

Teacher Burnout and Lack of Reciprocity¹

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Results are presented of a study on burnout among 249 Dutch elementary and secondary school teachers. The current study considers burnout in terms of the exchange of investments and outcomes at interpersonal (teacher-student) and organizational (teacher-school) levels. In addition, demographic (age and gender) and work-related factors (school type, teaching experience, number of hours employed) are included. Findings show that when teachers invest more than they get back from their school, they report higher levels of emotional exhaustion. As expected, at the interpersonal level, low outcomes from students are related to higher burnout levels, whereas at the organizational level, low investments are related to higher burnout levels. These findings are discussed in terms of the extent to which psychological contact is more intimate or impersonal in both types of relationships.

Although little is known about the exact prevalence of teacher burnout, it is assumed that in the etiology and development of mental-health complaints, burnout plays an important role. For instance, Greenglass, Burke, and Ondrack (1990) state that teacher burnout is positively related to self-reported indexes of personal distress, including depression, anxiety, and somatization. Moreover, Belcastro, Gold, and Grant (1982) found in their study that burned-out correctional teachers differed in their pattern of somatic complaints and illnesses compared to those classified as not burned out. Almost all of the investigated burned out teachers had developed gastroenteritis, migraine, or depression after entering their profession. In the Netherlands, 53% of the work-incapacitated teachers left their profession because they suffered from mental-health problems (Algemeen burgerlijk pensioenfonds, 1995).

Burnout is a metaphor that describes a particular syndrome which is assumed to be linked to the emotional strain of working frequently and

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intensively with other people. In particular, human-service professionals (e.g., nurses, physicians, social workers, and teachers) are vulnerable to burnout (Maslach, 1982, 1993). The most widely accepted conceptualization of burnout originates from the work of Maslach and Jackson (1986). They consider *burnout* an ongoing affective stress reaction that gradually develops over a period of time, and is characterized by three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. *Emotional exhaustion* refers to a depletion of teachers' energetic resources, thought to be caused by intense daily involvement with the personal and social needs of students. It is assumed that in order to cope with emotional exhaustion, teachers develop negative and indifferent attitudes, in particular toward students (*depersonalization*). Finally, burned-out teachers are likely to perceive themselves as less effective in their work, resulting in feelings of inadequate personal achievement (*reduced personal accomplishment*).

It has been shown in studies among teachers that burnout is significantly related to particular demographic variables (e.g., gender and age; Friedman, 1991; Greenglass et al., 1990), as well as to work-related factors (e.g., teaching experience, school type, number of hours employed; Friedman, 1991). Consequently, these demographic variables and work-related factors are taken into account in the present study.

Students' misbehavior (e.g., aggression and demotivation, Hart, 1987; Weisfelt, 1993) and poor working conditions (e.g., role conflict, work overload; Schaufeli & Bergers, 1992) are regarded as important stressors in the teaching profession. However, in most studies, these stressors are investigated as determinants without empirically elaborating on the underlying processes. We assume that social-exchange processes play a major role in the development of burnout because interactions with other people are thought to be the central concepts in burnout (Maslach, 1982). The relevance of social-exchange processes in burnout has been demonstrated recently by Buunk and Schaufeli (1993) in other human-service professions. According to the authors, equity theory provides a conceptual framework that advances our understanding of the role of social-exchange interactions in the development of burnout in human-service professions. Empirical findings have indeed demonstrated that discrepancies between one's own investments and outcomes (lack of reciprocity) in social-exchange relationships at both interpersonal (e.g., Schaufeli, Van den Eynden, & Brouwers, 1994; Van Dierendonck, Schaufeli, & Sixma, 1994) and organizational levels (e.g., Schaufeli, Van Dierendonck, & Van Gorp, 1996) are related to higher burnout levels. Therefore, the present study concentrates on the relationship between burnout and social-exchange processes at two levels: interpersonal (teacher-student) and organizational (teacher-school).

Social Exchange, Reciprocity, and Equity

Among social-exchange theories, Adams' (1965) equity theory is probably the most influential. In this theory, social relationships are viewed in terms of exchange processes between investments (I) and outcomes (O). People pursue reciprocity in exchange relationships: The ratio of investments to outcomes for the person in question should be in proportion to the investments and benefits of the other (real or hypothetical) party. When the ratio between investments and outcomes does not match the ratio for the other party, lack of reciprocity (inequity) is experienced. People can reduce or eliminate inequitable feelings, for instance, by altering their perceptions of investments or outcomes or by actually changing their investments or outcomes (Huseman, Hatfield, & Miles, 1985, 1987; Walster, Walster, & Berscheid, 1978).

Teachers need to feel valued in their work by receiving positive feedback from their students (Blase, 1986; Weisfelt, 1993) and from the organization. At the interpersonal level, a discrepancy between teachers' efforts (i.e., investments) and their valued outcomes (e.g., students' progress, enthusiasm, and gratitude) may result in energy depletion and disillusion. This is illustrated by a science teacher who states,

It means that no matter how good you are, how much you put into this job, often you're just not going to reach the kids. I feel you put a lot more into your work than you get back. This realization is very depressing. (Blase, 1982, p. 105)

Evidently, social-exchange processes between teachers and their students seem to be relevant for burnout. In addition, it has been argued that burnout should also be considered within the organizational context (Cox, Kuk, & Leiter, 1993; Golembiewski & Munzenrider, 1988). Drawing on the notion of the employees' psychological contract with the organization (Rousseau & Parkes, 1993), it can be argued that social-exchange processes similar to those observed in interpersonal relationships govern the relationship of the employee with his or her organization. The employee's notion of the psychological contract is shaped by expectations about outcomes from the organization (e.g., fair salary and promotion prospects, as well as less tangible matters, such as esteem and support from supervisors). Thus, it can be assumed that teachers expect something in return for their investments in the relationship with the organization, thus the school.

Pritchard (1969) criticized equity theory for neglecting (a) the role of internal standards as a basis for comparison, and (b) differences in levels of psychological contact in various relationships. Concerning the former, Pritchard states that in the evaluation process, people use their own internal

standards. From this perspective, a lack of reciprocity proceeds from a discrepancy between one's internal standards on the one hand and one's own investments and outcomes in an exchange relationship on the other hand. Following Pritchard's line of reasoning, we assume that in social-exchange relationships, teachers use their own internal standards to weigh investments against perceived outcomes rather than to compare their input-output ratio to that of others. Internal standards are especially salient in teachers for two reasons. First, teaching implies a rather solitary interaction between the individual teacher and his or her students. Therefore, in evaluating their investments and outcomes, teachers are more likely to use their own internal standards than the investment and outcome ratios of their colleagues. Second, most teachers are unwilling to discuss their professional performance with either their colleagues or the school management, because in doing so they might be regarded as incompetent (Commissie Toekomst Leraarschap, 1993). In other words, most teachers are likely to have limited information about their colleagues' performance in the classroom.

We furthermore assume that investments and outcomes can be related to burnout separately. More specifically, in the relationship with students, outcomes rather than investments are considered to be related to burnout. The rationale for this assumption is that teachers may consider the time and energy they put into their work as investments intrinsic to their job. Accordingly, internal standards are used to evaluate what is gained from students, rather than what has been invested. As for the relationship with the organization, we assume the reverse to be true; that is, investments are more important than outcomes. It is known that, at least in The Netherlands, teachers are dissatisfied with their salaries and promotion prospects and jobs outside their profession are rather limited (Lokhorst, Habets, Hoogendijk, & Kleipool, 1994; Van Poppel & Kamphuis, 1994). These outcomes are rather difficult to change because they are either inherent to the structure of the teaching system or embedded in the formal contract with the school. Given the fact that some outcomes from the school are difficult, if not impossible, to alter, investments become more salient to counteract feelings of lack of reciprocity.

In the second tenet of his criticism to equity theory, Pritchard (1969) states that at the two extremes of a continuum, social-exchange relationships can be either intimate or impersonal. People have greater sensitivity to discrepancies between investments and outcomes when the exchange relationship is more personal. Thus, lack of reciprocity is more likely to occur in more personal relationships. Applying this reasoning to teachers, we assume that their relationship with students can be characterized as more personal than with the school. Therefore, lack of reciprocity is more easily generated when the exchange relationship with students is concerned.

Hypotheses

In this study, two hypotheses are tested with regard to social exchange processes with students:

Hypothesis 1. Teachers who experience an imbalance in the relationship with students (i.e., investments outweigh outcomes) are more likely to have burnout symptoms than teachers who experience reciprocity.

Hypothesis 2. Burnout is mainly related to outcomes from students, rather than to investments teachers put into their relationship with students.

With regard to the exchange relationship with the school, two other hypotheses are tested:

Hypothesis 3. Teachers who feel that outcomes from the organization are less than their investments (lack of reciprocity) show higher burnout levels. However, lack of reciprocity at the organizational level is expected to have less impact on burnout than lack of reciprocity at the interpersonal level because the former relationship is less personal.

Hypothesis 4. Investments in the relationship with the school will show a stronger relation with burnout than outcomes from the school.

Method

Sample

The current study used a composite sample of teachers ($n = 257$; response rate 73%) from six elementary ($n = 97$) and four secondary ($n = 160$) schools located in Eindhoven, The Netherlands. The total sample consisted of 155 (60%) men, and 102 (40%) women. The average age was 45 years, with a range from 23 to 59 years ($SD = 6.98$). The mean work experience was 19 years ($SD = 7.71$), and the mean number of hours employed per week was 33 ($SD = 9.28$).

Procedure

In 1994 and 1995, teachers were asked to participate voluntarily in a school health program (SHP) that was conducted by a local Occupational

Health Service in Eindhoven. The object of the SHP was to prevent burnout and to reduce absenteeism by reducing workload through reallocation of tasks and duties among teachers. Each participant was interviewed about his or her experienced workload, as well as about his or her tasks and duties. In addition, a questionnaire was completed concerning working conditions (including investment and outcome items) and well-being (including burnout) of personnel. The questionnaires were completed after the interview in the presence of the interviewer. In the present study, data from the questionnaire are used

Instruments

Burnout The Dutch version of the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986) for educators (Schaufeli & Van Horn, 1995) was used to measure burnout. On the grounds of poor factorial validity, Schaufeli, Daamen, and Van Mierlo (1993) eliminated two items from the MBI: Item 16, "Working with people puts too much strain on me" (emotional exhaustion); and Item 12, "I feel very energetic" (personal accomplishment; cf. Byrne, 1993). Accordingly, the Dutch MBI version for teachers comprises 20 items subscaled in emotional exhaustion (EE; 8 items; e.g., "I feel emotionally drained by my work"), depersonalization (DP; 5 items; e.g., "I don't really care what happens to some students"), and personal accomplishment (PA; 7 items; e.g., "I deal very effectively with the problems of my students"). Internal consistencies (Cronbach's alpha coefficients) were .89, .56, and .75 for EE, DP, and PA, respectively. Each statement is rated on a 7-point Likert scale ranging from 0 (*a few times a year*) to 6 (*every day*). High scores on emotional exhaustion and depersonalization and a low score on personal accomplishment reflect high burnout levels.

Reciprocity Reciprocity in the relationship with students and with the school was assessed using two items for each exchange relationship consisting of a global investment item ("How much do you put into the relationship with your students?"/". . . the school?"—I), and a global outcome item ("How much do you get back in return from your students?"/". . . the school?"—O; Adams, 1965). Scoring categories ranged from 0 (*very little*) to 5 (*very much*). In order to evaluate the imbalance between investments and outcomes, ratio scores were calculated (O/I). A ratio greater than 1 indicates that outcomes exceed investments, whereas a ratio smaller than 1 indicates the opposite. A ratio score of 1 suggests a balanced or reciprocal exchange between investments and outcomes. Because reciprocity had to be assessed similarly at two different levels, global instead of specific investment and outcome items were included. Van Dierendonck, Schaufeli, and Buunk (1996) showed the validity of our operationalization of reciprocity vis à vis

an assessment in which subjects were asked to evaluate the ratio of investments and outcomes themselves. In addition, a recent study found a strong link between a similar single-item assessment of inequity and 14 job features, including poor work environment (smell, noise, heat), job variety and job autonomy (VanYperen, Hagedoorn, & Geurts, 1996).

Analyses

Multivariate outliers can strongly influence the parameters in multiple regression equations. To track down potential multivariate outliers, a screening method was applied as described by Bollen (1987). Variables entered in the screening process included the three burnout dimensions and relevant predictors. From the total sample ($N = 257$), 5 multivariate outliers and 3 cases with missing values were excluded from further analyses, resulting in a final sample of 249.

In the introduction, we hypothesized that lack of reciprocity in the relationship with students (Hypothesis 1) and in the relationship with school (Hypothesis 3) would be related to higher burnout levels. To test these hypotheses, a hierarchical multiple regression analysis was conducted with emotional exhaustion, depersonalization, and personal accomplishment as dependent variables. The independent variables *reciprocity students* and *reciprocity school* were entered simultaneously in the third step. Their product was entered in the fourth step to determine their interaction effect on burnout.

We also hypothesized that with regard to burnout, outcomes from students were more important than investments (Hypothesis 2) and that investments in school were more important than outcomes (Hypothesis 4). To test the relative contribution of outcomes and investments in both relationships in burnout, two hierarchical multiple regression analyses were conducted. To investigate Hypothesis 2, investments and outcomes in the relationship with students were entered simultaneously in the third step. To investigate Hypothesis 4, investments and outcomes in the relationship with the school were entered together in the third step.

Results

Results of the study are presented in two sections. First, correlations are presented between investments, outcomes, and burnout. Second, the predictive values of social exchange processes with students and the school are presented for burnout.

Table 1 shows the means, standard deviations, and intercorrelations of the variables used. Table 1 shows that reciprocity in the relationship with students was significantly correlated with all three burnout dimensions. When

Table 1
Descriptive Statistics and Intercorrelation of Variables Total Sample (N = 249)

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1 EE	15.35	9.94											
2 DP	5.46	4.31	.44***										
3 PA	30.77	6.47	-.23***	-.27***									
4 Investments, students	4.04	0.80	-.02	-.30***	.34***								
5 Outcomes, students	3.59	0.95	-.20**	-.37***	.47***	.61***							
6 Reciprocity, students	0.90	0.21	-.24***	-.15*	.24***	-.26***	.58***						
7 Investments, organization	3.84	0.98	-.07	-.37***	.22***	.34***	.32***	.07					
8 Outcomes, organization	2.39	1.01	-.25***	-.19**	.17**	.16	.21***	.10	.23***				
9 Reciprocity, organization	0.66	0.30	-.13*	.09	-.02	-.06	-.02	-.03	-.48***	.68***			
10 Age	45.00	6.98	.08	.17**	-.18**	-.19**	-.18***	-.06	-.13*	-.05	.08		
11 Teaching experience	19.00	7.71	.08	.08	-.07	-.06	-.06	-.03	.02	.08	.06	.76***	
12 Number of hours employed	33.00	9.28	-.01	-.10	.22	.07	.04	.00	-.17**	.05	-.10	-.18	.01

Note: EE = emotional exhaustion; DP = depersonalization; PA = personal accomplishment; Investments = investments exceed outcomes, whereas a positive value indicates that outcomes exceed investments.
*p ≤ .05. **p ≤ .01. ***p ≤ .001.

teachers feel that they invest more than they receive, emotional exhaustion and depersonalization levels are high, whereas personal accomplishment levels are low. With regard to reciprocity in the relationship with school, lack of reciprocity (i.e., investments exceed outcomes) is related to higher emotional exhaustion levels.

Table 2 reveals that demographic variables accounted for 1%, 10%, and 3% of the variance in emotional exhaustion, depersonalization, and personal accomplishment, respectively. Feelings of depersonalization were higher among male teachers than among their female colleagues. However, no significant gender differences were found for emotional exhaustion and personal accomplishment. Levels of reduced personal accomplishment tended to rise with age: Older teachers felt more incompetent than did their younger colleagues. No significant age differences were found for emotional exhaustion and depersonalization.

Table 2 also shows that the set of work-related factors significantly explained 7% of the variance in depersonalization and 9% of the variance in personal accomplishment. Significant differences in burnout levels with regard to school type, number of hours employed, and teaching experience were found. Secondary-school teachers felt more emotionally exhausted than did elementary-school teachers. Moreover, feelings of depersonalization and reduced personal accomplishment were also higher among secondary-school teachers than among their elementary-school colleagues. As for the number of hours employed, emotional exhaustion and depersonalization levels among full-time teachers did not significantly differ from part-time teachers. However, full-time teachers felt more competent in their work than did part-time teachers. As far as teaching experience is concerned, no significant relations were found regarding any of the three burnout scales.

Hypothesis 1 about the role of social-exchange processes at the interpersonal level (teacher-student) in burnout was not supported. Results showed that a lack of reciprocity between investments and outcomes with students did not significantly contribute to higher burnout levels. In agreement with Hypothesis 3, lack of reciprocity in the relationship with the school (i.e., investments exceed outcomes) was significantly related to higher levels of emotional exhaustion. We also assumed that lack of reciprocity at the organizational level would have less influence on burnout than lack of reciprocity at the interpersonal level. In fact, the opposite was found.

Hypotheses 2 and 4 presupposed outcomes to be more important in the relationship with students (Hypothesis 2), and investments to be more relevant in the relationship with the school (Hypothesis 4), respectively. Results of the two hierarchical multiple regression analyses are presented for investments and outcomes with students (Step 3a) and with the school (Step 3b; Table 3).

Table 2

Reciprocity in the Relationship With Students and the Organization (N = 249)

Step	Predictors Variables entered	Emotional exhaustion				Depersonalization				Personal accomplishment			
		β	<i>p</i>	R^2	ΔR^2	β	<i>p</i>	R^2	ΔR^2	β	<i>p</i>	R^2	ΔR^2
1	Age	0.08	.224			0.11	.077			-0.15	.018		
	Gender ^a	-0.01	.884			-0.30	.000			-0.08	.232		
	Combined variables			.01	.01			.10	.10***			.03	.03*
2	School type ^b	0.16	.022			0.27	.000			-0.29	.000		
	Number of hours employed	0.04	.576			-0.08	.160			0.13	.045		
	Teaching experience	0.13	.226			0.03	.732			0.02	.874		
	Combined variables			.03	.02			.17	.07***			.12	.09***
3	Reciprocity, students ^c	0.02	.798			0.05	.412			-0.04	.495		
	Reciprocity, organization ^c	-0.17	.010			-0.05	.434			0.05	.420		
	Combined variables			.06	.03*			.18	.01			.12	.00
4	Reciprocity, Students \times Organization	-0.04	.566	.06	.00	0.05	.366	.18	.00	0.05	.340	.13	.01

Note. All variables are standardized with the exception of gender and school type.

^a0 = male, 1 = female. ^b0 = elementary-school teachers, 1 = secondary-school teachers. ^cA negative value indicates that investments exceed outcomes, whereas a positive value indicates that outcomes exceed investments.

* $p \leq .05$ *** $p \leq .001$

Table 3

Investments and Outcomes in the Relationship With Students and the Organization (N = 249)

Step	Predictors Variables entered	Emotional exhaustion				Depersonalization				Personal accomplishment			
		β	<i>p</i>	R^2	ΔR^2	β	<i>p</i>	R^2	ΔR^2	β	<i>p</i>	R^2	ΔR^2
3a	Investments, students	0.22	.003			-0.09	.201			0.07	.254		
	Outcomes, students	-0.29	.000			-0.18	.007			0.43	.000		
	Combined variables			.09	.06***			.23	.06***			.33	.21**
3b	Investments, organization	-0.00	.994			-0.24	.000			0.13	.045		
	Outcomes, organization	-0.22	.000			-0.04	.498			0.10	.087		
	Combined variables			.08	.05**			.23	.05***			.15	.03*

Note. All variables are standardized.

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

Table 3 shows that emotional exhaustion was significantly associated with teachers' investments and outcomes in the relationship with students, accounting for 6% of the explained variance. Emotional-exhaustion levels were significantly higher when teachers either invested more or gained less from students. As predicted by Hypothesis 2, outcomes are of greater relevance than investments with regard to the two attitudinal burnout dimensions. That is, low outcomes from students were related to higher depersonalization and reduced personal accomplishment levels. Percentages of explained variances were 6% for depersonalization and 21% for personal accomplishment.

Results show that 5% of the variance in depersonalization and 3% of the variance in personal accomplishment was significantly explained by investments in the relationship with the school. In agreement with Hypothesis 4, these findings indicate that low investments were accompanied by higher levels of depersonalization and reduced personal accomplishment. Feelings of emotional exhaustion were significantly related to outcomes from the school, accounting for 5% of the variance. More specifically, teachers who gained less from the relationship with the school reported higher levels of emotional exhaustion.

In sum, particularly with regard to the attitudinal burnout dimensions (depersonalization and personal accomplishment), outcomes from students were more important than investments, whereas in the relationship with the school, investments were more significant. Low outcomes from students were related to higher depersonalization and reduced personal accomplishment levels. Low investments in the relationship with the school were related to higher levels of depersonalization and reduced personal accomplishment. However, low outcomes from the school were significantly related to higher emotional-exhaustion levels.

Discussion

The main objective of this study was to investigate whether an imbalance between investments and outcomes (lack of reciprocity) in interpersonal and organizational exchange relationships was related to burnout among teachers. A general overview of the results found in the present study concerning the relation between demographic and work-related factors and burnout indicates that age and gender, along with school type (primary vs. secondary) and number of hours employed (part time vs. full time), have been found to be significantly related to burnout. Therefore, these factors were controlled for in this study. In agreement with findings in other studies, male teachers showed more feelings of depersonalization than did female teachers (Anderson & Iwanicki, 1984; Greenglass et al., 1990). With regard to age, it was found that older teachers felt more incompetent than did younger

teachers. In other (mainly American) studies, opposite results have generally been found (e.g., Friedman, 1991). As for work-related factors, part-time teachers felt less competent than did their full-time colleagues. This finding has not been supported in other studies (e.g., Anderson & Iwanicki, 1984; Friedman, 1991) in which full-time teachers showed higher emotional-exhaustion levels than did part-time teachers. Our results on the relation between burnout and school type correspond with previous findings in which secondary-school teachers were found to be more burned out than elementary-school teachers (Anderson & Iwanicki, 1984; Gold & Grant, 1993). It has been argued by Gold and Grant that secondary-school teachers are more burned out because, compared with students from elementary schools, secondary-school students are less interested and more difficult to motivate.

As far as social-exchange processes are concerned, we had expected burnout to be related to lack of reciprocity at both the interpersonal (Hypothesis 1) and the organizational level (Hypothesis 3). However, this was only true for the exchange of investments and outcomes at the organizational level. In addition, our assumption that lack of reciprocity in the relationship with the school would have less impact on burnout than lack of reciprocity in the more personal relationship with students was also not supported. Thus, at the interpersonal level, teachers who experienced lack of reciprocity did not have higher scores on burnout than did teachers who experienced a reciprocal relationship with their students; whereas at the organizational level, higher scores on emotional exhaustion were found for teachers who felt that they invested more than they got back in return. Obviously, for teachers, lack of reciprocity at the organizational level is more relevant to burnout than lack of reciprocity at the interpersonal level. This finding might be explained by what has been stressed by Rosenholtz and Simpson (1990), who argue that school policies that impair teachers' flexibility to perform their core instructional tasks tend to decrease teachers' commitment to the school. Thus, when teachers feel restricted in their work (i.e., teaching) because of poor working conditions, negative feelings such as lower commitment are likely to occur. It is not unlikely that the positive relation we found in our study between lack of reciprocity at the organizational level and emotional exhaustion could also be explained by such poor working conditions: Teachers get tired of being ignored by the organization, it can be speculated. This agrees, for instance, with Mazur and Lynch (1989), who found that lack of recognition and appreciation from principals was related to burnout. Thus, feelings of being underappreciated may contribute to a more emotionally demanding work environment.

Borg and Riding (1991) also argued that in order to reduce teacher stress, it is important to "provide them with the facilities to carry out their job properly, to provide a decent working environment, and not to overload them

with work" (p. 370). To find more supporting evidence for the existence of such a relationship, future research needs to investigate which particular factors in the work environment of teachers are especially salient in social-exchange processes at the organizational level.

This brings us to our second and fourth hypotheses, in which we assumed that with students, outcomes are more relevant in burnout (Hypothesis 2), whereas with the school, investments are more relevant (Hypothesis 4). Results confirm both assumptions as far as the attitudinal components of burnout (depersonalization and personal accomplishment) are concerned. Depending on the type of exchange relationship, either investments or outcomes are more strongly related to these burnout dimensions. More specifically, outcomes from students were found to be the most predictive for burnout, whereas in the relationship with the organization, investments were more relevant. Elaborating on the relevance of outcomes in the relationship with students, results indicate that low outcomes from students were significantly related to higher levels of emotional exhaustion and depersonalization, and reduced personal accomplishment. In explaining these findings, we refer to the assumptions made in the introduction that, on the intimate-impersonal continuum, the relationship with students is more intimate than the relationship with the school, and that in the relationship with students outcomes are more relevant than investments. From these assumptions, it could be argued that teachers are more sensitive to what is gained from this relationship simply because teaching is highly "existentially significant" for them (Pines, 1993).

The importance of outcomes for teachers is, to some extent, supported by Byrne (1991), who pointed out that along with the deterioration of the social climate of the classroom, teachers become emotionally exhausted. Moreover, they develop increasingly negative attitudes toward their students and toward teaching in general. Weisfelt (1993), too, argued that prolonged absence of positive feedback from students (i.e., students' progress, motivation, enthusiasm, etc.) generates a sense of uselessness, resulting in an energy depletion. As expected in Hypothesis 4, results indicate that low investments were significantly related to higher depersonalization and reduced personal accomplishment levels, whereas low outcomes from the school were related to higher levels of emotional exhaustion. The finding that higher depersonalization levels were related to lower investments could be indicative of the relevance of Pritchard's argument that it is easier to alter negative feelings in a more impersonal relationship. Thus, in order to counteract these negative feelings, teachers might lower their investments and distance themselves from the school.

Some weaknesses in our study that warrant further research must be addressed. First, in this study, a lack of reciprocity was measured by two

items referring to investments and outcomes in general. In addition, the predictive value of lack of reciprocity with regard to burnout was rather small. Although the validity of this operationalization of reciprocity has been shown by Van Dierendonck et al. (1996), it is possible that in the relationship with students and with the organization, different kinds of investments and outcomes are also important in burnout. Thus, to enhance our understanding of social exchange processes, future research must concentrate on specifying these investments and outcomes. Second, teachers may use other principles to evaluate their investments and outcomes in a particular relationship than stated in equity theory. As Deutsch (1987) pointed out,

as a result of the overemphasis of research on equity, with its implicit context of market economy, there has been insufficient research on distributive justice in other institutional contexts such as the family, the school, or the hospital. Other principles than equity may more strongly come into play in these other contexts. (p. 152)

For instance, when equality principles (i.e., outcomes are equal, regardless of investments) are considered, investments become less important in evaluating distributive justice (i.e., equity). Finally, the present study is cross-sectional in nature. Therefore, it cannot be ruled out that poor outcomes or lack of reciprocity are consequences of burnout, rather than its antecedents. That is, energy depletion (burnout) might change teachers' perceptions of the social-exchange process. In order to disentangle causality, longitudinal studies are needed to monitor changes in social-exchange processes and their effect on burnout as it relates to the teaching profession.

In spite of these weaknesses, our results indicate that gender, age, teaching experience, and school type are confounders that need to be controlled for when studying teacher burnout. Furthermore, social-exchange processes in teaching seem particularly relevant for the relationship with the school as far as burnout is concerned. Finally, and most importantly, the present study shows that differentiating between investments and outcomes at the interpersonal and organizational level, instead of including ratio scores of investments and outcomes at both levels, is a promising direction for further research in burnout.

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