Incorporation of Emotional Labor in the Demand-Control-Support Model: The relation with Emotional Exhaustion and Personal Accomplishment in Nurses

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ABSTRACT

Nursing comprises interactions with patients which may require emotional labor. This study clarifies the relation of emotional labor with the three burnout dimensions within the context of the Demand Control Support model in nurses. We used the Dutch Questionnaire on Emotional Labor (D-QEL) to measure surface acting, deep acting, suppression, and emotional consonance. In line with other studies, job characteristics were significantly related to emotional exhaustion and surface acting was significantly related to emotional exhaustion and depersonalization. Emotional consonance, the situation where somebody effortlessly feels the emotion that is required, is related to personal accomplishment.

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The term *burnout* refers to a syndrome of psychological complaints in response to chronic emotional and interpersonal stressors on the job (Maslach, Schaufeli, & Leiter, 2001). The three dimensions that characterize this syndrome are emotional exhaustion, feelings of depersonalisation or cynicism, and a feeling of lessened personal accomplishment. Initially, researchers mainly identified risk factors for the development of burnout among job characteristics, but nowadays occupational and organizational characteristics receive increasing attention (Maslach et al., 2001).

Although emotional exhaustion is a key characteristic of the burnout syndrome (Maslach et al., 2001), only in the last decade has an emotion perspective been used to try to understand the development of emotional exhaustion. Hochschild noted that especially in service jobs employees are often required to show certain emotions because they function to please the customer. Having to show such emotions while one is not actually feeling them or having to hide one's own emotions when their expression is seen as inappropriate were subsumed under the header emotional labor (Hochschild, 1983). Hochschild introduced the term *surface acting* to refer to the display of the characteristics of an emotion that are regarded as appropriate, but are not actually felt. *Deep acting* describes the efforts to try to actually feel an emotion that is thought to be required. Finally, *emotional consonance* captures the situation where somebody effortlessly feels the emotion that is required in a certain situation.

A key concept in understanding the possible effect of emotional labor seems to be emotional dissonance (Härtel, Hsu, & Boyle, 2002). Emotional dissonance refers to the

discrepancy between the emotional demeanor that an individual displays and the emotions that are felt (Mann, 1999). This dissonance is seen as a separate dimension of emotional labor (Kruml & Geddes, 2000) or as an inevitable concomitant of emotional labor (Briët, Näring, Brouwers, & van Droffelaar, 2005; Hochschild, 1983). Affective events theory might explain the link between emotional dissonance and emotional exhaustion. In this cognitive approach, emotional dissonance leads to the perception of more hassles, which in turn leads to emotional exhaustion (Härtel et al., 2002).

The non-expression of emotions is often regarded as and has been found to be unhealthy. The relationship between the suppression of emotions and cardiovascular diseases has received particular attention and a psychophysiological pathway between them has been suggested (Gross & Levenson, 1997). Recently a psychosocial pathway for the effect of emotion suppression on long term health consequences has also been outlined (Mauss & Gross, 2004). Further, Richards and Gross (1999) documented the effects of emotion suppression on impaired cognitive functioning, especially memory. However, studying how pretending to have certain emotions, possibly at the cost of personal goals, might affect well-being, health, and emotional exhaustion is a much more recent phenomenon.

A hypothesis regarding the effect of emotional labor on the availability of resources can easily be derived from a common definition of an emotion. Contemporary definitions of emotion regard emotions as a process (Frijda, 1986). In a so-called primary appraisal, a person confronted with a situation, consciously and unconsciously assesses the situation. The ongoing activity is interrupted and a ‘readiness to act’ (Frijda, 1986) is felt, either towards or away from the situation. In this way emotions give priority to certain goals. It is during a secondary appraisal that the context is taken into account and the expression is consciously regulated. During

emotional labor workers will override the expression that is the output of the action tendency (Frijda, 1986) and act in accordance with the perceived job rules. In doing so, workers may give priority to the goals of clients or patients and this may influence the availability of personal goals and of resources and may influence work related well-being.

A number of studies have explored the relationship between emotional labor on the one hand, and job stress or emotional exhaustion on the other hand (Pugliesi, 1999; Zammuner & Lotto, 2001). This resulted in evidence that emotional labor has significant relationships with burnout level (Zammuner & Galli, 2005b). Support for the hypothesized link between emotional dissonance and emotional exhaustion has also been found (Abraham, 1999). The concept emotional labor seems thus useful to gain additional insights into stress at work, but it remains unclear how relevant this relatively recent concept of emotional labor is within the context of older concepts.

The model of choice for studying the relationship between job stress and well-being is the Demand Control Support (DCS) model, which has been successfully applied to the study of job-related well-being such as emotional or work-related exhaustion and burnout (van der Doef & Maes, 1999). The DCS model identifies three now classical variables: high job demands, low possibilities to regulate one's work and little support. It states that the combination of high job demands and low job control will result in psychological stress reactions. The model furthermore contains a so-called iso-strain hypothesis, which specifies a negative effect of the combination of high demands, low control and little social support. In order to evaluate the predictions of the model, a group of researchers carefully selected high quality studies, and concluded that there is accumulated evidence that each of the three variables from the DCS model causes strain and that their effect is cumulative (de Lange, Taris, Kompier, Houtman, & Bongers, 2003). These

reviewers also conclude that there is much less evidence for the strain hypothesis. Another review that specifically included studies on psychological well-being concluded that there is substantial evidence for an interactive effect of demands and control, the strain hypothesis of the DCS model, in the case of burnout, but much less evidence for the iso-strain hypothesis (van der Doef & Maes, 1999). After numerous studies that were inspired by the DCS model, we can conclude that its main value is to be found in the identification of three important factors. Furthermore, the strain hypothesis seems to be true in the case of burnout.

One criticism of the model is that different types of demands have not been incorporated in it (De Jonge & Kompier, 1997). As emotional labor acts as a job demand (Zapf, Seifert, Schmutte, Mertini, & Holz, 2001), it might be a useful extension of the JDC model. At present there are only a few studies that report on the relative importance of emotional labor or related concepts in comparison to the classical operationalization of demands of the DCS model. In one of these studies, the need to hide emotions predicted emotional exhaustion, and support from colleagues or supervisor had both an independent as well as a buffering effect (Ybema & Smulders, 2002). The Ybema and Smulders' study also included emotional demand, which refers to the sustained emotional effort that is required through professional contact with other people. It also refers to the emotional impact that inevitably comes with professions where there is frequent confrontation with death and suffering as in nurses, firemen, or ambulance drivers. Emotional demand and the need to hide emotions had a strong relation with emotional exhaustion. As the latter study did not include the variables of psychological demands and control, the DCS model was only partially taken into account. In a study undertaken by de Jonge, Mulder, & Nijhuis (1999) emotional demand seemed less relevant for emotional exhaustion. Another study (Zapf et al., 2001) made clear that emotion work, a concept that is closely related

to but nonetheless distinct from emotional labor, predicts a unique portion of about 3% of the variance in burnout variables.

The aim of the present study is to examine whether emotional labor and emotional demand are useful extensions of the demand concept in the DCS model. We will examine this by testing the additive effects of the DCS model in predicting the three dimensions of burnout. We hypothesize that after taking into account the influence of the classical operationalizations of the DCS model, emotional labor will predict additional variance of each of the three dimensions of burnout.

Hypothesis 1. More emotional labor will be associated with more emotional exhaustion.

Hypothesis 2. More emotional labor will be associated with more depersonalization.

Hypothesis 3. Less emotional labor, i.e. more emotional consonance will be associated with more personal accomplishment.

Furthermore, the strain hypothesis of the DCS model for of each of these demands will also be tested.

Hypothesis 4. The combination of high emotional labor with low control will be associated with more emotional exhaustion.

Hypothesis 5. The combination of high emotional labor with low control will be associated with more depersonalization.

METHOD

Subjects

The participants were sampled from nurses with a permanent appointment working in two different hospitals in the central part of the Netherlands. In total 880 questionnaires were distributed. The response rate was 38.8%, and the final sample consisted of 88% women and 12% men, with a mean age of 38 yrs, *SD* = 9.68. The mean number of years of experience in the profession is 17 yrs, *SD* = 10.27, ranging from 0 to 42 yrs. The mean number of working hours per week is 26.9, *SD* = 7.74, with a range of 8 to 40.

Materials

Dutch Questionnaire for Emotional Labor (D-QEL)

Kruml and Geddes identified emotive effort and dissonance as two separate dimensions of emotional labor (Kruml & Geddes, 2000). Our definition of emotional labor (Briët et al., 2005) focuses on this emotive effort. We define emotional labor as the intentional internal processes that maintain a state of dissonance (as in surface acting) or resolve the dissonance (as in deep acting) and developed a questionnaire that has sound psychometric properties (Briët et al., 2005). This instrument provides four scales, of which three measure the following varieties of emotional labor: surface acting, deep acting, and suppression.

Just as Zammuner and Galli (2005a) we translated the items for surface acting (items 1,2,3,4,5) and deep acting (items 7,8) from the emotion regulation questionnaire of Grandey (Grandey, 2003) which is an extension of the Emotional Labor Scale (Brotheridge & Grandey, 2002; Brotheridge & Lee, 2003).

An example of a *surface acting* item is: "I pretend to have the emotions I need to display for my job". An example of a *deep acting* item is: "I make an effort to actually feel the emotions I need to display toward others". From the same study items, we selected items that measure emotional consonance (items 10,11) that were taken from another study (Grandey, 1998 in (Zammuner & Galli, 2005a)). Best, Downey, & Jones, 1997 (in Brotheridge & Grandey, 2002) developed an Emotion Requirement Scale to measure a perception of display rules but not the actual emotional labor that these rules may cause. We rephrased the items that were used to measure the: "Requirement to hide negative emotions" so that they ask about actually hiding anger and disgust and fear and called the hypothesized separate dimension "suppression" (items 18, 19, 20). An example of a *suppression* item is: "I hide my anger about something someone has done". People apparently suppress emotions at work just as often as they fake them (Mann, 1999). *Emotional consonance* denotes a dimension indicating whether felt emotions call for the activation of regulatory processes (Zammuner & Galli, 2005b). A high level of emotional consonance will indicate that a person effortlessly expresses emotions that are felt and that these emotions are at the same time required for the job. An example of an *emotional consonance* item is: "I react to patients'emotions naturally and easily". We added one deep acting item (emotive effort, item 4) from the study by Kruml & Geddes (Kruml & Geddes, 2000), item 9 in our questionnaire.

It is important to note that Grandey (2000) used a definition of surface acting that encompasses the surface acting of positive emotions as well as the suppression of negative emotions. Indeed, a person that is faking interest might at the same time suppress boredom or irritation, but the latter might also be absent. To make a distinction possible we included this measure for the suppression of negative emotions in our questionnaire.

The structure of the resulting scale was tested on the scores of a sample of teachers with confirmatory factor analysis (CFA). The resulting *comparative fit index* (CFI), the Bentler-Bonnet *non-normed fit index* (NNFI) and the *root mean square error of approximation* (RMSEA) are reported. CFI and NNFI values larger than .90 indicate that the model is acceptable (Bentler & Bonnet, 1980). Values of RMSEA smaller than or equal to .05 indicate a good fit of the model (Byrne, 2001).

The CFA of the 4-factormodel resulted in indices that varied between . 90 and .93 (χ^2 = 210.20, *df* = 71, *p* = .00, *CFI* = .93, *NNFI* = .90, *RMSEA* = .08). The Cronbach's alpha of the resulting scales were all high. For surface acting, α = .79 (*n* = 329), for deep acting, α = .81 (*n* = 324), for *suppression*, α = .61 (*n* = 331), and finally for emotional consonance, α = .70 (*n* = 330). The scale was cross validated in this sample of nurses and the 4-factor structure of the scale was confirmed (Briët *et al.*, 2005).

Burnout

Burnout was measured with the Maslach Burnout Inventory for teachers, that was linguistically made suitable for nurses by changing students into patients (MBI-NL, (Schaufeli & van Horn, 1995)). The questionnaire consists of eight items that measure emotional exhaustion, five items that measure depersonalization, and seven items that measure personal accomplishment. Items can be answered on a seven-point scale ranging from 'never' to 'always/daily'. Indicative for burnout are high scores on emotional exhaustion and depersonalisation and low scores on personal accomplishment. Cronbach's α = .88 for emotional exhaustion (*n* = 329), α = .67 for depersonalisation (*n* = 330) and α = .78 for personal accomplishment (*n* = 331).

Social support

Social support was measured with two subscales each containing six items from the Emotional Support Subscale of the Social Support List – Discrepancies (SSL-D, (van Sonderen, 1991). All items start with the phrase: What is your opinion about the extent to which people" followed by e.g. "ask you for advice?" or "reassure you?". Answers to the items are given on a four-point scale running from 'I miss it' to 'it happens too often'. A high score indicates much support. Items from the scales 'emotional support from colleagues' and 'emotional support from staff members' were both included and scores added to create a general measure of support. This resulted in a Cronbach's $\alpha = .89$, $N = 331$.

Control

Assessment of the workers' autonomy can be regarded as a refined measurement of the control dimension (de Jonge, Janssen, & van Breukelen, 1996). Control was measured with six items from the Maastricht Autonomy Questionnaire (MAQ) (de Jonge, Landeweerd, & van Breukelen, 1994). The MAQ measures the worker's opportunity to determine a variety of task elements, like the method of working, the pace of work and the work goals. An example is: "The opportunity that the work offers to determine the method of working yourself." Answers are given on a five-point scale varying from very few possibilities to very many possibilities. A high score indicates a high level of control, $\alpha = .84$ ($n = 329$).

Job demands

Workload was measured with six items from the Vragenlijst Organisatiestress Doetinchem, VOS-D; [Organizational Stress Questionaire](Bergers, Marcelissen, & de Wolff, 1986). Respondents are asked to indicate how often they experience difficult job demands on a five point Likert scale varying from 'seldom' to 'very often'. An example of an item is: "It so

happens at work that there are few occasions where I can take it easy". A high score indicates high workload, $\alpha = .80$ ($n = 331$).

Emotional demand. The scale for emotional demand consisted of three items from a Dutch survey (Ybema & Smulders, 2002) that ask about emotional demand, emotional involvement, and emotionally difficult situations, $\alpha = .64$ ($n = 362$). A sample item is "Is your work emotionally demanding?"

METHOD OF ANALYSIS

Correlations between the study variables were calculated. Subsequently, we performed three separate hierarchical regression analyses with the burnout symptoms as criterion and the predictors entered in steps. All variables were first transformed to z-scores in order to obtain correct results for standardized regression coefficients for the interaction terms (Friedrich, 1982). In the first step the control variables were entered, in the second the variables from the DCS model were entered, including emotion regulation and emotional demand. In the 3^{d} step the interaction terms of demands and control were entered to test the strain hypothesis. For all tests an alpha level of .05 was used.

RESULTS

Correlation of Symptoms of Burnout with Job Characteristics and Emotional Labor.

Correlations between the dimensions of burnout and the job characteristics and emotional labor are given in Table 1. Emotional exhaustion was positively correlated with workload, and negatively with control and support. Furthermore, emotional exhaustion was positively correlated with emotional demand, surface acting, suppression, and deep acting. Depersonalisation was positively correlated with workload, emotional demand, surface acting,

and deep acting. Depersonalisation is negatively correlated with support, control, and emotional consonance. A notably high correlation, r = .38, is seen with surface acting. Finally, personal accomplishment is highly correlated with emotional consonance.

TABLE 1 ABOUT HERE

Regression of Symptoms of Burnout on Job Characteristics and Emotional Labor.

The relationship between emotional labor and burnout symptoms is explored in three hierarchical regression analyses. The results of the separate analyses for each burnout dimension are given in Table 2.

TABLE 2 ABOUT HERE

The three regression analyses all show a similar pattern. In the first step, a small proportion of the variance, 1% to 6%, of every dimension of burnout is explained by age and gender. In the second step much more variance, from 18% to 47%, is explained by the various work characteristics. The third step, in which the interactions of the various demands with control are entered, is not significant.

The regression analysis for emotional exhaustion reveals significant beta weights for workload and emotional demand. Furthermore, there are significant beta weights for surface acting, deep acting and the absence of emotional consonance.

The regression analysis on depersonalisation contains a negative beta weight for support and no significant beta weights for workload and control. Emotional demand and surface acting have significant beta weights of .22 and .28 respectively.

The regression analysis of personal accomplishment contains three significant predictors: control, surface acting and emotional consonance. The absence of emotional labor, especially of surface acting is seen in nurses with a high level of personal accomplishment.

In order to get an estimate of the relative importance of the emotion-related variables in predicting dimensions of burnout, subsequent regression analyses where performed in which workload, control and support were entered in step 2 and emotional demand and emotional labor in step 3. For emotional exhaustion this resulted in an increase in R^2 of 31 % in step 2 and an additional 16 % in step 3. For depersonalisation there was an increase in R^2 of 6 % in step 2 and an additional 17 % in step 3. Personal accomplishment showed an increase in R^2 of 3 % in step 2 and an additional 15 % in step 3.

DISCUSSION

In line with many studies that used the DCS model, the results of the regression analyses indicate that job demand and control are significantly related to emotional exhaustion and depersonalization. A separate contribution can, however be identified for emotional labor. Surface acting is related to emotional exhaustion, depersonalisation and personal accomplishment. The relation between surface acting and emotional exhaustion is a replication of findings from other studies (Brotheridge & Lee, 1998; Grandey, 2003; Zammuner & Galli, 2005b). The major difference with those studies is that the present study established this relation within the context of classical operationalizations of demand, control and support. We can

therefore conclude that surface acting is a useful specification of the demand concept of the DCS model.

As Hochschild noted more than twenty years ago (Hochschild, 1983), having to pretend certain emotions because it is seen as functional in a specific work context may come at a personal cost in terms of feeling emotionally drained or exhausted as. Faking emotions is strongly related to emotional exhaustion and depersonalisation in this sample of nurses. This finding adds to the evidence that surface acting in particular should be regarded as stressful (Mann & Cowburn, 2005). From our data we can not conclude which positive and wanted emotions are faked, but a survey study undertaken by Glomb & Tews (2004) revealed that the most often faked emotion is interest. Nurses may be in a situation where their tendency is to act detached or distant to a patient but at the same time they may assess that a patient expects interest. In such a situation they may choose to overrule the felt tendency. One might assume that pretending to be interested may require more energy that being effortlessly able to show real interest in accordance with a felt action tendency.

It seems that we do not know much about surface acting because molecular analyses on emotions in the workplace tend to focus on unwanted and unpleasant emotions and how people deal with them (Côté & Morgan, 2002; Fitness, 2000). Our analyses indicate that the suppression of emotions may, however, be of only minor importance in understanding the development of emotional exhaustion. It is, however, possible that the effect of the suppression of emotions is masked by the effect of surface acting. People that report surface acting, may not be aware or may not report that they suppressed an emotion first. Studies of positive emotions can help us to unravel whether, but also how exactly surface acting leads to fatigue. Experience sampling

methods or diary methods may be very useful for this purpose (Zohar, Tzischinski, & Epstein, 2003).

The variables that are associated with depersonalisation are surface acting and emotional demand, with corresponding beta weights of .28 and .22, indicating that they play an equally important role. Surface acting leads to more feelings of depersonalization, while the absence of acting, emotional consonance, diminishes depersonalization. From the work characteristics that we called classical only support is negatively related to depersonalization, ß¥ -.12.

The test of the strain hypothesis was not significant. Our study adds to the conclusion that there is only marginal evidence for the strain hypothesis, but sufficient evidence for direct effects of demand, control, and support on dimensions of burnout (de Lange et al., 2003).

The link between emotional demand and emotional exhaustion substantiates similar findings in a range of 40 occupational groups (Ybema & Smulders, 2002). Having to deal with emotionally laden situations may also lead to exhaustion. In a study in human service employees, job demands and emotional demands were the variables that were most strongly related to emotional exhaustion measured after one year (van Vegchel, de Jonge, Soderfeldt, Dormann, & Schaufeli, 2004). These findings are reflected in a change in the operationalization of workload in the model. Emotional demands are presently regarded as at least as important as quantitative demands in determining workload (van Vegchel et al., 2004).

The third dimension of burnout, personal accomplishment is significantly predicted by emotional consonance, with a beta weight of .34. Emotional consonance should not be subsumed conceptually under the label emotional labor. The other dimensions measure an active effort to deal with the experience or the expression of emotions and are therefore thought to contribute to stress or strain. A high level of emotional consonance is seen in the *absence* of such effort and is

a useful extension of the nomological network or constructs related to emotional labor (Diefendorff, Croyle, & Gosserand, 2005). Emotional consonance is apparently useful in gaining an understanding of personal accomplishment. There is an increasing interest in factors that determine that people like their work and give them a feeling of competence. In recent models that focus on engagement (Schaufeli & Bakker, 2004) and resources (de Jonge, Dormann, & van Vegchel, 2004) emotional consonance may play an important role.

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Table 1

Correlations between demographic variables, work characteristics and emotional labor

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender													
2. # of working hours	.33**	-											
3. Age	.14	-.17	-										
4. Workload	-.02	.07	.04	-									
5. Emotional support	-.12*	-.10	.05	-.29**	-								
6. Control	-.007	.12	.08	-.21**	.18**	-							
7. Emotional demand	.07	.03	.16**	.40**	-.06	-.09							
8. Surface acting	.16**	.06	-.02	.17**	-.07	-.09	.18**	-					
9. Suppression	.01	.06	.02	.06	-.07	-.01	.08	.17**	-				
10. Deep acting	.13*	.10	-.04	.08	-.05	-.01	.04	.39**	.17**	-			
11. Emotional consonance	-.01	-.09	.05	.02	.05	.09*	.06	-.08	.10	-.04	-		
12. Emotional exhaustion	.10	.17**	-.04	.54**	-.27**	-.23**	.35**	.45**	.12*	.29**	-.14*	-	
13. Depersonalisation	.19*	.17**	-.14**	.22**	-.22*	-.14*	.26**	.38**	.08	.22**	-.16*	.49**	-
14. Pers. Accompl	.03	.15**	-.11	.005	.05	.19**	-.001	-.15**	.04	-.02	.35**	-.15**	-.20**

Note: Pers. Accompl: Personal accomplishment
Significance levels indicated with asteriks: * $p < .05$; ** $p < .01$

Table 2

Hierarchical regression analysis of predictors of Emotional Exhaustion, Depersonalisation, and Personal Accomplishment (N=345)

	Dimensions of Burnout								
	Emotional exhaustion			Depersonalisation			Personal Accomplishment		
Predictor	*Beta*	*F*	R^2(change)	*Beta*	*F*	R^2(change)	*Beta*	*F*	R^2(change)
Step 1									
Control variables		1.61	.01		9.91*	.06***		1.71	.01
Age	-.06			-.19***			-.14		
Gender	.04			.13*			.06		
Step 2									
Work characteristics		33.19***	(.47***)		11.85***	(.23***)		8.00***	(.18**)
Classical Demand Control Support									
Workload	.41***			.05			.04		
Emotional support	-.08			-.12*			-.02		
Control	-.05			.01			.15**		
Emotional Demand	.12**			.22***			.02		
Emotional labor									
Surface acting	.29***			.28***			-.16**		
Suppression	.01			.03			.01		
Deep acting	.13**			.08			.04		
Emotional consonance	-.12**			-.12*			.34***		
Step 3									
Strain hypothesis		n.s.			n.s.			n.s.	

Note: Standardized beta-coëfficiënts are given.
Significance levels: * p < .05; ** p < .01; *** p < .001