

Validation of the Dutch Questionnaire on Emotional Labor (D-QEL) in Nurses and  
Teachers.

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## Validation of the Dutch Questionnaire on Emotional Labor (D-QEL) in Nurses and Teachers

Apart from occupational roles the “act of expressing socially desirable emotions” (Ashforth & Humphrey, 1993) is the basis for emotional labor in service jobs. Studies dealing with emotional labor focus on service working roles, in which employees are supposed to express desired emotions in their face-to-face interactions with clients, patients or pupils. In order to display appropriate emotions individuals sometimes must hide or fake felt emotions, or try to experience the expected emotion, which may cause emotional strain. Recent studies describe the relationship between emotional strain and burnout (Brotheridge & Grandey, 2002; Grandey, 2003).

When we decided to develop a Dutch instrument to measure emotional labor, a translation of an existing instrument was considered first. A thorough examination of the literature did, however, not result in the discovery of a widely accepted questionnaire. Others also noted that there was clearly no consensus about the concept emotional labor or about its measurement (Glomb & Tews, 2004). Furthermore, some of the available scales measured a concept with only one or two items, and their psychometric quality could certainly be improved by adding items. Therefore, we decided to develop a new instrument that would, if possible, build upon existing items or subscales. This study presents an overview of existing theoretical perspectives and instruments and describes the development and validation of the Dutch Questionnaire on Emotional Labor (D-QEL).

Hochschild (Hochschild, 1983) introduced the term emotional labor. She used a dramaturgical perspective in which the customer is the spectator, the employee the actor and the job the stage. Employees regulate their emotional display in order to meet organizationally based expectations required for their job. Hochschild distinguished two forms of emotional labor. She introduces the term surface acting, in which the regulation acts on the emotion expression in a face to face interaction. The person simply acts as though the required emotion is really felt (e.g. smiling to an annoying patient). Deep acting is a regulation that aims to produce certain emotions. The employee tries to

actually feel the emotions that he or she is supposed to express in the service interaction (Zammuner & Galli, 2005a). Grandey (2000) assents that usually positive emotions are required ("service with a smile"), but also that often negative emotions have to be suppressed.

Brotheridge and Grandey (2002) conceptualized emotional labor in two main ways. Employee-focused emotional labor denotes the employee process of expressing and managing emotions to meet work demands. This must be taken to mean the processes in which employees modify and control their emotional expressions (surface acting) and the process in which internal thoughts and feelings are controlled to meet the display rules required for the job (deep acting). The approach of our studies closely follows this point of view of emotional labor. Job-focused emotional labor denotes the level of interpersonal work demands. Zapf (Zapf, 2002) extended the construct emotional labor, and uses the term "emotion work". His concept of emotion work refers to the quality of interactions between employees and clients as a part of the job, like work demands, motivation and participation.

Whereas some researchers focus on work related aspects of emotional labor, we are mainly interested in the individual aspects. The relation between suppressing emotions and health aspects is an important theme in health psychology. The mechanism along which the suppression of emotions may cause emotional exhaustion is, however, not quite clear. There is some evidence of a relationship between overriding emotion response tendencies and an enhanced sympathetic activation of the cardiovascular system (Gross & Levenson, 1997). Whether surface acting and deep acting similarly might have negative psycho-physiological effects remains as yet unknown. Nothing in emotion theories shows that emotions have a "discharge function" (Frijda, 1986), while it is clear there is an impulse to express. Although items to measure suppression were developed by several researchers these were often used to measure a broader concept (Brotheridge & Grandey, 2002; Mann, 1999) and did not result in a one-dimensional suppression scale. Others used only few items (Brotheridge & Grandey, 2002; Mann,

1999; Ybema & Smulders, 2002) which seems to ask for improvement of psychometric quality by adding items.

Theoretical approaches of emotional labor focus on internal states, internal processes or on external behavioral displays (Glomb & Tews, 2004). Our definition of emotional labor consists of internal states and external behavioral displays. Therefore, we propose a definition in which emotional labor consists of intentional internal processes that maintain a state of dissonance (as in surface acting) or resolve the dissonance (as in deep acting).

In the literature the following forms of emotional labor are distinguished:

Surface acting refers to the display of the characteristics of an emotion that are regarded as appropriate, but are not actually felt. For example: "Put on a mask in order to express the right emotions for the job" or "to pretend to have the emotions you need to display for the job" (Brotheridge & Grandey, 2002; Zammuner & Galli, 2005b). Deep acting is a regulation that aims to produce the experience of a required emotion. The employee tries to actually feel the emotions that he or she is supposed to express in the service interaction (Zammuner & Galli, 2005a). Hochschild (1983) called this "active deep acting". It is rather modifying emotions than expressing them (Diefendorff, Croyle, & Gosserand, 2005). An example of deep acting is: "Try to actually experience the emotions that you must show". Suppression: sometimes an employee is required to hide emotions in order to be effective on the job (e.g. "hiding your anger about something someone has done"). On the effects of emotion suppression on the job not much is known yet. Ybema and Smulders (2002) investigated in their research the need to hide emotions in various professional categories in the Netherlands. The results show that service-jobs like police, firemen and security score high on the need to hide emotions. In threatening situations there apparently is no room to express feelings like fear, anger or doubt. Until now emotional consonance has not been paid much attention to in studies yet, although Hochschild (1983) already called this form of emotional management "passive deep acting". Emotional consonance captures the situation where somebody effortlessly feels the emotions that are required in a certain situation. Diefendorff et al.

(2005) distinguished emotional consonance as a separate factor. For us emotional consonance is the absence of emotional labor processes and therefore we will measure emotional consonance as a separate dimension for the purpose of emotional labor construct validation.

We present two studies. Study 1 describes the development of the D-QEL emphasizing its factor structure. Study 2 elaborates on study 1 and focuses on the improvement of the factor structure and the validation of the D-QEL in the Netherlands.

### STUDY 1:

#### The development of the Dutch Questionnaire on Emotional Labor (D -QEL)

We formulated four dimensions based on studies in which the questionnaires were described in detail: surface acting, deep acting, suppression and emotional consonance. We compared and selected relevant items from three studies (Brotheridge & Grandey, 2002; Kruml & Geddes, 2000; Zammuner & Galli, 2005a). In order to develop scales from which the internal consistency can adequately be assessed, we included at least three items from each dimension. Just as Zammuner and Galli (2005) we used the extended version of the emotional labor scale (ELS) (Brotheridge & Lee, 1998, 2003) made by Grandey (Grandey, 2003). We used the items for surface acting (items 1, 2, 3, 4, 5 in the D-QEL), deep acting (items 6, 7, 8), and emotional consonance (items 10 and 11). We extended the scale of deep acting to include one extra item (emotive effort, item 4 from the study of Kruml & Geddes, (Kruml & Geddes, 2000)) as well as emotional consonance (item 2 from the emotional dissonance scale from Kruml & Geddes: "The emotions I show the students match what I truly feel"), items 9 and 12 respectively in our questionnaire. The items were measured on a 5-point scale (1 = "never"; 5 = "always"). Others developed an Emotion Requirement Scale to measure a perception of display rules but not the actual emotional labor that these rules may cause (Best, Downey, & Jones, 1997 in (Brotheridge & Grandey, 2002)). 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) as it has been described as such in the literature (Gross & Levenson, 1993).

All items derived from English questionnaires were translated into the Dutch language by the first two authors and translated back again into English by a Dutch speaking Australian. Before using the test, we first asked ten persons with different jobs and demographic characteristics to fill out the questionnaire to see whether the questions were clear and well phrased. This appeared to be the case.

### Method

Subjects. For the first study the Dutch Association of Mathematics Teachers supported the project and provided means and assistance to send questionnaires to a random sample of 1000 members, all teachers in secondary schools. The response rate was 36.5% and the final sample consisted of 269 men and 96 women, with a mean age of 48.8 yrs, SD: 8.35 ranging from 21 to 64 yrs. The mean work experience is 21.4 years, SD: 9.78 ranging from 1 to 42 yrs. The mean number of teaching hours per week is 18.7, with a range from 0 (administration) to 29, SD: 6.77.

Statistical analysis. A confirmative factor analysis (CFA) was performed on the items from the scales of the D-QEL with the AMOS 3.6 computer program (Arbuckle, 1997). The 1- and 4-factor models were compared. A priori the items were determined to specify the factors and the relationship between them. AMOS generates a  $\chi^2$  goodness-of-fit ( $\chi^2$ ) statistic to test the extent to which the hypothesized model is consistent with the data. Study 1 shows a significant  $\chi^2$ . AMOS provides several fit indices that are largely independent of sample size. Several of these fit indices are utilized to investigate the overall fit of the postulated model: the comparative fit index (CFI), the Bentler-Bonnet non-normed fit index (NNFI) and the root mean square error of approximation (RMSEA). At values  $> .90$  the model is found to be sufficiently acceptable (Bentler & Bonnet, 1980). A RMSEA with a value less than or equal to .05 proves to give a good fit and a value less than or equal to .08 a sufficient fit (Byrne, 2001).

Because the internal consistency reliability of suppression would improve significantly after removal of item 20 (from .64 to .85; item total correlation was .31), we decided to delete this item.

### Results

The 1-factor model resulting in all items to load on one dimension (surface acting), did not prove to yield a good fit ( $\chi^2 = 1150.12$ ,  $df = 77$ ,  $p = .00$ , CFI = .42, NNFI = .32, RMSEA = .20) and was rejected. The CFA of the 4-factor model shows indices between .90 en .93 ( $\chi^2 = 210.20$ ,  $df = 71$ ,  $p = .00$ , CFI = .93, NNFI = .90, RMSEA = .08).

Internal reliability. The values for internal reliability for each of the subscales and their respective means and standard deviations are presented in Table 1. The subscales demonstrated adequate levels of internal consistency (Cronbach's  $\alpha$  values ranged from .63 to .85). For the most part, the item-total correlations achieved were at .56 or greater (for emotional consonance it was .36 and greater).

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Insert Table 1 about here

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These results seem marginally acceptable, but we decided to adjust the questionnaire for the next study. Consistent with other scale development studies items with item-total correlations below .40 were excluded or revised in study 2. The second version of the D-QEL consists of 13 items (Table 2).

## STUDY 2:

### Revision and validation of the D-QEL

The purpose of Study 2 was to improve the factor structure of the D-QEL and to examine evidence of its convergent, discriminant and criterion validity.

### 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.

The revision of the questionnaire. The second edition of the D-QEL shows some changes. One item of the deep acting scale (I try to actually experience the emotions that I must show (erda 06)) is excluded, because the internal consistency improved from Cronbach's alpha .68 to .81. For the same reason one emotional consonance item (The emotions I show to patients are genuine (erec 12)) is excluded. Cronbach's alpha improved from α.65 to .70. The suppression items in Study 1 were not posed clearly, because of a double negation ("I do not show ..."). This changed in study 2 to "hide...". In addition we changed the order of the items in order to counteract response tendencies. The items are no longer grouped together in dimensions.

The descriptive statistics of this study are presented in Table 2.

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Insert Table 2 about here

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Although the item-total of one suppression item (I hide my fear of a patient who appears threatening) is below .40, we decided not to exclude this item, because that would not improve the internal consistency of the scale (α = .61). The Cronbach's alpha from the other scales ranged from .70 to .81, which is considered as sufficient to continue analyses.

Validity. Our strategy for the validation of the D-QEL is to check up on the scale properties and the correlation with other constructs. In order to establish the convergent validity of the D-QEL the correlation with scales which measure the same constructs or with scales that are expected to be associated with it (Brotheridge & Lee, 2002) must be demonstrated. We assume that surface acting, deep acting and suppression correlate with the Courtauld Emotional Control Scale (CECS). The CECS was developed to evaluate

the extent to which individuals report controlling “anger, anxiety and depressed mood” (Watson & Greer, 1983). Patients were interviewed in semi-structured clinical interviews and after that asked to describe their emotional reactions to specific statements. This resulted in the three subscales.

To establish criterion validity we examined relations between the emotional labor scales and emotional exhaustion scale from the Maslach Burnout Inventory (Schaufeli & Horn, 1995). Several studies report a correlation between emotional labor and emotional exhaustion (Diefendorff et al., 2005; Grandey, 2003). The assumption is that surface acting, deep acting and suppression show a positive relation with emotional exhaustion.

Discriminant validity is established by the presence of non-significant or low correlations with scales that are not expected to be associated with the subscales of the D-QEL. For us emotional consonance is not an emotion regulating process, so we do not expect a correlation between emotional consonance and surface acting, deep acting or suppression.

Statistic analysis. Confirmatory factor analyses conducted in AMOS 3.6 (Arbuckle, 1997) tested 1- and 4-factor models as in study 1 which generates a  $\chi^2$  goodness-of-fit statistic to test the extent to which the hypothesized model is consistent for the data. The same indices were used to provide information on the overall fit of the data to each model: the comparative fit index (CFI), the Bentler-Bonnet non-normed fit index (NNFI) and the root mean square error of approximation (RMSEA).

## Results

The 1-factor model had all items loaded on a single factor. Comparisons of fit statistics indicated the 4-factor solution provides a significantly better fit than the 1-factor model. The CFA of the 4-factor model show indices of .99 ( $\chi^2 = 68.84$ ,  $df = 59$ ,  $p = .18$ ,  $CFI = .99$ ,  $NNFI = .99$ ,  $RMSEA = .02$ ), which provides good support for this model (Bentler & Bennet, 1980). Table 3 presents factor loadings of the items of the D-QEL from the first and the second study. All items score high on their dimension.

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Insert Table 3 about here

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Validity. Table 1 shows that there are significantly positive correlations between the subscales of the CECS: anger, anxiety and depressed mood ( $p < .01$ ) and surface acting, deep acting and suppression (D-QEL), which suggests convergent validity. As expected there are no significant correlations between surface acting, deep acting and suppression with emotional consonance (discriminant validity). Emotional exhaustion shows a significant positive correlation with surface acting, deep acting and suppression (criterion validity)

### Discussion

These two studies report to what extent people have to regulate their emotions in order to display appropriate emotions expected on the job. For that purpose a new Dutch measuring instrument was introduced, so the purpose of the studies was to develop and validate a Dutch emotional labor scale (D-QEL). It provided evidence of the reliability and convergent, discriminant and criterion validity of the D-QEL. Four separate dimensions were measured. Various studies distinguished three separate dimensions of emotional labor, surface acting, deep acting and emotional consonance, or equivalents (Brotheridge & Grandey, 2002; Diefendorff et al., 2005; Kruml & Geddes, 2000). We found evidence for a separate fourth dimension: suppression (Briët, Näring, Brouwers, & van Droffelaar, 2005). Whereas surface acting constitutes the production of an expression, suppression refers to a completely different psychological process: the inhibition of an emotional expression.

Emotional consonance can clearly be distinguished from the other dimensions, but 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 to strain. Emotional consonance measures the absence of such effort and is apparently a useful extension of the nomological network or constructs related to emotional labor (Diefendorff et al., 2005). For this reason we added this factor to the D-QEL. There is no significant correlation between emotional consonance and surface acting, deep acting and

suppression, which demonstrates the discriminant validity. Emotional consonance has an inverse correlation with emotional exhaustion, and also with CECS scale "down", which suggests that an emotional balance has a positive impact on the employee's well-being.

Surface acting, deep acting and suppression are related to each other and correlate significantly with the scales of the CECS, which supports convergent validity.

Surface acting was strongly associated with higher scores of emotional exhaustion, as in other studies (Glomb & Tews, 2004). There is a positive correlation between deep acting and emotional exhaustion, which suggests that also deep acting requires an active effort to deal with the experience of emotions which is therefore thought to contribute to stress or strain. Suppression too is positively related to emotional exhaustion, as reported by others (Ybema & Smulders, 2002). These results suggest that emotional labor at work has a negative impact on people's health.

### Limitations

The focus of these two studies is clearly on "service jobs". That explains why we did not study in depth any other emotional labor processes like hiding positive emotions or the authentic expressions of fear or anger. We started the D-QEL with dimensions which had already been described in detail and validated in other studies.

By excluding some items we did not realize three items per concept, but by doing so we did improve the internal consistency of some scales, however, this caused the questionnaire to be rather short and not all internal consistencies can be qualified as good.

In the third place it can be noted that in the first study 73.7% of the participants were men and in the second 88% women. Research shows us that there is a difference in the degree of emotional labor in different occupational groups (Zammuner & Galli, 2005a). Why is not known, but it is clear that men and women differ in handling their emotions.

With these studies we cannot give any causal statements. People who are emotionally exhausted may indeed regulate their emotions at work more than people of

better health. These studies showed a positive relationship between surface acting, deep acting and suppression with emotional exhaustion, but we don't know which process might influence the employee's experiences of well-being.

Apart from these limitations the present study has the important implications that a Dutch emotional labor measuring instrument is available. Although emotional exhaustion is considered to be one of the symptoms of the burnout-syndrome, not much is known yet of the requirements of emotions on the job in burnout research. Burnout is a considerable problem for employed people (Diefendorff et al., 2005; Grandey, 2003) and research into emotional labor and its consequences may contribute to an understanding of it.

#### Future research.

We did not measure the deep acting of negatively valenced emotions such as anger and aggression. In some jobs, such emotions are also expressed (Fitness, 2000) and a scale to measure the faking of negative emotions has been developed by others (Glomb & Tews, 2004). For certain studies such a measure of the (non)expression of negative emotions in the workplace will have to be developed.

Some studies have given us an idea of the specific emotions that are suppressed or expressed. The most frequently suppressed emotion is apparently anger (Mann, 1999), the most commonly expressed emotions seem to be interest and enthusiasm, but these are notably very often faked (Glomb & Tews, 2004; Mann, 1999). Studies that assess emotional labor repeatedly during training and supervision of teachers or nurses might give us an understanding of how and whether people change the amount and type of emotional labor that they use. By studying such processes we will get a better understanding of what constitutes adequate professional behavior and how it develops. Future studies may also point out which levels of faking and suppression can be regarded as adequate or healthy and which levels are harmful.

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Table 2

Descriptive statistics study 2: item-total correlations, Cronbach's  $\alpha$  of the emotional labor scales (N=334)

	<u>M</u>	<u>SD</u>	Item total	Cronbach's $\alpha$ F	Item (code)
<u>Surface acting</u>				.79	
I put on a show at work	1.49	.62	.60		13 (ersa01)
I put on a "mask" in order to express the right emotions for my job	1.43	.60	.61		16 (ersa02)
I pretend to have the emotions I need to display for my job	1.42	.60	.54		6 (ersa03)
I put on an act in order to deal with 1.87 patients in an appropriate way	.81	.65			11 (ersa04)
I fake a good mood	1.81	.78	.52		10 (ersa05)
<u>Deep acting</u>				.81	
I work hard to feel the emotions that I need to show to others	1.35	.69	.60		17 (erda07)
I make an effort to actually feel the emotions I need to display toward others	1.62	.80	.70		19 (erda08)
I work at conjuring up the feelings I need to show to patients	1.71	.78	.68		14 (erda09)
<u>Emotional consonance</u>				.70	
I react to patients' emotions naturally and easily	3.55	.81	.54		1 (erec10)
I easily express positive emotions to patients as expected for my job	3.62	.74	.54		2 (erec11)
<u>Suppression</u>				.61	
I hide my anger about something someone has done	2.60	.91	.44		5 (ersup18)
I hide my disgust over something someone has done	2.26	.95	.47		9 (ersup19)
I hide my fear of a patient who appears threatening	2.17	1.09	.36		18 (ersup20)

Note: between brackets the SPSS code labels

Table 3

Factor loadings of the 4-factor confirmatory factor analysis with SPSS code labels

Items	Study 1	Study 2
Surface acting		
ERSA01	.67	.69
ERSA02	.80	.71
ERSA03	.73	.62
ERSA04	.70	.76
ERSA05	.64	.61
Deep acting		
ERDA06*	.62	-
ERDA07	.78	.69
ERDA08	.92	.80
ERDA09	.76	.82
Emotional consonance		
EREC10	.70	.85
EREC11	.57	.62
EREC12*	.58	-
Suppression		
ERSUP18	.90	.62
ERSUP19	.83	.68
ERSUP20**	-	.50

Note: Study 1  $N = 365$

Study 2  $N = 319$

\* items deleted in 2nd study

\*\* item added in 2nd study

Table 1

Descriptive statistics, correlations and Cronbach's  $\alpha$  for study 1 and 2

Variable	<u>M</u>	<u>SD</u>	1	2	3	4	5	6	7	8
STUDY 1										
1. Surface acting	9.50	3.28	(.83)							
2. Deep acting	7.68	3.31	.24**	(.85)						
3. Suppression	4.24	1.55	.20**	-.05	(.85)					
4. Emotional consonance	10.60	2.05	.26**	.16**	-.19**	(.63)				
STUDY 2										
1. Surface acting	8.01	2.55	(.79)							
2. Deep acting	4.68	1.93	.39**	(.81)						
3. Suppression	7.04	2.21	.17**	.17**	(.61)					
4. Emotional consonance	7.17	1.36	-.08	-.04	.11	(.70)				
5. CECS anger	14.87	3.65	.23**	.26**	.22**	-.09	(.81)			
6. CECS depressed	15.14	4.30	.26**	.22**	.19**	-.18**	.66**	(.88)		
7. CECS anxiety	14.67	4.03	.29**	.19**	.18**	-.05	.45**	.60**	(.88)	
8. Emotional Exhaustion	10.39	6.86	.45**	.29**	.12*	-.14*	.26**	.36**	.27**	(.88)

Note: Study 1  $N = 365$ , Study 2  $N = 334$ .

Cronbach's  $\alpha$  on the diagonal; CECS = Courtauld Emotional Control Scale

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