we argue that strain at the start of the work shift is negatively related to daily service performance partly via daily surface acting. Previous studies have shown that exhaustion is negatively related to job performance (Wright & Cropanzano, 1998). Additionally, strain at the start of the work shift inflicts the employee's resource level which is an essential initiator for achieving performance (Bakker & Demerouti, 2007). Moreover, resources are important for coping with job demands (Bakker, Demerouti, & Euwema, 2005), such as delivering high-quality service performance. When starting the work day with a high level of strain, this may lead to adopting a more protective and defensive attitude (Hobfoll, 2002) and may enhance felt negative emotions, which may be detrimental for service performance.

As outlined above, in line with COR-theory, it can be expected that strain at the start of the work shift will also be positively related to applying surface acting; a low level of energetic resources may initiate this more automatic regulation technique. In turn, surface acting may result in an inauthentic performance. As the display of authentic positive emotions is presumed to increase the perceived quality of the encounter (Ashfort & Humphrey, 1993; Grandey & Brauburger, 2002; Grandey et al., 2005) an inauthentic display as a result of surface acting can be detrimental to the perceived service performance for several reasons. First, surface acting may elicit an unfavorable response from the client (Côté, 2005) with a consequent negative impact on the delivered service. Second, expressive suppression was found

to disrupt communication, social exchange and increased stress levels (Butler et al., 2003). Third, inauthentic behavior may lead to a sense of self-enstrangement and spuriousness (Butler & Gross, 2004), which in turn may elicit negative felt emotions. In line with this reasoning, it can thus be predicted that:

Hypothesis 2b: Strain at the start of the work shift is negatively related to service performance via surface acting.

Emotional labor and strain at the end of the work shift

Previous research has shown that surface acting has detrimental effects on employee well-being, whereas deep acting is detrimental to a lesser extent or not detrimental at all (e.g. Brotheridge & Grandey, 2002; Philipp & Schüpbach, 2010; Zapf & Holz, 2006). The negative relationship between surface acting and well-being can be attributed to the psychological costs of emotional self-regulation (Martínez-Inigo et al., 2007). In the current diary study, daily strain was conceptualized with the two core components of burnout: emotional exhaustion and depersonalization (cf. Demerouti, Mostert, & Bakker, 2010).

Emotional exhaustion refers to a lack of energy and emotional resource depletion, whereas depersonalization refers to strong feelings of detachment from work (Schaufeli & Van Dierendonck, 2000). According to COR-theory, people with less resources will be more vulnerable to resource losses (Hobfoll, 1989) and will also be less able to acquire new resources than people who start the work day with a higher level of resources (Hobfoll, 2002). Initial strain will thus inflict a less energy-demanding emotion regulation technique, such as surface acting. As argued, strain at the start of the work shift is presumed to be positively related to daily surface acting. Because of the described 'resource-loss spiral' surface acting may also be positively related to strain at the end of the work shift. A high level of initial strain may lead to more energetic resource losses and less resource gains during the work shift than employees who start the work shift with a low level of initial strain. In line with previous emotional labor research and the argumentation presented above, we predict that:

Hypothesis 3a: Strain at the start of the work shift is positively related to strain at the end of the work shift, indirectly via daily surface acting.

Hypothesis 3b: Daily deep acting is negatively related to strain at the end of the work shift.

According to Gross and John (2003), response modulation (i.e. surface acting) occurs later in the episode after a lot of cognitive and physiological processes may have had an effect. Surface acting is thus effortful because it is working against a kind of emotional inertia. A consequence of prolonged surface acting can be the awareness of a felt state of emotional dissonance (Van Dijk & Kirk Brown, 2006). Several studies have shown that emotional dissonance is positively related to exhaustion or burnout (cf. Bakker & Heuven, 2006; Van Gelderen et al., 2011). As a high level of strain at the start of the work shift is expected to leave less energy

for emotion regulation in terms of deep acting and dealing with emotional dissonance, it can be predicted that:

Hypothesis 4a: A high level of strain at the start of the work shift is positively related to daily emotional dissonance via daily surface acting.

Strain at the start of the work shift may also predict the way that employees deal with work stressors (Demerouti, Bakker, & Bulters, 2004). We presume that daily strain at the start of the work shift combined with surface acting may prolong the use of daily surface acting and therefore elevate the experience of daily emotional dissonance for several reasons. First, effort-recovery (ER) theory (Meijman & Mulder, 1998) states that employees possess a certain amount of resources that may become depleted during the work day. Moreover, employees who start the work shift with less resources (e.g. energy), or a higher level of strain are expected to be less able to acquire future resources (Hobfoll, 2002). Therefore, employees with a higher level of initial strain may have a low level of energy left that can be applied for emotion regulation (Aspinwall & Taylor, 1997). This even becomes more problematic after surface acting has started; low resource levels are still present and may be further depleted during the interaction. It may thus be difficult to stop surface acting at an early stage of the (emotional) taxing interaction. Second, after applying surface acting, a negative customer response may be expected (Côté, 2005). In turn, this may lead to the employee's experience of negative affect, that has to be compensated by investing energy in trying to feel better. This compensatory process may result in less self-control (Tice, Baumeister, & Zhang, 2004) and continue the accompanying emotional dissonant state. Third, exhausted employees need to replenish their resources because recovery is important to prevent strain, fatigue and psychological distress (Jansen, Kant, & Brandt, 2002; Zijlstra & Cropley, 2006). When experiencing a high level of initial strain combined with the application of surface acting, energetic resource levels will deplete even further and recovery will become more difficult. As a consequence, surface acting may be continued and may accordingly result in experienced emotional dissonance. It can thus be predicted that:

Hypothesis 4b: The combination of daily surface acting with strain at the start of the work shift will be positively related to strain at the end of the work shift via daily emotional dissonance.

Method

Participants and procedure

All participants were police officers of a Police Force District located in the Netherlands. The total population of the district was approximately 400 employees and 150 police officers were asked to participate. Of these, 53 police officers voluntarily participated in a paper-and-pencil diary study on three subsequent days (i.e. 159 study occasions). The sample included 38 men and 15 women (M age = 39 years; SD = 12.50). The subset that participated was demographically similar to the population (the mean age of the population was 40 years; SD = 10.83) and included 76.30% male police officers.

Approximately 70% of the population consists of male police officers. Participants recorded their entries at the start and at the end of the work shift for three work days. Participants were able to return the diary booklet anonymously in a closed envelope. As a reward for participation, each participant was entered into a drawing for a portable music player. The total response rate was 35%. Diary studies are very time-consuming, especially for employees such as police officers, who work at irregular hours and have highly demanding jobs. Therefore, expectations regarding response rates should be moderate. Relatively low-response rates are more common with diary studies (Bolger et al., 2003).

Measures

All Likert-type items described below were followed by seven-point rating scales ranging from 'Not applicable at all' (1) to 'Strongly applicable' (7). The Cronbach's α was person based calculated, including all three measurement occasions per person.

Surface Acting (three items, Cronbach's $\alpha = .86$) was assessed with the surface acting scale derived from the Emotional Labor Scale (Brotheridge & Lee, 2003). The original items from this scale were modified to measure daily surface acting. Example items follow: "Today, I regulated my emotions in the following manner: "I resisted expressing my true feelings" and "I pretended to have emotions that I don't really have".

Deep Acting (three items, Cronbach's $\alpha = .89$) was assessed with the deep acting scale derived from the Emotional Labor Scale (Brotheridge & Lee, 2003). Research of Brotheridge and Lee (2003) showed that surface acting and deep acting can be seen as distinct factors in measuring emotional labor. The original items from this scale were modified to measure daily deep acting. Example items follow: "Today I regulated my emotions in the following manner: "I actually tried to feel the emotions that I had to display" and "I tried to feel the emotions that are part of my work role".

Emotional Dissonance (four items, Cronbach's $\alpha = .91$) was measured with items derived from the Frankfurt Emotions Work Scale (Zapf et al., 1999). Four items were used from the scale which originally consisted of five items. The scale was adjusted such that the items referred to a specific day. The rationale of not using the fifth item of the original scale was that this item was not applicable to the experience of emotional dissonance on a particular work day. Examples follow: "Today, I showed emotions that were different than what I actually felt"; "Today, I had to suppress emotions to look neutral."

Service Performance (four items, Cronbach's $\alpha = .91$) was measured with four items based on the extra-role performance scale developed for helping colleagues (Williams & Anderson, 1991). The original items were modified to describe helping civilians/clients and to measure daily service performance. Example items

are ‘Today, I helped civilians with their problem’ and ‘Today, I gave civilians the correct information’.

Strain at the Start of the Work Shift (Strain T1; six items, Cronbach’s $\alpha = .83$) and *Strain at the End of the Work Shift* (Strain T2; six items, Cronbach’s $\alpha = .79$), measured the police officer’s immediate strain level at the start of the work shift and at the end of the work shift, respectively. The items reflected the exhaustion and cynicism dimensions of the MBI-General Survey (Schaufeli, Leiter, Maslach, & Jackson, 1996; Schaufeli & Van Dierendonck, 2000). exhaustion and depersonalization can be considered as the two core dimensions of burnout (cf. Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). The items were modified to assess current strain. Example items included ‘At this moment, I am feeling tired’ and ‘I am in doubt about the usefulness of my presence.’

Next to the acceptable Cronbach’s alpha scores (i.e. scores $>.70$), factor analysis (PCA) showed that all items had loadings $>.30$ on the accompanying dimensions.

Strategy of analyses

In analyzing the diary data, multilevel analysis was used because the daily reports consisted of repeated measures nested within persons (Bryk & Raudenbush, 1992). The predictor variables were centered around the person’s mean value to eliminate interpretations based on between-person variance in the predictor variable (Ilies, Schwind, & Heller, 2007). We used SPSS 19.0 to conduct multilevel analyses (maximum likelihood procedure). The likelihood ratio test was applied to compare the improvement in the different established models. The present sample size ($N = 53$) meets the criterion of at least 30 participants that is required for robust estimations of fixed effects in multilevel modeling (Maas & Hox, 2005). We tested the indirect effect between the independent variable and the dependent variable through its mediator and used Monte Carlo bootstrapping (resampling $n = 1000$) to acquire the 95% confidence intervals to test the significance of the indirect effects (Bauer, Preacher, & Gil, 2006; Bollen & Stine, 1992). Furthermore, the indirect effects may vary randomly across upper level units (Kenny, Korchmaros, & Bolger, 2003). Thus, causal as well as random effects can be fixed (Bauer et al., 2006). Therefore, we also tested whether the random-effects model differed significantly from the fixed-effects model. From the total scores, 1% was missing.

Results

Preliminary analyses

Table 1 shows the means, standard deviations and correlations among the study variables. To calculate the correlations, day-level variables were averaged across the three days. Preliminary analyses showed that none of the demographic characteristics (i.e. gender and age) were significantly related to either strain at the end of

Table 1. Means, standard deviations and correlation matrix among the key variables.

Variable	M	SD	1	2	3	4	5
1. Daily Surface Acting	2.56	1.47	–				
2. Daily Deep Acting	3.64	1.75	.11	–			
3. Strain at the start of the Work Shift	1.95	.87	.42**	.18*	–		
4. Daily Emotional Dissonance	2.66	1.64	.58**	.26**	.38**	–	
5. Daily Service Performance	5.28	1.58	–.50**	.23**	–.31**	–.09	–
6. Strain at the end of the Work Shift	2.19	.95	.51**	.06	.83**	.43**	–.40**

Note. Day-level data were averaged across 3 days.

* $p < .05$; ** $p < .01$.

the work shift (gender, $t = -.43$, n.s.; age, $t = -1.54$, n.s.); daily service performance (gender, $t = .85$, n.s.; age, $t = 1.03$, n.s.); or emotional dissonance (gender, $t = .51$, n.s.; age, $t = .01$, n.s.). The demographic characteristics were therefore excluded from further analyses.

Strain at the start and strain at the end of the work shift showed a strong correlation. Therefore, we specifically tested whether the two constructs could be independently measured (Torkzadeh, Koufteros, & Plughoef, 2003). To calculate the 95% confidence interval we used a bootstrapping procedure (number of samples = 1000). Results showed that the 95% confidence interval limits of the paired correlation were .77 (lower limit) and .88 (upper limit) thus supporting discriminant validity.

Variability over time

Before testing our hypotheses, we assessed the amount of variance to be attributed to the different data levels (i.e. day-level and person-level) for each dependent variable separately (Hox, 2002). Regarding daily service performance, a large amount of no less than 82% of the total variance was attributable to within-person variation, whereas 18% was attributable to between-person variation. With respect to strain at the end of the work shift, 30% of the variance was attributable to within-person variation. Regarding daily emotional dissonance, 66% of the variance was attributable to within-person variation. These findings indicate that significant amounts of variance may be explained both by *between-* and *within-*person variation, justifying our use of a multilevel analysis.

Hypotheses testing

Hypothesis 1a stated that strain at the start of the work shift would be positively related to daily surface acting and hypothesis 1b predicted that strain at the start of the work shift would be negatively related to daily deep acting. The results of the multi level analysis showed that strain at the start of the work shift was positively related to daily surface acting ($\gamma = .52$, $t = 3.820$, $p < .01$), whereas strain at the start of the work shift was not significantly related to daily deep acting ($\gamma = .26$,

Table 2. Multilevel estimates for models predicting daily service performance. *N* = 53 persons, and *N* = 159 measurement observations.

Model variables	Baseline model			Model 1			Model 2		
	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>
Intercept	5.285	.145	36.516***	5.285	.137	38.552***	5.274	.123	43.042***
Strain at the Start of the Work Shift				-.336	.150	-2.233*	-.296	.150	-1.975*
Daily Surface Acting (SA)							-.174	.087	-2.001*
Daily Deep Acting (DA)							.159	.070	2.268*
-2 × log Δ -2 × log <i>df</i>		589.223			584.614			574.017	
		-			4.609*			10.597**	
		5			6			8	
Level 1 (within-person)	2.020	.469		2.040	.466		2.150	.478	<i>R</i> ² 6%
Level 2 (between-person variance)	.445	.237		.325	.219		.089	.206	<i>R</i> ² 27% 80%

Note: *R*² percentages are calculated in approximation.

**p* ≤ .05;

***p* < .01;

****p* < .001.



Table 3. Multilevel estimates for models predicting strain at the end of the work shift: $N = 53$ persons, and $N = 159$ measurement observations.

Model variables	Baseline model			Model 1			Model 2		
	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>
Intercept	2.189	.116	18.801***	2.169	.070	30.812***	2.179	.065	33.775***
Strain at the Start of the Work Shift				.675	.065	10.343*	.664	.067	9.920***
Daily Surface Acting (SA)							.082	.038	2.171*
Daily Deep Acting (DA)							-.047	.032	-1.474
$-2 \times \log \Delta -2 \times \log df$		348.547			284.198			276.695	
		5			64.349***			7.503*	
					6			8	
Level 1 (within-person variance)	.275	.078		.250	.066		.258	.066	R^2 9%
Level 2 (between-person variance)	.627	.140		.184	.057		.138	.050	R^2 6%
									78%

Note. R^2 percentages are calculated in approximation.

* $p \leq .05$;

** $p < .01$;

*** $p < .001$.

Table 4. Multilevel estimates for models predicting daily emotional dissonance. *N* = 53 persons, and *N* = 159 measurement observations.

Model variables	Baseline model			Model 1			Model 2		
	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>
Intercept	2.646	.167	15.804***	2.652	.132	20.095***	2.581	.132	19.525***
Strain at the Start of the Work Shift (ST1)				.049	.146	.337	.001	.146	.006
Daily Surface Acting (SA)				.566	.083	6.790***	.549	.083	6.642***
Daily Deep Acting (DA)				.090	.069	1.299	.090	.067	1.340
SA × ST1							.156	.081	1.936*
-2 × log Δ	590.451				540.702			537.162	
-2 × log <i>df</i>	-	5			49.749***			3.540*	
Level 1 (within-person variance)	1.765	.048		1.457	.357		1.467	.353	<i>R</i> ² 17%
Level 2 (between-person variance)	.901	.300		.452	.203		.384	.192	<i>R</i> ² 50%

Note: *R*² percentages are calculated in approximation.

**p* ≤ .05;

***p* < .01;

****p* < .001.

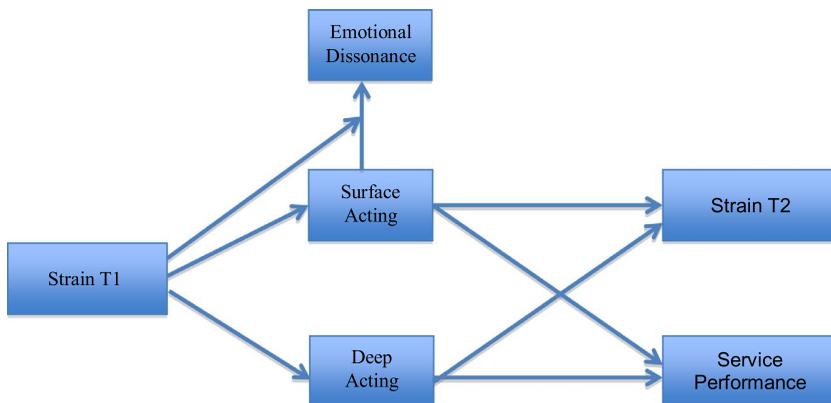


Figure 1. Research model.

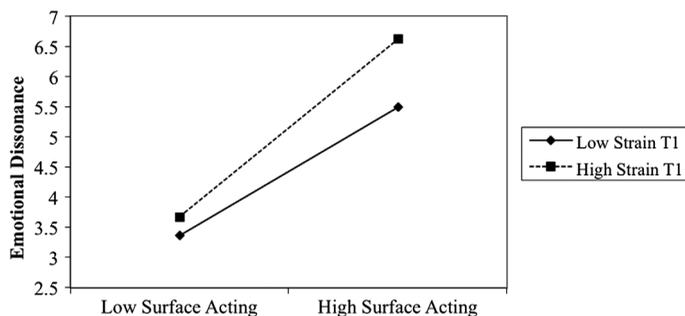


Figure 2. Interaction of daily surface acting and strain at the start of the work shift (Strain T1) on daily emotional dissonance.

$t = 1.800, p = .07$). Thus, Hypothesis 1a was supported, and Hypothesis 1b had to be rejected (See Figure 2).

Hypothesis 2a suggested that daily deep acting would be positively related to daily service performance. To test this hypothesis, we compared a baseline model (Model 0) to a model incorporating strain at the start of the work shift (Model 1) and another model incorporating the main effects of daily surface acting and daily deep acting (Model 2). The results of the multilevel analyses are presented in Table 2. The results revealed that Model 1 improved the model fit compared to the baseline Model 0 ($\Delta -2^*\log = 4.609, df = 6, p < .05$). In turn, Model 2 showed an improved model fit compared to Model 1 ($\Delta -2^*\log = 10.597, df = 8, p < .01$). The results presented in Table 2 show that daily deep acting was positively related to service performance ($\gamma = .16, t = 2.268, p < .05$). These findings provide support for Hypothesis 2a.

In addition, results showed that daily surface acting was negatively related to service performance ($\gamma = -.17, t = -2.00, p < .05$). Furthermore, we calculated the indirect effect from strain at the start of the work shift to daily service

Table 5. Multilevel estimates for models predicting daily strain at the end of the work shift via daily emotional dissonance. *N* = 53 persons, and *N* = 159 measurement observations.

Model variables	Baseline model			Model 1			Model 2		
	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>
Intercept	2.189	.116	18.801***	2.179	.065	33.775***	2.185	.068	32.151***
Strain at the Start of the Work Shift (ST1)				.664	.067	9.920***	.637	.067	9.501***
Daily Surface Acting (SA)				.082	.038	2.171*	.014	.042	.336
Daily Deep Acting (DA)				-.047	.032	-1.474	-.058	.032	-1.814*
SA × ST							.004	.035	.124
ED							.117	.034	3.454**
-2 × log Δ -2 × log		348.547			276.695			266.726	
<i>df</i>		-			71.852***			9.969*	
					8			10	
Level 1 (within-person variance)	.275	.078		.258	.066		.226	.062	<i>R</i> ² 18%
Level 2 (between-person variance)	.627	.140		.138	.050		.153	.052	<i>R</i> ² 76%

Note. *R*² percentages are calculated in approximation.

**p* ≤ .05;

***p* < .01;

****p* < .001.

performance. First, we compared the model including the random effects to the fixed-effects model. The random-effects model did not show a better fit than the fixed-effects model ($\Delta -2 * \log \text{likelihood} = 4.187$, $df = 11$, $p > .05$). Therefore, we calculated the fixed indirect effect. The fixed indirect effect from strain at the start of the work shift to daily service performance via daily surface acting was $-.09$, $CI_{.95} = -.19, -.01$. These findings provide support for Hypothesis 2b.

Hypothesis 3a stated that strain at the start of the work shift would be positively related to strain at the end of the work shift, via daily surface acting, whereas Hypothesis 3b stated that daily deep acting would be negatively related to strain at the end of the work shift. To test these hypotheses, we compared a baseline model (Model 0) to a model incorporating strain at the start of the work shift (Model 1) and a model incorporating the main effects of daily surface acting and daily deep acting (Model 2). The results of the multilevel analyses are presented in Table 3. The results revealed that Model 1 showed improved fit compared to the baseline Model 0 ($\Delta -2 * \log = 64.349$, $df = 6$, $p < .001$). Furthermore, results revealed that Model 2 showed improved fit compared to Model 1 ($\Delta -2 * \log = 7.503$, $df = 8$, $p < .05$). The results also showed that daily surface acting was positively related to daily strain at the end of the work shift ($\gamma = .08$, $t = 2.171$, $p < .05$), whereas daily deep acting was not related to strain at the end of the work shift ($\gamma = -.05$, $t = -1.474$, $p = .14$). When the model including the random effects was compared to the fixed-effects model, the random-effects model did not show a better fit ($\Delta -2 * \log \text{likelihood} = 8.802$, $df = 11$, $p > .05$). Additionally, the results showed that the fixed indirect effect between strain at the start of the work shift and strain at the end of the work shift via daily surface acting was $.04$, $CI_{.95} = .01, .09$. These findings provide support for Hypothesis 3a. Hypothesis 3b should be rejected.

Hypothesis 4a stated that daily surface acting would particularly show a positive relationship with daily emotional dissonance when strain at the start of the work shift would be high. To test this hypothesis we first compared a baseline model (Model 0) to a model including the main effects of daily surface acting and strain at the start of the work shift (Model 1). Consequently, we compared this model to a model that introduced the interaction of daily surface acting with strain at the start of the work shift (Model 2). The results of the multilevel analysis are presented in Table 4. The results revealed that the model incorporating the interaction effect showed improved fit ($\Delta -2 * \log = 3.54$, $df = 1$, $p = .05$). Daily surface acting was positively related to daily emotional dissonance ($\gamma = .55$, $t = 6.642$, $p < .001$), and daily deep acting was not related to daily emotional dissonance ($\gamma = .09$, $t = 1.340$, $p = .18$). The interaction effect of daily surface acting with strain at the start of the work shift on daily emotional dissonance was significant ($\gamma = .16$, $t = 1.936$, $p < .05$). The interaction effect is graphically depicted in Figure 1, which confirms that the results are in the hypothesized direction. Additionally, we conducted a simple slope test for multilevel models (Preacher, Curran, & Bauer, 2006). The slopes test revealed that the interaction slope was steeper for high levels of the moderator variable (i.e. strain at the start of the work shift) ($\gamma = 1.00$, $t = 3.457$,

$p < .01$) than for low levels of the moderator variable ($\gamma = .72, t = 5.176, p < .01$). In all, Hypothesis 4a was supported.

According to Hypothesis 4b, the combination of a higher level of daily surface acting with high levels of strain at the start of the work shift will be positively related to strain at the end of the work shift via daily emotional dissonance (i.e. mediated moderation; Muller, Judd, & Yzerbyt, 2005). The results of the multi-level analyses are presented in Table 5 and revealed that the model including all relevant variables showed improved fit compared to the model that incorporated only strain at the start of the work shift, daily surface acting and daily deep acting ($\Delta -2 * \log = 9.44, df = 1, p < .001$). When the model including the random effects was compared to the fixed-effects model, the random-effects model did not show improved fit ($\Delta -2 * \log \text{likelihood} = 10.563, df = 20, p > .05$). Additionally, results showed that the fixed indirect effect from daily surface acting to strain at the end of the work shift via daily emotional dissonance was .07, $CI_{.95} = .03, .12$. These findings provide support for Hypothesis 4b.

Discussion

The aim of the present study in emotional labor among police officers was to contribute to our understanding of the relationship between emotional labor, performance and strain on a day-to-day basis. This study is innovative in that we investigated the relationship between surface acting, deep acting, and variation in service performance as a function of strain on a day-to-day basis. The present study advances past knowledge in that we incorporated strain at the start of the work shift as an important antecedent of specific daily emotional labor, namely an antecedent of the emotional labor strategy surface acting. As hypothesized, police officers who started the work shift with less energy that day, were then more inclined to surface act, which turned out to be positively related to strain at the end of the work shift and negatively related to service performance. Below, the theoretical contributions of this study are discussed.

Initial strain and emotional labor

The results of the present study show that strain at the start of the work shift is positively related to daily surface acting and is not related to daily deep acting. These findings suggest that police officers who experience a higher level of initial strain are more inclined to use surface acting as an emotion regulation strategy during the work shift. Previous emotional labor studies found a positive relationship between surface acting and burnout as a consequence (cf. Brotheridge & Lee, 2002; Totterdell & Holman, 2003). However, strain at the start of the work shift could play an important role in explaining why surface acting has been found to be detrimental to employee well-being. Although the relation between strain and deep acting was not significant at a two-tailed significance level (H1b), a one-tailed

test would show that strain at the start of the work shift and deep acting would be negatively related. Strain at the start of the work shift may leave less energy for cognitively regulating emotions. Energy is needed to invoke thoughts, images and memories, all part of the technique of deep acting (cf. Zapf, 2002).

The results thus indicate that police officers that are faced with a high level of strain at the start of the work shift, have less energy left in regulating their emotions beforehand. Results show that strain at the start of the work shift is positively related to the use of surface acting as a response to the emotion eliciting situation. Other situational factors such as the impact of the situation, the duration, the variety and frequency of felt emotions, may draw on energy resources even further. This process can be explained by insights from the COR-theory (Hobfoll, 1988, 2002). That is, a lack of energetic resources is expected to reduce gains and may increase the risk of losing resources. Additionally, a lack of resources could result in a more defensive attitude (Hobfoll, 2002). Resources, such as the employee's energy level are needed to regulate emotions (Aspinwall & Taylor, 1997). In turn, this regulation is needed to bring about a cognitive change, such as required for deep acting, and thus really feel the emotions that must be displayed according to the company's display rules. Surface acting costs less energy, as one only has to change the outward appearance rather than feel the necessary emotions. When the display of negative emotions during the customer interaction would be clearly inappropriate or destructive, police officers who experience a higher level of initial strain may try to change their outward appearance (e.g. fake or suppress emotions).

A second explanation may be that a lower energy level likely results in a more negative affective state or a negative mood. Previous research has found a positive relationship between a negative affective state and surface acting (Judge, Woolf, & Hurst, 2009; Liu, Prati, Perrewé, & Ferris, 2008). When it is expedient to display positive emotions while in a negative mood, the tendency to apply surface acting may further increase. This implies that the discrepancy between felt emotions and displayed emotions is further elevated, which in turn may strengthen the tendency to apply surface acting.

Finally, a third explanation may be found in that negative emotions leave less energy for constructive positive social interactions. During customer interactions, a display of negative emotions may lead to a negative response, which may be detrimental for the employee (Côté, 2005). Police officers who experience more negative affect may be inclined to invest energy in feeling better oneself and have less energy left and limited self-control to empathize with the customer. This compensatory process (Tice et al., 2004) may be another important mechanism in explaining the preference for daily surface acting over daily deep acting.

A high level of strain at the start of the work shift may have different personal causes such as marital status, tenure, self-esteem, inadequate sleep and conflicts at home (Grandey & Cropanzano, 1999; Hobfoll, 1989). Also, work-family conflicts may lead to job distress (Grandey & Cropanzano). A study of Peeters, Montgomery, Bakker, and Schaufeli (2005) showed that (emotional) job demands

had a direct and indirect effect on burnout through work–home interference and home–work interference. Accordingly, it is important to have enough energy after work to prevent the spill-over from conflicts at work to the home domain.

Next to emotional labor, other aspects may enhance a higher level of strain at the end of the work shift. For instance time demands, a lack of knowledge and emotional impactful situations may cost energy. However, former diary studies among police officers did show a positive relationship between emotional dissonance and suppressing negative emotions and strain at the end of the work shift despite the level of strain at the start of the work shift (Van Gelderen et al., 2007, 2011).

Initial strain and service performance

Previous studies showed that deep acting can be related to an increase in job performance (Hülshager et al., 2010; Totterdell & Holman, 2003). The results of the present study confirms this viewpoint in terms of service performance. Daily deep acting is positively related to daily service performance, whereas daily surface acting is negatively related to service performance. Thus, the acting style that is applied during the work shift seems to influence the way that the police officer rates the performance in helping civilians during the work day. More concretely, daily deep acting seems to enhance the officer's ability to help citizens effectively. The interpretation of this result can be found in the application of the emotion regulation strategy of deep acting. The police officer tries to alter thoughts regarding emotionally loaden interactions with civilians to avoid feeling various emotions that could be detrimental in daily service interactions. Deep acting thus seems to be related to preparing the police officer to high-quality service performance.

The results of the present study show that strain at the start of the work shift is negatively related to service performance via surface acting. When relating emotional labor to service performance, deep acting seems to appear more effective from the police officer's viewpoint. In contrast, surface acting was negatively related to service performance, however, again initial strain seemed to play an important role in elucidating the negative relationship between surface acting and service performance. The tendency to surface act as a result of strain at the start of the work shift may inflict the police officer's ability to help civilians above and beyond the primary work task (i.e. to do more than the primary job task demands).

Surface acting is applied to interactions in which the police officers' emotions are already felt due to the strain at the start of the work day. This means that the felt emotions can no longer be cognitively anticipated and should be regulated through modifying the emotional display. Then, the police officers alter their emotional expression to manage felt emotions from strain and solve the customer interaction problem at hand. However, surface acting may also lead to inauthentic behavior, which in turn may elicit a negative reaction from the interaction partner (Côté, 2005). We argue that such interactions risk to elevate the police officer's strain level and may explain the negative relationship with service performance

(cf., Wright & Cropanzano, 1998). In addition, previous research has shown that surface acting was positively related to negative mood (Judge et al., 2009), which may also be detrimental to the police officers' service performance.

Emotional labor and strain at the end of the work shift

The results of this study support the hypothesis that daily surface acting is negatively related to strain at the end of the work shift. Simultaneously, the results show that daily deep acting was not related to strain at the end of the work shift. These findings are in line with former emotional labor research which showed that surface acting and not deep acting is detrimental to employee well-being (cf. Brotheridge & Lee, 2002; Philipp & Schüpbach, 2010; Totterdell & Holman, 2003). The results further showed that daily emotional dissonance mediated the relationship between daily surface acting and strain at the end of the work shift. This perceived state of imbalance between felt and displayed emotions may be harmful to employee well-being (e.g. Van Dijk & Kirk Brown, 2006; Zapf, 2002). Research of Schaubroeck and Jones (2000) showed that refusal to act could increase emotional dissonance, which may lead to a higher strain level at the end of the work shift (e.g. Bakker & Heuven, 2006). Furthermore, the results showed that a higher level of strain at the start of the work shift combined with a higher level of daily surface acting, is related to a higher level of daily emotional dissonance. Thus, a high level of initial strain has a more pronounced strengthening effect on the positive relationship between daily surface acting and daily emotional dissonance. When a police officer low on energetic resources (e.g. a higher strain level) starts to surface act, a more prolonged and severe felt level of emotional dissonance could result. Acting unfelt emotions when low on resources may exacerbate strain because of the psychological effort required (Martínez-Inigo et al., 2007). Put differently, a higher level of initial strain may increase the chance of further resource losses, which is elevated by the costs of acting emotions. The result is a higher level of daily emotional dissonance and a higher level of strain at the end of the work shift.

Limitations, future research and practical implications

Some limitations of our study should be mentioned. The first limitation concerns the response rate, which is lower than survey studies on emotional labor. Diary studies generally produce a lower response rate, most likely because of the effort required to participate when several days of participation are requested (Bolger et al., 2003). An important strength of diary studies is to measure the variables under study at the moment or just after they are taking place, which cannot be achieved through survey studies. An improvement could be the incorporation of an event-based approach, whereby the emotional labor strategies can be more related to specific situations and the time between the actual event and the recording can be even further shortened.

Another limitation of this study may be the infliction of statistical power for the fixed effects of the model due to the ratio between Level-1 and Level-2 sample size. However, former studies consistently showed that smaller sample sizes in both levels would not cause problematic bias in the fixed effects and would not substantially inflict Type I error rates (cf. Bell, Morgan, Schoeneberger, & Loudermilk, 2010). Further, it should be noted that a general multilevel SEM framework was not applied. Therefore, we were not able to test the fit of the *complete* measurement model and could not more specifically test the measurement of the latent variables.

The fourth limitation involves results attained from only one occupational group. Because police officers may differ from other service professions (e.g. flight attendants, call center employees, receptionists and waiters), the findings may not be generalizable. Further, it should be noted that policing in the Netherlands can be characterized by community policing, which implies close contact with civilians and partners in crime. This may differ from police strategies in other parts of the world. Future emotional labor research should compare emotional labor across occupational settings and include diverse high-stress occupations (e.g. debt collectors, soldiers and other emergency services).

A final limitation can be seen in investigating emotional labor from the point of view of the performer only. When considering performance in the primary job and service outcome, it may be equally important to incorporate the viewpoint of the customer or receiver of service. This is important because customers' feedback is based on their viewpoint of performance success and on the effect of the sender's used emotion regulation technique (cf., Côté, 2005; Van Gelderen et al., 2011). The customer's viewpoint in rating success and perhaps recognizing employee emotion regulation techniques may differ from the insights of the employee. Thus, more research is needed that incorporates the effects of emotional labor from the receiver's point of view into emotional labor research.

Several other leads for future research can be provided. First, future research should also focus directly on the potential positive effects of surface acting. Previous emotional labor research showed that expressing socially desirable emotions during service interactions (affective delivery) is important to attaining organizational goals (i.e. sales, satisfied customers; Ashfort & Humphrey, 1993; Tsai & Huang, 2002). Next to impression management or service performance, customers appreciate performance in the primary task (cf. Parasuraman, Zeithaml, & Berry, 1985). Accomplishment of the primary task (in-role performance) may result in satisfied clients and subsequently to positive performance feedback. In turn, in-role performance could create job resources that may also foster personal well-being (e.g. Bakker & Bal, 2010). In turn, performance feedback may be an important job resource that positively affects employee well-being (Bakker & Demerouti, 2007), and may perhaps compensate for the detrimental effects of surface acting.

Second, when surface acting is carried out on behalf of the organization, the arising tension or dissonance need not always threaten the actor's sense of self

(Van Dijk & Kirk Brown, 2006). For instance, when a police officer is treated impolitely by an intoxicated civilian the officer may experience irritation but display a neutral expression to hide this emotion. When emotional dissonance serves a higher goal, such as keeping order and preventing escalation, the effect of surface acting on strain could be buffered. The understanding that surface acting may further work goals and serve others' interests, may elevate felt positive emotions and thus counter negative felt or dissonant emotions during taxing interactions.

The findings of the present study may have important implications for employees and their managers. Employees should focus on starting the work day with enough energy to enhance their well-being and organizational performance. Interventions aimed at reducing exhaustion or strain should focus both on dealing with emotionally taxing situations at work as well as facilitating adequate rest to start the new work day freshly. Future studies should incorporate other factors that may enhance strain at the start of the work shift, such as marital difficulties or other family problems; issues that were not taken into account in the present study. Finally, emotion regulation strategies and ways of dealing with personal resource levels should be included in the training of police officers to help them better cope with emotionally demanding interactions during the work day. Specifically, police officers should be trained to have insight into and apply strategies that regulate emotions before the situation that elicits these emotion takes place. Examples are situation selection (not always in the front-line), attentional deployment (alternative thoughts), situation modification (changing the situation) and cognitive change (Gross & John, 2003). Moreover, police training should not only focus on learning the adequate behaviors to get situations under control, but also offer insight into the relationship between private and public emotions. Finally, police officers should be aware of the importance of personal resource levels such as personal health, adequate rest and sleep.

Conclusion

Emotional labor research has thus far predominantly focused on the negative effects of surface acting on employee well-being. Research on the relationship between emotional labor, strain and service performance on a daily basis has been limited. The present study argues that the concept of emotional labor should be simultaneously related to both employee well-being and service performance. Hence, the present study demonstrates that the negative effects of surface acting on employee well-being are a consequence of initial strain; a lack of energetic resources enhances a resource-loss spiral and instigates the application of a more automatic emotion regulation technique such as surface acting. Furthermore, a combination of initial strain and surface acting increases emotional dissonance, in turn increasing strain at the end of the work shift. In all, our findings underscore

the need to examine emotional labor on a daily basis and to include within-person differences in relation to emotional labor outcomes.

Disclosure statement

No potential conflict of interest was reported by the authors.

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