

From Inequity to Burnout: The Role of Job Stress

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This research examined burnout (i.e., emotional exhaustion, depersonalization, and lack of personal accomplishment) among 2 samples of Dutch teachers as a function of inequity and experienced job stress in 3 different exchange relationships (with students, colleagues, and the school). It was hypothesized that inequity would be linked to burnout through the stress resulting from this inequity. Analysis of a cross-sectional sample ($N = 271$) revealed that this was indeed the case. Findings were replicated longitudinally using an independent sample of 940 teachers. It is concluded that the often-reported effect of inequity on burnout can partly be interpreted in terms of elevated levels of job stress. Implications of the findings are discussed.

Nearly half a century ago, Festinger (1954) argued that when people are uncertain about their opinions or abilities, they evaluate themselves by comparing themselves with similar others. Adams (1965) transformed this basic notion into a general theory of psychological equity. According to this theory, people pursue reciprocity in their relationships: What they invest in and gain from a particular relationship should be proportional to what the other party invests in and gains from this relationship. In Adams's seminal paper, this principle is expressed as the ratio of the investments and outcomes of one party to those of the other party. *Inequity* refers to a situation in which one outweighs the other.

Equity theory predicts that perceived inequity re-

sults in a range of negative affective and motivational outcomes. This prediction has generally been supported for various types of social relationships (for a review, see Buunk & Schaufeli, 1999), including social relationships at work. In this context, perceived inequity has been shown to be a strong predictor of burnout (e.g., Bakker, Schaufeli, Sixma, Bosveld, & Van Dierendonck, 2000; Peeters, Geurts, & Van Horn, 1998; Schaufeli, Van Dierendonck, & Van Gorp, 1996; Tans, Kalimo, & Schaufeli, 1999; Van Dierendonck, Schaufeli, & Buunk, 1998, 2001; Van Yperen, 1998). Although these and other findings are consistent with the reasoning that inequity in a particular exchange relationship increases the stress experienced in this relationship, resulting, in turn, in elevated levels of burnout, no research has explicitly considered the psychological process underlying these results. That is, whereas perceived inequity has been shown to be a predictor of burnout, as yet it is not clear how the underlying psychological process actually operates.

The present research deals with this issue. Our basic premise is that a disturbed balance between the investments in and rewards gained from a particular exchange relationship at work increases the stress resulting from this relationship. This, in turn, will lead to elevated levels of burnout. Thus, we expect that the association between perceived inequity at work and burnout will at least partly be explained by the amount of job stress resulting from the corresponding exchange relationships. Relevant to this issue, we present results from two related studies among two statistically independent samples of Dutch teachers (total $N = 1,252$). Further, in this

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research we distinguish among several types of exchange relationships at work, assuming that these will be differentially related to the outcome variables under study. That is, we expect inequity in a particular exchange relationship to lead to elevated levels of stress experienced from that particular relationship but not from other relationships (Schaufeli et al., 1996; Van Horn, Schaufeli, & Taris, in press).

Inequity, Resources, Demands, and Stress

The cognitive appraisal theory of Lazarus and his colleagues (DeLongis, Folkman, & Lazarus, 1988; Lazarus, 1966, 1982; Lazarus & Folkman, 1984) focuses on the individual's appraisal of a situation as stressful and treats cognition and emotion as interdependent factors concurrently involved in the process mediating the relationship between stressors and strains (Folkman, Schaefer, & Lazarus, 1979). Following Lazarus and Folkman (1984), the present study defines *stress* as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). *Strain* refers to maladaptive behavioral, psychological, and somatic responses to stressors resulting from prolonged and intense experienced affect reactions and physiological arousal (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Wofford, Goodwin, & Daly, 1999).

Although Lazarus and Folkman's (1984) definition of stress has not remained uncriticized (see Hobfoll, 1989, for a concise summary), it fits our purposes very well because it construes stress as the individual's subjective response to the demands exerted by his or her environment, *contingent* on the resources one holds. That is, the amount of resources one has is a critical factor in determining whether a demand is considered stressful. If one has few resources, a particular demand will yield higher levels of stress than if one has plenty of resources. In the context of stress at work, this reasoning implies that especially workers who feel that they have few or no resources will consider the demands made by their work as stressful.

The present study proposes to consider the degree to which workers feel that the exchange relationships they maintain at work are inequitable as an indication of the amount of resources they possess. Equity theory holds that workers who experience high levels of inequity have invested much of their energy, effort, attention, and the like in these relationships while receiving little in return (e.g., little respect or support from others, low pay). Thus, workers experiencing

high levels of inequity will often possess fewer resources than workers who feel that there is a reasonable balance between what they invest in and gain from their work relationships. If Lazarus and Folkman (1984) are right in asserting that the amount of resources one possesses determines whether a particular environmental demand is considered stressful, it would seem that workers having few resources or experiencing high levels of inequity will on average experience more stress than other workers, because they may lack the necessary resources to overcome the demands made by their job. Thus, in turn, will eventually result in strain and adverse health effects (cf. Hobfoll & Freedy, 1993; Taris, Schreurs, & Schaufeli, 2000, for a similar reasoning applied to the occurrence of burnout).

Relations Among Inequity, Stress, and the Components of Burnout

Burnout is a multidimensional concept, including emotional exhaustion (the feeling of being emotionally overextended and depleted of one's emotional resources; Maslach, 1993), depersonalization (a negative, overly detached, and indifferent attitude toward the people one is working with), and lack of personal accomplishment (a decline of experienced competence and achievement in one's work; Maslach, 1993). These dimensions may be differentially affected by perceived inequity, and it is therefore necessary to explain the effects of inequity for each separate dimension of burnout. Emotional exhaustion as a form of strain may best be considered an affective outcome, that is, a negative psychological state caused by perceived inequity (see Schaufeli et al., 1996). It seems reasonable to assume that the effect of perceived inequity in a particular relationship on emotional exhaustion is mediated by elevated levels of stress experienced due to maintaining that relationship.

Depersonalization is a form of defensive coping (Lee & Ashforth, 1996) in that the stress resulting from an exchange relationship that is perceived as inequitable may prompt people to withdraw themselves psychologically from that relationship (Leiter, 1993; Leiter & Maslach, 1988; Taris, Schreurs, & Van Silfhout, in press). By decreasing one's investments in an unrewarding exchange relationship with others, one may restore the equitableness of that relationship (cf. Schaufeli et al., 1996; Taris et al., 1999). Thus, it seems likely that the effect of inequity on depersonalization runs through elevated levels of stress.

The link between elevated levels of stress and the third burnout component, lack of personal accomplishment, would seem less obvious. One—admittedly speculative—line of reasoning draws on Schachter and Singer's attribution-of-arousal theory (Mandler, 1984; Schachter & Singer, 1962; Winton, 1990). This theory holds that particular stimuli may result in arousal and that the person interprets this arousal in the light of the total situation as the person sees it. Thus, there is no immediate link between the arousal itself and the interpretation of that arousal. In the context of stress at work, workers may use the degree to which they experience stress at work (arousal) as a measure of their performance. The fact that maintaining a particular work relationship currently leads to stress where it formerly led to pleasure and satisfaction may lead people to infer that they perform less well than they used to. If this is correct, there should be a negative association between the amount of stress reported and personal accomplishment.

At this point it is probably good to note that perceived inequity may not only result in elevated levels of stress but also in a range of other affective or motivational reactions (e.g., Geurts, Schaufeli, & Rutte, 2000), these, in turn, may trigger increased levels of burnout as well. For example, feeling that one is treated inequitably may cause people to look more critically at their jobs. If they evaluate their job in less positive terms, it may become easier for them to admit that they are tired of their job and of the people they work with. In more favorable circumstances, admitting that one's job has negative health consequences may result in cognitive dissonance (see Festinger, 1957). Stated differently, inequity may lower the threshold for recognizing and acknowledging the adverse effects of one's job, independently of the amount of stress one experiences. Alternatively, feeling inequitably treated may increase the motivation to focus on the negative aspects of one's job. Focusing on these negative aspects may make it easier to accept a different job if the opportunity arises and may in this respect be considered as a coping strategy. Thus, our reasoning that perceived inequity leads to elevated levels of stress and that this stress triggers higher levels of burnout may not be the only process accounting for the relation between inequity and burnout.

Heuristic Research Model and Hypotheses

We propose that focusing on the amount of subjectively experienced job stress may lead to a better understanding of the relationship between perceived inequity and burnout. Figure 1 presents a heuristic

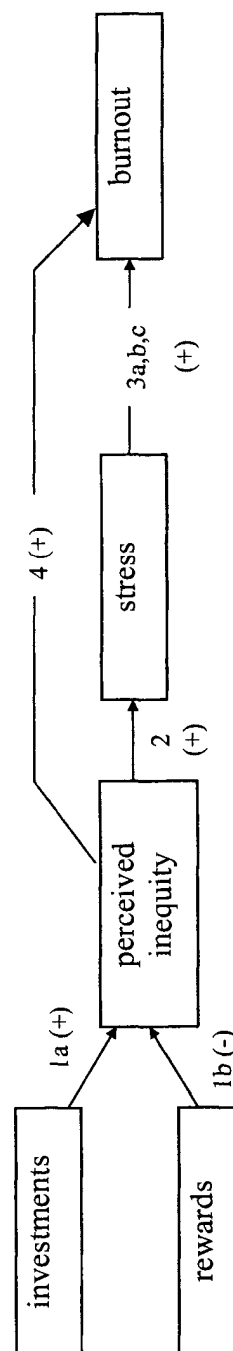


Figure 1 Heuristic model for the relations among investments, rewards, perceived inequity, stress, and burnout. Numbers refer to the hypotheses corresponding with this effect; "+" and "-" denote expected direction of effects

representation of the basic model tested in this research. The first part of this figure addresses the relations between the investments in and rewards gained from an exchange relationship. That is, we expect that the subjective evaluation of the equitableness of a particular exchange relationship depends on (a) one's own investments in that relationship, where, everything else being equal, more investments increase the likelihood that this relationship will be considered inequitable (Hypothesis 1a); and (b) the rewards gained from that relationship, where everything else being equal, receiving less rewards increases the chances of experiencing this relationship as inequitable (Hypothesis 1b)

The subjective evaluation of the stress experienced from a particular relationship will mainly depend on the perceived equitableness of that relationship. People who maintain an unfavorable balance between the investments in and rewards gained from a particular exchange relationship will perceive that relationship as more stressful than would other people (Hypothesis 2). Further, we assume that burnout is contingent on the degree to which a particular exchange relationship is stressful. This effect may be differentiated for each respective dimension of burnout. That is, we expect that the degree to which a particular relationship leads to elevated levels of stress will vary positively with feelings of emotional exhaustion (Hypothesis 3a), depersonalization (Hypothesis 3b), and lack of personal accomplishment (Hypothesis 3c). Note, however, that the process accounting for the effects of stress on each of the three burnout dimensions is expected to vary per dimension. Finally, although we expect that the relationship between inequity and burnout will largely be accounted for by the stress resulting from a disturbed balance between investments and rewards, it remains important to test whether any effect of inequity on burnout remains, independently from the effects of the stress resulting from a disturbed balance. Therefore, Figure 1 includes such an effect (Hypothesis 4)

Study 1

Study 1 addresses the hypotheses in a cross-sectional study among 312 Dutch secondary school teachers. Given this particular occupational group, we distinguished among three different exchange relationships: with students, with colleagues, and with the organization for which the teachers are working. The relationship with the students constitutes in many respects the core of a teacher's job. For example, in a qualitative study on teachers' investments and rewards in various exchange relationships at

work, Van Horn et al. (in press, Study 1) found that teachers mentioned significantly more investments and rewards for the relationship with their students than for the relationship with their organization or their colleagues, suggesting that inequity experienced in the exchange relationship with the students is more salient and, therefore, a stronger determinant of stress and burnout than the other two exchange relationships. Thus, one additional goal of this study is to examine the relative strength of the effects of perceived inequity in various exchange relationships

Conceptualization of Inequity

Note that up until now the terms *lack of reciprocity* and *inequity* were used interchangeably (Chadwick-Jones, 1976; Schaufeli et al., 1996), both involve the comparison of the ratio of one's own investments and outcomes to that of another party, as proposed by Adams (1965). This classical way of conceptualizing inequity thus involves comparison of one's own input/outcome ratio to that of an external referent. Pritchard (1969) criticized this interpersonal way of measuring inequity because it neglects the role of *internal standards* as a means for comparison. This internal standard refers to "the amount of outcome Person perceives as being commensurate with his own inputs, *without regard to any comparison person*" (Pritchard, 1969, p. 205; italics in the original). According to Pritchard, *intrapersonal* comparisons play a crucial role in exchange processes, rather than *social* comparisons as proposed in classical equity theory. A similar stance is taken in effort-reward imbalance theory, in which workers evaluate their own efforts against the rewards they receive from their job, without any external reference (Hanson, Schaufeli, Vrijkotte, Plomp, & Godaert, 2000; Siegrist, 1996). In a similar vein, the often-used Hatfield single-item equity measure (Hatfield, Traupmann, Sprecher, & Hay, 1985) asks people to evaluate their inputs in a particular relationship against their outcomes, without referral to others. In this tradition, inequity is conceptualized as the difference between workers' investments and their rewards, the underlying assumption being that *any* disturbed balance between own investments and outcomes is unfair, *irrespective* of what others receive or invest. In a sense, one's investments constitute the frame of reference while judging one's rewards, and vice versa.

As yet, little research has addressed the issue of the "correct" way of measuring inequity (i.e., with or without external referent). The sparse evidence relevant to this issue suggests that the comparison with similar others adds little to the measurement of inequity.

uity, at least not in the context of equity at work (Taris et al., 1999). Therefore, the remainder of this research concentrates on inequity measured as the perceived ratio between one's own investments in and own rewards gained from various exchange relationships.

Method

Sample The data were collected in a quality-of-work survey conducted at four Dutch secondary schools. The participants completed a 15-page structured questionnaire addressing work characteristics, outcome variables (i.e., burnout, stress), equity-related variables, and background variables. When data collection was finished (3 weeks after the start of the study), a 64% response rate was obtained ($N = 312$, mean age = 44.4 years, $SD = 8.9$, 39% was female, average number of years of teaching experience was 18.9 years, $SD = 9.1$).

Measures Levels of burnout were assessed using the Dutch version of Maslach and Jackson's (1986) Maslach Burnout Inventory (MBI), as adapted for use among teachers (Schaufeli & Van Dierendonck, 2000). The MBI consists of three subscales: emotional exhaustion, depersonalization, and (reduced) personal accomplishment. As in previous research, confirmatory factor analysis (Joreskog & Sorbom, 1993) confirmed that an oblique three-factor model fitted the data best (see Schaufeli, Daamen, & Van Mierlo, 1994). *Emotional exhaustion* was measured by an eight-item scale. Typical items are "I feel emotionally drained from my job" and "I feel used up at the end of a work day" (0 = *never*, 6 = *everyday*). The internal consistency (Cronbach's α) was .89. *Depersonalization* was tapped by a five-item scale. Typical items were "I worry that this job is hardening me emotionally," "I don't really care what happens to some students," and "I feel that I treat some students indifferently" (0 = *never*, 6 = *everyday*). The internal consistency of this scale was .66. Finally, *personal accomplishment* was measured by a seven-item scale ($\alpha = .81$). Typical items were "I feel I am positively influencing other people's lives through my work" and "I know how to deal with my students' problems effectively."

The *stress experienced in each relationship* was measured with three scales taken from Kamphuis and Van Poppel's (1994) School Health Questionnaire (see Nyklíček et al., 1997, similar instruments for measuring teacher stress were devised by Boyle, Borg, Falzon, & Bagliani, 1995; Kyriacou & Sutcliffe, 1978). For each work relationship, the participants were asked to indicate to which degree they felt burdened by various aspects of this relationship. "To which degree do you feel burdened by the following aspects of your job?" (1 = *not at all*, 5 = *very much*). A 13-item scale tapped the stress experienced in the *relationship with the students* ($\alpha = .93$). Exemplary items were "students showing lack of interest and motivation" and "misbehavior among students." Six items measured the stress experienced in the *relationship with the colleagues* ($\alpha = .78$). Typical items were "the fact that some of my colleagues are incompetent" and "colleagues who do not adhere to mutual decisions or agreements." Finally, the stress experienced in the *relationship with the organization* was measured with 4 items ($\alpha = .79$), including "the school management does not function well" and "bad contact with the school management."

Investments and rewards were assessed for each relationship separately, namely, for the relationships with students, colleagues, and the organization. As we felt that the participants might well be unfamiliar with judging these relationships in terms of "investments" and "rewards," the following introduction prepared the participants for the items tapping these concepts: "In your work you are mainly concerned with students, colleagues and the school management. In each of these three relationships you 'invest' (e.g., your time, effort, and skills), while you also receive particular material and immaterial 'rewards' (e.g., money, appreciation of others). This part of the questionnaire deals with your appreciation of these rewards and investments." For each type of relationship, two items tapped the investments in and rewards gained from this relationship. The items were "How much do you invest in the work relationship with your students/colleagues/school management?" and "How much do you receive in return from this relationship?" (1 = *very little*, 5 = *very much*).

Note that these items do not involve an explicit comparison with a particular point of reference in judging one's investments and rewards. However, given the absence of any external reference point, it seems likely that people will judge their investments and rewards in terms of what they feel can reasonably be expected from them (for the investments) or in terms of what they feel they can rightfully expect to receive in return (for the rewards). These expectations, in turn, may well be based on what *others* invest and receive. For example, people may compare their own investments with that of others and conclude that they themselves invest "very much" in comparison with these others. Thus, it seems likely that there is some kind of implicit reference point when our participants judge their investments and rewards, even though these items mention no such reference point.

Perceived inequity was assessed for each of the three exchange relationships of interest. For each of the three exchange relationships, a general question was posed that measured the imbalance of investments and rewards (a variation on the Hatfield single-item equity measure, Hatfield et al., 1985). These questions were part of the block of items tapping the participants' investments and rewards. For the relationship with the students, this item was "When I compare the investments in the work relationship with my students to the benefits resulting from this relation, I receive *than I invest*" (1 = *much less*, 5 = *much more*). For the two other relationships, the word *students* was replaced with *colleagues* and *school management*, respectively. All items were coded such that a high score indicated inequity.

Statistical analysis The Appendix presents the means, standard deviations, and intercorrelations for the variables used in this study. The data were analyzed using covariance structure modeling (Joreskog & Sorbom, 1993). Model fit was assessed using several fit indexes, including the chi-square test, the root mean square residual (RMR), and the adjusted goodness-of-fit index (AGFI). A Monte Carlo study by Marsh, Balla, and MacDonald (1988) demonstrated that these fit indexes are rather sensitive to variations in sample size, such that in large samples models seldom fit the data, even if the difference between the "true" model and the specified model is negligibly small. Therefore, we also took into account Bentler and Bonett's (1980) non-normed fit index (NNFI) and the comparative fit index (CFI; Bentler, 1990), which are less sensitive to variations in

sample size. For these latter two indexes, values of .90 and over signify an acceptable fit.

Results

In the present analysis, the model presented in Figure 1 was extended with effects of age, gender, number of years of teaching experience, and number of hours worked on all dependent variables (i.e., equity, stress, and the burnout subscales). These variables were not of substantive interest in this research and merely served as controls. Therefore, the effects of these variables are not discussed in the remainder of this study. Further, the error variances of the variables belonging to a particular cluster (e.g., the cluster of burnout subscales; the cluster of stress variables; the cluster of inequity variables; and the cluster of independent variables) were correlated, allowing for possible covariation among the variables in these clusters.

This model fitted the data reasonably well, $\chi^2(54, N = 271) = 169.32$, $RMR = .06$, $GFI = .94$, $NNFI = .78$, $CFI = .93$. However, inspection of the modification indices suggested a direct effect of the rewards gained from the relationship with one's students on the stress experienced in that relationship. As we felt that this effect could be accounted for theoretically, it was added to the model. After deletion of several nonsignificant effects, the final model yielded $\chi^2(92, N = 271) = 162.75$, $RMR = .05$, $GFI = .94$, $NNFI = .92$, $CFI = .96$.

Figure 2 presents the standardized maximum likelihood estimates for the final model. As this figure reveals, Hypothesis 1a was supported by significant positive effects from the investments in each of the three exchange relationships on the three corresponding equity measures. That is, all else being equal, more investments were associated with more inequity. These effects were relatively small, though, ranging from .10 to a modest .37 ($ps < .05$). In contrast, the rewards gained from a particular exchange relationship accounted for a much larger part of the perceived equitableness of that relationship (the standardized effects ranged from a healthy $-.58$ to $-.76$, $ps < .001$; Hypothesis 1b was supported). Thus, the investments in a particular exchange relationship seemed less relevant in determining the equity of that relationship than the rewards gained from that relationship. This impression was tested by comparing the fit of a model in which the effects of the investments and rewards were constrained to be equal for each exchange relationship with the fit of the unconstrained model presented in Figure 2. The constrained model fitted the data significantly worse

than the unconstrained model, $\Delta\chi^2(3, N = 271) = 252.19$, $p < .001$, confirming the impression that especially the rewards gained from an exchange relationship are important in determining the perceived equitableness of that relationship.

Relevant to Hypothesis 2, we found support for the assumption that teachers who felt that they invested more in a particular exchange relationship than they received in return experienced more stress from that relationship compared with other teachers. The expected pattern of effects was found for all three exchange relationships (standardized effects ranging from .13 to .53, all $ps < .05$). Further, teachers who felt they gained much from the relationship with their students experienced less stress compared with other teachers (an effect of $-.41$, $p < .001$).

As regards the effects from the three stress variables on the three burnout components, we found that in two out of three cases the stress experienced in a particular exchange relationship contributed to elevated levels of emotional exhaustion. The strongest effect was found for the student stressors (a standardized effect of .25, $p < .001$); for the colleague stressors, this effect was .17 ($p < .05$; Hypothesis 3a was partially supported). Constraining the effects of the stress experienced in these two relationships on emotional exhaustion to be equal resulted in a significantly worse fit, $\Delta\chi^2(1, N = 271) = 5.17$, $p < .05$. Thus, the effects of the stress experienced in an exchange relationship on emotional exhaustion differed as a function of the type of exchange relationship; the relationship with the students seems most important.

For depersonalization, we found the student stressors and the organizational stressors to be relevant. The strongest effect was found, again, for the student stressors (a standardized effect of .29, $p < .001$), the corresponding effect was .12 ($p < .05$) for the organizational stressors (Hypothesis 3b was partially supported). Follow-up analysis revealed that these two effects differed significantly, as constraining these effects to be equal resulted in a significant deterioration of fit, $\Delta\chi^2(1, N = 271) = 7.35$, $p < .01$. Thus, the effect of the student stressors on depersonalization was significantly stronger than that of the organizational stressors.

In support of Hypothesis 3c, higher levels of stress resulting from the relationship with the students and the colleagues were associated with lower feelings of personal accomplishment (effects of $-.39$, $p < .001$ and $-.13$, $p < .05$, respectively). Again, constraining these effects to be equal resulted in a deterioration of fit, $\Delta\chi^2(1, N = 271) = 44.29$, $p < .001$.

Finally, Figure 2 shows that there were not only

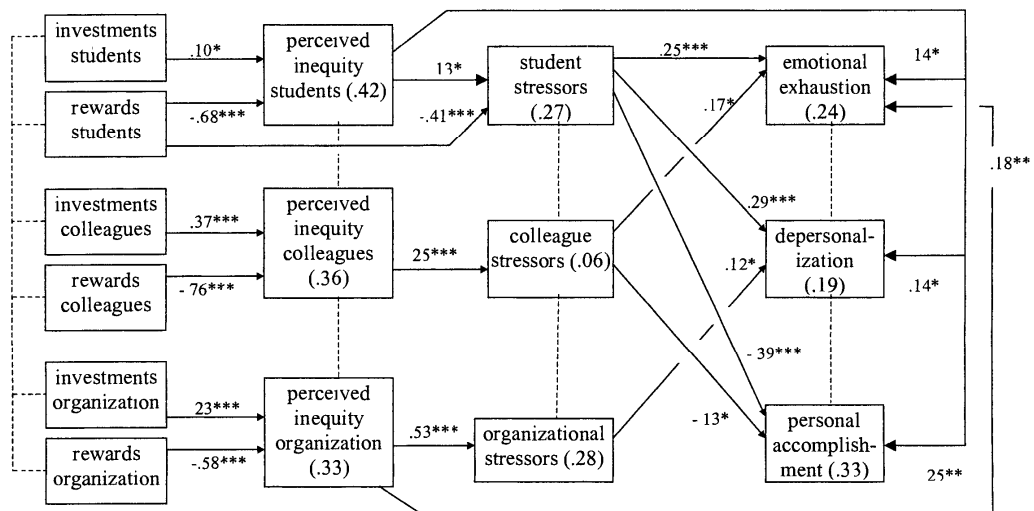


Figure 2 Standardized maximum likelihood estimates for the final model. Structural effects only, data from four schools, $N = 271$. R^2 s are in parentheses, and dashed lines signify correlated (error) variances. * $p < .05$ ** $p < .01$ *** $p < .001$

indirect effects of inequity on the three burnout components but also several direct effects. Teachers who experienced inequity in the relationship with their students or in the relationship with the organization felt more exhausted and more depersonalized than other teachers, while they also obtained lower scores on personal accomplishment (effects of .14, .14, and -.25, respectively, all $ps < .05$). Similarly, there was a direct effect of inequity experienced in the relationship with the organization on emotional exhaustion (a standardized effect of .18, $p < .01$; Hypothesis 4 was partially supported).

Discussion

Study 1 provided reasonable support for our hypotheses. As expected, we found that more investments and less rewards increased the likelihood that a particular exchange relationship would be considered inequitable (Hypotheses 1a and 1b). Hypothesis 2, stating that people who maintain an unfavorable balance between the investments in and rewards gained from a particular exchange relationship perceive that relationship as more stressful than did others, was also supported for all three exchange relationships. As regards the relationships between the stress experienced in particular exchange relationships and the three burnout components, we largely found the expected effects of the student stressors on all three components (Hypotheses 3a, 3b, and 3c). That is, teachers experiencing much stress in the relation with their students reported elevated levels of emotional exhaustion and depersonalization and less feelings of personal accomplishment.

The colleague stressors were moderately strongly related to emotional exhaustion. Furthermore, the colleague stressors had a modest negative effect on feelings of personal accomplishment as well, whereas the organizational stressors were also associated with depersonalization. The results presented here lend credence to the notion that the stress experienced in the relationship with one's students is more important a determinant of emotional exhaustion, depersonalization, and (lack of) personal accomplishment than the stress due to other relationships.

Our basic tenet that the investments and rewards in a particular exchange relationship would be related to burnout through the stress resulting from that relationship was thus largely supported. However, we also found several direct effects of inequity on the three burnout components (especially for inequity experienced in the relationship with one's students, Hypothesis 4 was partially supported). Thus, the association between inequity and the three burnout

components seems only partly accounted for by the stress resulting from a perceived unfavorable balance between investments and outcomes.

Although the main results of Study 1 were largely consistent with our expectations, some limitations of this study are worth mentioning. Study 1 is a cross-sectional study, implying that it is impossible to distinguish between cause and effect. In addition, the data used in this study were obtained from a limited number of schools, meaning that the results may be idiosyncratic for this particular sample. Further, it is generally desirable to cross-validate results to obtain some understanding of the degree to which capitalization on chance was responsible for the results, especially if these effects were not *a priori* predicted and obtained for small samples (see MacCallum, Roznowski, & Necowitz, 1992). Finally, apart from these methodological limitations (which are addressed in the next study), it must be noted that the explained variance in the three single-item equity measures was rather small (.33 to .42), leaving on average 63% of the variance in these items unaccounted for. This finding is somewhat puzzling, as a person's score on the single-item measure of equity should in principle be fully dependent on their assessment of their investments in and rewards gained from a particular exchange relationship. Furthermore, the direct effect of the investments in and rewards gained from an exchange relationship on the stress resulting from that relationship was in one instance much stronger than the direct effect of the single-item equity measure. Despite the fact that our predictions were largely supported, these findings cast some doubts on the validity and, perhaps, reliability of the measure used here, underlining the importance of replication of these results.

Study 2

Study 2 was designed to replicate the results obtained in Study 1 in a longitudinal study among a nationally representative sample of 940 Dutch primary and secondary school teachers. To this purpose, a straightforward two-wave analogue of the model tested in Study 1 was developed. Figure 3 presents a heuristic representation of the model tested in Study 2.

As in Study 1, we expected effects of the investments in and rewards gained from a particular exchange relationship on the perceived equitableness of that relationship (Effects 1 and 2 in Figure 3). This variable was assumed to be related to the amount of stress resulting from that relationship at both waves of the study (Effect 3). Further, the stress ensuing

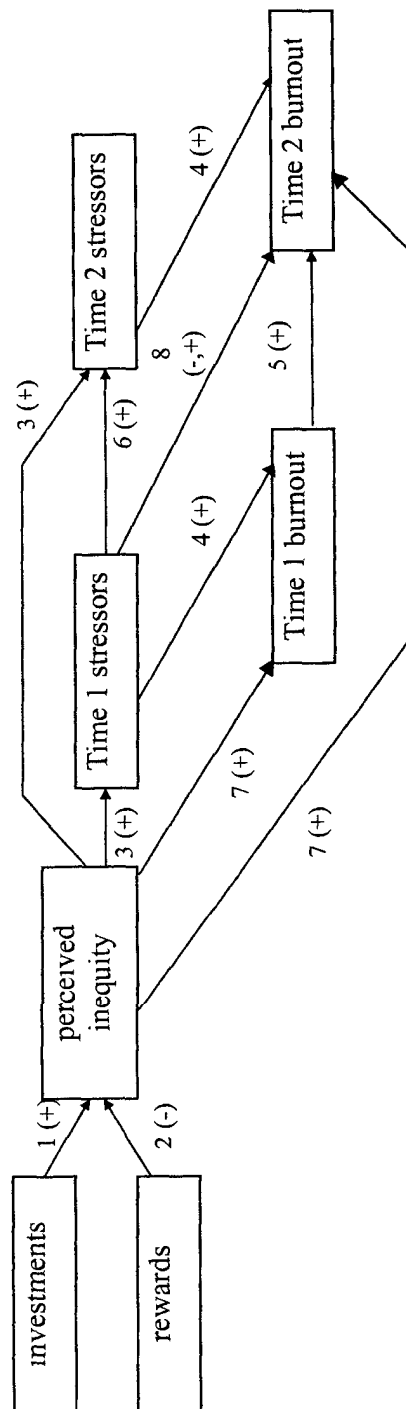


Figure 3 Heuristic model for the longitudinal relations among investments, rewards, perceived inequity, stress, and burnout. Numbers correspond with effects mentioned in the text; "+," "-" and "(-, +)" denote expected direction of effects

from a particular exchange relationship will at both waves be associated with feelings of burnout (taken as three separate components; Effect 4). Of course, we expected lagged effects of the Time 1 measurement of a particular variable on the Time 2 measurement of the same variable (Effects 5 and 6). Further, we tested whether there were any direct effects of Time 1 inequity on Time 1 or Time 2 burnout (Effect 7).

Finally, we expected a lagged effect of the Time 1 stressors on Time 2 burnout (Effect 8). Two theoretical approaches are relevant to the prediction of the direction of this effect (see Feij, Whitely, Peiró, & Taris, 1995). The simplest of these is what might be called the *accumulation* approach, which assumes that workers who experience much stress at both time points will experience more feelings of burnout than those who experience stress at only one occasion. That is, the stress experienced at both occasions *accumulates*, such that workers who experience more stress at Time 1 will experience more burnout at Time 2, even after controlling Time 2 stress and Time 1 burnout (Hypothesis 5a)

The second approach assumes that workers are not just passive recipients of environmental influences. Rather, they will try to *adapt* their environment to meet their needs (Feij et al., 1995; Lerner, 1984; Taris, 1999, cf. Lazarus & Folkman, 1984). Consistent with this reasoning, equity theory holds that the stress ensuing from a disturbed balance between investments and outcomes will lead workers to attempt to restore this balance (Buunk & Schaufeli, 1999; Hatfield & Sprecher, 1984; Walster, Walster, & Berscheid, 1978). Thus, workers who experience much stress at a given time point might try to adjust their situation in such a way that in time they experience less stress and, consequently, less burnout than would be expected on the basis of the across-time stability of work stress and burnout. Consequently, this adaptation approach expects a negative lagged "feedback" effect of Time 1 stress on Time 2 burnout (Hypothesis 5b)

The issue of *when* each of these two processes applies would seem a matter of both personal and environmental factors. As regards the personal factors, it is well known that people differ with respect to the ways they typically deal with the problems they face (Hewitt & Flett, 1996; Taylor & Aspinwall, 1996). It would seem that especially active and problem-focused copers will try to change their environment to meet their needs. However, the opportunities for changing one's environment are limited by the characteristics of this environment (e.g., Dewe, Cox, & Ferguson, 1993; Torp, Ruise, & Moen, 1999). For

example, jobs offering much autonomy will offer more opportunities to tailor one's work to one's needs than low-autonomy jobs. Thus, accumulation of stress (and, consequently, adverse health outcomes) will occur when workers do not possess sufficient (personal or environmental) resources to change this situation, whereas adaptation will take place when workers do possess such resources.

Method

Sample The data were collected as part of a two-wave panel study among a nationally representative sample of 1,309 Dutch teachers (mean age = 43.6 years, $SD = 8.0$, 51% female, average number of years of teaching experience was 19.1 years, $SD = 8.3$). At the first wave (winter 1996), the participants completed a written questionnaire that addressed psychological and physical well-being, selected work characteristics, perceived inequity, and several biographical variables. The majority of the sample (998 participants) also cooperated in the second wave of the study (winter 1997), yielding a 76.2% response rate. A multivariate analysis of variance revealed that the mean scores on the study variables of those who dropped out of the study did not differ significantly from those who remained in the study, $F(11, 1118) = 0.66$, ns . Thus, dropout did not seem to be selective. After listwise deletion of missing values, the final sample size was 940 participants.

Measures The concepts in this study were measured with the same instruments as in Study 1. As regards the measurement of the burnout-related variables, the internal consistency of the emotional exhaustion scale (Cronbach's alpha) was .91 at Time 1 and .92 at Time 2. For depersonalization, we found internal consistencies of .66 at Time 1 and .69 at Time 2, and the internal consistency of personal accomplishment was .86 at Time 1 and .87 at Time 2. The variables belonging to the cluster of *equity-related variables* were assessed in a similar fashion as in Study 1. That is, at the first wave of the study we included the Hatfield single-item equity measure, as well as separate measurements of the investments in and the rewards gained from each of the three exchange relationships of interest. The *amount of stress* resulting from the three relationships was measured at both occasions using the same instruments that were used in Study 1. For the student stressors scale, the colleague stressors scale, and the organizational stressors scale, we found reliabilities of .89, .83, and .81 at Time 1 and .88, .86, and .80 at Time 2, respectively.

Results

As in Study 1, the model presented in Figure 3 was extended with effects of gender, age, number of years of teaching experience, and number of hours worked on the various measures of burnout. Again, these variables were merely included as controls, and their effects are not discussed in the remainder of this study. This model fitted the data reasonably well, $\chi^2(150, N = 940) = 747.95$, $RMR = .09$, $GFI = .94$, $NNFI = .89$, $CFI = .95$. After deletion of the

nonsignificant effects, the final model yielded $\chi^2(194, N = 940) = 792.20$, $RMR = .09$, $GFI = .94$, $NNFI = .92$, $CFI = .95$.

For simplicity, the results obtained for the final model are presented in three parts, dealing with Hypotheses 1a, 1b, and 2 (concerning the effects of the equity measures on the stressors and burnout; see Figure 4), Hypotheses 3a, 3b, and 3c (on the effects of various types of stress on the three burnout indicators; see Figure 5), and with the lagged effects of Time 1 stress/Time 1 burnout on Time 2 stress/Time 2 burnout (see Figure 6). Note that the results presented below were obtained in the same analysis, even though they are presented separately.

Investments, rewards, and inequity. Figure 4 presents the standardized maximum likelihood estimates for the effects of the investments and rewards in the three exchange relationships of interest on the corresponding equity measures and the stress resulting from that relationship. As in Study 1, Hypotheses 1a and 1b (stating that more investments in and less rewards gained from a particular exchange relationship would increase perceived inequity) were supported for all three relationships. All else being equal, teachers who invested more in their relationships were more likely to experience this relationship as inequitable compared with other teachers (standardized effects ranging from .31 to .69, $ps < .001$). Conversely, teachers who obtained more rewards from these relationships were less likely to experience inequity in this relationship (effects ranging from $-.62$ to $-.85$, $ps < .001$). Further, note that although the magnitude of the differences between the effects of the investments and rewards was smaller in Study 2 than in Study 1, the *pattern* of effects of the investments and rewards on perceived inequity was the same as in Study 1. Constraining the effect of the investments in and rewards gained from a particular exchange relationship to be equal for each of the three relationships resulted in a massive increase of 1666.07 chi-square points with only 3 *df* extra ($p < .001$). Thus, the perceived rewards obtained in a relationship were more strongly related to the degree to which one experienced inequity than the investments in that relationship.

Hypothesis 2 stated that teachers who felt that they invested more in their exchange relationships with students, colleagues, and the school would experience more stress resulting from that relationship than would others. Consistent with Study 1, in the present study we found for all three exchange relationships that inequity was associated with more stress (effects ranging from .22 to .37, $ps < .001$, Hypothesis 2 was supported). Indeed, we also found small but signifi-

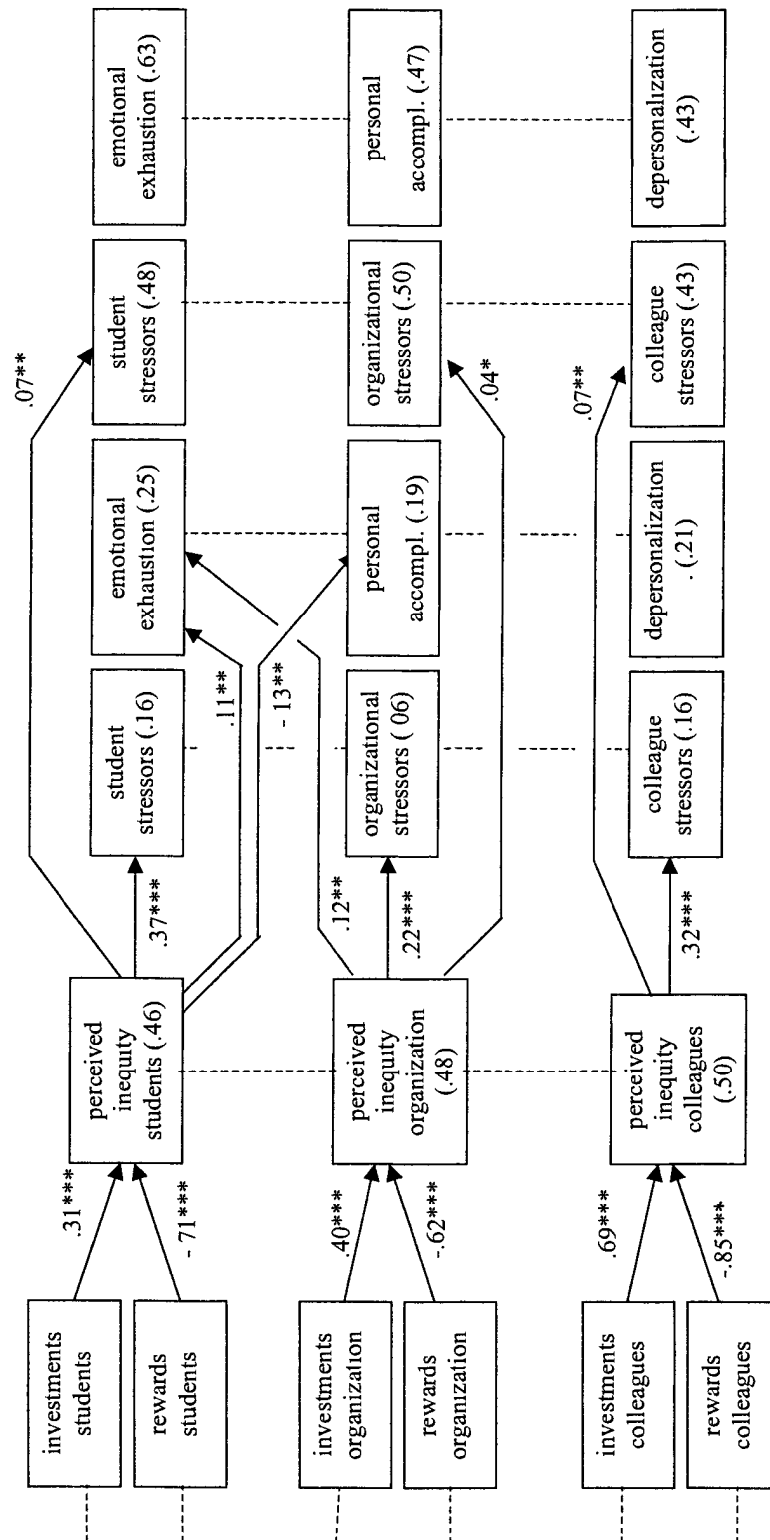


Figure 4 Maximum likelihood estimates for the effects of the indicators of inequity on the dependent variables. R^2 s are in parentheses, and dashed lines signify correlated (error) variances. * $p < .05$ ** $p < .01$ *** $p < .001$

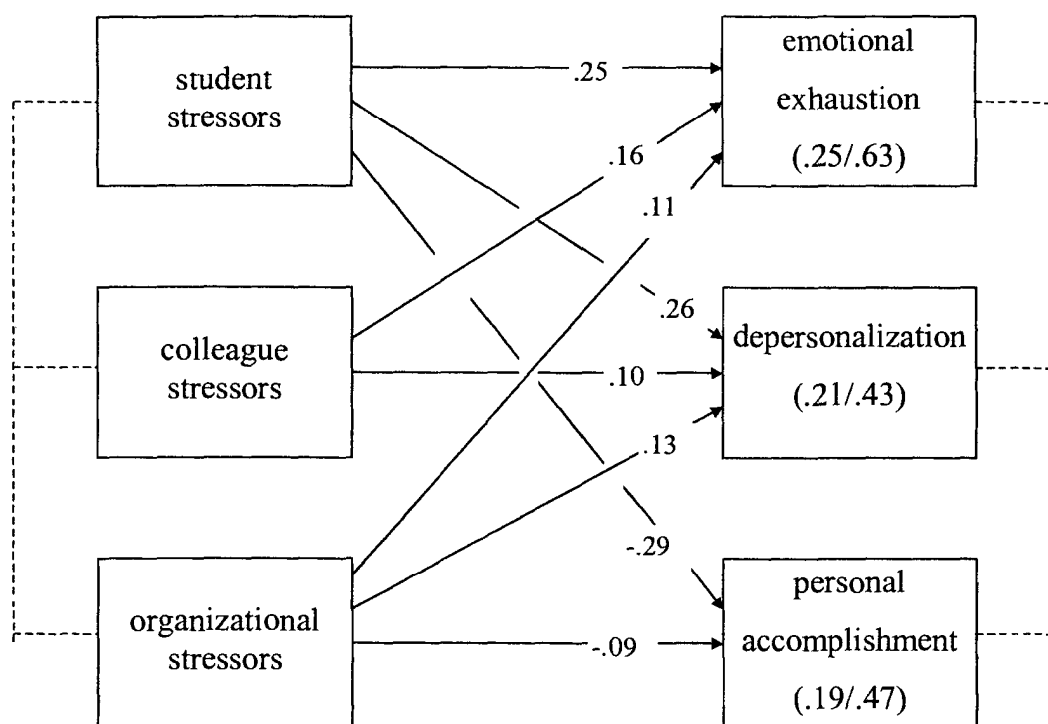


Figure 5 Maximum likelihood estimates for the effects of various sources of stress on burnout indicators (within waves), effects constrained across time R^2 's are in parentheses, the first R^2 represents explained variance at Time 1, and the second R^2 represents explained variance at Time 2 (all effects $p < .01$). Dashed lines signify correlated (error) variances

cant lagged effects from Time 1 inequity on Time 2 stress (effects ranging from .04 to .07, $ps < .05$).

Hypothesis 4 stated that there would be direct effects of inequity on burnout. As Figure 4 shows, we found no longitudinal effects of the inequity variables on the Time 2 measures of the three burnout components. However, at Time 1 there were several direct effects of inequity on emotional exhaustion and personal accomplishment. Teachers who felt that they invested more in the relationship with their students than they gained from that relationship were more likely to report feelings of exhaustion (an effect of .11, $p < .01$) and reduced personal accomplishment (an effect of -.13, $p < .01$), whereas teachers who experienced inequity in the relationship with the organization were also more likely to be exhausted (an effect of .12, $p < .01$; Hypothesis 4 was partially supported). It is noteworthy that this pattern of effects replicates the findings of Study 1, in which similar effects of inequity in the relationship with students and the organization on emotional exhaustion and personal accomplishment were obtained.

Stress and burnout. Figure 5 focuses on the effects of the stress resulting from various exchange relationships on the three burnout components. Note that these effects were obtained within each of the two cross-sections in Study 2; the lagged effects of Time 1 stress/Time 1 burnout on Time 2 stress/Time 2 burnout are presented in Figure 6. Further, note that the effects in Figure 5 were constrained to be equal for each occasion. Thus, the structural effects presented in Figure 5 apply to both occasions (the proportions of explained variance, however, are substantially higher for Time 2, owing to the inclusion of stability parameters; e.g., the effect of Time 1 emotional exhaustion on Time 2 emotional exhaustion).

Hypothesis 3a stated that all stressor variables would contribute to the occurrence of exhaustion. This hypothesis was supported by positive effects of the three stress variables on emotional exhaustion (effects ranging from .11 to .25, $ps < .01$); more stress is positively associated with more feelings of exhaustion. Hypothesis 3b concerned the relationship between the stress experienced in each of the three

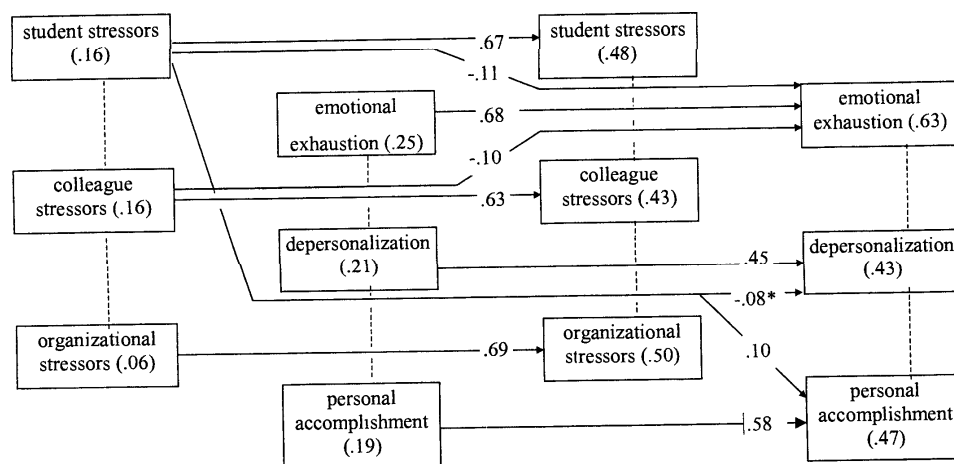


Figure 6 Maximum likelihood estimates of the lagged effects of Time 1 stress/Time 1 burnout on Time 2 stress/Time 2 burnout. R^2 s are in parentheses, all effects are significant at $p < .01$, except * $p < .05$. Dashed lines signify correlated (error) variances.

relationships and the occurrence of depersonalization. Again, this hypothesis was supported, in all three instances we found the expected positive effect of stress on depersonalization (effects ranging from .10 to .26, $ps < .01$). Finally, Hypothesis 3c (regarding the effect of stress on personal accomplishment) was supported in two out of three instances. That is, teachers who experienced high levels of stress in their relationships with their students and the organization were less likely to feel efficacious (effects of $-.29$ and $-.09$, respectively). All in all, the results presented in Figure 5 largely replicated those presented in Study 1; even the magnitude of the corresponding effects was quite comparable.

Lagged effects of stress and burnout. Finally, Figure 6 presents the lagged effects of the Time 1 measurements of stress and burnout on the Time 2 measurements of these variables. The participants' scores on these concepts were quite stable across time, as evidenced by strong Time 1–Time 2 stability effects. The same applies for the three burnout subscales.

Despite these high Time 1–Time 2 stability effects, we also found several lagged effects, although the magnitude of these effects was considerably smaller than that of the stability effects. The relationship with the students seems to be the most important stressor. Consistent with the adaptation approach, teachers reporting high levels of stress in their relationship with their students at Time 1 were less likely to report high levels of depersonalization and exhaustion at Time 2 and more likely to have a high score on personal accomplishment. Note that the direction of these lagged effects runs contrary to the effects found within each cross-section (see Figure 5). For example, teachers who experience high levels of stress in

the relationship with their students at Time 1 are less likely to experience high levels of exhaustion at Time 2, net of the indirect path between Time 1 stress and Time 2 exhaustion. However, it is important to note that the overall effect of Time 1 stress on Time 2 exhaustion is still positive. This overall effect can be computed as the sum of the direct and indirect paths linking Time 1 stress to Time 2 exhaustion. The indirect paths linking Time 1 stress to Time 2 exhaustion are Time 1 stress $>$ Time 2 stress $>$ Time 2 exhaustion (i.e., $.67 * .25 = .17$) and Time 1 stress $>$ Time 1 exhaustion $>$ Time 2 exhaustion (i.e., $.25 * .68 = .18$). The direct path is $-.11$. Thus, the overall effect of Time 1 stress on Time 2 exhaustion is $.24$ ($.17 + .18 - .11$), signifying that teachers who experience high levels of stress in the relationship with the students at Time 1 experience all in all more feelings of exhaustion at Time 2 than other teachers. The same applies to the other lagged effects in Figure 6. Consistent with the adaptation approach, these findings suggest that teachers who experience high levels of stress at Time 1 are to some degree successful in mitigating its negative impact on their mental health, it is not the case that teachers who experience much stress at Time 1 experience more burnout at Time 2, controlling Time 2 stress and Time 1 burnout (Hypothesis 5b supported, Hypothesis 5a rejected).

To judge the practical implications of this result, consider the matrix of total effects of the Time 1 stressors on Time 2 burnout. Table 1 presents these effects for the longitudinal sample used in this study as well as for the cross-sectional sample of Study 1. As this table shows, despite the lagged "feedback" effects that supported Hypothesis 5b, the magnitude of the overall effects of the three stressor variables on

Table 1

Total Effects of Inequity Experienced in Three Exchange Relationships at Work on the Three Burnout Components (Time 1: Effects for Study 1/Study 2, Respectively, Time 2: Effects for Study 2 Only)

Variable	Time 1			Time 2		
	EE	DP	PA	EE	DP	PA
Time 1 stressors						
Students	.25***/.24***	.29***/.26***	-.38***/-.29***	.22***	.20***	-.26***
Colleagues	.17**/.16***	.00/.09***	.13**/.00	.11***	.10***	.00
Organization	.00/.11***	.12*/.13***	.00/-.10***	.15***	.14***	-.12***
Perceived inequity						
Students	.18**/.20***	.18**/.09***	-.30***/-.23***	.17***	.09***	-.19***
Colleagues	.04**/.05***	.00/.03***	.03*/.00	.05***	.04***	.00
Organization	.18**/.14***	.03*/.03***	.00/-.02***	.12***	.04***	-.03***

Note EE = emotional exhaustion; DP = depersonalization; PA = personal accomplishment

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

burnout is quite comparable with that of the effects found within Time 1 (and in Study 1). Thus, it appears that the practical importance of the feedback effects should not be exaggerated: Teachers who experience much stress at Time 1 are likely to experience high levels of burnout at Time 2, in spite of the fact that they seem to some degree able to influence the stressors in their job.

Table 1 shows the total lagged effects of Time 1 inequity on the three burnout indicators as well. Again, the magnitude of these lagged effects is quite comparable with the effects found at Time 1 as well as those obtained in Study 1, suggesting that the practical importance of the feedback effect discussed in the previous section is quite limited.

Discussion

Study 2 was designed in attempt to replicate the findings of Study 1 longitudinally. Again, our hypotheses were largely supported by the data. As in Study 1, we found that the investments in and the rewards gained from an exchange relationship were related to the single-item Hatfield equity measure in the expected fashion. That is, more investments in and lower rewards gained from a relationship were associated with a higher likelihood that the participants would perceive that relationship as inequitable. It is noteworthy that, again, the effects of the investments in a relationship on the stress resulting from that relationship were generally considerably weaker than the effects of the rewards gained from that relationship. The explained variance in the single-item equity measures was on average higher than in Study 1 (.37 vs. .48). Further, as in Study 1, the expected positive effects of perceived inequity in an exchange relationship on the stress resulting from that relationship were found for all three relationships. These effects were replicated longitudinally as well, showing that the effects of inequity persist across time.

The results obtained in Study 1 for the cross-sectional relationships among the stressor variables and the three burnout indicators were almost fully replicated. However, the lagged effects of the stressors on the burnout indicators were either not significantly different from zero or in the reverse direction. This supports the reasoning that participants who experience much stress are to some degree successful in mitigating this stress—although our results also revealed that the net effect of Time 1 stress on Time 2 burnout was still such that elevated levels of stress were associated with more mental health complaints.

Finally, as in Study 1, we found not only indirect

effects between the cluster of equity-related variables and the three burnout indicators but also direct effects. Thus, although the effects of perceived inequity in exchange relationships on burnout can partly be interpreted in terms of elevated levels of stress resulting from these exchange relationships, this may be not the full story.

General Discussion

The present research focused on the relations among perceived equity, stress, and the three subscales of the MBI in two independent samples of Dutch teachers. Study 1 revealed that for three different exchange relationships, the relation between perceived inequity and burnout was partly accounted for by the stress generated by this inequity; however, there were also several direct effects of inequity on burnout. Study 2 replicated these findings longitudinally. Further, both studies showed that the rewards obtained from an exchange relationship were considerably more important in determining perceived inequity than the investments in this relationship. Finally, Study 2 suggested that workers are to some degree successful in mitigating the negative effects of the stressors.

Study Limitations

Before discussing the implications of the present research, we briefly outline some limitations and issues for future research. One limitation is that the present research included a limited number of dependent variables, namely, only the three burnout dimensions. To broaden the empirical basis for the theoretical notions tested in this research, it would seem important that future research replicates the present results for other ways of withdrawing oneself from an inequitable exchange relationship (e.g., organizational commitment, turnover, and absenteeism).

A more important limitation derives from the fact that only teachers were involved in this research. This implies that our findings may not be representative for populations of other workers. For one thing, the exchange relationships in other populations may be different from the relationships studied in the present research. Although people usually maintain work relationships with colleagues and the organization they work for, in other occupations maintaining relationships with students is quite rare. This point is so obvious that it barely needs mentioning, were it not for the fact that the stress experienced in the relationship with the students was an especially important predictor of emotional exhaustion, depersonalization,

and (lack of) personal accomplishment. Although this finding meshes with the fact that the interaction with students constitutes the core of a teacher's job (see Van Horn et al., in press), it also means that the present set of results can be generalized to other populations only to a limited degree. That is, in other occupational groups different exchange relationships may induce elevated levels of stress. For example, among nurses and doctors the interaction with patients is an important determinant of the stress experienced in that relationship (e.g., Bakker et al., 2000). This suggests that in "people jobs" (Maslach, 1993), in which interaction with the recipients of one's services constitutes an important part of the task, similar results will be obtained, namely, that the relationship with these recipients will result in more stress than the relationships with colleagues and the organization for which one is working.

Finally, it must be noted that the concepts measured in this research were obtained by means of self-reports. This means that the magnitude of the effects reported here may have been biased as a result of common-method variance or the wish to answer consistently (see Kasl, 1998). Further, one may argue that especially the stress measures and the measure of burnout have some conceptual and empirical overlap: Both the stress scales and the burnout subscales ask people for their negative reactions to the workplace. Although this might lead to inflated correlations and a higher likelihood that causal models in which "stress" conceptually falls between equity and burnout fit the data well, it is difficult to conceive of a more objective way of measuring stress that still allows for a distinction among different *sources* of stress. For example, the present study differentiated among stress due to students, colleagues, and the school. Stress may be measured in terms of cortisol level (see Brantley, Dietz, McKnight, & Jones, 1988) but that would render it impossible to discriminate among the effects of the various stress sources distinguished here.

Practical and Theoretical Implications

The present research extends and enhances previous work on the relationship among inequity, job stress, and burnout in at least three respects. First, by examining the stress resulting from various exchange relationships in connection to burnout, we could show that the effect of inequity on burnout (e.g., Bakker et al., 2000; Peeters et al., 1998; Schaufeli et al., 1996, Van Dierendonck et al., 1998, 2001) can partly be accounted for in terms of elevated levels of stress. Although this line of reasoning is implicit in

equity theory, the present research is the first attempt to spell out the causal chain that relates inequity to burnout. Consistent with previous interpretations, inequitable exchange relationships were associated with higher levels of stress; these, in turn, were related to adverse health consequences (i.e., burnout). It should be noted, however, that our analyses also revealed a consistent pattern of direct effects of inequity on burnout, independently from the hypothesized indirect effects. Thus, it appears that the process in which inequity leads to elevated levels of stress, in turn leading to increased levels of burnout, is not the only mechanism that may account for the relationship between inequity and burnout. One tentative explanation is that workers who feel that they are treated inequitably tend to lower their thresholds for acknowledging the adverse health effects of their jobs, whereas such an admission may result in cognitive dissonance for workers who are satisfied with their input/output ratio. Further research may shed more light on this issue.

Second, we were able to show that inequity experienced in different exchange relationships at work is associated with relation-specific stress and that this relation-specific stress is differentially associated with the three burnout components. Finally, we found modest evidence for the assumption that workers who experience a particular exchange relationship as inequitable are to some degree successful in mitigating the effects of the stress resulting from this relationship. That is, our longitudinal results suggest that the stress resulting from an inequitable relationship does not accumulate across time; rather, this stress seems to prompt workers to adjust their situation in such a fashion that the negative consequences of this stress are reduced. The issue of *which* process operates, however, is probably also a function of the opportunities for change offered by the work environment and one's coping styles. Accumulation of stress (and, thus, adverse health effects) may be expected when workers do not possess sufficient personal or environmental resources to change a stressful work situation, whereas adaptation will occur when such resources are present. This reasoning underlines the importance of careful job design and a good match between a worker and his or her job. That is, while jobs must be designed to offer sufficient control opportunities to meet the demands of this job (see Karasek & Theorell, 1990), workers should be selected on the basis of their capacities to use these opportunities to their advantage.

It is interesting that the investments in a particular exchange relationship at work were considerably less important in determining the perceived equitableness

of that relationship than the perceived rewards gained from that relationship. This result (which was obtained in both studies) is in line with earlier findings (e.g., Tans et al., 1999; Van Horn et al., in press). It would seem important that follow-up research addresses the reasons why this is so. One tentative explanation might be that people view the rewards gained from their exchange relationships (and, perhaps, maintaining equitable relationships as well) as *resources* in the sense of Hobfoll's conservation of resources (COR) theory (e.g., Hobfoll, 1989; Hobfoll, Freedy, Green, & Solomon, 1996). According to COR theory, resources are those things that people value or that act as a means to obtaining that which they value. COR theory argues that resources are extremely salient and especially that the loss of such resources will result in high levels of stress and low levels of well-being (the *primacy of loss* principle; see Wells, Hobfoll, & Lavin, 1999). Such reasoning would account for the present pattern of findings, in which we found strong effects of the rewards and resources, whereas the effects of the investments were considerably weaker.

If rewards may indeed be construed as resources in the sense of COR theory, interesting implications for equity theory and workplace justice emerge. For example, the present research suggested that a disturbed balance between the investments in and rewards gained from a particular exchange relationship may have negative implications for worker health. Such a disturbed balance may be restored by either lowering investments or increasing rewards. COR theory suggests (as do the results of the present research) that increasing rewards is a far more effective strategy than decreasing investments. Conversely, the primacy of loss principle suggests that even a slight decrease in the rewards gained from a particular exchange relationship may have strong deleterious effects on worker health. This line of reasoning suggests that executive staff should be "reward managers" to their subordinates, in the sense that they should see to it that their subordinates' efforts are adequately compensated.

Note that changes in workers' health may already be achieved through altering workers' *perceptions* of their rewards or investments. For example, Van Dierendonck et al.'s (1998) study among staff working with people with mentally retardation showed that an intervention designed to alter their perceptions of the benefits of and investments in particular exchange relationships resulted in lower burnout rates and lower sickness absence rates. Thus, in practice it may not be necessary that rewards or investments *de facto* increase or decrease to obtain favorable health out-

comes. Although this sounds encouraging (e.g., suggesting that personnel officers may improve the personnel's well-being rather simply, by sending them to a training designed to establish a cognitive reappraisal of workers' rewards), the other side of the coin is that it is probably also very simple for the balance between investments and rewards to be *disturbed*, even if in reality nothing has changed. Thus, what emerges is a conceptualization of equity in terms of a balance between investments and rewards, that is, especially sensitive to changes on the side of the (perceived) rewards. This issue awaits the outcome of future investigations of inequity and well-being.

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(Appendix follows)