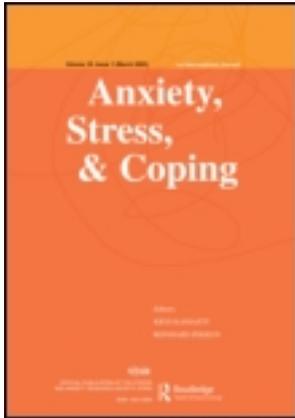


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### Daily suppression of discrete emotions during the work of police service workers and criminal investigation officers

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## Daily suppression of discrete emotions during the work of police service workers and criminal investigation officers

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The aim of the present research among Dutch police officers was to examine whether fluctuations in emotional job demands predict exhaustion through the suppression of discrete emotions. A first diary study ( $N = 25$ ) tested how the suppression of discrete emotions is related to exhaustion at the end of the work shift of police call-center service workers. Results revealed that suppressing *anger* was positively related to exhaustion at the end of a work shift, whereas suppressing *happiness* was not. A second study ( $N = 41$ ) among criminal investigation officers showed that the emotions *anger*, *abhorrence*, and *sadness* were among the most common negative emotions that were suppressed as part of the emotional labor of this specialized occupational group. Results of a third (diary) study ( $N = 39$ ) confirmed that emotional dissonance and more particularly the suppression of *abhorrence* mediated the relationship between emotional job demands and exhaustion at the end of a work shift.

**Keywords:** criminal investigation officers; discrete emotions; emotional labor; exhaustion; police officers

During their duty, police officers are regularly confronted with non-cooperative civilians or suspects. As a consequence, police officers engage in emotional labor on a daily basis. Emotional labor can be described as the employee's management of feelings, in order to create an observable display in accordance with situational demands (Hochschild, 1983). Display rules can usually be derived from a company's policy, stating which emotions the company considers appropriate to show to clients. In the case of policing, crime victims and offenders are important clients whom have to be dealt with. In order to make a professional appearance and reach organizational goals, police officers may need to suppress their felt emotions (e.g., anger) or display emotions that are not felt (e.g., sadness). This state of discrepancy between felt and displayed emotions is called emotional dissonance, which is considered to be detrimental to one's psychological well-being (Ashfort & Humphrey, 1993; Bakker & Heuven, 2006; Heuven & Bakker, 2003).

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Most emotional labor research shows that the general construct of emotional dissonance is related to emotional exhaustion and depersonalization (Hochschild, 1983; Kruml & Geddes, 2000; Zapf, 2002). Previous research on emotion regulation emphasizes the negative social and detrimental health effects of suppressing emotions. Suppression of emotions may disrupt communication and, heighten stress levels, is cognitively demanding, and may even impair memory (Butler et al., 2003; Gross, 1998; Richards & Gross, 1999, 2000). As previous research mainly focused on the detrimental health effects of the *general* construct of emotional dissonance, it is important to broaden these insights by taking the effect of suppressing *discrete* emotions into account (cf. Glomb & Tews, 2004). This is because suppression of some, specific emotions can be more detrimental for individual well-being than suppression of other emotions.

We will report two diary studies and a pilot study among groups of police officers. A diary design has advantages above other research designs for field studies. First, a diary design has the advantage of studying the respondents' experiences in their natural context. This shortens the time between the actual experience and its documentation (Bolger, Davis & Rafaeli, 2003). Furthermore, diary research is still rare in the emotional labor literature, but offers the opportunity to study the effects of emotional labor on employee psychological well-being 'in-vivo' – throughout subsequent days. Next to investigating the daily consequences of emotional dissonance, the present research aims to extend emotional labor research by focusing on the suppression of different discrete emotions relevant for the occupational group under study.

### **Emotional demands and psychological well-being**

Emotion regulation is a way of dealing with the emotionally demanding situations that a police officer may encounter during the line of duty. Emotional job demands may thus form an important precursor of having to suppress emotions, and consequently the experience of emotional dissonance. Police work can be emotionally demanding in many ways. Police officers are frequently confronted with emotionally taxing situations and human sorrow (Brown & Campbell, 1990; McCafferty, Domingo, & McCafferty, 1990), and generally experience a high workload (Biggam, Power, & MacDonald, 1997). Furthermore, police officers often experience emotionally demanding interactions with crime victims and offenders. Dealing with such emotionally taxing job demands costs energy and may lead to burnout complaints in the long run (Lee & Ashforth, 1996; Leiter, 1993; Maslach & Jackson, 1984). Interacting with verbally aggressive and unpleasant customers may also elevate the experienced level of burnout (Dormann & Zapf, 2004). A study of Bakker and Heuven (2006) showed that emotional job demands may evoke emotional dissonance, which in turn appeared to be related to burnout. However, this study related job demands to 'trait' burnout and was measured at one point in time. The purpose of the present study is to test how during daily changing conditions, state levels of emotional job demands are related to state exhaustion through experienced levels of emotional dissonance. Evidence of this relationship at the within-person level would further validate the mediating relationship of emotional dissonance between emotional job demands and employee well-being, which has only been confirmed at the between-individual level of analysis.

### Emotion suppression and psychological well-being

While experiencing negative emotions, employees often need to abstain from expressing these felt emotions or express positive emotions to deliver a qualitative service (Tsai & Huang, 2002). During their duty, police officers may also need to suppress or fake emotions. Research of Rafaeli and Sutton (1987) showed that as a means of socially influencing a crime suspect under interrogation, police officers might show other emotions as felt. Likewise, negative emotions can be faked when arresting an offender or can be suppressed in order to keep up a professional appearance. Our study focused on the psychological health effects of *suppressing* emotions. The suppression of emotions can be seen as a response-focused emotion regulation technique, implying that the emotion is regulated after it is actually felt (Gross, 1998). As the outward sign of inner feelings is inhibited, the behavioral expression will be prevented but the experience of the emotion is still present (Gross, 2002). The suppression of emotions is a specific form of emotional dissonance that is presumed to have subsequent negative consequences for employee well-being in at least four ways.

First, suppression of emotions can have physiological consequences. Research of Gross and Levenson (1993, 1997); Gross, 1998) showed that the suppression of emotions led to increased sympathetic activity (i.e., increased skin conductance and finger pulse amplitude). In addition, suppression while watching a disgust-eliciting movie was related to a decreased control of cardiac sympathetic activity (Demaree, Schmeichel, Robinson, Pu, & Everhart, 2006). Second, suppression seems to be cognitively costly due to the verbal demands of self-instructions in the course of suppressing the unwanted emotions (Gross, 2002). Richards and Gross (2000) showed that suppression was even related to poorer memory functioning. After participants were shown emotion-eliciting slides, suppressors appeared to have more difficulty in memorizing the accompanying verbally encoded information, whereas participants who used the reappraisal technique did not.

Third, emotion suppressors are generally less liked by others and receive little social support. This negative effect on one's social interactions is supposed to be a consequence of not sharing one's emotions (Gross, 2002). The lack of social support may also contribute negatively to one's psychological well-being – either directly or indirectly since one lacks the necessary resources to cope with job demands (Bakker, Demerouti, & Euwema, 2005). Fourth and finally, suppression also seems to be connected to a sense of spuriousness and estrangement to the suppressor himself (Butler & Gross, 2004) and increased negative emotional experiences (Butler et al., 2003).

### Suppression of positive and negative emotions

When employees are conducting emotional labor, positive as well as negative emotions can be suppressed. However, it can be debated whether the suppression of both positive and negative emotions will have the same detrimental effects on employee well-being. Suppression of positive emotions implies that felt positive emotions are not shown but may still be felt. As a result of (just) feeling positive emotions this may bring about positive side effects for the employee. Feeling positive emotions is assumed to be linked to strengthening the self's regulatory capacity by recharging the batteries (Tice,

Baumeister, & Zhang, 2004). Further, according to Fredrickson's (1998) broaden-and-build theory, positive emotions can broaden people's thought-action repertoire leading to enduring personal resources. In turn, this may facilitate behavioral flexibility and well-being (Fredrickson, 2005).

Contrary to the described benefits of feeling positive emotions, suppressing negative emotions indicates that the individual feels the negative emotions. These felt negative emotions cannot be displayed in the given job context and therefore better be suppressed. Erickson and Ritter (2001) found that the suppression of negative emotions is linked to feelings of inauthenticity at work. Other researchers assume that the experience of negative emotions can have negative consequences for one's physical health and psychological well-being due to increased autonomic nervous system responses (i.e., Beiser, 1974; Gross & Levenson, 1997). For instance, it has been found that people who experienced more negative emotions have a weaker immune system and have a higher risk of getting ill beyond people who experience positive emotions (Barak, 2006). When people feel negative emotions, they may abandon self-control as a result of putting top priority and energy in trying to feel better or to present themselves more positively. Furthermore, experiencing negative emotions may impair self-regulation through prioritizing short-term feeling states above more long-term goals (Tice et al., 2004). In addition, chronically responding to negative events with expressive suppression may lead to an exacerbation of the experience (Butler & Gross, 2004).

### Overview of the studies

In order to examine daily emotional labor among police officers, two diary studies and a pilot study were set up. Study 1 uses diary data of police call-center service workers, a group of police employees who are in contact with civilians through the phone. This study was used to examine the possible contrasting effects of the suppression of positive versus the suppression of negative emotions. In this study suppressing *anger* was used as a common specific discrete negative emotion and suppressing *happiness* as a common specific discrete positive emotion. Anger and happiness are important emotions (Baumeister & Bushman, 2008). Anger refers to a response to a threatening situation to one's self-esteem, whereas happiness refers to feeling good. According to Russell's (1980) circumplex model, both emotions differ in their state of pleasantness and arousal level. Anger falls into the unpleasant category and happiness in the pleasant category. Both emotions can be categorized as high-arousal emotions, although happiness can be seen as less arousal evoking than anger. Consequently, we will study how both emotions may differ in their effect on daily job exhaustion.

The second sample consisted of another group of police officers, namely criminal investigation officers who are directly confronted with more severe criminals and crime scenes. An interview study (Study 2) with this sample of criminal investigation officers was conducted. The goal of this second study was to examine which discrete negative emotions were most commonly suppressed during the work of the occupational group under study.

Following this pilot study, a second diary study (Study 3) was conducted among another sample of criminal investigation officers in order to test the mediating role of emotional dissonance and of suppressing discrete negative emotions (resulting from the pilot study) in the relationship between emotional job demands and daily

exhaustion. The specific hypotheses in which the discrete emotions are included will be described below.

### **Study 1**

In diary Study 1, we will examine the relationship between the suppression of the discrete emotions *anger* (in Dutch: woede) and *happiness* (in Dutch: blijdschap) on daily exhaustion. When interacting with clients, police call-center service workers may experience various discrete emotions. Research of Mann (1999), conducted within 12 different UK office-based companies, showed that anger was the most frequently suppressed emotion. Especially as a result of customer verbal abuse, *anger* is a common emotion that may be felt and subsequently should be suppressed by the employee within the job context (Grandey, Kern, & Frone, 2007; Grandey, Tam, & Brauburger, 2002). In contrast to feeling angry, emotional labor studies have shown that happiness is an emotion relevant in providing “service with a smile”, which is related to customer satisfaction (Barger & Grandey, 2006).

However, *suppression* of happiness is also potentially relevant in the work of police officers. An emergency call or an impolite client may suddenly interrupt a positive and happy mood (i.e., having fun with colleague workers). Having to suppress happiness feelings does not necessarily need to exhaust energy reservoirs of employees because the effect of felt positive emotions may act as resources that protect future losses (cf. Fredrickson, 2005; Hobfoll, 2002). Happiness may still be felt, but should not be displayed to the client. It is thus hypothesized that suppressing the discrete negative emotion anger will be positively related to the employee’s experience of exhaustion at the end of the work shift, whereas happiness will be unrelated to exhaustion at the end of the work shift, controlling for exhaustion at the start of the work shift (Hypothesis 1).

### **Method**

#### *Participants and procedure*

Participants were employees of a police service call-center. Civilians who need non-emergent police intervention should call this center. Employees of the police call-center decide whether police intervention is necessary. A total of 25 employees participated in a five-day diary study ( $N = 125$  study occasions). The sample included 20 women and 5 men. Participants recorded their entries both at the start and at the end of a work shift. All employees participated voluntarily. The total response rate was 33%.

#### *Diary measures*

*Anger* and *Happiness* were measured by reporting the intensity of each felt emotion (referring to a whole working day) on 4-point rating scales ranging from “not felt at all” (1) to “strongly felt” (4). Further, the intensity with which each emotion was displayed was measured by the respondent on 4-point rating scales ranging from “not shown at all” (1) to “completely shown” (4).

*Suppression of Anger and Suppression of Happiness* were calculated as the (positive) deviance score between the felt and actually shown emotions (namely felt minus shown emotions) separately. As only the positive values of this measure imply the suppression of emotions, we only included the positive scores in our analysis. We therefore replaced the negative values with a score of zero.

*Exhaustion at the start of the work shift* was measured as the police officer's momentary strain level (three items, Cronbach's  $\alpha = .83$ ). Exhaustion at the start of the work shift is an important control variable. The items reflected the exhaustion dimension, which is based on the Dutch version of the MBI-General Survey (Schaufeli, Leiter, Maslach, & Jackson, 1996; Schaufeli & van Dierendonck, 2000). The items were selected and reformulated such that they refer to momentary feelings of exhaustion during the work shift. The items were each followed by a 4-point rating scale ranging from "Not Applicable at all" (1) to "Strongly Applicable" (4). The items are "I am feeling mentally exhausted", "At this moment, I am feeling tired," and "Working all day is very demanding for me".

*Exhaustion at the end of the work shift* (three items, Cronbach's  $\alpha = .84$ ) used the same items as *Exhaustion at the start* of a work shift.

### *Statistical analyses*

The diary data are suitable for multilevel analysis, because the daily reports consist of repeated measures that are nested within individuals (second level). The first-level predictor variables (i.e., emotional exhaustion at the start of the work shift, suppression of anger, and suppression of happiness) were centered around the person mean, in order to eliminate between-person variance in the predictor variables (Ilies, Schwind, & Heller, 2007). The likelihood ratio test was used to compare the improvement of each of the tested models. As the variables at the individual level explain part of the individual and the group variance, the multiple correlation coefficient is calculated in approximation. The multilevel analysis was conducted with SPSS 16.0, using the maximum likelihood procedure. From the total scores, 13% was missing.

## **Results**

### *Preliminary analyses*

Table 1 shows the means, standard deviations, and the correlations among the study variables. The possible range on the measures of suppression was 0–3, and on the measure of exhaustion 1–4, where higher scores indicated higher levels of suppression and exhaustion. The obtained range for the suppression of anger was 0–3, for the suppression of happiness 0–2, and for exhaustion at the start and at the end of the work shift 1–3.

### *Hypotheses testing*

To test Hypotheses 1 (i.e., whether the suppression of anger and the suppression of happiness are related to exhaustion), four separate models were set up. We compared an intercept-only model (baseline model) to a model in which we controlled for

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

Variable	M	SD	1	2	3
Suppression anger	.28	.53	–		
Suppression happiness	.09	.29	.27**	–	
Emotional exhaustion 1	1.58	.59	.32**	.25**	–
Emotional exhaustion 2	1.81	.65	.32**	.18	.75**

Note: Day-level data was averaged across 5 days.

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

exhaustion at the start of the work shift (Model 1); and to a model where the suppression of anger was added (Model 2). In Model 2, 59% of the variance of exhaustion at the end of the work shift was attributable to between-person variations. Model 1 had a significantly larger value for deviance than the baseline model ( $\Delta - 2 \times \log = 32.07$ ,  $df = 1$ ,  $p < .001$ ), which may be caused by exhaustion at the start of the work shift. In addition, Model 2 showed a significant improvement over Model 1 ( $\Delta - 2 \times \log = 38.27$ ,  $df = 1$ ,  $p < .001$ ). Significant predictors in this model were exhaustion at the start of the work shift and the suppression of anger. Results presented in Table 2 showed that the suppression of anger was positively related to exhaustion at the end of the work shift ( $t = 2.50$ ,  $p < .05$ ). This result supports Hypothesis 1, relating the suppression of anger to exhaustion in police service officers.

In addition, we build a fourth model (Model 3) in which we added the suppression of happiness. Results showed that Model 3 did not show a better fit to Model 2 ( $\Delta - 2 \times \log = .09$ ,  $df = 1$ ,  $p > .05$ ). Furthermore, results of Model 3 showed that the suppression of happiness was unrelated to exhaustion ( $t = .30$ ,  $p = .76$ ). This result further supports Hypothesis 1.

### Discussion

Results of Study 1 showed that the suppression of the discrete emotion anger was positively related to exhaustion, whereas the suppression of happiness was not. The harder police call-center employees try to suppress the display of felt anger, the higher their level of exhaustion at the end of the work shift will be. Suppressing the display of happiness, however, did not affect exhaustion in a similar way. This offers support for the assumption that suppression of negative emotions is more detrimental for employees' exhaustion than the suppression of positive emotions. While suppressing positive emotions, one may still feel the positive emotions with concurrent positive effects for one's well-being. Negative emotions will also still be felt when employees try not to show them. Thus, the effect of emotional dissonance on exhaustion differs for positive and negative emotions (cf. Tice et al., 2004). Feeling positive emotions may protect the employee against the harmful effects of emotional dissonance (cf. Fredrickson, 2005), whereas feeling negative emotions may not. Thus in studying emotional dissonance it is important to distinguish between suppressing positive and negative emotions.

A second diary study was conducted in order to validate the detrimental effect of suppressing negative emotions on emotional exhaustion for a different group of

Table 2. Multilevel estimates for models predicting emotional exhaustion at the end of a shift.  $N = 25$ , and  $N = 125$  observations.

Model variables	Baseline model			Model 1			Model 2			Model 3		
	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>
Intercept	1.751	.109	16.054**	1.769	.070	25.365***	1.770	.081	21.861***	1.772	.081	21.816***
Emotional exhaustion 1				.647	.088	7.385***	.642	.107	5.978***	.645	.108	5.966***
Suppressing happiness							–	–	–	.046	.152	.304
Suppressing anger							.194	.078	2.503*	.191	.078	2.446*
$-2 \times \log$			191.673			159.605			121.338			121.250
$\Delta -2 \times \log$						32.07***			38.27***			.09
df						1			1			1
						$R^2$ (%)			$R^2$ (%)			$R^2$ (%)
Level 1 (within-person variance)	.213	.075		.198	.067	7	.192	.077	10	.191	.077	10
Level 2 (between-person variance)	.263	.086		.092	.039	65	.107	.047	59	.107	.047	59

Note:  $R^2$  percentages are calculated in approximation.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

police employees. Because suppression of positive emotions was unrelated to exhaustion, we chose to focus on suppression of negative emotions and to investigate whether the detrimental effect holds true for various, specific negative emotions. Therefore, the second diary study was set up to further differentiate between the possible differential effects of the suppression of distinguished negative emotions on exhaustion at the end of a work shift. Before conducting this second diary study, we first conducted an interview study to examine *which* specific negative emotions are relevant for police officers to be suppressed while at work.

## Study 2

In contrast to the call-center police service workers of diary Study 1, criminal investigation officers often have to deal with situations that involve traumatic circumstances like severe crime scenes, wounded, and murdered victims, vice cases, and other crimes against human dignity. It can be argued that this special group of police officers should be able to generate certain impressions when confronted with civilians in order to handle emotional taxing situations (e.g., look untouched). Thus, negative emotions usually need to be suppressed as part of the criminal investigation officer's emotional labor to meet job demands.

In diary Study 1, anger and happiness were assumed to be emotions that commonly had to be suppressed as part of the work role of police call-center service workers. Results of diary Study 1 showed that only the suppression of the negative emotion anger was related to exhaustion. Accordingly, we conducted a pilot study to investigate which negative emotions commonly have to be suppressed during the work of criminal investigation officers.

This pilot study was conducted with a total of 41 participants from a Criminal Investigations Department in the Netherlands. The sample included 5 women and 36 men. Their mean age was 44 years, and they had a mean level of working experience as a police officer for 23 years. All criminal investigation officers participated voluntarily. They were asked to describe a critical work incident in which they had to suppress their actually felt emotions while at work. Accordingly, the participants were asked to rate to what extent they suppressed each of the emotions, anger (in Dutch: woede), abhorrence (in Dutch: afschuw), fear (in Dutch: angst), sadness (in Dutch: verdriet), guilt (in Dutch: schuld), shame (in Dutch: schaamtegevoel), and shyness (in Dutch: verlegenheid) on 7-point rating scales. The possible range on the measures were 1–7, where higher scores indicated higher levels of suppression. The obtained range for the suppression of the described emotions was 1–7.

Results showed that next to *anger* ( $M = 4.17$ ,  $SD = 2.11$ ), *abhorrence* ( $M = 3.61$ ,  $SD = 2.01$ ) and *sadness* ( $M = 1.78$ ,  $SD = 1.46$ ) were among the most prominent negative emotions (i.e., had the highest mean scores and were considered most relevant for this occupational group) that were suppressed during the work of the criminal investigation officers. Descriptive analyses of the other emotions showed the following results: *fear* ( $M = 1.56$ ,  $SD = 1.40$ ), *guilt* ( $M = 1.66$ ,  $SD = 1.30$ ), *shame* ( $M = 1.39$ ,  $SD = 1.09$ ) and *shyness* ( $M = 1.24$ ,  $SD = .73$ ). Thus, as in diary Study 1, anger was found to be a common negative emotion to be suppressed while at work. In addition, criminal investigation officers reported abhorrence and sadness as negative emotions that they had to suppress regularly as part of their emotional

labor. Therefore, these emotions were also taken further into account during the subsequent diary study.

### **Study 3**

Following the result of diary Study 1, in Study 3, we only focussed on the effect of the suppression of negative emotions. Emotional dissonance implies the presence of a discrepancy between felt and shown emotions. Thus far, emotional dissonance has been studied as a general phenomenon in emotional labor, not taking discrete emotions into account separately. Yet, suppressing each of the discrete negative emotions, anger, abhorrence, and sadness can all be seen as a form of emotional dissonance. The suppression of these emotions is expected to cost energy; hence emotional exhaustion will be increased as a result. However, it can be questioned if the suppression of all separate discrete emotions will have the same detrimental effect on exhaustion.

In addition, it can be presumed that emotional dissonance, in particular the suppression of each of the discrete negative emotions, mediates the relationship between emotional job demands and exhaustion (cf. Bakker & Heuven, 2006). It indicates that emotional job demands is presumed to affect emotional dissonance, in particular the suppression of discrete negative emotions. When dealing with emotional job demands, the chances are higher that the police officer may feel emotions or has to suppress them. In turn, as with emotional dissonance in general, the suppression of each of the relevant negative emotions is expected to have a negative influence on exhaustion. Hence, we hypothesized that emotional dissonance mediates the relationship between emotional job demands and exhaustion at the end of a work shift, while controlling for exhaustion at the start of a work shift (Hypothesis 2). In addition, we hypothesized that the suppression of anger (Hypothesis 3), abhorrence (Hypothesis 4), and sadness (Hypothesis 5) mediate the relationship between emotional job demands and exhaustion at the end of a work shift, while controlling for exhaustion at the start of a work shift.

### **Method**

#### *Participants and procedure*

As in Study 1, we used a five-day diary design. Participants of Study 3 were employees of several Criminal Investigation Departments of the Dutch Police Force. A total of 39 participants from a criminal investigation department specialized in vice activities, a forensic investigation department, and a general criminal investigation department participated in a five-day diary study ( $N = 195$  study occasions). The sample included 11 women and 28 men. Participants recorded their entries at the start and at the end of a work shift. All employees participated voluntarily. The response rate was 36%.

#### *Diary measures*

*Emotional Job Demands* (nine items, Cronbach's  $\alpha = .75$ ) were measured with a scale specifically developed to meet the purposes of the present study. Items provided

statements of specific and common demands that are part of the criminal investigation officer's job. Examples are "Today, I had to deal with verbal intimidation of civilians or suspects" and "Today I had to deal with civilians or suspects who were under the influence of alcohol or drugs". The complete scale has been included in Appendix 1. Each item was followed by a 7-point rating scale ranging from "not applicable at all" (1) to "strongly applicable" (7).

*Emotional dissonance* (four items, Cronbach's  $\alpha = .95$ ), was measured with four items of the Frankfurt Emotions Work Scale (Zapf, Vogt, Seifert, Mertini, & Isic, 1999). This scale was adjusted such that items were referring to the specific day. Examples are "Today, I had to suppress emotions to look neutral" and "Today, I had to show positive or negative emotions while I felt differently inside". Each item was followed by a 7-point rating scale ranging from "not applicable at all" (1) to "strongly applicable" (7).

*Anger*, *Abhorrence*, and *Sadness* were measured by reporting the intensity of each felt emotion by the respondent (referring to a whole working day) on 5-point rating scales ranging from "not felt at all" (1) to "strongly felt" (5).

The *Suppression of Anger*, *Suppression of Abhorrence*, and *Suppression of Sadness* were reported as the extent to which each of these emotions actually was displayed on 5-point rating scales ranging from "not shown at all" (1) to "strongly shown" (5). Afterwards, the suppression score of each emotion was calculated as the (positive) deviance score between the felt and shown discrete emotion. As only the positive values of this measure imply the suppression of emotions, we only included the positive scores in our analysis. We replaced the negative values with a score of zero.

*Exhaustion at the start of the work shift* (three items, Cronbach's  $\alpha = .75$ ) and *Exhaustion at the end of the work shift* (three items, Cronbach's  $\alpha = .75$ ) were measured with the same items as used in Study 1.

### *Statistical analyses*

In calculating the fixed effects of our multilevel models, the same statistical analysis procedure as in diary Study 1 was used. The first-level predictor variables of Study 3 were exhaustion at the start of the work shift, emotional job demands, emotional dissonance, and the suppression of discrete emotions. In testing mediation models the most widely used approach is the method described by Baron and Kenny (1986). However, this method does not test the indirect effect between the independent variable and the dependent variable through its mediator (Hayes, 2009). Therefore, we calculated the indirect effects and we used Monte Carlo bootstrapping to acquire the 95% confidence intervals in order to test the significance of the indirect effects (Bauer, Preacher & Gil, 2006; Bollen & Stine, 1992). Furthermore, in using hierarchical data (data consisting of two or more nested levels), the mediation effects may vary randomly across upper level units (Kenny, Korchmaros, & Bolger, 2003). This means that causal effects can be fixed as well as random. Consequently, the effect of a level-1 predictor can vary across level-2 units (Bauer et al., 2006). Therefore, we first tested if the random effects model differed significantly from the fixed effects model. If so, we calculated the random indirect effects in lower level mediation models using the method proposed by Bauer et al. From the total scores, 0.3% was missing.

## Results

### Descriptive analyses

Table 3 shows the means, standard deviations, and the correlations among the diary study variables. The possible range on the measures of suppression were 0–6 and for the other measures 1–7, where higher scores indicated higher levels of suppression, job demands, emotional dissonance, and exhaustion. The obtained range for the suppression of anger and abhorrence was 0–4, for the suppression of sadness 0–3, and for emotional job demands, emotional dissonance, and exhaustion at the start and at the end of the work shift 1–7.

### Hypotheses testing

We first tested whether the random effects models differed significantly from the fixed effects models. Results showed that in the case of the mediating effect of emotional dissonance, the suppression of disgust, and the suppression of sadness, the model including the random effects did not show a better fit than the fixed effects models ( $\Delta -2 \times \log$  likelihood = 8.855,  $df = 9$ ,  $p > .05$ ;  $\Delta -2 \times \log$  likelihood = 15.600,  $df = 9$ ,  $p > .05$ ;  $\Delta -2 \times \log$  likelihood = 11.079,  $df = 9$ ,  $p > .05$ , respectively). Contrarily, the random effects model with the suppression of anger as a mediator did show a better fit than the fixed effects model ( $\Delta -2 \times \log$  likelihood = 26.156,  $df = 9$ ,  $p < .05$ ). Therefore, in testing the mediating role of the suppression of anger we calculated the *random* indirect effect (Bauer et al., 2006). For the other models we calculated the fixed indirect effects.

Results presented in Table 4 show the estimates of the relationship between the emotional job demands, emotional dissonance, and emotional exhaustion at the end of the work shift, controlling for emotional exhaustion at the start of the work shift. The results indicate that the mediator emotional dissonance was significantly related to exhaustion at the end of the work shift ( $t = 6.23$ ,  $p < .001$ ). Furthermore, Model 3 including the mediator emotional dissonance showed a significant improvement over Model 2 ( $\Delta -2 \times \log = 31.65$ ,  $df = 1$ ,  $p < .001$ ). Testing Hypothesis 2 (i.e., emotional dissonance mediates the relationship between emotional job demands and exhaustion at the end of the work shift) showed that the indirect effect was .298,  $CI_{.95} = .181, .435$ . Hypothesis 2 was thus supported.

Table 3. Means, standard deviations, and correlation matrix among the key variables in Study 3.

Variable	M	SD	1	2	3	4	5	6
Suppression anger	.26	.69	–					
Suppression abhorrence	.39	.83	.39**	–				
Suppression sadness	.29	.71	.61**	.23**	–			
Emotional job demands	1.48	.80	.29*	.65**	.11	–		
Emotional dissonance	2.33	1.74	.31**	.59**	.23**	.47**	–	
Emotional exhaustion 1	2.21	1.28	.40**	.38**	.13	.34*	.24	–
Emotional exhaustion 2	2.51	1.38	.59**	.52**	.37**	.31**	.48**	.51**

Note: Day-level data was averaged across 5 days.

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

Table 4. Multilevel estimates for models predicting emotional exhaustion at the end of a shift: emotional dissonance as a mediator;  $N=39$ , and  $N=195$  observation.

Model variables	Baseline model			Model 1			Model 2			Model 3		
	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>
Intercept	2.463	.161	15.273**	2.477	.142	17.413***	2.486	.140	17.818***	2.486	.130	19.161***
Emotional exhaustion 1				.384	.063	6.134***	.374	.061	6.113***	.359	.058	6.246***
Emotional job demands							.295	.107	2.752**	.036	.100	.359
Emotional dissonance										.293	.047	6.234***
$-2 \times \log$			590.031			558.678			551.872			520.218
$\Delta - 2 \times \log$						31.35***			6.81*			31.65***
df						1			1			1
						$R^2$ (%)			$R^2$ (%)			$R^2$ (%)
Level 1 (within-person variance)	1.07	.305		.934	.263	13	.902	.256	16	.761	.217	29
	.811	.230		.617	.180	24	.594	.173	27	.521	.154	36
Level 2 (between-person variance)												

Note:  $R^2$  percentages are calculated in approximation.\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Results presented in Table 5 show the estimates of the relationship between the emotional job demands, suppression of anger, and emotional exhaustion at the end of the work shift, controlling for emotional exhaustion at the start of the work shift. Results showed that the suppression of anger was significantly related to exhaustion at the end of the work shift ( $t = 2.38, p < .05$ ). Furthermore, Table 5 reveals that Model 3, including the mediator suppression of anger, showed a significant improvement over Model 2 ( $\Delta - 2 \times \log = 9.48, df = 1, p < .05$ ). Testing Hypothesis 3 (i.e., the suppression of anger mediates the relationship between emotional job demands and exhaustion at the end of the work shift) showed that the random indirect effect was .03,  $CI_{.95} = -.022, .087$ . Thus, Hypothesis 3 was rejected.

Results presented in Table 6 show the estimates of the relationship between the emotional job demands, suppression of abhorrence, and emotional exhaustion at the end of the work shift, controlling for emotional exhaustion at the start of the work shift. Results showed that the suppression of abhorrence was significantly related to exhaustion at the end of the work shift ( $t = 2.49, p < .05$ ). Adding the suppression of abhorrence to Model 3 revealed that Model 3 showed a significant improvement over Model 2 ( $\Delta - 2 \times \log = 10.37, df = 1, p < .05$ ). Testing Hypothesis 4 (i.e., the suppression of abhorrence mediates the relationship between emotional job demands and exhaustion at the end of the work shift) showed that the indirect effect was .111,  $CI_{.95} = .023, .211$ . This is in support of Hypothesis 4.

Finally, results showed that the suppression of sadness was not significantly related to exhaustion at the end of the work shift ( $t = 1.23, p = .22$ ). The test of Hypothesis 5 (i.e., the suppression of sadness mediates the relationship between emotional job demands and exhaustion at the end of the work shift) showed that the indirect effect was .017,  $CI_{.95} = -.010, .059$ . Consequently, Hypothesis 5 had to be rejected.

### Discussion

Results of Study 3 show that emotional dissonance mediated the relationship between emotional job demands and exhaustion. Moreover, one discrete negative emotion commonly experienced by criminal investigation officers, namely abhorrence separately mediated this relationship. Suppressing the emotions anger or sadness both did not mediate the relationship between emotional job demands and exhaustion at the end of the work shift. However, in line with our findings from Study 1, the suppression of anger was significant and positively related to exhaustion at the end of the work shift.

The kinds of situational job demands that criminal investigation officers encounter may lead to concerns like feeling ill, being focused on catching the criminal, or wanting to help the crime victims. Experiencing emotions like *anger* aimed at the criminal offender, feeling *abhorrence* about a particular situation, or feeling *sad* about the crime victims and their relatives appeared to be experienced emotions with a negative valence among criminal investigation officers. In order to keep up a professional appearance, the police officers need to suppress the display of such felt negative emotions. As a result, emotional dissonance in general and particularly suppressing the display of anger and abhorrence affects exhaustion at the end of the work shift. However, suppressing the display of sadness was unrelated to exhaustion at the end of the work shift. These findings suggest that not every discrete

Table 5. Multilevel estimates for models predicting emotional exhaustion at the end of a shift: suppression of anger as a mediator;  $N=39$ , and  $N=195$  observation.

Model variables	Baseline model			Model 1			Model 2			Model 3		
	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>
Intercept	2.463	.161	15.273**	2.477	.142	17.413***	2.486	.140	17.818***	2.489	.131	18.930***
Emotional exhaustion 1				.384	.063	6.134***	.374	.061	6.113***	.374	.062	6.010***
Emotional job demands							.295	.107	2.752**	.259	.109	2.373*
Suppression of anger										.253	.106	2.380*
– 2 × log			590.031			558.678			551.872			542.388
Δ – 2 × log						31.35***			6.81*			9.48*
df						1			1			1
						$R^2$ (%)			$R^2$ (%)			$R^2$ (%)
Level 1 (within-person variance)	1.07	.305		.934	.263	13	.902	.256	16	.901	.260	16
Level 2 (between-person variance)	.811	.230		.617	.180	24	.594	.173	27	.501	.158	38

Note:  $R^2$  percentages are calculated in approximation.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Table 6. Multilevel estimates for models predicting emotional exhaustion at the end of a shift: suppression of disgust as a mediator;  $N = 39$  and  $N = 195$  observations.

Model variables	Baseline model			Model 1			Model 2			Model 3		
	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>	Estimate	SE	<i>t</i>
Intercept	2.463	.161	15.273**	2.477	.142	17.413***	2.486	.140	17.818***	2.467	.133	18.499***
Emotional exhaustion 1				.384	.063	6.134***	.374	.061	6.113***	.350	.061	5.651***
Emotional job demands										.181	.113	1.606
Suppression of abhorrence										.240	.096	2.488*
$-2 \times \log$			590.061			558.678			551.872			541.507
$\Delta - 2 \times \log$						31.35***			6.81*			10.37***
df						1			1			1
						$R^2$ (%)			$R^2$ (%)			$R^2$ (%)
Level 1 (within-person variance)	1.07	.305		.934	.263	13	.902	.256	16	.907	.257	15
Level 2 (between-person variance)	.811	.230		.617	.180	24	.594	.173	27	.533	.161	34

Note:  $R^2$  percentages are calculated in approximation.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

negative emotion has the same detrimental effect on the employees' psychological well-being.

### General discussion

The central goal of the present series of studies was to study the effect of daily emotional labor on daily employee well-being. In two diary studies and one interview study with police officers, we examined the prevalence of suppressing certain specific emotions and tested the daily effect of such an emotion regulation strategy on police officers' day-levels of exhaustion. The present results offer an important and innovative contribution to emotional labor research. The concept of emotional dissonance and its effect on employee well-being is namely further refined by making a distinction between the daily effects of suppressing *different* discrete emotions on police officers' daily exhaustion. Our studies offered some interesting findings. One of the main findings from diary Study 1 among police call-center service officers was that the suppression of anger was positively related to exhaustion, whereas the suppression of happiness was not. This result indicates that the suppression of this specific negative emotion may have more detrimental effects on employee's well-being than the effect of the suppression of this specific positive emotion. Although the demand to control for the suppression of positive emotions consumes self-regulation resources, this effect could be due to the fact that the suppression of positive emotions still implies feeling positive emotions. Feeling positive emotions may benefit the employee's well-being (cf. Fredrickson & Levenson, 1998). Consequently, following a positive mood may offer the benefits of just felt positive emotions and enhance the employee's energy level at the start of the interaction. The relative presence of positive emotions and absence of negative emotions can also lead to a state of happiness which promotes higher job performance, especially in jobs that require social interactions (Cropanzano & Wright, 2001). On the contrary, feeling negative emotions undermines employee well-being, which is in line with previous studies that emphasize the negative health effects of felt negative emotions (i.e., Beiser, 1974; Gross & Levenson, 1993). In addition, the distinction between the difference in the effect of separate discrete emotions on exhaustion is also an important one to make from a physiological point of view. It is in line with findings that different emotions may cause different patterns of autonomic nervous system responses (i.e., Ekman, Levenson & Friesen, 1983), with possible different effects on health outcomes (Danner, Snowdown, & Friesen, 2001).

Results of Study 3 validate earlier presumptions and findings within emotional labor research that shows that emotional dissonance is positively related to burnout (Grandey, 2000; Kruml & Geddes, 2000; Zapf, 2002). These findings are in line with previous research that shows a mediating relationship of emotional dissonance between emotional job demands and burnout (Bakker & Heuven, 2006; Van Dijk & Kirk Brown, 2006). However, these previous findings were not based on diary data and did not make a distinction between separate discrete emotions. Using diary data makes it possible to examine the daily influence of emotional dissonance on momentary exhaustion. Furthermore, incorporating the influence of various discrete negative emotions offers a further interesting extension to the line of emotional labor research. This refinement is an important one to make, as Study 3 showed that sadness and anger as discrete negative emotions appeared not to mediate the

relationship between emotional job demands and exhaustion, whereas in contrast, the suppression of abhorrence did. Furthermore, the suppression of anger and abhorrence were positively related to exhaustion at the end of the work shift, whereas sadness was not. These findings imply that different suppressed discrete emotions may have different effects on exhaustion, which means that for emotional dissonance to increase employee exhaustion, the specific felt emotion may play a central role. Accordingly, it means that emotional job demands that evoke situations of having to suppress (negative) emotions may not necessarily be detrimental to the police officers' well-being, depending on the emotion that has to be suppressed.

What may explain this difference in the effect of the separately studied discrete negative emotions on exhaustion? One possible explanation for this effect is the higher cost of suppressing anger and abhorrence, compared to sadness. The suppression of anger and abhorrence may have stronger effects in the short run, whereas the suppression of sadness may have more detrimental effects in the long run. Within the police culture and as a means of professionally working with harsh and emotional situations, police officers may be more used to ignoring feelings of sadness that can be felt afterward when thinking over the encountered situation. Put differently, within the police culture it is not commonplace for police officers to show and feel emotions of sadness during actions in public. Another explanation for the more detrimental effect of suppressing anger and abhorrence on exhaustion could be found within the social consequences of not showing anger and abhorrence. The social consequences of suppressing anger and abhorrence could be that high, that it may cost more energy to suppress these emotions rather than suppressing sadness. Accidentally showing sadness may be less threatening for the social interaction, which may thus make the suppression less effortful. Feelings of sadness may even lead to helping other people, when this helping behavior makes oneself feel better (Manucia, Baumann, & Cialdini, 1984). As police officers like to help people as an important part of their job, feelings of sadness may lead to greater helping behavior and as a consequence to a more positive response from the person in need. In contrast, anger can be seen as a strong emotion that can have important or even detrimental effects on social interactions (i.e., van Kleef, De Dreu & Manstead, 2004). Côté (2005) presumed that the suppression of anger would lead to a less unfavorable response of the observer because the anger is not shown. In turn, this less unfavorable response would be less detrimental for one's psychological well-being. Furthermore, Averill (1982) states that anger enables people to maintain social bonding when the relationship is in immediate threat. As it may sound undesirable, social bonding when interrogating a suspect can be helpful in keeping up the contact. Failing to suppress anger can thus have significant consequences in solving the crime case.

Finally, the emotions anger and abhorrence differ from the emotion sadness in their level of arousal (Russell, 1980). This may imply that the motivation and initiative to generate subsequent activity is lower for sadness than for anger and abhorrence. Sadness is often expressed inwardly or in a neutral way (e.g., related to "doing nothing"), whereas anger and abhorrence may evoke taking action in order to solve or even leave the situation at hand. Consequently, suppressing anger and abhorrence will have a greater impact on prolonging the situation at hand and may thus result in an increase in employee exhaustion.

One additional finding deserves attention here. Exhaustion at the start of the work shift was incorporated in the research model as an important control variable. Previous research has shown that in studying the effects of emotional dissonance on momentary strain at the end of the work shift, it is important to take strain at the start of the work shift into account (Van Gelderen, Heuven, Van Veldhoven, Zeelenberg, & Croon, 2007). Exhaustion at the start of the work shift leaves less energy for regulating one's emotions and may result in an increase in experienced emotional dissonance. Likewise, it can be hypothesized that exhaustion at the start of the work shift leads to a further energy loss spiral and prevents the acquittance of energy during the work shift (Hobfoll, 1989), which may result in a higher exhaustion level at the end of the work shift.

Our findings thus have important implications for theoretical models that try to explain employee well-being as an outcome of emotional dissonance. The findings suggest that it is important to go beyond studying only the general concept of emotional dissonance within emotional labor research, because different forms of emotional dissonance may have different effects on employee exhaustion. Instead, models that incorporate the daily suppression of different discrete emotions seem to be more plausible in explaining daily levels of exhaustion.

#### ***Limitations, strength, and implications for future research***

The present study has several limitations. A first limitation is a low response rate compared to other survey studies within the field of emotional labor. Diary studies are often sensitive to a low response rate because it takes a lot of time and effort for respondents to participate (Bolger et al., 2003). Especially the occupation of a police officer is very busy and stressful, which may have influenced the response rate. Accordingly, the respondents who participated in this study may be more committed or have a higher energy level than their colleagues. This could have an effect on the generalizability of the results.

Second, our results were obtained with a highly specific occupational group, namely police officers and criminal investigation officers. This specialized occupational group may differ from other service-related settings in the way interactions take place with customers and the emotional demanding situations that have to be dealt with. This provided unique insights in a special occupational group, but also restricts the generalization of the findings.

Third, this study did not address cause-effect relationships. Although we studied emotional exhaustion at two points in time (i.e., we studied change in exhaustion during the work shift), future studies should focus on lagged effects to study the relationship between emotional suppression at work and employee exhaustion over time. Furthermore, the study has a time-based design and is not complemented with an event-based approach. It may be interesting for future research to incorporate specific events that evoke emotional labor.

Fourth, due to taking into account only the cases in which emotional suppression occurred, the data of the predictor variables (i.e., the emotion suppression variables) for both Study 1 and Study 3 became asymmetric, which is at odds with the assumption of normality. Although normality of predictors is not a requirement for multilevel analyses (Hox, 1995), this limitation should be noted. Furthermore, it should be mentioned that there is a skewness in the data of the outcome variable for

both Study 1 and Study 3 (i.e., exhaustion at the end of the work shift). However, exhaustion at the start of the work shift and exhaustion at the end of the work shift show similar distributions, and the standardized residuals showed a normal curve, defending our analyses.

We specifically focused on the effect of suppressing distinct negative emotions in addition to general emotional dissonance. Instead of suppressing emotions as a result of complying to display rules of being neutral, positive or polite, the work of police officers also implies the faking of positive as well as negative emotions. Research of Mann (1999) suggests that in conducting emotional labor, emotions are as much hidden as faked. Faking positive and negative emotions are assumed to have less positive or even negative effects on the employee's psychological well-being because faking emotions is perceived as inauthentic (Côté, 2005; Ekman, 1999). Furthermore, faking negative emotions may evoke a negative customer response because the employee showed negative emotions. Therefore, future research should take the effects of faking different discrete emotions on the employee's psychological well-being, further into account.

Finally, it should be mentioned that the various discrete emotions in this study were measured as single items. Multi-item measures are usually less sensitive to errors. Consequently, this single item measure makes it more difficult to establish internal consistency and reliability.

Notwithstanding the described limitations, the present studies offer a unique contribution in uncovering the way that emotional demands eventually enhance feelings of exhaustion through the suppression of discrete emotions. Furthermore, this study shows the importance of specifying emotional dissonance into the different components of suppressing positive and negative emotions. Suppressing distinct positive or negative emotions may form important distinctions in their effect on day-to-day employee exhaustion. Future studies on the effects of discrete emotions need to be undertaken to further broaden the insights of the effects of different discrete emotions within emotional labor research. For the practice of policing it may be important to train police officers in dealing with different felt emotions like anger and abhorrence, which cannot always be shown during their duty.

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## Appendix 1: Emotional job demands scale

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### *Emotional job demands*

During this shift I came in contact with . . . . .

1. Verbally intimidating suspects/civilians.
  2. A suspect/civilian who evoked pity or sympathy
  3. Mentally disturbed suspects/civilians.
  4. Unhygienic or contagiously diseased suspects/civilians.
  5. Physically threatening suspects/civilians.
  6. Suspects/civilians under influence of alcohol or drugs.
  7. Obtrusive suspects/civilians.
  8. A complex crime scene, where a lot of work had to be done.
  9. Suspects/civilians who evoked disgust.
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Note: All questions were to be answered on 7-point scales

(1 = not applicable at all, 7 = strongly applicable).