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Work-related and individual determinants of the three burnout dimensions

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Applying the Conservation of Resources (COR) theory as a framework, this study among Dutch nurses ($n = 156$) first tested whether work-related demands, resources and self-esteem were differentially associated with the three burnout dimensions (emotional exhaustion, personal accomplishment and depersonalization), respectively. In addition, the current study investigated the interrelationships between the burnout dimensions and the hypothesized moderating effect of self-esteem. As expected, emotional exhaustion was primarily associated with job demands (i.e. work overload) and—to a slightly lower extent—with resources such as social support and self-esteem. In contrast, but also according to the authors' predictions, depersonalization and personal accomplishment were not associated with job demands. Emotional exhaustion was, as predicted, an important correlate of depersonalization, whereas reduced personal accomplishment was negatively associated with self-esteem and with quality of work content, a resource. In line with earlier findings but contrary to some recent propositions, reduced personal accomplishment was positively associated with depersonalization. Finally, self-esteem did not moderate the relationships between the selected work factors and the burnout dimensions. The limitations of the study are discussed and directions for future research are proposed.

1. Introduction

'Burnout' was introduced during the mid-1970s by Herbert Freudenberger (1974). He used it as a metaphor to describe a phenomenon he observed among volunteers with whom he was working in an alternative care setting. Volunteers in this so-called Free Clinic showed symptoms of emotional depletion and a loss of motivation and commitment (Freudenberger, 1974, 1975). Since then the concept has not lost its popularity. Its importance is illustrated by the fact that in the Netherlands, for example, almost one in every three disability benefit recipients is assessed as work-disabled on mental grounds (Houtman, 1996). Only work incapacity because of musculoskeletal disorders has a similarly high prevalence.

Although several definitions have been developed, most authors describe burnout as a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment (Schaufeli, Maslach, and Marek, 1993). Maslach (1993) posits that empirical evidence provides more support for this multidimensional conception of burnout than it does for a single unitary one. She further states that a three-dimensional model has several

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advantages regarding interventions. Maslach, and Schaufeli (1993) conclude in this respect that the distinctiveness of the burnout concept from related concepts pertains—next to its process—to its multidimensionality. This three-dimensional model is, according to Maslach (1993), not at odds with the simpler unidimensional approach. ‘It rather both incorporates the single dimension (exhaustion) and extends it by adding two other dimensions: response to others (depersonalization) and response to self (personal accomplishment)’ (Maslach, 1993, p. 27).

Emotional exhaustion refers to feelings of being overextended and depleted of one’s emotional resources. Depersonalization refers to a negative, callous or excessively detached response to other people. Reduced personal accomplishment refers to a decline in one’s feeling of competence and successful achievement in one’s work (Maslach, 1993). Accordingly, burnout is an individual stress experience that is embedded in the context of complex social relationships at work. In addition to the draining of one’s energy, burnout involves the negative evaluation of oneself (diminished personal accomplishment) and of others (depersonalization).

It is assumed that burnout develops as a reaction to particular job stressors that occur among human service workers (Cordes, and Dougherty, 1993, Schaufeli, and Enzmann, 1998). Most notably, burnout is positively associated with work overload, lack of social support from colleagues and supervisors, and role problems. The three-dimensional conceptualization of burnout implies that different job stressors might be related to different dimensions. The Conservation of Resources (COR) theory provides a framework that predicts such particular differential relationships. According to the COR theory, individuals strive to obtain things that they value, so-called ‘resources’. Examples of such resources at work are job security, money, support and a successful career. Stress occurs (1) when resources are threatened by ‘demands’ (e.g. work overload or role stress); (2) when resources are lost (e.g. unemployment); and (3) when levels of return do not match one’s investments of resources (Hobfoll, and Freedy, 1993). COR theory also states that loss of resources is more stressful than lack of gains (the primacy of loss principle). Hobfoll, and Freedy (1993) applied COR theory to burnout and assumed that job demands threaten the individual’s resources and therefore cause strain that eventually leads to physical and emotional exhaustion. On the other hand, they assume that resources help to overcome the need for defensive coping and enhance self-efficacy that counteracts burnout. In a somewhat similar vein, Leiter (1993) proposed a process model of burnout that assumes that job demands and resources are differently related to the three burnout dimensions. More specifically, Leiter (1991, 1993) found that job demands (e.g. work overload and interpersonal conflicts) were primarily related to emotional exhaustion, whereas resources (e.g. supervisor and co-worker support and job autonomy) were more strongly related to depersonalization and reduced personal accomplishment.

In a recent meta-analytic examination that included over 60 studies, carried out mainly among human service providers, Lee, and Ashforth (1996) confirmed that the three dimensions of burnout are differentially related to job demands and resources in ways that would be predicted by COR theory. For instance, five out of eight job demands were strongly ($r_c \geq .50$) associated with *emotional exhaustion* (r_c refers to individually corrected weighted mean correlations). In contrast, resources such as ‘support’ (e.g. social support and community bond), ‘job enhancement opportunities’ (e.g. participation and skill utilization) and ‘reinforcement contingencies’ (e.g. unmet expectations and contingent rewards) were less strongly related to emotional exhaustion ($r_c \geq .30$). *Depersonalization* was less frequently and less strongly correlated with both types of variable. Eight out of 26 correlations with job demands and resources were larger than or equal to .30. Only two job

demands were strongly correlated with depersonalization (i.e. role stress and stressful events) ($r_c \geq .50$). The relationships with the other demands such as workload and work pressure were clearly weaker compared with the corresponding correlates of emotional exhaustion. To their surprise Lee, and Ashforth (1996) found only weak associations between *personal accomplishment* and most resource variables: only 3 out of 26 correlations (exclusively resources) proved to be significant and substantial ($r_c \geq .30$).

Taken together, these results confirm that emotional exhaustion is strongly associated with job demand variables, whereas depersonalization and personal accomplishment are—albeit less convincing—associated with resources. The latter is particularly true for personal accomplishment. Lee, and Ashforth (1996, p. 128) conclude: ‘The patterns of associations between the demand and resource correlates and the three burnout dimensions appear to be consistent with the conservation of resources explanation of burnout (Hobfoll, and Freedy, 1993, Leiter, 1993)’.

1.1. *Self-esteem and burnout*

It has been suggested that burnout is associated with certain dispositional attributes. An attribute that is conceived to be both theoretically and empirically plausible is ‘self-esteem’ (Shirom, 1989, Rosse, Boss, Johnson, and Crown, 1991). Self-esteem is generally defined as a global self-evaluation. It expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes the self to be capable, significant, successful and worthy. Self-esteem is assumed to comprise two components, a belief in one’s ability and a belief in one’s fundamental worth (Locke, McClear, and Knight, 1996). Rosse, *et al.* (1991) posit that individuals with low self-esteem tend to be less effective in interpersonal relationships. They may be predisposed both to depersonalize patients and co-workers and to experience feelings of incompetence in their relationships with others. They may also have fewer resources to help them to cope with these feelings, as well as with other stressors that produce burnout. Furthermore, individuals with low self-esteem tend to be extremely dependent on others for validation, making them particularly vulnerable in the emotionally charged environments that are characteristic of burnout. Hobfoll, and Freedy (1993) further suggest that individuals with high self-esteem (a resource) are expected to be ‘less shaken’ by job stressors and accompanying consequences. Also, Maslach (1993) stresses the importance of self-esteem in this context. She points out that the occurrence of burnout involves a process of self-evaluation and self-conceptualization. Summarizing, these propositions suggest that individuals with low self-esteem are emotionally more vulnerable and interact less adequately with other people (clients or colleagues) in their work. People with low self-esteem are therefore probably more susceptible to burnout and in particular to feelings of reduced personal accomplishment. To a certain extent, these propositions line up with some findings that suggest that high self-esteem is positively and causally related to performance (Brockner, 1988). In general, however, empirical evidence regarding this causal relationship is still at least equivocal and has raised more questions than it has answered (Brockner, 1988).

Self-esteem might fit into the burnout process in two different ways. First, it may be conceived as a personality trait. In that case it may act either as a direct antecedent or as a moderator of the relationships between work characteristics and burnout. According to the first point of view, employees with low self-esteem may be more likely to develop burnout, regardless of other factors. The second point of view suggests that those with initially high self-esteem will ‘hang in there’, while those with poor self-esteem will respond to stressors in a self-defeating way. Second, the individual’s level of self-esteem may be conceived as a

transient state. In that case, poor self-esteem is typically thought of as a reaction to external stimuli, that—in its turn—might foster burnout (Rosse, *et al.*, 1991).

There exists some evidence that self-esteem is negatively related to all three burnout dimensions. In their study among hospital employees Rosse, *et al.* (1991) reported significant correlations with emotional exhaustion ($r = -.43$), depersonalization ($r = -.31$), and reduced personal accomplishment ($r = -.42$). Similar results were found by Golembiewski, and Kim (1989), who, in addition, showed that self-esteem acts both as an antecedent and as an effect of burnout. However, they did not find interaction effects of self-esteem with work characteristics or with burnout.

1.2. Research questions

This study first aims to extend Lee, and Ashforth's (1996) findings on the specific determinants of burnout. They suggested that certain variables, such as dispositional attributes, which were not examined in their study, might provide an explanation for the fact that work-related resources were only weakly related to personal accomplishment. A second limitation of their study was that it only contained bivariate relationships.

Rosse, *et al.* (1991) investigated the relationship between self-esteem and burnout using multiple regression analyses. Unfortunately, they used a single composite score to measure burnout and did not differentiate between the three burnout dimensions. In addition, they combined each time only one single work characteristic with self-esteem in the subsequent regression analyses in order to determine the size of the interactions. Their analysis thus did not allow for conclusions regarding the relative strengths of the relationships between self-esteem and the four selected work characteristics for each burnout dimension.

The current study goes beyond those of Lee, and Ashforth (1996) and Rosse, *et al.* (1991) by including a particular dispositional attribute (i.e. self-esteem) and by testing a complex pattern of relationships between job demands, resources, self-esteem and burnout dimensions using structural equations modelling with LISREL (Jöreskog, and Sörbom, 1993a, b), respectively. Several aspects of the four work dimensions that Lee and Ashforth (1996) differentiated are investigated for the purposes of this study. The work resources that are selected in the present study are: 'quality of work content'—representing job enhancement opportunities such as autonomy, skill variety and feedback; 'supervisor and co-worker support'—representing support; and 'unmet expectations regarding ones career'—a reinforcement contingency variable. In addition the authors selected the work-related demand 'work overload' and the dispositional attribute (resource) 'self-esteem'. Finally, the three burnout dimensions 'emotional exhaustion', 'depersonalization' and 'personal accomplishment' were included in this study.

To summarize: the following hypotheses are based on COR theory (Hobfoll, and Freedy, 1993), the studies of Leiter, and Maslach (1988) and Cordes, and Dougherty (1993) and the previously discussed studies (Leiter, 1991, 1993, Rosse, *et al.*, 1991, Lee, and Ashforth, 1996). The first three hypotheses predict particular relationships between the three dimensions of burnout and job demands and resources:

- (1) Emotional exhaustion is positively related to job demands (i.e. work overload), whereas depersonalization and reduced personal accomplishment are not.
- (2) Depersonalization and reduced personal accomplishment are more strongly negatively related with work resources (i.e. good quality of work content, supervisor and co-worker support, and career expectations) than emotional exhaustion.

Table 1. Expected positive relationships between burnout dimensions and determinants.

Emotional exhaustion	Work overload (work demand) Poor quality of job content (work resource) Lack of social support (work resource) Unmet career expectations (work resource) Poor self-esteem (individual resource)
Depersonalization	Poor quality of job content (work resource) Lack of social support (work resource) Unmet career expectations (work resource) Poor self-esteem (individual resource) Emotional exhaustion
Personal accomplishment	Quality of job content (work resource) Social support (work resource) No unmet career expectations (work resource) Self-esteem (resource) Lack of depersonalization

Relationships that are supported by both research and theory are printed in bold. The other relationships are ambiguous in theory or research findings.

The next two hypotheses pertain to the interrelationships between the burnout dimensions :

- (3) Emotional exhaustion is positively associated with depersonalization.
- (4) Depersonalization is positively associated with reduced personal accomplishment.

Both final hypotheses are concerned with self-esteem:

- (5) Self-esteem is negatively associated with all three burnout dimensions (i.e. emotional exhaustion, depersonalization, and reduced personal accomplishment), but in particular with reduced personal accomplishment.
- (6) Self-esteem moderates the relationship between work factors and burnout dimensions: compared to employees with high self-esteem, those with poor self-esteem experience higher burnout levels when work demands are high and resources are lacking.

The hypothesized relationships are summarized in table 1.

First, preliminary correlational analysis was carried out to investigate to what extent the relationships, in particular those in bold face (table 1), corresponded with the data. Next, the proposed (and eventually modified) pattern of relationships was tested integrally with the help of LISREL-8. Finally, hierarchical multiple regression analyses were performed to find out whether or not self-esteem acts as a moderator between work demands and resources on the one hand and the three burnout dimensions on the other.

2. Method

2.1. Procedure and sample

Data were gathered from 176 nurses employed at a general hospital in the Netherlands. A self-report questionnaire was administered to all nurses. A total of 156 usable questionnaires was returned, which represents a 89% response rate. The majority (91%) of the respondents was female, and the mean age was 34 years (SD = 8.71 years). The mean work experience in this sample was 14 years and 44% of the respondents were employed full time.

Table 2. Correlations between work characteristics, self-esteem and the three burnout dimensions.

Variables	M	SD	α	Correlations														
				1	2	3	4	5	6	7	8	9						
1. Quality of job content	3.77	.42	.69	—														
2. Work overload	3.16	.51	.86	.07	—													
3. Support of co-workers	3.26	.31	.65	.25**	-.13	—												
4. Support of supervisor	3.24	.41	.75	.48**	-.23**	.41**	—											
5. Unmet career expectations	3.26	.64	.71	-.20*	.11	-.02	-.38**	—										
6. Self-esteem	3.12	.26	.75	.03	-.06	.05	.06	-.03	—									
7. Emotional exhaustion	2.65	.85	.86	-.10	.45**	-.31**	-.33**	.14	-.29**	—								
8. Depersonalization	2.14	.61	.57	-.12	.07	-.22*	-.22*	.15	-.22*	.40**	—							
9. Personal accomplishment (reversed)	2.99	.49	.71	-.20*	-.08	-.10	-.16	.15	-.26**	.19*	.44**	—						

N varies between 127 and 153 due to pairwise deletion of missing values.

* $p \leq .05$, ** $p \leq .01$.

2.2. Measures

- (1) *Quality of job content* (resource): The items to measure this work resource variable were derived from Job Characteristics Theory (Hackman, and Lawler, 1971, Lawler, and Hall, 1971, Hackman, and Oldham, 1980). Quality of job content refers to those aspects in the work environment that are considered to be challenging and worthwhile: (1) skill variety; (2) skill discretion; (3) task identity; (4) autonomy; (5) social contacts; (6) performance feedback; (7) task significance; (8) opportunities to learn; (9) opportunities to be creative; and (10) opportunities to do things that one performs best. Respondents were asked to indicate on a 5-point Likert scale to what extent they agreed with statements such as: 'My job provides me the opportunity to be creative'; 'My job provides me the opportunity to utilize a variety of skills' and 'My job permits me to decide how to go about doing my job'. A principal component analysis on these 10 items revealed one component with an eigenvalue of 2.65.
- (2) *Work overload* (demand) was measured by an 8-item questionnaire with a 5-point response scale ranging from 1 'never' to 5 'always'. This scale was developed by de Jonge, Landeweerd, and Nijhuis (1993) and consists of a relatively wide range of quantitative and qualitative demanding aspects in the work situation, such as working under time pressure, working hard and strenuous work.
- (3) *Workplace social support from supervisor and co-workers* (resources) were measured with two, 5-item scales that tap perceived social support from co-workers and from supervisors, respectively. The scales were derived from a Dutch questionnaire on organizational stress 'Vragenlijst Organisatie Stress-Doetinchem' (Bergers, Marc-elissen, and De Wolff, 1986). The items were scored on a 4-point response scale format, ranging from 1 'never' to 4 'always'.
- (4) *Unmet career expectations* (a resource variable) was measured by a 5-item questionnaire with a 5-point response scale, ranging from 1 'totally disagree' to 5 'totally agree'. This instrument was derived from an existing scale called 'unmet career needs' (Buunk, and Janssen, 1992, Janssen, 1992). The elements of this scale were based on career needs noted by Schein (1978) and Hall (1976). Five out of the eight items of this scale were selected: unmet expectations regarding: (1) salary; (2) responsibility; (3) opportunities to develop knowledge and skills; (4) job security; and (5) position. For reasons of item overlap the three remaining items (i.e. unmet expectations regarding: support, self-determination and creativity) were not included; similar items are included in other resource measures (i.e. quality of job content and social support).
- (5) *Burnout* was measured with the Dutch version (Schaufeli, and Van Dierendonck, 1993, 1994) of the Maslach Burnout Inventory (Maslach, and Jackson, 1986). The MBI-NL consists of three scales: emotional exhaustion (9 items), depersonalization (5 items), and personal accomplishment (8 items). The items are scored on a 7-point rating scale ranging from 'never' (0) to 'daily' (6).
- (6) *Self-esteem* was measured by means of a 5-point, 8-item Likert scale. The positive and negative self-esteem items developed by Warr, and Jackson (1983) were summed to form an index of self-esteem. For example: 'I'm a useful person to have around'; 'I feel I can't do anything right'; 'When I do something I always do it well'.

Table 2 displays the internal consistencies (Cronbach's α) of the scales used in the present study. With three exceptions (i.e. quality of work content, co-worker support and depersonalization), all scales meet the criterion of .70 (Nunnally, 1987). Two of these scales

are slightly below the criterion, whereas a relatively poor internal consistency of depersonalization is more often observed, probably because of the small number of items included in the scale (Schaufeli, and Van Dierendonck, 1993).

3. Results

3.1. Relationships between demands, resources and the three burnout dimensions

Table 2 shows that emotional exhaustion is significantly and most strongly associated with work overload (work demand) (Hypothesis 1) but only slightly less associated with two resources (social support and self-esteem) (Hypothesis 2).

Depersonalization is significantly and moderately strongly associated with both social support (Hypothesis 2) and with self-esteem, but not with work overload (Hypothesis 1). Reduced personal accomplishment shows a significant negative relationship with two resources (quality of the job content and self-esteem) (Hypothesis 2) and no relationship with work overload (Hypothesis 1). Depersonalization and reduced personal accomplishment are thus not more strongly related with work resources than emotional exhaustion (Hypothesis 2); on the contrary, emotional exhaustion even shows somewhat stronger relationships with both social support and self-esteem.

Regarding the interrelationships between the burnout dimensions, table 2 shows that depersonalization is significantly positively related with emotional exhaustion (Hypothesis 3) and with lack of personal accomplishment (Hypothesis 4). Finally, self-esteem is significantly and negatively related with all three burnout dimensions (Hypothesis 5), but the expected particularly strong relationship between self-esteem and personal accomplishment was not detected.

Inspection of table 2 reveals that some expected relationships (table 1) were not observed. Unmet career expectations were not related to any burnout dimension. Quality of work content was only significantly and negatively related to lack of personal accomplishment. Finally, neither measure of social support was related to lack of personal accomplishment. These unexpectedly lacking associations were not included in the subsequent LISREL analysis (modified version).

3.2. Integral test of the hypothesized relationships

A more comprehensive test of the hypothesized relationships can be accomplished with covariance structure analysis using the LISREL computer program (Jöreskog, and Sörbom, 1993a, b). As argued above a slightly modified model was tested that did not include non-significant associations. In addition, the moderately strong association between emotional exhaustion and social support—which is consistent with Lee, and Ashforth (1996)—is included in the present model. The pattern of relationships that is eventually investigated in the current study is illustrated in figure 1, together with the LISREL results.

Regarding the LISREL model specifications, it was further assumed that latent and observed variables are identical; hence, a path analysis is performed. In addition, the error variances of the endogenous variables themselves and the error variance regarding the relationship between emotional exhaustion and personal accomplishment were set free. This decision was made because the pattern is not exhaustive: the endogenous variables thus might in part be predicted by (related) variables that are not taken into account (MacCallum, Roznowski, Mar, and Reith, 1994). Jöreskog, and Sörbom (1993a, b) suggest several fit indices to investigate the overall fit of the model, namely the χ^2 goodness-of-fit index, the LISREL Adjusted Goodness of Fit Index (AGFI), the Root Mean Square Error of Approximation (RMSEA: Browne, and Cudeck, 1993) and the Non-Normed Fit Index

Table 3. Fit measures of the hypothesized model using co-worker and supervisor support as a support measure ($n = 127$).

Fit measures	df	Co-worker	Supervisor
χ^2 (null model)	21	128.49**	151.95**
χ^2	5	3.96 (ns) ^a	3.76 (ns) ^b
AGFI		.95	.95
NNFI		1.04	1.04
RMSEA		.00	.00

** $p \leq .01$, ^a $p = .55$, ^b $p = .59$

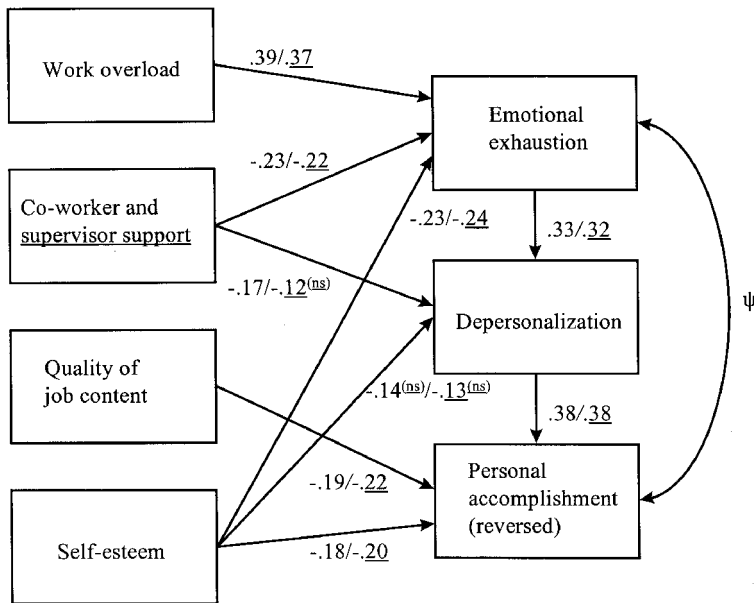


Figure 1. The strengths of the hypothesized relationships (gammas and betas), calculated with help of LISREL-8, using co-worker and supervisor support as a support measure ($n = 127$).

(NNFI: Bentler, and Bonnet, 1980). With regard to specific relationships LISREL provides, among others, t -values indicating the significance of the specified relationships and so-called modification indices. The latter indices provide information about what specific relationships should be added in order to improve the fit between the hypothesized model and the empirical data (Hayduk, 1987). The results of the LISREL analyses are shown in table 3 and figure 1. It was decided to test the model twice: in the first model supervisor support was included, whereas in the second model support from co-workers was included. This additional step was carried out because both support measures are theoretically and empirically associated, but on the other hand they refer to different subjects and in part to different social processes (Buunk, 1990).

The results presented in table 3 show that the hypothesized pattern fits very well, both when support from co-workers and when supervisor support is included in the model.

The χ^2 goodness-of-fit index is small and non-significant for both models. The AGFI is equal to .95, RMSEA is zero and the NNFI is somewhat larger than 1 (1.04). Generally, values for NNFI larger than .90 are considered to be indicative of a good fit (Bentler, and

Bonnet, 1980). In addition, most relationships (figure 1) are significant and no modifications were suggested by the LISREL program. The relationships between depersonalization, self-esteem and supervisor support were not significant, but omission of any of these relationships did not increase the model fit any further; rather, it decreased the model fit.

3.3. Interactions

To investigate whether self-esteem moderates the relationships between the four work characteristics and the three burnout dimensions, three hierarchical multiple regression analyses were carried out. In step one, work characteristics (i.e. quality of work content, work overload, social support, unmet career needs) and self-esteem were entered into the equation. In the second step all product variables (interactions) were added to the model and R^2 change was calculated and tested (F change). In order to minimize collinearity between the work characteristics and product variables centration was applied before the regression analyses were carried out (Kleinbaum, Kupper, and Muller, 1988).

The results of the regression analyses, however, showed that the models that included the centred product variables did not predict the three burnout dimensions significantly better than the models without interactions. All R^2 changes were non-significant: $\Delta R^2 = .044$, $p = .18$ (ns) for emotional exhaustion; $\Delta R^2 = .065$, $p = .14$ (ns) for depersonalization and $\Delta R^2 = .062$, $p = .13$ (ns) for personal accomplishment. Thus, since no significant interaction effects were observed, self-esteem did not act as a moderator between work characteristics and burnout (Hypothesis 6).

4. Conclusion and discussion

4.1. Major findings

The findings of this study suggest that as expected (Hypothesis 1) and in line with the COR framework (Hobfoll, and Freedy, 1993, Leiter, 1993, Lee, and Ashforth, 1996), emotional exhaustion is primarily and strongly ($r = .45$, $\beta = .39/.37$) associated with the demand 'work overload'. Employees are clearly affected by this 'demand', resulting in emotional depletion. Social support (both from co-workers and supervisor) as a resource is negatively associated with emotional exhaustion. The more one perceives the availability of support coming from supervisor and/or co-workers the less one experiences feelings of emotional exhaustion. This relationship is somewhat weaker than the aforementioned relationship. These results regarding the relationship between support and emotional exhaustion agree with the results of Lee, and Ashforth (1996). Furthermore, the present authors found—in line with Hypothesis 5—that emotional exhaustion was significantly (negatively) associated with self-esteem. This suggests that employees with high self-esteem experience relatively low levels of emotional exhaustion compared to individuals with poor self-esteem. This finding is in line with the results reported by Rosse, *et al.* (1991). In the current study, however, it remains unclear whether self-esteem is a cause or a consequence: both causal interpretations might be valid. Regarding burnout as a process, it is plausible that high self-esteem prevents people somewhat from becoming exhausted. Individuals with high self-esteem tend to perceive themselves as more competent and more in control of life and are therefore likely to experience less negative emotions compared with individuals with poor self-esteem. However, on the other hand, a gradual long-term increase of stressful conditions accompanied by feelings of burnout may eventually also affect one's self-esteem in a negative way (Locke, *et al.*, 1996). This reversed relationship was reported in the study of Rosse, *et al.* (1991) as well.

Particularly interesting is the finding that depersonalization as well as personal accomplishment were not associated with the demand 'work overload', which agrees with Hypothesis 1. This result suggests that the burnout process evolves differently as far as the three burnout dimensions are concerned. As assumed in Hypothesis 2, depersonalization seems to be associated with the resources 'social support' and 'self-esteem' (table 2). The LISREL results, however, suggest that the direct relationship between depersonalization and supervisor support, in contrast with Lee, and Ashforth's (1996) findings and with Hypothesis 2, is quite weak, even not significant. Part of the relationship between supervisor support and depersonalization seems to act indirectly, through its relationship with emotional exhaustion. A similar conclusion can be drawn with respect to self-esteem (Hypothesis 4), and to a limited extent also to support from co-workers. In this study and in agreement with Hypothesis 3, emotional exhaustion seems to be the most important correlate of depersonalization.

Personal accomplishment is associated with self-esteem, as predicted by Hypothesis 5. Furthermore, according to the LISREL analyses and in agreement with Hypothesis 2, personal accomplishment is also related to the work resource 'quality of job content'. A high quality job content implies that one experiences high levels of autonomy, feedback, variety, and so on. These elements foster the opportunities to develop new skills, to perform adequately, to do relevant work and to relate one's efforts to one's performances. Although the cause and effect issue can not be resolved in this study, challenging jobs are intrinsically rewarding and growth-enhancing and they seem to enhance feelings of mastery (Hackman, and Oldham, 1980, Janssen, Nijhuis, Peeters, and De Jonge, 1996) and in doing so they might enhance feelings of personal accomplishment. A high level of self-esteem will probably be a good starting point for a positive self-evaluation, also as far as one's job is concerned (personal accomplishment). Individuals with high levels of self-esteem will in general tend to attribute positive outcomes to intrinsic factors, and negative outcomes to external factors. Their self-evaluation is therefore likely to be somewhat positively biased. Individuals with poor self-esteem will engage in the opposite (Locke, *et al.*, 1996).

Regarding the interrelations between the burnout dimensions, the correlations and the LISREL beta (β) coefficients seem to confirm to a certain extent the Leiter, and Maslach (1988) model and the propositions that Cordes, and Dougherty (1993) stated: emotional exhaustion seems to be primarily related to depersonalization (Hypothesis 3) and depersonalization is primarily related to personal accomplishment (Hypothesis 4). The relationship between emotional exhaustion and personal accomplishment is much weaker. These findings, however, are not quite in line with the recent findings of Lee, and Ashforth (1996) and with the predictions made by Leiter (1993). Thus, one might speculate that there is no strict order in which the three burnout dimensions affect each other. It might depend on the specific impact that different contingencies or a mix of these contingencies (such as work characteristics) have upon the burnout dimensions. This might differ between situations or among certain categories of employees. In order to gain more insight into this topic additional theorizing and longitudinal research is needed.

No moderating effects of self-esteem on the three burnout dimensions were found, as assumed by Hypothesis 6. This negative result suggests that, although individuals with high self-esteem are less sensitive to burnout compared to those with low levels of self-esteem regardless of the level of job stress they encounter (direct effect), self-esteem does not seem to act as a buffer between stressors and burnout. These findings are also in line with the results reported by Rosse, *et al.* (1991). However, the relative small sample size together with the (conservative) multivariate test that was applied might have increased the risk of underestimating this effect.

4.2. Limitations

Finally it has to be recognized that this study had some limitations. It was a cross-sectional study, meaning that no firm conclusions regarding causation can be made. A second weakness is that all results were based on self-report measures. In addition, the sample consisted mainly of women working in one specific hospital. Thus, one has to be careful with regard to generalization of the results. Finally, self-esteem was measured by a global, context-free measure. Perhaps a more specific measure (i.e. 'work-related self-esteem') as employed by Rosse, *et al.* (1991) would have resulted in higher correlations. None the less the authors believe that their findings are noteworthy, since they are consistent with other recent studies that all point in a similar direction, namely that the dimensions of burnout are differentially related to job demands and resources, respectively.

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