

Perceived Inequity: Does It Explain Burnout Among Medical Specialists?¹

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This study investigated, among medical specialists ($N = 2,400$), the association between perceived inequity in relationships at work (patients, colleagues, organization) and burnout, and the moderating role of communal orientation. Intrapersonal inequity, involving an internal standard of reference, and interpersonal inequity, taking colleagues as the standard of reference, were assessed. The adjusted response rate was 63%. Intrapersonal inequity affected all burnout dimensions: emotional exhaustion in all relationships at work, depersonalization in the relationship with patients, and reduced personal accomplishment in relationships with colleagues and the organization. Intrapersonal inequity explained more variance in burnout than did interpersonal inequity. Communal orientation did not moderate these associations. Hence, medical specialists are more vulnerable to burnout if they perceive their relationships at work to be inequitable, regardless of their tendency to help others. Organizations might, therefore, prevent burnout by creating a working environment that is supportive and appreciative.

Burnout is a metaphor that describes a long-term response to job-related stress among individuals who do “people work,” such as police work, social work, teaching, and health care. The most frequently used definition comes from

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Maslach and Jackson (1986), who described burnout as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment. *Emotional exhaustion* refers to depletion of emotional resources; the individual feels tired and emotionally drained. It is considered to be the core symptom of burnout (Schaufeli & Enzmann, 1998). *Depersonalization* refers to a negative, cynical attitude towards one's clients. Original feelings of compassion and empathy give way to an excessively detached attitude. *Reduced personal accomplishment* refers to a tendency to evaluate negatively the quality of one's work with clients.

The intrinsic stresses associated with medical practice are well documented and include time urgency, a continuous need to develop new skills and practice routines, concerns about malpractice, dealing with uncertainty and the limits of medical knowledge, as well as working intensively with people in distress (e.g., Arnetz, 1997; McCue, 1982). These conditions may cause some physicians to thrive because they are burnished by exposure to stress. Others, however, may begin to "burn out" (Anonymous, 1994). In the U.S. Physician Worklife Study, the prevalence of burnout was 22% (Williams et al., 1999). The number of Dutch physicians who suffer from burnout is expanding as a result of increasing stress. Disability insurance companies for physicians recently felt obliged to raise premiums by 20 to 30% as a result of the increase of burnout and other stress-related complaints (Ankoné, 1999).

Equity Theory

To further our understanding of burnout, the present study addresses the nature of the relationships medical specialists have at work: with patients, colleagues, and the organization as such. Equity theory states that people pursue reciprocity in their relationships—what they invest and gain from a relationship should be balanced (Adams, 1963; Walster, Walster, & Berscheid, 1978). Implicitly, partners in a relationship thus assume that when an investment is made, they will gain something in return. At work, perceived investments may consist of education, seniority, time, attention, skills, and efforts. Perceived gains may include status, appreciation, and pay (Adams, 1965; Van Dierendonck, Schaufeli, & Buunk, 1996). Equity is at stake when one feels that the investments exceed the gains, resulting in feelings of deprivation or exploitation. Equity is also at stake when one's gains are higher than one's investments and when one feels advantaged or overpaid (Buunk & Hoorens, 1992; Van Dierendonck et al., 1996).

Equity theory postulates that the experience of inequity will lead to emotional discomfort (Adams, 1963, 1965; Walster et al., 1978). In the work setting, persistent feelings of inequity may lead to burnout as a manifestation thereof. Perceived inequity was found to be associated with burnout in general practitioners in both a cross-sectional study (Van Dierendonck et al., 1996) and a longitudinal study (Bakker, Schaufeli, Sixma, Bosveld, & Van Dierendonck, 2000).

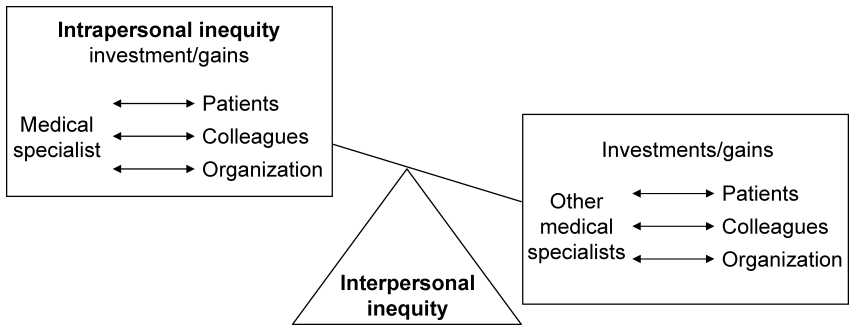


Figure 1. Graphic representation of intrapersonal inequity versus interpersonal inequity.

Intrapersonal Versus Interpersonal Inequity

The perception of inequity is the result of a comparison process. Critical to the outcome of this process is the standard against which the individual makes the comparison of gains and investments. According to Pritchard (1969), people use their own internal standard to determine the fairness of their investment/gains ratio in a relationship. This internal standard is based on past experience in comparable relationships and the person's perception of the value of his investments. Inequity thus results from a discrepancy between one's internal standard on the one hand and one's own investments and gains in a relationship on the other hand (Schaufeli, Van Dierendonck, & Van Gorp, 1996). We will refer to the outcome of this process as perceived *intrapersonal inequity* (Figure 1).

Although most burnout research has examined intrapersonal inequity, in the original formulation of equity theory (Adams, 1963, 1965) the standard of reference is usually a person or group that is comparable on a number of attributes and has similar relationships with a third party; for example, two specialists being paid by the same organization. Hence, the relationships others are perceived to have are used as the standard of reference to determine the equity of one's own relationships. Adams (1963, p. 424) provided this example: "A bank clerk may determine whether her inputs and gains are in balance by comparing them with the relationship between inputs and gains of other female clerks in her section" (p. 424). Thus, comparison with one's colleagues is a major way of evaluating one's equity considerations pertaining to relationships at work. We refer to the outcome of this latter process as perceived *interpersonal inequity* (Figure 1).

Perceptions of Inequity Among Medical Specialists

Medical specialists may perceive intrapersonal inequity in their relationships with patients, colleagues, and the organization for several reasons. The

relationship between doctors and patients is inequitable by its very nature. The doctor is supposed to provide care, whereas the patient is supposed to receive it. Yet, medical specialists expect the patient's health to improve and the patient to cooperate in such a way that improvement is optimal. Also, respect and gratitude are usually received (Van Dierendonck et al., 1996). These "gains," however, are not always forthcoming. A medical specialist may encounter patients who are anxious, uncomfortable, and unable to express appreciation (McCue, 1982). In addition, societal changes have resulted in a reduced status of doctors and an increased chance of indictments. As a result, the specialist may feel that he continuously invests more in the relationship with his patients than he gains in return.

Although medical specialists' work is to a large extent individual work, they may expect to receive some support from their colleagues in return for their investments; for example, flexibility in taking over on-call duties, or advice and emotional support when dealing with difficult patients. Specialists without such support may be especially vulnerable to burnout. Van Dierendonck, Schaufeli, and Sixma (1994) found that general practitioners who received the least support from their colleagues experienced the most burnout. Also, Kop, Euwema, and Schaufeli (1999) found among police officers that a lack of reciprocity in relationships with colleagues was associated with burnout.

There is increasing evidence that perceived inequity in the relation with the organization can also contribute to burnout (Geurts, Schaufeli, & de Jonge, 1998; Kop et al., 1999; Schaufeli et al., 1996; Van Dierendonck, Schaufeli, & Buunk, 1998; Van Horn, Schaufeli, & Enzmann, 1999). In return for his investments, the medical specialist may expect from his organization a reasonable workload, appreciation, career advancement, financial compensation, and sufficient clerical assistance. If these rewards are not provided, the specialist may develop a negative attitude toward the organization, ultimately leading to burnout.

For the perception of interpersonal inequity, medical specialists may compare the equitability of the aforementioned work relationships with the equitability of similar relationships held by colleagues. Thus, interpersonal inequity comes into play when a medical specialist perceives his or her own relationships with patients, coworkers, or the organization to be more unequal than similar relations held by colleagues. In the scant literature on the relation between inequity and burnout, the issue about which standard of reference people use to compare their ratio of investments and gains was raised by Van Dierendonck et al. (1996), but has not been investigated empirically. Hence, the question remains as to which type of inequity is most important to explain burnout.

Communal Orientation

For a better understanding of the association between equity and burnout, it is important to also consider differences between people in the degree to which they

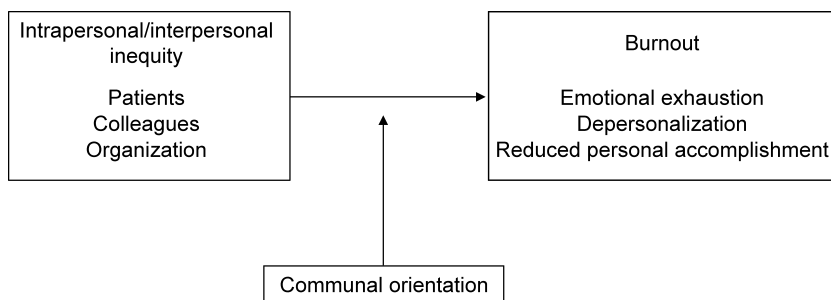


Figure 2. Hypothesized relationship between inequity, burnout, and communal orientation.

make comparisons and are affected by perceived inequity. Equity sensitivity, for example, is a trait that characterizes how individuals react to situations perceived to be equitable or inequitable (O'Neill & Mone, 1998). Two conceptually related traits are *exchange orientation*, the disposition to be strongly oriented toward equity, and *communal orientation*, the tendency to respond to the needs of others (Buunk & Hoorens, 1992). Communal orientation is a trait that is particularly relevant to helping relationships. Individuals characterized by a high communal orientation give out of concern for the welfare of others. Hence, it may be assumed that communal orientation is important for healthcare professionals and may lead to decreased sensitivity for inequity. Van Yperen, Buunk, and Schaufeli (1992) found that for nurses high in communal orientation, an unbalanced relationship with their patients hardly mattered. However, for nurses low in communal orientation, perceived inequity was clearly related to burnout. Van Yperen (1996) replicated this finding in another sample of nurses. It is hypothesized that a similar moderating role of communal orientation will also be found in medical specialists. The assumed relationships between inequity, burnout, and communal orientation are illustrated in Figure 2.

The aim of this investigation is to assess whether equity theory can improve our understanding of burnout among medical specialists. The following research questions are pursued:

Research Question 1. Is perceived inequity among medical specialists associated with burnout?

Research Question 2. Which standard of reference is most relevant for burnout—an internal standard (i.e., intrapersonal inequity) or a comparison with colleagues (i.e., interpersonal inequity)?

Research Question 3. Do specialists with a high degree of communal orientation show a weaker association between equity and

burnout when compared to specialists having a relatively lower degree of communal orientation?

Method

Procedure

Data were collected by postal questionnaire. A letter supplying information on the study was attached to the questionnaire. The senior project leader and the chairman of the Dutch Order of Medical Specialists signed the letter, indicating their support of the study. Specialists were invited to return the questionnaire within 2 weeks, using a pre-stamped envelope. Reminders were sent 4 weeks and 8 weeks after the initial mailing. One month after sending the last reminder, all nonresponders received a short questionnaire asking for their gender, age, specialty, degree of work stress, and satisfaction (see the Instruments section) in order to investigate any differences between responders and nonresponders.

Sample

A random sample of 2,400 specialists was drawn from the total population of registered Dutch Medical Specialists ($N = 14,540$). Specialists were excluded when they had (a) previously participated in a similar study on burnout among oncologists (Le Blanc, Schaufeli, & Van Heesch, 1999), or (b) stopped working as a specialist for at least 6 months.

Of the 2,400 questionnaires that were sent out, 1,573 were returned (66%). One hundred thirty-eight of the returned questionnaires were disregarded: 104 because respondents did not fulfill the inclusion criteria, and 34 because the questionnaires were incomplete. The adjusted response rate was 63% ($n = 1,435$). Of the nonresponse forms, 54% were returned. These nonresponders appeared to be, on average, 1 year older, and to experience less stress. Effect sizes, however, were very small ($\eta = .115$ and $.085$ for age and stress, respectively; Cohen, 1988). Internists were slightly underrepresented, compared to the national registration information (11.9% vs. 9.1%), $\chi^2(8, N = 15,975,000) = 16.28, p = .004$; while there were more respondents in the "remaining specialists" category. No significant difference was found with regard to gender.

The sample studied was comprised of 82% men and 18% women; and included 13% psychiatrists, 9% internists, 7% anesthesiologists, 7% surgeons, 7% pediatricians, 6% radiologists, 5% gynecologists, 5% neurologists, and 41% other. The mean age of respondents was 47 years ($SD = 7.8$) and 9% of the sample was single. A quarter (25%) worked in an academic hospital, and 65% worked in a peripheral hospital. Respondents had worked as specialists 14.6 years on average ($SD = 8.0$).

Instruments

The following demographic and job characteristics were obtained: gender, age, marital status, specialty, and years worked in this specialty. The Dutch version of the Maslach Burnout Inventory (Schaufeli & Van Dierendonck, 2000) was used to measure burnout. Three separate dimensions of burnout could thus be distinguished: (a) emotional exhaustion (8 items; e.g., "I feel emotionally drained by my work"); (b) depersonalization (5 items; e.g., "I don't really care what happens to some patients"); and (c) personal accomplishment (7 items; e.g., "I deal very effectively with the problems of my patients"). Items were scored on a 7-point rating scale ranging from 0 (*never*) to 6 (*every day*). Higher scores on emotional exhaustion and depersonalization are indicative of higher levels of burnout. The scale for personal accomplishment was recoded and relabeled (as reduced personal accomplishment), such that higher scores also indicate higher levels of burnout. Internal consistencies (Cronbach's α) of the scales in this sample were .87, .69, and .78, respectively.

The perception of inequity was measured separately for the relationship with patients, colleagues, and the organization. For each relationship, four questions were asked: (a) How much do you invest in the relationship with your patients? (b) How much do you receive in return from this relationship? (c) How much do your immediate colleagues invest in the relationship with patients? (d) How much do your immediate colleagues get in return from this relationship? Comparable items were formulated for the relationships with colleagues and the organization, respectively. A 5-point response scale was used, ranging from 1 (*very little*) to 5 (*very much*).

The first two questions asked directly for investments and gains pertaining to the relationship at hand. Intrapersonal inequity was calculated for each type of relationship by the ratio between perceived gains and inputs; that is, the score on Question 2 divided by the score on Question 1. The next two questions involved the comparison of these relationships to the situation of colleagues. Scores for all four questions were used to calculate the interpersonal inequity for each type of relationship, using the Adams (1965) formula: gains divided by inputs minus gains colleagues divided by inputs colleagues (i.e., the score on Question 2 divided by the score on Question 1 minus the score on Question 4 divided by the score on Question 3).

For both types of inequity, participants were assigned to one of three groups on the basis of their equity scores: one group of participants who perceived their inputs to exceed the gains (underbenefited, coded as -1), one group of participants who considered their inputs to equal their gains (balanced, coded as 0), and one group of participants who perceived the gains to exceed their inputs (overbenefited, coded as 1). Recoding was done because, first, the score distribution was extremely peaked, with an overrepresentation of specialists who perceived

their relationships to be balanced (Table 1) and second, the operationalization of equity is still an issue of debate (Van Dierendonck, Schaufeli, & Buunk, 2001), for example, whether to use a difference or ratio score. By categorization, the difference between these two approaches disappears.

Communal orientation was measured using a 14-item questionnaire originally developed by Clark, Ouellette, Powell, and Millberg (1987) and adapted for the Dutch situation by Van Yperen et al. (1992). The 14 statements were rated on a 5-point scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). Internal consistency was .75.

Finally, global ratings of job stress and satisfaction were obtained by asking "Overall, how stressful/satisfying do you find your work?" which were rated on a 5-point scale ranging from 0 (*not at all*) to 4 (*extremely*). These questions were used for comparison with nonresponders.

Analyses

To assess the representativeness of the responders with regard to gender and specialty, study data were compared using chi-square tests, with data registered by the Registration Commission for Dutch Medical Specialists (1997-1998). To compare responders and nonresponders, chi-square and *t* tests were used. Missing values were imputed within the individual mean score if at least half of the items of a scale were completed.

For descriptive purposes, frequencies, means, and standard deviations were calculated. The research questions were investigated by fitting a series of general linear models (GLMs). In these GLMs, the outcome variables emotional exhaustion, depersonalization, and reduced personal accomplishment were predicted by inequity in the relationships with patients, colleagues, and the organization, and by communal orientation. All analyses were carried out twice: once with intrapersonal inequity as predictor, and once with interpersonal inequity as predictor.

To determine if inequity was associated with burnout (Research Question 1), we fitted a multivariate GLM with the inequity variables concerning relationships with patients, colleagues, and organization as independent variables, and the three burnout dimensions as dependent variables (Model 1). When the multivariate analysis showed significant effects, univariate GLMs were fitted separately for each of the burnout variables. To assess whether intrapersonal inequity or interpersonal inequity is the most important in contributing to burnout (Research Question 2), we compared the percentages of variance explained by the analyses with the intrapersonal inequity measures as independent variables with the analyses using the interpersonal inequity measures. For each of the effects, partial η^2 is presented, indicating the strength of association. This enables comparison of the effects of the equity measures and communal orientation on the three burnout

Table 1

Mean Inequity Scores of Medical Specialists Who Feel Underbenefited, Balanced, or Overbenefited

Relation with:	N	Intrapersonal inequity			N	Interpersonal inequity		
		Under-benefited	Balanced	Over-benefited		Under-benefited	Balanced	Over-benefited
Patients	1,338	37%	57%	7%	1,251	16%	77%	7%
Colleagues	1,373	25%	71%	4%	1,292	20%	74%	6%
Organization	1,371	52%	42%	5%	1,299	25%	57%	16%

Table 2
Means, Standard Deviations, and Intercorrelations of Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4a	4b	4c	5a	5b	5c
1. Emotional exhaustion	15.01	8.06	—								
2. Depersonalization	6.84	4.19	.49**	—							
3. Reduced personal accomplishment	30.82	6.24	.14**	.15**	—						
4. Intrapersonal inequity ^a											
a. Patients	0.91	0.21	-.14**	-.11**	.003	—					
b. Colleagues	0.93	0.20	-.17**	-.06	-.09*	.11**	—				
c. Organization	0.82	0.30	-.15**	-.07*	.06	.14**	.24**	—			
5. Interpersonal inequity ^b											
a. Patients	-0.24	0.16	-0.07	-0.05	-0.01	.54**	.17**	.08*	—		
b. Colleagues	-0.60	0.22	-.09*	-.002	-.02	.05	.66**	.18**	.15**	—	
c. Organization	-0.23	0.32	-.11**	-.004	.04	.04	.21**	.52**	.05	.19**	—
6. Communal orientation	50.83	5.12	.04	-.18**	-.32**	-.08*	-.13**	-.11**	-.07*	-.09*	.15**

Note. Intercorrelations are product moment correlations, two-tailed. Spearman correlations for ordinal scales produce similar results as with product moment correlations.

^aScores are <1 (*underbenefited*), 1 (*balanced*), or >1 (*overbenefited*). ^bScores are <0 (*underbenefited*), 0 (*balanced*), or >0 (*overbenefited*).

p* < .01. *p* < .001.

dimensions. Eta-squared values of .01, .09, and .25 may be considered small, medium, and large effects, respectively (Cohen, 1988).

To determine the moderating effect of communal orientation (Research Question 3), communal orientation was added to the inequity variables of Model 1. The hypothesized moderating effect of communal orientation was investigated by comparing the fit of the model incorporating main effects only (Model 2) with the fit incorporating interactions of the inequity variables with communal orientation (Model 3). Accounting for the number of tests performed and for the large sample size, the level of significance was set at an alpha of .01.

Results

The majority of specialists perceived their relationships to be balanced (Table 1), with one notable exception: In the relationship with the organization, the majority (52%) reported intrapersonal inequity. They felt that they invested more in their organization than they received in return. With regard to patients, approximately one third of the specialists (37%) felt underbenefited, and a minority felt overbenefited in these relationships. In general, specialists felt more intrapersonal inequity than interpersonal inequity.

Relationships Between Inequity, Burnout, and Communal Orientation

Descriptive statistics and correlations between study variables are presented in Tables 2 and 3. Table 4 presents the fit results of the GLM analyses for intrapersonal inequity and interpersonal inequity. Model 2 turned out to predict the burnout dimensions significantly better than did Model 1, while Model 3 did not improve prediction significantly. Table 5, therefore, presents the results of the analyses with Model 2.

The first research question concerned the association between inequity and burnout. A main effect, albeit small, of intrapersonal inequity on emotional exhaustion was found (Table 5). Mean scores (Table 3) indicate that specialists reported more emotional exhaustion when they perceived their inputs to exceed gains in their relationships with patients, colleagues, and the organization. When they felt overbenefited, they reported less burnout. Hence, these are linear relationships. Depersonalization was affected by inequity in the relationship with patients: both underbenefited and overbenefited specialists reported more depersonalization than did those who perceived their relationship to be balanced, indicating a curvilinear relationship. Feelings of personal accomplishment were affected in the relationship with colleagues. Specialists who felt underbenefited or balanced in their relationship with colleagues felt that they accomplished less. Perceiving inequity in these three relationships together explained 6%, 2%, and 2% of the variance in emotional exhaustion, depersonalization, and reduced personal accomplishment, respectively.

Table 3

Mean Burnout Scores and Standard Deviations for Underbenefited, Balanced, and Overbenefited Relationships

		Emotional exhaustion		Depersonalization		Reduced personal accomplishment	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Intrapersonal inequity							
Patients	Underbenefited	16.3	8.4	7.5	4.3	25.1	6.1
	Balanced	14.4	7.9	6.3	4.1	25.1	6.3
	Overbenefited	12.4	8.2	7.0	4.3	25.2	6.1
Colleagues	Underbenefited	17.4	8.9	7.3	4.3	26.0	6.5
	Balanced	14.2	7.5	6.6	4.2	25.0	6.2
	Overbenefited	13.2	7.6	7.1	4.0	23.2	5.0
Organization	Underbenefited	16.1	8.4	7.1	4.3	24.9	6.0
	Balanced	14.0	7.6	6.4	4.1	25.4	6.5
	Overbenefited	12.0	7.0	6.6	4.5	26.6	6.5
Interpersonal inequity							
Patients	Underbenefited	16.3	8.7	7.6	4.4	25.5	6.6
	Balanced	14.6	7.8	6.7	4.2	24.9	6.1
	Overbenefited	14.6	8.5	7.0	4.2	26.1	6.3
Colleagues	Underbenefited	17.0	9.2	7.1	4.2	25.9	6.5
	Balanced	14.2	7.5	6.8	4.2	25.0	6.2
	Overbenefited	16.0	8.0	7.4	4.1	26.3	6.8
Organization	Underbenefited	16.5	8.6	7.1	4.2	25.1	6.4
	Balanced	14.5	7.8	6.7	4.2	25.1	6.2
	Overbenefited	14.1	7.2	7.1	4.2	26.1	6.4

When interpersonal measures of equity were used as predictors, the model explained 3% of the variance in emotional exhaustion and 1% of the variance in depersonalization and personal accomplishment (Table 5). This finding answers the second research question: Perceived intrapersonal inequity explains burnout better than does perceived interpersonal inequity.

Table 4

Univariate Generalized Linear Modeling Analyses Showing Amount of Variance Explained and Improvement of Fit of the Models Tested

	EE	DE	RPA
Intrapersonal inequity ($n = 1,315$)			
Model 1: Main effects of inequity in the relationships with patients, colleagues, and organization	0.06	0.02	0.02
Model 2: Addition of communal orientation	0.03	54.34**	164.09**
Model 3: Addition of interactions	0.06	0.06	0.13
	1.20	2.71	2.78
	0.07	0.07	0.13
Interpersonal inequity ($n = 1,209$)			
Model 1: Main effects of inequity in the relationship with patients, colleagues, and organization	0.03	0.01	0.01
Model 2: Addition of communal orientation	0.16	49.46**	146.09**
Model 3: Addition of interactions	0.03	0.05	0.12
	0.65	0.35	1.04
	0.03	0.05	0.12

Note. EE = emotional exhaustion, DE = depersonalization, RPA = reduced personal accomplishment.
** $p < .001$.

Table 5

Univariate Generalized Linear Modeling Analyses for Model 2: Partial η^2 Expressing Strength of Associations

	Emotional exhaustion	Depersonalization	Reduced personal accomplishment
Intrapersonal inequity			
Inequity patients	.012***	.015***	.000
Inequity colleagues	.024***	.005	.021***
Inequity organization	.012***	.004	.006
Communal orientation	.000	.040***	.112***
Interpersonal inequity			
Inequity patients	.004	.004	.001
Inequity colleagues	.014***	.002	.007
Inequity organization	.003	.001	.002
Communal orientation	.000	.040***	.108***

Note. Values of .01, .09, and .25 may be considered small, medium, and large effect sizes, respectively (Cohen, 1988).

*** $p < .001$.

Our third research question addressed the role of communal orientation. Adding communal orientation as a predictor to the model significantly improved the fit of the model (Table 3). From Table 4, it appears that communal orientation significantly affected depersonalization and reduced personal accomplishment, but not emotional exhaustion. From Table 2, we learn that the higher the communal orientation, the lower the depersonalization and reduced personal accomplishment. However, contrary to our hypothesis, communal orientation did not moderate the relationship between inequity and burnout. Addition of the interaction parameters to the model did not improve the fit significantly.

Discussion

We examined the role of perceived inequity in explaining burnout among Dutch medical specialists. Understanding the mechanisms leading to burnout in medical specialists is important because the increasing incidence of burnout among physicians necessitates the search for clues for preventive action.

Specialists reported more signs of burnout when they perceived their relationships at work to be inequitable. Regardless of the type of relationship, the feeling that investments exceed gains was associated with emotional exhaustion. Moreover, feeling unrewarded by patients coincided with depersonalization—a negative and cynical attitude toward these patients. Finally, personal accomplishment decreased when one perceived inequity in the relationship with colleagues, but—interestingly—not in the relationship with patients.

Burnout in healthcare professionals traditionally is assumed to be induced by intensive, emotion-laden patient contacts (Maslach & Schaufeli, 1993). It has been argued that in a caregiver–recipient relationship, depersonalization is a means to cope with emotional exhaustion (Maslach & Schaufeli, 1993). In the long run, a detached attitude toward patients is assumed to lead to reduced feelings of personal accomplishment, as suggested by Bakker et al.'s (2000) study of general practitioners. In line with this assumption, we found for medical specialists' relationships with patients an association between inequity on the one hand and emotional exhaustion and depersonalization on the other. However, no association was found with reduced personal accomplishment. Contrary to a recent study by Van Dierendonck et al. (2001), we found no indication of a curvilinear relationship.

In this study, considerable inequity (52%) was reported in the organizational relationship. Although medical specialists felt mostly underbenefited in the relationship with the organization, most variance in burnout was explained by an unbalanced relationship with colleagues. This finding seems to correspond with the contention that in relationships with peers, there is a stronger tendency toward reciprocity than in relationships between individuals of unequal social status (Buunk, Doosje, Jans, & Hopstaken, 1993). Hence, we conclude, as did others (Geurts et al., 1998; Hoff, Whitcomb, & Nelson, 2002; Van Dierendonck et al., 1994), that the relationship with colleagues deserves special attention for understanding burnout. As in the relationship with the organization, no association was found between inequity and depersonalization.

These conclusions are all based on specialists' perceptions of intrapersonal inequity, using an internal standard of reference to determine the equitability of their input/gains ratio in the immediate exchange relationships. In organizational studies, the standard of reference is often determined by other workers in similar jobs (cf. Van Dierendonck et al., 1996), which we termed *interpersonal inequity*. Interpersonal inequity proved to explain less variance in burnout than did intrapersonal inequity. Thus, for understanding burnout in medical specialists, it is more helpful to know how a person perceives the equitability of his or her immediate relationships than to know whether he or she perceives colleagues to be in a similar plight. It is one's own experience that matters, rather than one's comparison with others. Because medical specialists' work is, to a large extent, individual work, they may not have had a clear perception of what their colleagues invested in their relationships and received in return. In line with this,

respondents appeared to have more trouble with the questions pertaining to interpersonal inequity. There were more missing answers (as indicated by the smaller sample size in Table 4), and a response set (giving the same answers to all questions) was observed more frequently. This may have diminished the explanatory value of interpersonal inequity.

Another possible explanation for our findings is that to determine one's internal standard for judging the balance between investments and gains, as in intrapersonal inequity, a comparison with others is already incorporated. In our analyses concerning interpersonal inequity, inequity was recalculated with new variables. If these variables make no sense (because of the reasons stated earlier), the relative degree of error is increased, which in turn may have resulted in the lower degree of explained variance. There is ongoing discussion about how perceived inequity should be measured. Our measures took two important aspects of Adams' (1963, 1965) definition into account: the possibility of feeling underbenefited, equitable, or overbenefited; and the inclusion of a comparison other. These are improvements over measures such as the ones used by Van Yperen et al. (1992) where neither aspect was operationalized. In our study, the inequity measures were categorized, which led to a loss of variance. To investigate to what degree the decision to categorize affected the results, we recalculated the analyses using the original measures. We found that the statistical probability decreased for two associations, but not below our level of significance of .01 (α).³ Consequently, the results of the recalculation did not change our conclusions. However, to further our theoretical understanding of the role of inequity, more research into the assessment of this concept is clearly needed.

An unexpected finding was that the specialists' degree of communal orientation did not moderate the association between inequity and burnout. Compared to specialists with a lower degree of communal orientation, specialists who are highly responsive to others' needs are equally vulnerable to burnout when their relations are unbalanced. This result is different from what has been found in two studies among nurses (Van Yperen, 1996; Van Yperen et al., 1992). In these studies, the same instrument was used to assess communal orientation. A possible explanation involves gender effects: There were 18% females in our study versus 59% and 79% in the other studies, respectively. Van Yperen (1996) investigated whether gender moderated the relation between communal orientation and burnout and found no effect. Likewise, we found no improvement in fit resulting from an interaction between gender and communal orientation: intrapersonal inequity, $F(3, 1294) = 0.63, p = .59$; interpersonal inequity, $F(3, 1189) = 0.40, p = .75$. Interestingly, the contribution of communal orientation to the burnout dimensions of depersonalization and reduced personal accomplishment exceeded the contribution of inequity considerations.

³Interested readers may obtain these results from the corresponding author.

Strengths of this study are its sample size, its satisfactory response rate, and the conformity to reference data, which make this a likely representative sample of the population of Dutch medical specialists. Study limitations include its cross-sectional design, which makes it impossible to draw inferences about the causal nature of relationships. Finally, a common method problem may be involved. All variables were self-reported, which possibly increased their relationship.

Despite the significant contribution of inequity to the explanation of specialists' degree of burnout, it should be pointed out that the amount of variance explained was small (2% to 6%), though similar to what has been found in other professionals (e.g., Geurts et al., 1998; Kop et al., 1999; Van Horn et al., 1999). For optimal prediction of burnout, therefore, perceptions of inequity should be considered concurrently with other predictors of burnout in medical specialists, such as stress, satisfaction, availability of resources (e.g., clerical assistance, material resources), work-home interference, and work control (Linzer et al., 2001; Ramirez, Graham, Richards, Cull, & Gregory, 1996; Visser, Smets, & de Haes, 2003).

Specialists felt most underbenefited in relation with the organization. Because of social changes, traditional benefits (e.g., financial security, status, autonomy) can no longer be taken for granted. Therefore, medical specialists may have an increased need for other kinds of rewards and support from the organization, such as recognizing extra effort, demonstrating concern, better administrative support, and ready availability of resources and services. Moreover, as inequity in the relationship with colleagues contributes most to burnout, organizations would benefit from efforts to produce a work environment where there is frequent exchange of support, feedback, and appreciation. Given the main effect of communal orientation on depersonalization and reduced personal accomplishment, fostering concern for others in the workplace by employers may reduce the risk of burnout among employees.

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