Social Comparison, Inequity, and Absenteeism Among Bus Drivers

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In this study, absenteeism among bus drivers is predicted on the basis of equity theory and social comparison theory The number of objectively recorded absence spells (up to a maximum of 14 calendar days) is assessed in a sample of 116 bus drivers from a transport company in the Netherlands Using the program LISREL, a social psychological model is developed (i e tested and revised) The study demonstrates the impact upon absenteeism of two social factors (1) conflicts with superiors, which are associated with drivers' perception of investing more in the exchange relationship with the company than they receive in return, and (2) the perceived norms of colleagues regarding being absent from work In addition to their impact upon absence behaviour, both social factors also seem to influence the personal norm regarding being absent. Unexpectedly, the personal absence norm is not significantly associated with absence behaviour It is concluded that equity theory and social comparison theory enhance our understanding of absenteeism among bus drivers

SOCIAL COMPARISON, EQUITY, AND ABSENTEEISM AMONG BUS DRIVERS

Most international overviews indicate that the absence rates in the Netherlands are consistently in the upper region of the international absence rank (Prins, 1990). Sickness benefit arrangements and medical supervision procedures appear to be responsible for the comparatively high incidence and duration of absences in the Netherlands. In this country, and in contrast with most other industrialized countries: (1) employees do *not* need medical certification to receive sickness benefits, unless the illness lasts longer than about two weeks; and (2) most employees receive full income replacement during their sickness period.

In the Netherlands, absence rates among bus drivers take alarming proportions. The absence percentage among drivers is two to three times the national average

(Kompier et al., 1990). These alarming figures have triggered many studies examining the determinants of health problems that are the most important antecedents of long-term absenteeism and future disability (such as back, tendon, and joint dysfunctions; mental disorders; and cardiovascular diseases). Several stressors in the work situation of bus drivers have been found to be related to health problems, such as: (1) irregular work-schedules; (2) ergonomic problems in the bus cabin; (3) time pressures; (4) traffic pressures; (5) responsibility for passengers; (6) stressful contacts with passengers; and (7) insufficient decision latitude within the job setting (Kompier, 1991).

In addition to affecting the ability to come to work through the development of serious health problems ("involuntary" absenteeism), such stressors are also likely to affect the motivation to attend the job ("voluntary" absenteeism) (cf. Steers & Rhodes, 1978). Although short-term absences, which are assumed to be valid *indicators of "voluntary" absences (Chadwick-Jones, Nicholson, & Brown, 1982)*, occur quite frequently among bus drivers (Kompier et al., 1990), such absences have barely been studied among this occupational group. As we will discuss in the next section, equity theory (Adams, 1965; Walster, Walster, & Berscheid, 1978) might be helpful in understanding such absences among bus drivers. By studying short-term absences from a more general social comparison perspective (Festinger, 1954; Wheeler, 1991) we attempt to overcome two additional limitations in absence research. First, our study is an attempt to make a theoretical contribution to absence research. As has been indicated by several researchers (Chadwick-Jones et al., 1982; Steers & Rhodes, 1978), the theoretical integration of research findings leaves much to be desired. Second, rather than focusing on organizational or individual determinants of absenteeism, our study focuses on the impact of social psychological factors upon absenteeism.

Accordingly, our study develops a social psychological model on the basis of equity theory and social comparison theory. It is assumed that absenteeism among drivers is the result of: (1) the perception of inequity in the exchange relationship with the company; and (2) the adjustment of one's personal absence norm to the absence norms of colleagues. Both social processes affecting absenteeism will be pointed out in greater detail in the next two sections.

Inequity in the Exchange Relationship with the Company

The relationship between employees and their company can be considered as an exchange relationship between inputs or investments from employees (such as skills, experience, and effort) and outcomes or benefits provided by the company (such as salary, promotion prospects, and social contacts). According to equity theory (Adams, 1965; Walster et al., 1978) employees perceive their exchange relationship to be unfair when their investments are not proportional to rewards

Bus drivers belong to an occupational group that is particularly likely to perceive their exchange with the company as inequitable, i.e. that they invest more in their relationship with the company than they get in return. On the one hand, as earlier mentioned, bus drivers are confronted with major job stressors. On the other hand, the rewards provided by the company are quite limited. Generally, bus drivers in the Netherlands have poor promotion prospects, poor training facilities, and little influence on decision making due to rather authoritative leadership styles (Pokorny, 1991). According to equity theory, feelings of inequity impel employees to cope with the unfair situation in one way or another. One possibility is to leave the work situation temporarily by being absent. This can be referred to as "exit" behaviour (Hirschman, 1970). Several studies have provided evidence for a direct positive relationship between feelings of inequity and absenteeism (Dittrich & Carrell, 1979; Geurts, Buunk, & Schaufeli, in press a,b; Hendrix & Spencer, 1989; Oldham, Kulik, Ambrose, Stepina, & Brand, 1986). Staying away from work serves two major functions. First, negative feelings that are caused by the work situation are reduced. Second, the inequitable relationship with the organization is restored: Employees reduce their investments and at the same time rewards are increased (they have an extra day off without financial consequences). Accordingly, it can be assumed that the more inequitably drivers perceive their exchange relationship with the company, the more often they will be absent (see path 1 in Fig. 1).

Another possible response triggered by feelings of inequity is an active attempt by employees to change their situation, rather than to escape from it. Employees can express their feelings of inequity, and discuss work problems with their

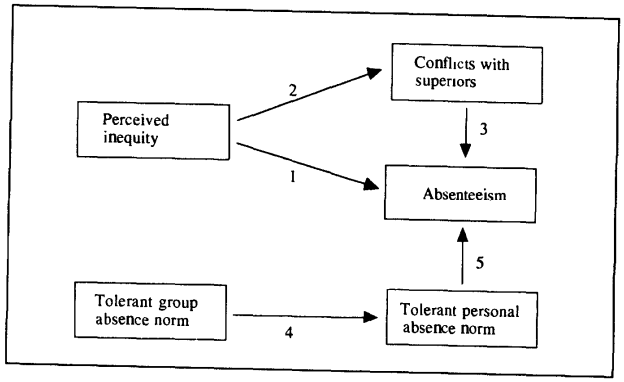

FIG 1 The hypothesized model

superiors in the hope of changing the situation. This type of reaction has been referred to as "voice" (Hirschman, 1970). However, in addition to poor participation in decision making, bus drivers have few possibilities to discuss work problems with superiors, either formally or informally (Pokorny, 1991). Walton, Dutton, and Cafferty (1969) have demonstrated that such barriers to communication, as well as inequity in work load and rewards, were two major causes of conflicts in a sample of 300 managers of several departments within a firm. Also, Rahim and Bonoma (1979) have suggested that several organizational characteristics, such as barriers to communication and low management receptiveness to employees' ideas, increase the likelihood of conflicts. Therefore, we can expect that in Dutch transport companies raising one's voice will easily lead to conflicts with superiors. Consequently, it is hypothesized that the more drivers experience feelings of inequity, the more they will be involved in conflicts with superiors (see path 2 in Fig. 1).

An unfavourable impact of poor subordinate–superior relationships upon absenteeism has been demonstrated in several studies (cf. Chadwick-Jones et al., 1982). For example, in the study of Nicholson and Payne (1987), both white-collar and blue-collar workers reported that having conflicts with their superiors would be a legitimate reason for them to stay away from work. Accordingly, it is hypothesized that the more drivers are involved in conflicts with superiors, the more often they will be absent (see path 3 in Fig.1).

Social Comparison of Attitudes Regarding Absenteeism

An additional social psychological process affecting absenteeism involves attitudes towards the conditions under which employees feel they can stay away from work. Several studies have shown the impact of a group absence norm upon individual absence behaviour. For example, the study conducted by Chadwick-Jones et al. (1982) revealed that *within* social collectives (departments, plants, or occupations) absence patterns were quite similar, whereas *between* collectives absence patterns were very different. They concluded that individuals fit themselves into a group norm that prescribes how much absence is considered to be "appropriate" by the group. The tendency of individuals to conform to absence norms of the group is generally what would be predicted by social comparison theory, particularly as applied to conformity behaviour (Allen & Wilder, 1977). According to social comparison theory, an individual appraises the "correctness" of his opinion by comparing his own opinion with that of the group. When a discrepancy with the group is perceived, the individual becomes uncertain about the validity of his own opinion, resulting in a movement towards the group. The theory assumes that conforming behaviour stems primarily from the motivation to establish a valid norm (i.e. informational social influence), rather than from a desire to be liked by the group (i.e. normative social influence) (cf. Moscovici, 1986; Turner, 1991). From this point of view, employees will not only conform publicly, but they will internalize the absence norms of their colleagues as well. Accordingly, it can be assumed that when drivers perceive the absence norms of colleagues to be more tolerant than their personal absence norm, they will take over the more tolerant norm. This is likely to result in being absent more frequently. Similarly, when drivers perceive the group absence norm to be less tolerant, they will adopt this less tolerant norm, resulting in fewer absences. Generally, we expect that the more drivers perceive the absence norms of their colleagues to be tolerant, the more tolerant their personal absence norm will be (see path 4 in Fig. 1). Moreover, the more tolerant their personal absence norm is, the more often drivers will stay away from their work (see path 5 in Fig. 1).

Summary of the Research and the Theoretical Model

The present study aims to predict objectively recorded short-term absences among bus drivers on the basis of equity theory and social comparison theory. By employing LISREL VII (Jöreskog & Sörbom, 1989), the present study allows for the simultaneous testing of an *a priori* specified model that comprises all hypothesized paths (see Fig. 1). To summarize: The perception of inequity will motivate drivers to reduce inequity, either by withdrawing silently (by reporting sick) or by raising their voice, resulting in conflicts with superiors. Such conflicts—in turn—will increase absenteeism. In addition to this social process triggered by perceived inequity, we expect the impact upon absenteeism of a social influence process. Absenteeism is more likely the more tolerant one's personal absence norm is. This personal absence norm is supposed to be more tolerant, the more drivers perceive the absence norms of their colleagues to be tolerant.

METHOD

Subjects and Procedure

The study is conducted among 60 local and 56 regional bus drivers (110 males and 6 females) from a transport company in the Netherlands. The response rate is 78 per cent. The average age and duration of employment are 38.76 years (SD = 7.03, range 22–56) and 10.36 years (SD = 8.01; range 1–38), respectively. All subjects participated voluntarily. They were informed about the necessity of the researchers having access to individual absence records, but it was strongly emphasized that the collected data would be treated confidentially.

Measures

Absence frequency is measured objectively from the company records during a 9 month period immediately following a survey. The absence frequency measure is chosen for theoretical and methodological reasons. Theoretically, absence

frequency, particularly of short spells, is supposed to best represent "voluntary" absences (Chadwick-Jones et al., 1982; Smulders, 1980), because it is less affected by involuntary long-term illnesses than are time-lost measures. Methodologically, absence frequency carries fewer problems in statistical analyses, because it is less susceptible to skewness and leptokurtosis than are time-lost measures (Hammer & Landau, 1981). Consequently, in our study the frequency of short absence spells (up to a maximum of 14 calendar days (Smulders, 1980) is assessed for each bus driver. The cut-off point of 14 calendar days is chosen because in the Netherlands absence spells of less than 2 weeks are not medically certified. Such absences, therefore, reflect primarily a decision made by employees themselves. The stability-index is calculated by correlating prior absence frequency (during the 9 month period before the survey) with subsequent absence frequency (during the 9 month period following the survey) (Steel, 1990). This test–retest reliability is 0.52, which is well within the range of Steel, who found correlations varying from 0.29 to 0.79. The kurtosis and skewness of the absence measure used in our study are 0.18 and 0.98 respectively, indicating that a normal sample distribution is approached.

Survey Measures

Table 1 shows the means, standard deviations, internal consistencies (Cronbach's alpha), and zero-order correlations of all the variables included in the current study. All survey measures are self-constructed.

Perceived Inequity. Subjects were confronted with three items: (1) "I invest more in my work than I get out of it"; (2) "I work too hard, considering what I get in return"; and (3) "For the efforts I put into the company, I get a lot in return" (this item was recoded). Subjects responded on a five-point scale, ranging from, "I disagree completely" (1) to, "I agree completely" (5). The internal consistency is good (= 0.72). Similar measures of inequity have often been employed in research on burnout (VanYperen, Buunk, & Schaufeli, 1992).

TABLE 1
Means (M), Standard Deviations (SD), Internal Consistencies (On the Diagonal), and Zero-order Correlations (Below the Diagonal)

Variables	*M*	*SD*	*1*	*2*	*3*	*4*
Perceived inequity	2 92	0 98	(0 72)			
Conflicts with superiors	1 69	0 77	0 40**	–		
Group absence norm	3 11	0 53	0 13	0 08	(0 76)	
Personal absence norm	1 98	0 63	0 17	0 35**	0 31**	(0 64)
Absence frequency	1 17	1 18	0 13	0 33**	0 23*	0 17

* $P < 0\,05$. ** $P < 0\,01$

Conflicts with Superiors. Subjects were asked how often they had recently been involved in conflicts with superiors (i.e. different point of views, difficulties, quarrels). They responded on a single five-point scale, ranging from "never" (1) to "daily" (5).

Group Absence Norm. Subjects were asked to estimate the likelihood that their colleagues would be absent in five potentially absence-inducing situations: (1) feeling miserable; (2) personal circumstances; (3) not feeling too well; (4) being fed up with work; and (5) just wanting to stay away from work. The alternatives range on a five-point scale from "certainly not" (1) to "certainly" (5). The internal consistency is 0.76.

Personal Absence Norm. Subjects were asked how likely it was that each of the five potentially absence-inducing events mentioned earlier would lead to their being absent from work. The alternatives ranged on a five-point scale from, "certainly not" (1) to "certainly" (5). The internal consistency is sufficient (= 0.64). A similar scale was also used in an earlier study (Geurts et al., in press a). In two independent samples of blue collar workers, the internal consistencies were also sufficient (0.65 and 0.66).

Data Analysis

To assess the fit of the proposed model, a confirmatory path analysis is performed using the maximum likelihood methods of LISREL VII (Joreskog & Sörbom, 1989). Although our sample size is rather small, it meets the minimal requirements to us LISREL (McPhee & Babrow, 1987). As proposed by Kenny (1979), the reliabilities of the measures are used to fix the values of the factor loadings and error variances. For survey measures and the absence measure, internal consistencies (i.e. Cronbach's alpha's) and the stability-index are used respectively.[1] The overall fit of the model to the data is tested by the absolute chi-square goodness-of-fit index (χ^2). In addition, other LISREL fit-indices (i.e. the Adjusted-Goodness-of-fit Index (AGFI), and the Root Mean Square Residual (RMSR)) are considered. As these indices vary with sample size, McDonald and Marsch (1990) recommend the use of the Tucker–Lewis Index (TLI) for assessing the relative fit of the model (i.e. compared to the null-model in which all variables are supposed to be uncorrelated). Values of less than 0.90 usually mean that the model can be improved substantially (Bentler & Bonett, 1980). In improving the model *t*-values are used to eliminate non-significant paths, and modification indices are used to explore the existence of unspecified but significant paths.

[1] The path from any construct to its measured variable (i e lambda) equals the square root of the reliability of

RESULTS

Model Development

The goodness-of-fit measures indicate that our hypothesized model (see Fig. 1) does not fit the data of our sample very well ($\chi^2_{(4)} = 17.65$, $P = 0.001$, AGFI = 0.792, RMSR = 0.094, TLI = 0.39). Therefore, additional steps have to be taken to arrive at a more acceptable model. Table 2 shows the goodness-of-fit measures of the null-model (M_0) and the *a priori* specified model (M_1), as well as three additional steps.

In the first step (M_2), two non-significant relationships are constrained to zero, as well as the covariance between perceived inequity and the group absence norm (psi = 0.20, ns). Contrary to our expectations, it can no longer be assumed that drivers are absent more often the more inequitably they perceive their exchange with the company (path 1: ß = 0.01, ns), and the more tolerant their personal absence norm is (path 5: ß = 0.17, ns). As can be expected, because the paths are non-significant, the fit does not deteriorate significantly ($\delta\chi^2_{(3)} = -3.19$, ns). In the second step, the fit of M_3 improves significantly when a direct relationship between conflicts with superiors and one's personal absence norm is unconstrained ($\delta\chi^2_{(1)} = 14.13$, $P < 0.001$), indicating that being involved in conflicts with superiors is associated with having a more tolerant personal absence norm. Although the goodness-of-fit indices indicate that an acceptable fit is already attained, the fit can be further improved significantly in one additional step. In step 3 (M_4) a direct relationship is specified between the perceived group absence norm and being absent ($\delta\chi^2_{(1)} = 5.16$, $P < 0.05$): Drivers are absent more often the more they perceive the absence norms of their colleagues to be tolerant. These steps result in a good fitting model ($\chi^2_{(5)} = 2.27$, $P = 0.811$, AGFI = 0.977, RMSR = 0.043, TLI = 1.09), explaining 29.1 per cent of the variance in absence frequency. Figure 2 shows the standardized regression coefficients of the final model.

In this model, three of the five hypothesized paths appear to be significant. The more drivers perceive inequity, the more often they are involved in conflicts with

TABLE 2
Model Development (n = 116)

	χ^2	*df*	*P*	*AGFI*	*RMSR*	*TLI*
M_0	66 31	10	0 000	0 697	0 205	–
M_1	17 65	4	0 001	0 792	0 094	0 39
M_2	21 56	7	0 003	0 858	0 129	0 63
M_3	7 43	6	0 283	0 939	0 074	0 96
M_4	2 27	5	0 811	0 977	0,043	1 09

χ^2 = Chi-square goodness-of-fit index, AGFI = adjusted-goodness-of-fit index, RMSR = root mean square residual, TLI = Tucker–Lewis Index For M_0–M_4 see text

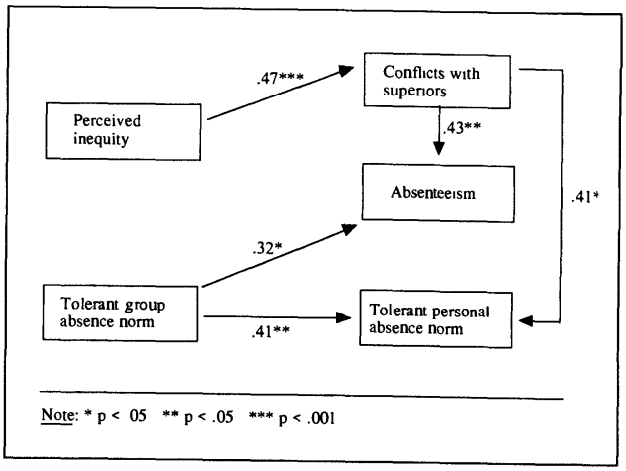

FIG. 2. The empirical model (n = 116)

superiors (path 2: ß = 47, $P < 0.001$); such conflicts resulted in being absent (path 3: ß = 0.43, $P < 0.01$). Furthermore, the more drivers perceive the group absence norm to be tolerant, the more tolerant their personal absence norm is (path 4: ß = 0.41, $P < 0.01$). The results further show that two paths which were not hypothesized, are significant. First, the group absence norm is directly related to absenteeism, rather than through the personal absence norm (ß = 0.32, $P < 0.05$). Second, conflicts with superiors are not only related to being absent, as was expected, but also to the personal absence norm (ß = 0.41, $P < 0.01$).

To summarize, the results suggest that absence frequency of short spells (up to a maximum of 14 calendar days) is influenced by two social processes. The first process is triggered by the perception of drivers that they invest more in the exchange relationship with the company than they receive in return. Rather than being related directly to absenteeism, the perception of inequity is associated with conflicts with superiors, which, in turn, motivate the driver to be absent. According to the second social process, the perceived tolerance of the group norm is directly related to being absent, rather than indirectly through the personal absence norm. Although the personal absence norm seems to be influenced by the group absence norm, it is not a significant predictor of absenteeism.

DISCUSSION

The present research is an attempt to make a theoretical contribution to absence research by studying "voluntary" absenteeism among bus drivers on the basis of equity theory and social comparison theory. It was assumed that absenteeism among bus drivers is the result of: (1) the perception of imbalance between one's investments and the benefits provided by the company; and (2) the adjustment of one's personal absence norm to the absence norms of colleagues.

With respect to the first social process affecting absenteeism (triggered by inequity), *no* evidence was found for a direct positive relationship between perceived inequity and absenteeism: Drivers are *not* absent more often, the more inequitably they perceive their exchange with the company. Therefore, absenteeism cannot be interpreted as a direct attempt by the driver to restore equity. The results showed, in accordance with our expectation, that drivers are more often involved in conflicts with superiors the more they perceive inequity in their exchange with the company. Such conflicts are associated with absence behaviour, as predicted, as well as with the personal absence norm. These findings suggest that bus drivers prefer raising their voice to their superior as a response to feelings of inequity, rather than withdrawing silently. According to Hirschman (1970), the choice between "exit" and "voice" strategies depends on loyalty to the work organization and belief in the possibility of improvement of the dissatisfying situation. Where there is loyalty (commitment) and a belief in the possibility of improvement, "voice" is preferred. However, our results indicate that when this attempt leads to conflicts with superiors, drivers withdraw after all, either by reporting sick (behavioural withdrawal), or by changing their personal absence norm in a more tolerant direction (which can be interpreted as "psychological withdrawal").

With respect to the second social process affecting absenteeism (social influence), the results showed that, as expected, the personal absence norms were more tolerant, the more drivers perceive the absence norms of their colleagues to be tolerant. Thus, drivers seem to adjust their personal absence norm to those of their colleagues. However, contrary to our expectations, the personal absence norm is not related to actual absence behaviour. Rather, the group absence norms are directly related to being absent, independent of the personal absence norm. Thus, it seems that the perception of a tolerant group absence norm results either in a change of one's personal absence norm in a more tolerant direction (attitudinal change) or in actually being absent more often (behavioural change).

These findings suggest that having a *tolerant* attitude towards being absent and actual absence *behaviour* reflect two quite independent and different responses of drivers to: (1) a perceived tolerant group absence norm; and (2) conflicts with superiors. However, the independence between one's personal absence norm and actual absence behaviour raises two questions. First, why is it that drivers who have a tolerant personal absence norm do not act according to their norm? On the basis of Festinger's cognitive dissonance theory (1957), one would expect that the attitudes towards performing a particular behaviour agree with actual behaviour in order to avoid "cognitive imbalance". In a similar vein, Ajzen and Fishbein's theory of reasoned action (1980) would predict that the inclination to report sick under certain conditions is a major determinant of actual absence behaviour. It can be argued, however, that individuals report that they are likely to be absent when they are "fed up with the work", but that in real life this situation occurs in a more complex context in which specific barriers (such as negative consequences for a colleague or undesirable disciplinary action) prevent them from reporting sick (cf. Steers & Rhodes). This explanation thus questions the ecological validity of the five conditions in the "personal absence norm" scale.

The second question that needs to be answered is: Why is it that drivers who are absent frequently do not report having a tolerant absence norm? It can be speculated that persons have presented themselves too favourably in reporting their personal norms about absenteeism. In other words, the personal absence norm measure may be susceptible to social desirability. Both factors (i.e. the ecological validity and the susceptibility to social desirability) might explain why results from our earlier study, in which a similar measure was used in another sample (Geurts et al., in press a), also failed to show a significant relationship between the personal absence norm and actual absence behaviour. A suggestion for future research would, therefore, be to pay particular attention to these "methodological" pitfalls in measuring personal norms regarding being absent.

To summarize, the results of the present study clearly indicate that absenteeism among bus drivers (i.e. the number of absence spells up to a maximum of 14 calendar days) is strongly affected by: (1) conflicts with superiors, which seem to be triggered by the perception of investing more in the exchange relationship with the company than what is received in return; and (2) the perceived norms of colleagues regarding being absent from work. In addition to their impact upon withdrawal behaviour (absenteeism), both social factors also seem to influence one's personal norm regarding absenteeism, which can be interpreted as a form of "psychological withdrawal".

The results of the present study are, however, somewhat preliminary. Because several steps are taken to arrive at a proper fitting model, the possibility of chance capitalization cannot be completely ruled out. A cross-validation in another sample is needed to test the robustness of the final model. Furthermore, although the study features a prospective design, the determinants of absenteeism are assessed cross-sectionally. Therefore, the causal direction of the relationships among these variables cannot be disentangled. For example, it has been suggested that feelings of inequity result in conflicts with superiors However, it can also be argued that conflicts with superiors give rise to feelings of inequity. Consequently, a longitudinal design in which both independent and dependent variables are measured more than once should be employed to provide more clarity about these points

Nevertheless, our final model explains approximately 30 per cent of the variance in objectively recorded absence frequency among bus drivers. This percentage is rather high compared to other studies that explain 20 to 25 per cent by employing large and heterogeneous sets of variables (Schalk, 1989), and by measuring absences by means of self-report (Brooke & Price, 1989). Hence, our results illustrate how fruitful equity perspective and social comparison perspective can be for our understanding of absenteeism among bus drivers.

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