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TITLE

**Linking Presenteeism to Organizational Performance:
Mediating and Buffering Factors**

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ABSTRACT

Using data collected from a European retailer at two levels (415 employees from 21 stores), this study explores the detrimental effects of presenteeism on store-level indicators of customer satisfaction, operational efficiency, absenteeism, and productivity. Results show that presenteeism is directly related to absenteeism rates, and indirectly related to other performance indicators through increased need for recovery and reduced job satisfaction. Finally, personnel-management procedures perceived as unfair worsen the negative influence of employees' presenteeism on their job satisfaction.

KEY WORDS

Presenteeism, absenteeism, organizational performance, need for recovery, job satisfaction, fair personnel-management procedures

¹ The empirical study was conducted when Nathalie Delobbe was affiliated at the Louvain School of Management, UCLouvain, Belgium.

Commonly defined as showing up for work while ill (Johns, 2010), presenteeism is arousing great interest because it is allegedly more costly for employers than absenteeism. (Deery et al., 2014; Lohaus & Habermann, 2019). Less time would be lost from people staying at home than from them being on the job while not functioning optimally because of illness or other medical conditions (Evans-Lacko & Knapp, 2016). However, many employers need further evidence to be convinced that there is a payback for curbing presenteeism. To this regard, current studies have at least three areas for improvement. First, quantifications of the impact of presenteeism on productivity are questionable as they are mostly based on self-reported estimates of on-the-job productivity loss (Lohaus & Habermann, 2019). Also, the mechanisms through which presenteeism impacts organizational outcomes must be further elucidated, to identify organizational levers that can be used to manage those consequences. Finally, much of the studies on the consequences of presenteeism have limited their investigation to individual-level outcomes, such as absenteeism, burnout, and job satisfaction (Deery et al., 2014; Demerouti et al., 2009; Karanika-Murray et al., 2015).

Based on these few contentions, this study aims to explore how individual-level outcomes related to presenteeism can affect organizational-level consequences. First, it assesses the effect of presenteeism on objective organizational performance indicators measured at the business unit level, using a multidimensional approach of performance. Second, it explores two underlying mechanisms, namely a health impairment path (need for recovery) and an affective/motivational path (job satisfaction), that might come into play in the relationship between presenteeism and organizational outcomes. Third, it examines how fair personnel-management procedures (FPMP) moderate the relation between presenteeism and each underlying mechanism (i.e., need for recovery and job satisfaction). Thus, this study

aims to advance knowledge of job resources that can play a protective role in the presenteeism process and mitigate its influence on organizational outcomes

Effect of presenteeism on organizational performance

Absenteeism has long been proved to be a cost to employers, which has led many organizations to reinforce their attendance policies, a tendency that has contributed to the rise of presenteeism in many organizations (Baker-McClearn et al., 2010). Costs caused by presenteeism are more difficult to estimate, however, than those due to absenteeism. Researchers have mostly turned to questionnaires, such as the *Work Limitations Questionnaire* (Lerner et al, 2001) and the *Stanford Presenteeism Scale* (Koopman et al., 2002), that ask employees how much productivity they think they have lost because of medical problems. Presenteeism costs are then computed by turning the sum of estimated lost workdays into monetary figures at the company level to be compared with absenteeism costs (Knani et al., 2018).

Although such estimations have led some to believe that presenteeism is a more worrisome problem than absenteeism, they are far from persuasive enough to convince organizational leaders to spend on expensive programs to lower presenteeism. Indeed, these estimations are plagued with limitations that reduce their utility for researchers and managers (Johns, 2010; Knani et al., 2018; Lohaus & Habermann, 2019; Vänni et al., 2017). First, individual self-reported estimates of productivity loss have low reliability and convergent validity with objective measures of individual productivity. Also, from the employers' viewpoint, reductions in productivity due to presenteeism are to be compared with the zero productivity of absent workers, since an unwell employee who does not show up for work costs the employer even more than a worker present while sick. Finally, these estimates conflate individual and firm productivity, whereas firm productivity results from many independent and interacting variables. Consequently, organizational productivity loss

resulting from employee presenteeism should not be equated to the sum of corresponding individual wages for lost work hours (Taloyan et al., 2012). Finally, these estimates reduce organizational performance to the only indicator of productivity, overlooking the multidimensional nature of organizational performance.

The most accepted conceptualizations of organizational performance distinguish the social, operational, commercial, and economic dimensions (Becker et al., 2001; Kaplan & Norton, 1996), or consider operational performance, that may be internal (e.g., operational efficiency) or external (e.g., customer satisfaction), as an intermediary step toward more global organizational and economic performance (Ployhart & Hale, 2014). To expand the narrow focus on individual productivity and to achieve a more comprehensive understanding of the effect of presenteeism on organizational performance, the following hypothesis is proposed:

Hypothesis 1. Individual presenteeism is significantly related to organizational performance indicators, namely collective levels of (a) absenteeism, (b) operational efficiency, (c) customer satisfaction, and (d) productivity, to the same degree as absenteeism.

Mediating role of need for recovery and job satisfaction

The detrimental effects of presenteeism can first be explained by the *Effort-Recovery Model* (Meijman & Mulder, 1998). Going to work in spite of physical or psychological discomfort deprives people of time to rest and opportunities to recover from illness, may cause accumulation of tiredness and fatigue and, in the long run, may harm an employee's health (Karanika-Murray & Cooper, 2018; Taloyan et al., 2012). Several studies have examined exhaustion as an indicator of health impairment and burnout resulting from presenteeism behaviors, and found a reciprocal relation between exhaustion and presenteeism (Demerouti et al., 2009, Lu et al., 2013, 2014). Not surprisingly, Miraglia and Johns's (2016)

meta-analysis indicates an average correlation of .30 between presenteeism and emotional exhaustion.

In addition to health-related mechanisms, lack of emotional fulfilment may explain the consequences of presenteeism (Ferreira & Martinez, 2012). When sickness leads to presenteeism behavior, work outputs are of a poorer quality than would be achieved at optimal health, which may lead individuals to be unsatisfied and discouraged (Karanika-Murray et al., 2015). Furthermore, because of inadequate recuperation, employees presenting at work while ill also tend to develop negative affective states, which may trigger discontentment and disengagement (Demerouti et al., 2009; Lu et al., 2013). Presenteeism may also be felt as a decision made under the pressure of external constraints, such as high attendance requirements or fear of damaging consequences, which may reduce motivation and satisfaction (Karanika-Murray et al., 2015). Notably, presenteeism was found to be negatively related to job satisfaction in numerous studies (Baker-McClearn et al., 2010; Caverley et al., 2007). As job satisfaction is among the most widely recognized individual antecedents of the absenteeism rate, customer satisfaction, and organizational performance (Jiang et al., 2012), it is expected that:

Hypothesis 2. (a) Need for recovery and (b) job satisfaction mediate the negative relationship between presenteeism and organizational performance indicators, so that a high level of presenteeism reduces organizational performance through its (a) positive effects on need for recovery and (b) negative effects on job satisfaction.

Moderating role of fair personnel-management procedures

The primary interest of employers is to know if presenteeism is really harmful to an organization's overall performance and, if so, whether it is more harmful than absenteeism. However, to make the case for an occupational health protection policy, the subsequent question is *what organizational levers can be put in place to prevent presenteeism and reduce*

its negative consequences? Managerial or supervisory support is one resource that has been shown to moderate the effect of presenteeism on exhaustion (Lu et al., 2013). Organizational justice is, to our knowledge, the second buffer factor explored to date. Organizational justice can be defined as the extent to which employees perceive that their management considers their viewpoints, shares information concerning decision-making, and treats individuals fairly (Cropanzano et al., 2001). Organizational justice plays a proven role in the phenomenon of presenteeism (Johns, 2010, 2011; Miraglia & Johns, 2016), and appears to be a major predictor of workers' health indicators, such as depressive symptoms, emotional exhaustion, musculoskeletal disorders, and sickness absence (Eib et al., 2018; Elovainio et al., 2010; Manville et al., 2016). A couple of empirical studies document a direct negative relationship between organizational justice and presenteeism (Johns, 2011; Hansen & Andersen, 2009). In addition to going to work more frequently while ill, employees experiencing injustice exhibited higher health-related lost productivity (Pohling et al., 2016), suggesting that organizational justice minimizes the harmful consequences of presenteeism. The only study that investigated the buffering role of organizational justice found that presenteeism predicts longer absence spells when employees feel unfairly recognized (Deery et al., 2014). Hence, this study proposes to consider FPMP as a factor buffering the negative outcomes of presenteeism:

Hypothesis 3. Fair personnel-management procedures moderate the positive relationship between presenteeism and **(a)** the need for recovery and **(b)** job satisfaction, so that this relationship becomes weaker as justice increases.

Method

Procedure and sample

Individual-level data were collected from employees working in 21 different stores of a European retailer while store performance indicators for the year of the study were provided

by headquarters services (i.e., marketing, human resource, and accounting). In stores with fewer than 30 employees, all employees were invited to participate in the survey. In stores employing more than 30 people, the survey was sent to a stratified sample of 30 people representative of the store in terms of jobs, levels of responsibility, age, years of service, gender, and working time. Of the 578 questionnaires distributed by the research team, 415 (75% response rate) were returned and usable for further analysis. Respondents were predominantly female (75%), had an average age of 42 years ($SD = 22.2$), and an average tenure of 22.20 years ($SD = 10.54$). The majority (82%) had a high school degree or less; 37% worked full-time, and 24% worked half-time or less.

Measures

Individual-level variables. To measure presenteeism, participants were asked to use a 5-point anchored scale (1 = no, never; 5 = five times or more) to answer the question: “How many times did you go to work in the past 12 months even though you should have stayed home for health reasons?”. Similarly, the following question was used to measure absenteeism: “Over the past 12 months, how many times have you stayed home due to illness or accident?” Similar single item measures of presenteeism and absenteeism are common and have good reliability (Johns & Miraglia, 2015; Miraglia & Johns, 2016). The need for recovery was assessed using the van Veldhoven and Broersen’s (2003) four-item scale ($\alpha = .79$). Job satisfaction was assessed using two items of the O’Reilly and Caldwell (1981) *Job satisfaction survey* ($\alpha = .72$). FPMP was assessed using Colquitt’s (2001) three items of procedural justice ($\alpha = .74$). Gender, level of education, and age were also assessed, as these variables are related to attendance behaviors (Miraglia & Johns, 2016).

Store-level variables. Based on the balanced scorecard approach (Kaplan & Norton, 1996), four dimensions of organizational performance were assessed for each store. Social performance was assessed by the annual rate of absenteeism, calculated as the total number of

days of absence divided by the total number of days that should have been worked.

Operational performance was captured by an indicator of shrinkage measuring the loss of inventory due to factors such as wastage, administrative or cashier errors, and damage in transit or in stores. Commercial performance was estimated by the average annual rate of customer satisfaction that was assessed each month by an online survey. Economic performance was measured by a productivity indicator, i.e. annual sales divided by the number of work hours paid for by the employer.

Results

Confirmatory factor analyses confirmed the convergent and discriminant validity of the individual-level variables, namely need for recovery, job satisfaction, and FPMP, as the three-factor model fit the data well ($\chi^2 [24] = 42.05; p < .01; CFI = .97; TLI = .96; RMSEA = .04; SRMR = .04$) and yields a significantly better fit than more parsimonious models. Moreover, levels of within-group agreement $r_{WG(j)}$ (for need for recovery : $r_{WG(j)} = .54$; for job satisfaction: $r_{WG(j)} = .74$; for justice : $r_{WG(j)} = .74$) as well as intra-class correlation coefficients ICC(1) and ANOVA (for need for recovery : ICC(1) = .10, $F = 3.10, p < .000$; for job satisfaction: ICC(1) = .04, $F = 1.73, p < .05$; for FPMP: ICC(1) = .02, $F = 1.53, p < .05$) suggest that the aggregation of individual-level data into store-level variables is acceptable.

To test Hypothesis 1, correlation coefficients of self-reported presenteeism and absenteeism measures with the store-level indicators of performance were compared. Table 1 shows that customer satisfaction correlates significantly with absenteeism but not with presenteeism, with a significant difference between both correlations ($z = 1.89, p < .05$). Neither self-reported absenteeism nor presenteeism is significantly related to store-level shrink reduction and productivity and the magnitude of these non-significant correlations is similar (for shrink reduction: $z = 0.19, p > .05$; for productivity: $-0.31, p > .05$). Regarding

the store-level absenteeism rate, it is significantly correlated with self-reported absenteeism as well as presenteeism, with comparable correlations ($z = 0.33, p > .05$).

Mediation Hypotheses 2a and 2b were tested at the store level through bootstrap regression analysis. The results (Table 2) show that the total indirect effect of presenteeism on organizational performance is significantly negative for customer satisfaction ($-.28, CI [-.51, -.12]$) and for productivity ($-.73, CI [-1.70, -.08]$). Need for recovery functions as a mediator for explaining the indirect effect on customer satisfaction ($-.21, CI [-.47, -.04]$), whereas job satisfaction transmits the indirect effect on productivity ($-.39, CI [-.95, -.05]$). Regarding the store-level absenteeism rate, the mediation analysis confirms a positive direct effect of presenteeism ($2.52, CI [.53, 4.52]$), without any significant mediation of need for recovery or job satisfaction. The results also show that, while the total indirect effect is not significant, job satisfaction play a role between presenteeism and shrink reduction ($-.41, CI [-1.02, -.10]$).

Hypotheses 3a and 3b were tested at the individual level through hierarchical regression analyses, controlling for gender, level of education, and age. The results (Table 3) demonstrate that FPMP moderates significantly the relationship between presenteeism and job satisfaction ($\beta = .10; p < .05$), but not the relationship between presenteeism and need for recovery ($\beta = -.01, p > .05$). As plotted in Figure 2, presenteeism relates significantly negatively with job satisfaction when procedural justice is low, i.e., one standard deviation below the mean ($\beta = -.13; p < .001$), and on the mean ($\beta = -.08; p < .05$), but appears unrelated to job satisfaction when procedural justice is high, i.e., one standard deviation above the mean ($\beta = -.03, p > .05$).

Discussion

Tracking the true costs of presenteeism and managing its detrimental effects are challenging for organizations. To our knowledge, the present study is the only one to use objective organizational data, measured at business unit level, to assess productivity as well as

three other dimensions of organizational performance, namely customer satisfaction, operational efficiency, and stores rates of absenteeism. Considering this, it helps to shed new light on the complex relationship between presenteeism and organizational performance.

Except for customer satisfaction, correlations between self-reported presenteeism and organizational performance indicators are similar to the correlations of those indicators to self-reported absenteeism. This supports the assumption that the detrimental effects of presenteeism on organizations are comparable to, but not greater than, those of absenteeism. Difference between this observation and results observed in past studies could be due to the lack of robustness of the methods conventionally used to calculate productivity losses. Nevertheless, this study shows that presenteeism can be considered as a potential risk factor for organizational inefficiencies and reduced performance, while also providing a better understanding of the psychological mechanisms underlying the presenteeism and organizational performance relationship. In addition to be directly related to the store-level absenteeism rate, presenteeism was found to increase their need for recovery, which in turn reduces customers' satisfaction. Presenteeism also affects store shrink rates and productivity through decreased job satisfaction. Consistent with the dual-path model (Miraglia & Johns, 2016), health impairment and motivational paths are two avenues that seem relevant to understanding not only the drivers but also the consequences of presenteeism. Finally, this study advances nascent knowledge of organizational factors that may buffer these negative outcomes, as it shows that personnel-management procedures perceived as unfair worsen the negative influence of employees' presenteeism on their job satisfaction.

Practical Implications

Knowing the effects of presenteeism on their business is a key issue for employers. Based on the balanced scorecard approach, this study suggests an alternative way to assess productivity loss and other hidden costs caused by presenteeism, as well as by absenteeism.

Notably, instead of trying to monetize the productivity loss caused by presenteeism, it seems preferable to focus on the cause-and-effect relationships between measures of employees' attitudes and behaviors, as they can be collected in satisfaction surveys, and the key performance indicators now commonly used by management (Becker et al., 2001). Such approaches also make it possible to evaluate the effects of personnel- management policies implemented to promote occupational health and limit the harmful effects of presenteeism. If well managed, presenteeism may also have positive consequences for the worker, such as preventing accumulation of workload, and preventing depressive symptoms associated with long-term absence (Karanika-Murray & Biron, 2020). As this study results suggest, one of the tipping points between beneficial and detrimental presenteeism could be linked to the managerial practices and styles of supervision.

Limitations and Future Research

As this study relied on cross-sectional data, it does not allow to conclude that presenteeism is the cause of dissatisfaction and exhaustion, as well as lower organizational performance. An unhealthy work climate, with more pressure for attendance and fewer sources of satisfaction, may develop in underperforming stores and fuel a vicious circle between presenteeism and deteriorating business results. Using a longitudinal research design, with time-series data, is needed to clarify reciprocal relationships between presenteeism and organizational performance. Due to the small number of stores ($N = 21$), several correlations between presenteeism and organizational performance indicators were not significant, while falling in the range from .20 to .30 of medium correlations (Hemphill, 2003). Also, the impact of presenteeism on organizational productivity may vary according to factors such as work design, ease of substitution, and workload. Finally, presenteeism may be due to various health conditions that are more or less damaging for work productivity. Future research should strive for larger and more diversified samples of companies and business units in order to

validate these initial findings and advance our understanding of the underlying mechanisms and buffering factors of presenteeism's effect on organizational performance.

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TABLE 1 Descriptive statistics and correlations between store-level study variables

Variables	M	SD	1	2	3	4	5	6	7	8	9
1. Presenteeism	2.72	.54	–								
2. Absenteeism	1.97	.39	.76***	–							
3. Need for recovery	1.35	.15	.76***	.69***	–						
4. Job satisfaction	3.83	.29	–.47*	–.39†	–.63**	–					
5. FPMP	3.38	.23	–.22	–.12	–.51*	.74***	–				
6. Absenteeism rate	8.05	1.98	.62**	.66**	.66**	–.55*	–.35	–			
7. Operational efficiency	.00	1.00	–.23	–.26	–.40†	.55**	.50*	–.34*	–		
8. Customer satisfaction	8.08	.24	–.23	–.51*	–.53*	.54**	.42†	–.63**	.35	–	
9. Productivity	.00	1.00	–.21	–.16	–.39†	.52*	.43*	–.21	.56**	.35	–

Note. $N = 21$. FPMP = Fairness of personnel-management procedures. † $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

TABLE 2 Indirect effect of presenteeism on organizational outcomes through need for recovery and job satisfaction

Dependent variables	Direct and indirect effects		Boostrapping <i>BCa</i> 90% CI	
			Lower	Upper
Absenteeism rate	Direct Effect (<i>c'</i>)	2.52 (1.13)	.53	4.52
	Indirect effect (<i>ab</i>):			
	Need for recovery	.81 (.83)	-.17	2.52
	Job satisfaction	.34 (.72)	-.15	2.23
	TOTAL	1.15 (1.26)	-.21	3.86
Operational efficiency	Direct Effect (<i>c'</i>)	.32 (.57)	-.67	1.31
	Indirect effect (<i>ab</i>):			
	Need for recovery	-.32 (.65)	-1.48	.57
	Job satisfaction	-.41 (.28)	-1.02	-.10
	TOTAL	-.73 (.66)	-1.90	.16
Customer satisfaction	Direct Effect (<i>c'</i>)	.18 (.13)	-.04	.41
	Indirect effect (<i>ab</i>):			
	Need for recovery	-.21 (.13)	-.47	-.04
	Job satisfaction	-.07 (.07)	-.23	.02
	TOTAL	-.28 (.12)	-.51	-.12
Productivity	Direct Effect (<i>c'</i>)	.34 (.58)	-.66	1.34
	Indirect effect (<i>ab</i>):			
	Need for recovery	-.34 (.48)	-1.17	.34
	Job satisfaction	-.39 (.27)	-.95	-.05
	TOTAL	-.73 (.51)	-1.70	-.08

Note. N = 21. Unstandardized regression coefficients are reported; Standard errors in parentheses; *BCa* = bias corrected and accelerated; Replications based on 20,000 bootstrap samples

TABLE 3 Hierarchical regression predicting need for recovery and job satisfaction

	Need for recovery			Job satisfaction		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Control variables						
Gender	-.12*	-.07	-.07	.11*	.05	.04
Level of education	-.11*	-.09*	-.09*	.06	.06	.06
Age	.06	.01	.01	-.06	.02	.02
Independent variables						
Presenteeism		.33***	.33***		-.11**	-.11**
FPMP		-.21***	-.22***		.59***	.63***
Interaction effect						
Presenteeism × FPMP			-.01			.10*
<i>F</i>	4.36	19.55	16.26	2.77	49.65	42.75
Total <i>R</i> ²	.03**	.20***	.20***	.02*	.39***	.40***
ΔR^2	.03**	.17***	.00	.02*	.37***	.01*

Note. *N* = 415. Standardized regression coefficients are reported. FPMP = Fairness of personnel-management procedures. * *p* < .05; ** *p* < .01; *** *p* < .001 (two-tailed tests).

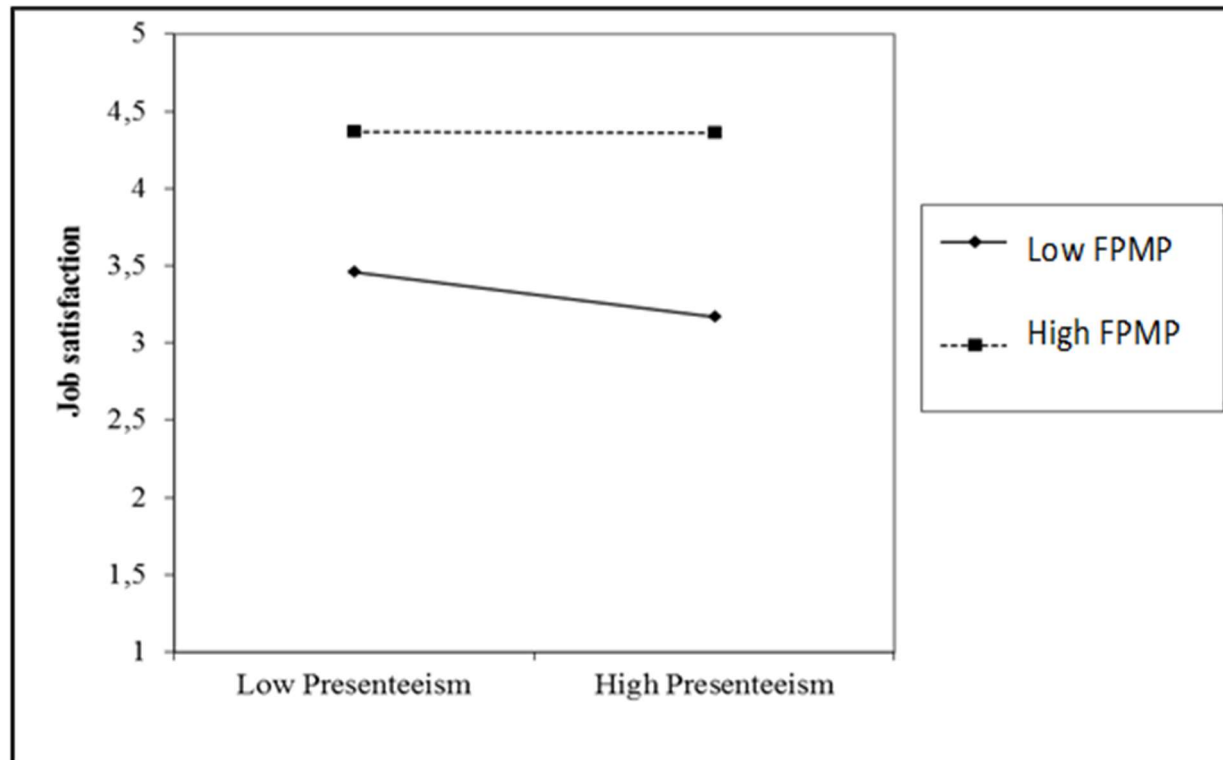


FIGURE 1 Interaction of presenteeism and fairness of personnel-management procedures (FPMP) on job satisfaction