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The relationship between presenteeism and job satisfaction:
A mediated moderation model using work engagement and
perceived organizational support

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Abstract

Research on presenteeism has largely focused on its prevalence, determinants and consequences on the health of both employees and organizations. To date, few studies have examined the influence of presenteeism on workers' attitudinal and motivational responses. Based on the *Effort-Recovery Theory*, this study evaluates the mediating effect of work engagement in the relationship between presenteeism and job satisfaction. Building on previous work, this study also proposes to consider perceived organizational support as a moderator of the work engagement-job satisfaction relationship. Presented in the form of a mediated moderation model, the results of bootstrapped regression analyses show three main results. First, presenteeism is negatively associated with work engagement and job satisfaction. Secondly, work engagement is one of the factors through which presenteeism influences job satisfaction. Thirdly, perceived organizational support moderates the association between work engagement and job satisfaction so that, at a low level of work engagement, feeling supported by the organization makes a difference on job satisfaction. Overall, this research is part of the limited number of studies that have focused on the interplay existing between presenteeism and its consequences in terms of job attitudes.

Keywords: presenteeism, job satisfaction, work engagement, perceived organizational support, mediated moderation model

Research highlights

- 1) This research focuses on the consequences of presenteeism on job attitudes;
- 2) Presenteeism is negatively associated to work engagement and job satisfaction;
- 3) Work engagement mediates the relationship between presenteeism and job satisfaction;
- 4) Employees' perceptions of organizational support moderate the association between work engagement and job satisfaction;
- 5) Work engagement and perceived organizational support help explain the negative effect of going to work while ill on job satisfaction.

The relationship between presenteeism and job satisfaction: A mediated moderation model using work engagement and perceived organizational support

1. Introduction

Presenteeism can be defined as going to work while being sick (Johns, 2010). In recent years, research has examined the prevalence of presenteeism, revealing that this attendance behavior is widespread among workers. Indeed, in various European samples, more than 60% of employees report having worked while their health was not optimal (Aronsson, Gustafsson, & Dallner, 2000; de Vroome, 2006; Hansen & Anderson, 2008; Leineweber et al., 2011). Given this important prevalence, numerous studies have contributed to the identification of its determinants, such as compromised health (Allen, Hines, Pazdernik, Konecny, & Breitenbach, 2018; Lauzier, Melançon, & Côté, 2017; Miraglia & Johns, 2016), absenteeism and attendance management policies (Arnold, 2016; Baker-McClearn, Greasley, Dale, & Griffith, 2010; Johns, 2011), and limited access to personal and professional resources (Mach et al., 2018; Miraglia & Johns, 2016).

With regard to its consequences, studies have shown that presenteeism has a significant influence on organization's health and productivity (Cooper & Dewe, 2008; Fernando, Caputi, & Ashbury, 2017; Goetzel et al., 2004; Zhang, Sun, Woodcock, & Anis, 2015). Foremost, this attendance behavior represents a risk factor for the development of health conditions (Demerouti, Le Blanc, Bakker, Schaufeli, & Hox, 2009), as it can put others at risk by contributing to the transmission of infectious diseases (Widera, Chang, & Chen, 2010), and is associated with the exacerbation of symptoms (physical and/or psychological) as well with delays in the recovery process (Demerouti et al., 2009), leading to more absences (Johns, 2011). Additionally, by reducing employees' efficiency, presenteeism also generates productivity losses for organizations, which are estimated to be greater than those generated by absenteeism (Goetzel et al., 2004; Pauly,

Nicholson, Polsky, Berger, & Sharda, 2008; Zhang et al., 2015). For example, Goetzel et al. (2004) estimate that presenteeism costs, on average, 255\$ annually per employee of a single organization. Hemp (2004), for his part, believes that presenteeism productivity losses can cost between 150 and 180 billion dollars per year. Given the impacts and costs related to presenteeism, it seems imperative to expand our understanding of this behavior and its consequences.

Although past and current studies voice the effects of presenteeism on employees' health and productivity, few have sought to identify the factors that may explain why and how working while ill affects their attitudinal and motivational responses towards their work (Cooper & Lu, 2016; Karanika-Murray, Pontes, Griffiths, & Biron, 2015; Lohaus & Habermann, 2019). Filling this gap, this study has three main objectives. First, by considering the *Effort-Recovery Theory* (Meijman & Mulder, 1998), the study aims to better understand the deleterious effects of presenteeism on employee job attitudes. More specifically, it attempts to determine the consequences of such behaviour on workers' levels of work engagement and job satisfaction. Second, it examines the mediating role of work engagement in the presenteeism-job satisfaction relationship. This goal is based on the notion that work engagement, when conceived as an internal motivational state, can influence the recovery process and then help explain why working while sick can lead to psychological disengagement. Thirdly, this study also expands on previous work (e.g., Karanika-Murray et al., 2015) by testing the moderating role of perceived organizational support (POS) on these relationships. As a positive and supportive work environment (Karanika-Murray & Biron, 2019), the present study considers POS as an important organizational resource that could help workers facing work situations while ill, which subsequently could impede their satisfaction with their work.

1.1. Influence of presenteeism on motivational and attitudinal responses

The *Effort-Recovery Theory* proposed by Meijman and Mulder (1998) can help explain the deleterious effects of presenteeism on employees' job attitudes. More precisely, this theory states that the efforts spent at work can lead to physical, behavioral and subjective load reactions (e.g. fatigue, negative affect), leading to a need for recovery. In a state of deficit in levels of energy and motivation, recovery efforts are needed to restore homeostasis in psychological well-being and performance abilities (van Houff, Flaxman, Söderberg, Stride, & Geurts, 2018). The process of showing up to work and completing one's day of work triggers a natural recovery response, which pushes individuals to look for internal and external resources (e.g. emotion regulation, social support) or activities (e.g. relaxation, detachment from work) that could help recovering. Under normal conditions, recovery occurs when employees are no longer confronted with work demands, as well as when fatigue and stress are reduced (Geurts & Sonnentag, 2006). However, when the exposure to high workload is long and limits the recovery process, load reactions accumulate and can provoke health problems and impairments in well-being (van Houff et al., 2018). This effect is potentially stronger for workers who are present at work while their health is suboptimal (i.e. presenteeism). Failing to fully recover while still going to work, workers may suffer the cumulative effects of their health impairments; in turn, emotional responses towards their work in general may be lessened or become negative. Furthermore, it is proposed that although physically present, workers who are at work while being ill may not be mentally present, which can in turn limit their ability to achieve expected outcomes (Karanika-Murray et al., 2015). Thus, as workers cannot perform to the best of their physical and psychological capacities, this can have an influence on emotional and attitudinal responses (Admasachew & Dawson, 2011; Baker-McClearn et al., 2010), including work engagement and job satisfaction (Karanika-Murray et al., 2015).

Although Miraglia and Johns (2016) meta-analysis has revealed a positive association between job satisfaction and presenteeism, several studies have reported the opposite (Baker-McClearn et al., 2010; Cho, Park, Lee, Min, & Baek, 2016; Karanika-Murray et al., 2015; Lu, Lin, & Cooper, 2013). Even if being engaged and satisfied with their job can motivate workers to practice good attendance (Miraglia & Johns, 2016), it has been shown that going to work when health is suboptimal can have a negative influence on job attitudes. Indeed, some studies have found a negative association between presenteeism and work engagement (Admasachew & Dawson, 2011; de Beer, 2014), which is defined as a positive emotional state characterized by vigor, dedication and absorption (Bakker & Demerouti, 2008). Notably, de Beer (2014) found significant differences between employees with and without presenteeism-related health conditions. In fact, workers who went to work and reported suffering from a health condition (or reported being present while ill) also tended to report a lower level of work engagement. On the contrary, those who did not attend work while ill tended to report a higher level of work engagement. Moreover, several studies have found a negative association between presenteeism and job satisfaction (Baker-McClearn et al., 2010; Karanika-Murray et al., 2015; Lu et al., 2013), which refers to employees' positive and pleasant feelings and attitudes towards work (Zhu, 2013). For example, Baker-McClearn et al. (2010) indicated that employees reporting presenteeism tend to describe their job as a stressful and unsatisfactory environment. As for Lu et al. (2013) longitudinal study, presenteeism was shown to be negatively related to job satisfaction due to a lack of sufficient recovery opportunities. Thus, it appears that positive job attitudes represent a predictor of the likelihood of attending work while being ill, but doing so can provoke various negative consequences, such as decreased job satisfaction and work engagement.

H1 – Presenteeism will be negatively linked to work engagement (H1a) and job satisfaction (H1b).

1.2. Role of work engagement in the relationship between presenteeism and job satisfaction

From an emotional standpoint, employees who are highly engaged in their work also seem to experience positive emotions and cognitions because they experience a feeling of meaningfulness towards the work they accomplish, identify greatly with the position they occupy within the organization (Bakker & Demerouti, 2008), and find tasks interesting and motivating (Siu et al., 2010). These emotional states lead them to invest resources and skills to accomplish their work.

Several studies recognize that work engagement and job satisfaction are two distinct constructs, yet positively associated with one another (Alarcon & Lyons, 2011; Giallonardo, Wong, & Iwasiw, 2010; Tejpal, 2016). In fact, engaged employees also tend to be more satisfied with their job (Bakker, 2011). From the perspective of the *Effort-Recovery Theory* (Meijman & Mulder, 1998), going to work while ill can limit the recovery process and cause psychological disengagement, requiring more efforts from workers to meet the daily work demands, which influences their job attitudes. Hence, because being present at work while health is not optimal limits the positive psychological presence at work, it seems plausible that the negative effect of presenteeism on work engagement would then carry over to job satisfaction.

H2 – Work engagement will mediate the negative relationship between presenteeism and job satisfaction, so that a high level of presenteeism would reduce job satisfaction through its negative effects on work engagement.

1.3. Role of perceived organizational support on the relationship between work engagement and job satisfaction

According to the *Organizational Support Theory*, individuals tend to personify their organization by viewing it as having a personality with benevolent or malevolent intentions towards them (Eisenberger, Huntington, Hutchison, & Sowa, 1986; Rhoades & Eisenberger, 2002). This personification process is a pre-requisite to the development of POS, which refers to the individuals' perception of the extent to which the organization values their contributions and cares about their well-being (Eisenberger et al., 1986). Many studies recognize the beneficial effects of POS on employees' subjective well-being, as well as on their job attitudes and behaviors (Eisenberger & Stinglhamber, 2011), including their level of engagement (Attridge, 2009; Bakker & Demerouti, 2008; Caesens & Stinglhamber, 2014; Caesens, Stinglhamber, & Luypaert, 2014; Duke, Goodman, Treadway, & Breland, 2009; Murthy, 2017; Riggle, Edmondson, & Hansen, 2009) and their job satisfaction (Duke et al., 2009; Miao, 2011; Riggle et al., 2009).

Two main mechanisms explain the positive effects of POS on outcomes that are beneficial for both employees and organizations. On the one hand, based on the norm of reciprocity (Gouldner, 1960), the *Social Exchange Theory* (Blau, 1964) posits that employees who feel supported by their organization will repay their debt and reciprocate the organization's caring. As a result, supported employees feel obligated to help their supportive organization reach its goals and contribute to the development and general efficiency of the organization by demonstrating positive attitudes and behaviors towards it. On the other hand, the *Organizational Support Theory* has suggested that self-enhancement processes are also at stake to the extent that POS helps to fulfill employees' socio-emotional needs (e.g. need for esteem or for affiliation; Eisenberger et al., 1986). Because POS meet employees' fundamental human needs in the workplace, the ones who

feel supported by their organization should then present better indicators, particularly in terms of well-being (Eisenberger & Stinglhamber, 2011).

While numerous studies have examined the direct and beneficial effects of POS on several outcomes, some studies have also investigated the moderating effect of POS in the development of attitudinal and behavioral outcomes, such as organizational commitment (Butts, Vandenberg, DeJoy, Schaffer, & Wilson, 2009), organizational citizenship behaviors (Alfes, Shantz, Truss, & Soane, 2013), and job performance (Duke et al., 2009; Erdogan & Enders, 2007). In line with the second mechanism explaining the effects of POS, the literature suggests that POS should strengthen employees' need for emotional support by suggesting that support and understanding will be provided to deal with stressful situations at work (e.g. Armeli, Eisenberger, Fasolo, & Lynch, 1998; Viswesvaran, Sanchez, & Fisher, 1999). POS indeed indicates that material and emotional resources will be available when needed to help the employee to carry out his/her job more effectively (Eisenberger & Stinglhamber, 2011). In a work environment characterized by increasing demands and pressures, feeling supported by one's organization can therefore become a significant organizational resource that helps the employee to cope with his/her job and finally to maintain positive attitudes towards it. Supporting this view, empirical findings reported by Duke et al. (2009) showed that POS contributes to attenuate the negative effects of emotional labor on job satisfaction. Similarly, the study of Erdogan and Enders (2007) indicated that the association between leader-member exchange and job satisfaction is stronger when supervisors report high POS.

Consistent with the theoretical arguments and empirical evidence discussed, the present research suggests that employees who feel engaged in their work are more likely to be satisfied with their work, but that this is even stronger if they also feel supported by their organization.

Their positive evaluation of their job resulting from their work engagement should indeed be reinforced by the signal that support is available when needed as conveyed by a high POS.

H3 – POS will moderate the positive relationship between work engagement and job satisfaction, so that this relationship will become stronger as POS increases.

This third hypothesis (H3) suggests that POS will condition the strength of the association between presenteeism and job satisfaction (through work engagement). This advocates for the presence of a mediated moderation model, suggesting that the mediating effect of work engagement (H2) will be more strongly associated to job satisfaction when POS is high (H3).

H4 – POS will moderate the indirect relationship between presenteeism and job satisfaction through work engagement, so that when POS is high, this indirect relationship will become stronger.

2. Method

2.1. Procedures and participants

An online survey including all the variables under study was distributed to the employees of a Belgian medical clinic. A convenience sampling approach was used. In total, 289 employees providing clinical care or holding administrative positions participated voluntarily in this research. The sample includes 228 (79%) women and 58 (21%) men, aged between 20 and 65 (average age ranges between 35 and 39). Such gender representation is not surprising and seem fairly representative of the Belgian healthcare work force (Service public fédéral, 2018). The majority of participants reported working full time (159; 55%) and working under a permanent contract (268; 94%). The average number of days participants reported to work while being ill over the last 12 months is 4.60 days (SD = 8.64). Considering these few characteristics, it is possible to attest that presenteeism does not differ according to participants' work schedule ($t[285] = -0.28$; *n.s.*) or

their employment contract ($t[283] = 0.94$; *n.s.*), but does differ according to their gender ($t[284] = -2.53$; $p < 0.05$). This observation reflects what is reported in other studies, showing that overall, women tend to go to work while ill more than men (Aronsson et al., 2000; Gustafsson, Schenck-Gustafsson, & Fridner, 2016; Miraglia & Johns, 2016).

At the time of the study, the authors were not informed of any change initiatives or other endeavors in progress within the organization (e.g. collective agreement renewals) that could have influenced workers' attendance patterns. Nor were the authors aware of any specific attendance management policy that could have unduly influenced employee attendance at work. However, the Belgian hospital context is known to be not particularly positive for their employees (Van Bogaert, Clarke, Willems, & Mondelaers, 2012; Vandebroek, Van Gerven, De Witte, Vanhaecht, & Godderis, 2017). Different studies assessing nursing staff and physicians' experiences established a link between work and organizational elements (such as job-related stress, workload, hospital management, and lack of organizational support) and satisfaction at work, intention to quit, burnout, sickness absenteeism and presenteeism (Trybou, Gemmel, Vaerenbergh, & Annemans, 2014; Van Bogaert, Clarke, Roelant, Meulemans, & Van de Heyning, 2010; Van Bogaert et al., 2012; Vandebroek et al., 2017). Therefore, contextual elements relevant to the Belgian health care system may have influenced participants' attendance behaviors.

2.2. Measures

Presenteeism was measured using a single item that aims to calculate its frequency: "*In the last 12 months, how many times did you report to work despite feeling that you should have stayed home because of your health condition?*". Participants answered this question by indicating how often they came to work when they were sick. This measure is used in several studies (Aronsson et al., 2000; Johns, 2011) and Demerouti et al. (2009) reported a test-retest reliability of .58 or

higher for 6 to 12 months intervals, indicating that answers to this question are relatively stable over time.

Work engagement was measured using the short version of the Utrecht Work Engagement Scale (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002; for example: “*I am passionate about my work*”). This scale includes 9 items and uses a seven-point response scale (1 = Never – 7 = Always). A high score for this scale means a higher level of work engagement ($\alpha = .86$; 95% CI: [.84-.89]).

Job satisfaction was measured using 4 items (Eisenberger, Cummings, Armeli, & Lynch, 1997; for example: “*Overall, I am very satisfied with my current job*”) and uses a seven-point response scale (1 = Strongly disagree – 7 = Strongly agree). A high score for this scale means a higher level of job satisfaction ($\alpha = .90$; 95% CI: [.88 – .92]).

Perceived organizational support was measured using the short version of the Survey of Perceived Organizational Support (Eisenberger et al., 1986; for example: “*The clinic really cares about my well-being*”). This instrument includes 8 items and uses a seven-point response scale (1 = Strongly disagree – 7 = Strongly agree). A high score for this scale means a higher level of POS ($\alpha = .86$; 95% CI: [.84 – .89]).

3. Results

3.1. Preliminary analyses

Before testing the study’s hypotheses, some verifications to ensure compliance with the basic postulates specific to covariance analyses were covered. First, as suggested by Tabachnick and Fidell (2013) and used by various authors (Johns, 2011; Gosselin, Lemyre, & Corneil, 2013), a logarithmic correction was made to adjust the distribution of the frequency of presenteeism. Secondly, the calculation of internal consistency coefficients (Cronbach's alpha) showed

satisfactory degrees of homogeneity to justify the use of a single score for each measure in subsequent statistical analyses. Thirdly, the *Harman's one factor test* consisting of doing a preliminary factor analysis comprising all items included in the questionnaire was performed (Podsakoff & Organ, 1986). A high influence of the error variance can be considered when a single factor emerges from the analyses and/or when the variance explained by the first factor is more than 50%. In this study, 22 factors emerged from the factor analysis and the first factor explained only 41% of the variance. Fourthly, the assessment of variance inflation factors (VIF) calculated using the different regression models found that they were of low amplitude (between 1.09 and 1.40). Lastly, confirmatory factor analyses performed with *Mplus 6* (Muthén & Muthén, 2011) show that the tested measurement model composed of four latent factors produced very good adjustment indices (χ^2 78.0003; df = 41; χ^2/df = 1.90; CFI = .98; TLI = .97; RMSEA = .057 [CI 90%: .037 – .075]; SRMR = .042), and is significantly better than the fit of more constrained models.

3.2. Test of hypotheses

As previously stated, the first hypothesis suggested that presenteeism would be negatively related to both work engagement (H1a) and job satisfaction (H1b). The associations between presenteeism and job attitudes were verified using correlational and regression analyses performed on IBM SPSS Statistics for Windows version 24 (see Tables 1 and 2). The results show negative and significant regression coefficients, thus confirming H1a and H1b: the more employees show up for work when they are sick, the less they feel engaged and satisfied with their job. These results observed are comparable to those reported in other studies, including Karanika-Murray et al.'s (2015) study.

INSERT TABLE 1 HERE

H2 proposed that work engagement would mediate the relationship between presenteeism and job satisfaction. In order to examine this mediating effect, regression analyses were carried out using the PROCESS macro developed by Hayes (2013). Based on a total of 5000 replications (corrected and accelerated bias), bootstrap analyses presented in Table 2 show a significant partial mediation effect of work engagement. The results indeed indicate that presenteeism is significantly and negatively related to work engagement and that, while controlling for presenteeism, work engagement is positively associated with job satisfaction. Furthermore, the negative influence of presenteeism on job satisfaction remains significant when the influence of work engagement is considered, thus indicating a partial mediation. Finally, the indirect effect of presenteeism on job satisfaction through work engagement is significant. These results confirm H2, and to some extent replicate the evidence previously reported by Karanika-Murray et al. (2015). Overall, these findings reveal that work engagement represents an explanatory mechanism of the negative relationship between presenteeism and job satisfaction, so that presenteeism affects workers' level of work engagement, which in turn affects their level of job satisfaction.

INSERT TABLE 2 HERE

H3 suggested that POS would moderate the relationship between work engagement and job satisfaction. Once again, the analysis was performed using the PROCESS macro developed by Hayes (2013). The results presented in Table 2 show a significant moderating effect of POS, as shown by the addition of the interaction term. However, contrary to our expectations, the interaction term is negative and not positive. Although we expected that, at a high level of POS, the relationship between work engagement and job satisfaction would be stronger (which would be consistent with a positive interaction term), Figure 1 shows that the relationship between engagement and satisfaction is strengthened among employees reporting low POS (which is

consistent with the negative interaction term that was found). Interestingly, this plot of the interaction effect indicates that, when work engagement is high, job satisfaction is high as well, regardless of the level of POS. However, when levels of work engagement are low, feeling supported by the organization or not makes a difference in terms of job satisfaction. Overall, although these results differ from what was initially assumed, they still suggest that POS has a beneficial effect. A high POS is, however, exclusively beneficial in terms of job satisfaction for those with little engagement in their work.

INSERT FIGURE 1 HERE

Finally, considering the mediation and moderation effects, these contentions were also tested in order to reflect the possibility that the testing of H1 and H2 might be contingent on H3, which would suggest a mediated moderation effect (H4). Once again, the PROCESS macro and bootstrapping method were used to test this hypothesis (model 14). As shown in Table 2, the index of mediated moderation (.03; SE = .01; 95% CI = [.01 – .06]) is significant and the indirect effect of presenteeism on job satisfaction through work engagement is significant at all levels of POS (as evidenced by confidence intervals that exclude zero). This indicates that work engagement conveys the effect of presenteeism on job satisfaction, regardless of the POS levels reported by participants. The effect of presenteeism on job satisfaction through work engagement is however less when POS is high than when POS is low. These findings supported the moderated mediation model but showed once again that, contrary to both H3 and H4, POS does not reinforce the effect of work engagement on job satisfaction.

4. Discussion

The results of the present study support the first two proposed hypotheses, indicating that presenteeism is negatively associated with both work engagement and job satisfaction (H1), and

that work engagement mediates the association between presenteeism and job satisfaction (H2). The results also show that POS moderates the relationship between work engagement and job satisfaction (H3) and support a significant mediated moderation effect (H4). However, although the moderating effect was observed, it was not in the anticipated direction. While it was expected that a high POS would have a beneficial effect on the relationship between work engagement and job satisfaction by strengthening this relationship, it was found that this beneficial effect of a high POS was rather evidenced by higher levels of satisfaction only when employees were less engaged in their work. In other words, the current findings indicate that, when work engagement is low, POS has a compensatory effect.

The same pattern of results was found in prior research (e.g., Hochwarter, Witt, Treadway, & Ferris, 2006; Shantz, Alfes, & Latham, 2016). In particular, Shantz et al. (2016) also reported that POS compensates for relatively low levels of work engagement. Employees who were relatively disengaged were no more likely to report intentions to quit the organization, or to engage in deviant behavior than those who were engaged *if* they perceived that their organization was supportive. These authors explained their findings by relying on the *Conservation of Resources Theory*, and the substitution hypothesis in particular (Hobfoll, Freedy, Lane, & Geller, 1990). The latter suggests that resources are substitutable for one another to meet the demands caused by a loss or a threat of a loss of resources. To recover the loss due to the depletion of a resource, employees will compensate with another resource. In line with this hypothesis, employees experiencing a depleted work-related energy resource (such as work engagement) may draw from another work-related resource (such as POS). In contrast, employees who are already well resourced because they are highly engaged in their work may not require an additional pool of resources to drawn from.

Shantz et al. (2016) further suggested that this compensatory effect of POS is consistent with Caplan's (1974) buffering hypothesis that was proposed to explain the effect of support on the relationships between job stressors or demands and their outcomes. In particular, numerous studies provided empirical evidence for the buffering effect of POS by showing that it attenuates the deleterious effects of several stressors on employee well-being and health while has little or no impact when stressors are low (e.g. Byrne & Hochwarter, 2006; Erdogan & Enders, 2007; Jawahar, Stone, & Kisamore, 2007; Kinnunen, Feldt, & Mäkikangas, 2008; Kwan, Zhang, & Lee, 2018; Reizer & Mey-Raz, 2018). This body of research consistently shows that workers who perceive organizational support are likely to feel that they have sufficient access to organizational resources to facilitate their coping mechanisms against adverse work conditions. In a certain way, these studies also show a compensatory effect of POS.

4.1. Limitations

This study presents some limitations that should be considered when interpreting the results. First, its cross-sectional nature does not allow causal inferences between the variables under study. However, the fact that the positioning of the different variables within the proposed model is based on the existing literature allows to somewhat puts this limitation into perspective. That being said, the use of a longitudinal design would certainly favor the establishment of more robust causal associations between the variables. Secondly, the generalizability of the results may be limited, as only one Belgian organization was included in this study. Replicating this study to larger and more diverse samples is thus recommended. Thirdly, the possible influence of common method bias represents another limitation, since all variables were assessed using self-reported measures at a single point in time. This may have artificially inflated the relationships between variables (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff, MacKensie, & Podsakoff,

2012). However, results to preliminary analyses (Harman's one-factor test revealed 22 factors emerge from the factor analysis and the first factor explains only 41% of the variance) suggest that this influence is somewhat relative and quite similar to what one could expect to find in studies that use similar research designs.

Lastly, a final limitation concerns the use of a single item to measure presenteeism. The use of single-item measures has been criticized in the literature, mainly because they may not adequately assess conceptually complex constructs, and are considered unreliable because internal consistency estimates of reliability cannot be calculated. However, some authors consider that this type of measure remains appropriate to capture a concrete and unidimensional concept, i.e. when the single item can represent the entire definition (Fisher, Matthews, & Gibbons, 2015; Fuchs & Diamantopoulos, 2009). Although the use of single-item measures can be criticized, it should be noted that the literature on presenteeism has made extensive use of a single-item measure to assess presenteeism (Aronsson et al., 2000; Biron, Brun, Ivers, & Cooper, 2006; Deery, Walsh, & Zarzick, 2014; Gosselin et al., 2013; Gustafsson & Marklund, 2011; Johns, 2011; Karanika-Murray et al., 2015).

4.2. Implications and future directions

Although preliminary in nature and their related limitations, the results observed in this study offer both theoretical and practical implications for organizations and their members. First, this study further supports the *Effort-Recovery Theory*, which proposes that when individuals' recovery process is limited, they are more at risk to suffer from cumulative negative effects, affecting their emotional responses and job attitudes towards their presence at work or their job in general (Meijman & Mulder, 1998). Evidence has already shown that when individuals come to work when their health is not optimal, they tend to report lower levels of engagement

(Admasachew & Dawson, 2011; de Beer, 2014) and satisfaction (Baker-McClearn et al., 2010; Karanika-Murray et al., 2015; Lu et al., 2013) towards their job. Such effect seems to be tributary to much required efforts to meet their work demands and personal standards of presence at work. As reported by Karanika-Murray et al. (2015), this evidence suggests that a high level of engagement helps individuals to maintain a positive emotional and motivational state of presence at work, even when they go to work while ill.

The results of this study also allow to concur with key elements of the *Organizational Support Theory* (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002). Indeed, they indicate that individuals who perceive support from their organization also tend to maintain a more positive emotional and cognitive assessment of their work environment, including work engagement and job satisfaction. Overall, this study promotes the idea that a decrease in one's engagement towards work can help explain the deleterious effects of being present while ill on job satisfaction, and the effect of this engagement varies according to the level of organizational support one perceives. More specifically, it was found that when studied in interaction, POS seems to be a significant factor to consider when employees experience a low level of work engagement, as a result of their presenteeism. Our findings highlight how organizational resources as perceived by the employee can constitute an important lever that can help attenuate the negative effects of a low work engagement induced by presenteeism on their job satisfaction.

Secondly, this study underlines the importance of better understanding the consequences of presenteeism and deepen our knowledge of the effects of presenteeism on workers' affective and motivational states. To date, presenteeism research has largely been limited to its prevalence, its determinants and its consequences for organizations' health and productivity. However, few studies have focused on why and how presenteeism can influence individuals' job attitudes

(Cooper & Lu, 2016; Karanika-Murray et al., 2015; Lohaus & Habermann, 2019). As Lohaus and Habermann (2019) asserted, an expansion of the current conceptualizations of presenteeism is needed by including both its antecedents and consequences, as well as by integrating individual and contextual elements. Having a more in-depth understanding of these relationships could help support both employees and managers: signals of lower engagement and satisfaction levels may be used as an indicator that their attendance behaviors may need to be modified, or underlie the need to implement resources to rebuild positive job attitudes. As such, this study helps better understand how internal motivational state (i.e. work engagement) and resources found in the workplace (i.e. POS) can influence the dynamics between presenteeism and job satisfaction.

Thirdly, it is recognized that the means to prevent or reduce presenteeism are rather limited, as this behavior is complex to detect (Collins et al., 2005). It is therefore paramount to develop our understanding of the deleterious effects of presenteeism and the factors that can help preventing such attendance behaviors, guide organizational interventions, as well as improve workers' health and maintain organization's productivity. In this particular study, results suggest that presenteeism is associated with a lower job satisfaction. According to Aziri (2011), low levels of job satisfaction have the potential to influence various aspects of organizational life, such as employee's commitment, absenteeism and intention to quit. This points out the benefit of using presenteeism as a potential risk factor for low job satisfaction, and to target individual and organizational components that can help buffer such negative effect. More specifically, implementing flexible attendance policies and promoting taking sufficient time off to recover from an illness before returning to work could help managers limit presenteeism in the workplace, and therefore maintain higher levels of job satisfaction among their employees.

Fourthly, as a “positive, affective-motivational state of work-related well-being” (p. 187; Bakker, Schaufeli, Leiter, & Taris, 2008), work engagement seems to represent a notable ingredient that can explain the presenteeism-job satisfaction negative relationship. Therefore, interventions to foster employee work engagement could be beneficial for their organizations. Based on previous studies, these interventions should aim to develop self-efficacy, autonomy and self-esteem in employees, by encouraging a supportive organizational culture, supervisory coaching and performance feedback (Bakker et al., 2008; Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010). Thus, managerial practices that support the professional development of employees, welcome their input and reinforce their proactive initiatives could help foster their work engagement. Overall, these types of interventions could help develop work engagement and maintain a certain level of satisfaction at work, despite coming to work when ill.

Additionally, this study shows that POS can vary the strength of the indirect effect of presenteeism on job satisfaction through work engagement. In particular, the results show that a high POS can reduce the negative influence of a low work engagement on job satisfaction. When employees perceive a high level of organizational support, they feel supported and understood, and therefore believe that their manager and/or work environment in general can be more understanding and mobilized in case of perceived difficulties. Therefore, investing in levers that are known to generate POS, such as immediate supervisor support and colleagues support, could contribute to maintain employees’ job attitudes, even when presenteeism behaviors are reported (Krishnan & Mary, 2012; Rhoades & Eisenberger, 2002). For example, by helping employees cope with their workload, orienting new employees to their new role and helping them after a leave of absence, managers can have a direct influence on their subordinates’ POS and therefore, limit the negative impacts of presenteeism on motivational and affective attitudes.

Lastly, expanding the mediated moderation model tested in this study would help further identify how to mitigate the deleterious effects of presenteeism on job attitudes. For example, assessing the effect of other mediators (e.g. impression management and self-efficacy) and moderators (e.g. different types of supervisory support) could help to develop the understanding and prevention of this attendance behavior. In addition, exploring the distinct influence of various forms of presenteeism (functional, therapeutic, over-achieving and dysfunctional) would make it possible to gain a more nuanced comprehension of such a way of behaving and its effects on workers' health (Karanika-Murray & Biron, 2019). For example, in the case of workers who engage in over-achieving presenteeism (i.e. worker's decision to perform at work at the expense of their recovery from ill-health), examining how work addiction can influence the relationship between their attendance behaviors and their job satisfaction could be beneficial. For those who engage in dysfunctional presenteeism (i.e. worker's unsustainable choice to go to work while being ill and risking to suffer from impaired health in the future), an analysis of the influence of human resource policies and management styles on the dynamic between presenteeism and job satisfaction could be valuable to limit sickness absenteeism. These considerations seem particularly relevant for the Belgian healthcare sector: since the workload is substantial and can be difficult to manage, healthcare providers may consider that absences from work will increase the burden on their colleagues, so that presenteeism might be preferred. In turn, this could eventually lead to a decrease in positive affects towards their work. Therefore, investigating contextual elements and resources is needed to prevent the deleterious effects of presenteeism. In summary, the results to this study contribute to the understanding of the consequences of presenteeism on attitudinal and motivational responses, as well for identifying individual and organizational

elements that can explain the effects of presenteeism on those consequences. Future studies are needed to deepen the comprehension of these dynamics and their contributing factors.

References

- Admasachew, L., & Dawson, J. (2011). The association between presenteeism and engagement in National Health Service Staff. *Journal of Health Services Research et Policy*, 16(1), 29-33. <https://doi.org/10.1258/jhsrp.2010.010085>
- Alarcon, G. M., & Lyons, J. B. (2011). The relationship of engagement and job satisfaction in work samples. *The Journal of Psychology*, 14(5), 463-480. <https://doi.org/10.1080/00223980.2011.584083>
- Alfes, K., Shantz, A. D., Truss, C., & Soane, E. C. (2013). The link between perceived human resource management practices, engagement and employee behaviour: A mediated moderation model. *The International Journal of Human Resource Management*, 24(2), 330-351. <https://doi.org/10.1080/09585192.2012.679950>
- Allen, D., Hines, E. W., Pazdernik, V., Konecny, L. T., & Breitenbach, E. (2018). Four-year review of presenteeism data among employees of a large United States health care system: A retrospective prevalence study. *Human Resources for Health*, 16(59), 1-10. <https://doi.org/10.1186/s12960-018-0321-9>
- Armeli, S., Eisenberger, R., Fasolo, P., & Lynch, P. (1998). Perceive organizational support and police performance: The moderating influence of socioemotional needs. *Journal of Applied Psychology*, 83(2), 288-297. <https://doi.org/10.1037/0021-9010.83.2.288>
- Arnold, D. (2016). Determinants of the annual duration of sickness presenteeism: Empirical evidence from European data. *Labour*, 30(2), 198-212. <https://doi.org/10.1111/labr.12053>
- Aronsson, G., Gustafsson, K., & Dallner, M. (2000). Sick but yet at work: An empirical study of sickness presenteeism. *Journal of Epidemiology and Community Health*, 54(7), 502-509. <https://doi.org/10.1136/jech.54.7.502>

- Attridge, M. (2009). Measuring and managing employee work engagement: A review of the research and business literature. *Journal of Workplace Behavioral Health*, 24(4), 383-398. <https://doi.org/10.1080/15555240903188398>
- Aziri, B. (2011). Job satisfaction: A literature review. *Management Research and Practice*, 3(4), 77-86. Retrieved from <http://mrp.ase.ro/no34/f7.pdf>
- Baker-McCleary, D., Greasley, K., Dale, J., & Griffith, F. (2010). Absence management and presenteeism: The pressures on employees to attend work and the impact of attendance on performance. *Human Resource Management Journal*, 20(3), 311-328. <https://doi.org/10.1111/j.1748-8583.2009.00118.x>
- Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in Psychological Science*, 20(4), 265-269. <https://doi.org/10.1177/0963721411414534>
- Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, 13(3), 209-223. <https://doi.org/10.1108/13620430810870476>
- Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & Stress*, 22(3), 187-200. <https://doi.org/10.1080/02678370802393649>
- Biron, C., Brun, J., Ivers, H., & Cooper, C. L. (2006). At work but ill: Psychosocial work environment and well-being determinants of presenteeism propensity. *Journal of Public Mental Health*, 5(4), 26-37. <http://dx.doi.org/10.1108/17465729200600029>
- Blau, P. M. (1964). *Exchange and Power in Social Life*. New York, NY: John Wiley.

- Butts, M. M., Vandenberg, R. J., DeJoy, D. M., Schaffer, B. S., & Wilson, M. G. (2009). Individual reactions to high involvement work processes: Investigating the role of empowerment and perceived organizational support. *Journal of Occupational Health Psychology, 14*(2), 122-136. <https://doi.org/10.1037/a0014114>
- Byrne, Z., & Hochwarter, W. A. (2006). I get by with a little help from my friends: The interaction of chronic pain and organizational support on performance. *Journal of Occupational Health Psychology, 11*(3), 215-227. <https://doi.org/10.1037/1076-8998.11.3.215>
- Caesens, G., & Stinglhamber, F. (2014). The relationship between perceived organizational support and work engagement: The role of self-efficacy and its outcomes. *European Review of Applied Psychology, 64*(5), 259-267. <https://doi.org/10.1016/j.erap.2014.08.002>
- Caesens, G., Stinglhamber, F., & Luypaert, G. (2014). The impact of work engagement and workaholism on well-being: The role of work-related social support. *The Career Development International, 19*(7), 813-835. <http://dx.doi.org/10.1108/CDI-09-2013-0114>
- Caplan, G. (1974). *Support systems and community mental health: Lectures on concept development*. New York, NY: Behavioral Publications.
- Cho, Y.-S., Park, J. B., Lee, K.-J., Min, K.-B., & Baek, C.-I. (2016). The association between Korean workers' presenteeism and psychosocial factors within workplaces. *Annals of Occupational and Environmental Medicine, 28*(41), 2-11. <https://doi.org/10.1186/s40557-016-0124-1>

- Collins, J. J., Baase, C. M., Sharda, C. E., Ozminkowski, R. J., Nicholson, S., Billotti, G. M., ... Berger, M. L. (2005). The assessment of chronic health conditions on work performance, absence, and total economic impact for employers. *Journal of Occupational and Environmental Medicine*, 47(6), 547-557. <https://doi.org/10.1097/01.jom.0000166864.58664.29>
- Cooper, C., & Dewe, P. (2008). Well-being – absenteeism, presenteeism, costs and challenges. *Occupational Medicine*, 58(8), 522-524. <https://doi.org/10.1093/occmed/kqn124>
- Cooper, C. L., & Lu, L. (2016). Presenteeism as a global phenomenon: Unraveling the psychosocial mechanisms from the perspective of social cognitive theory. *Cross Cultural et Strategic Management*, 23(2), 216-231. <https://doi.org/10.1108/CCSM-09-2015-0106>
- de Beer, L. T. (2014). The effect of presenteeism-related health conditions on employee work engagement levels: A comparison between groups. *Journal of Human Resource Management*, 12(1), 1-8. <https://doi.org/10.4102/sajhrm.v12i1.640>
- Deery, S., Walsh, J., & Zarzick, C. D. (2014). A moderated mediation analysis of job demands, presenteeism, and absenteeism. *Journal of Occupational and Organizational Psychology*, 87(2), 352-369. <http://dx.doi.org/10.1111/joop.12051>
- Demerouti, E., Le Blanc, P., Bakker, A. B., Schaufeli, W. B., & Hox, J. (2009). Present but sick: A three-wave study on job demands, presenteeism and burnout. *Career Development International*, 14(1), 50-38. <https://doi.org/10.1108/13620430910933574>
- de Vroome, E. (2006). *Prevalence of sickness absence and presenteeism*. Retrieved from <https://www.eurofound.europa.eu/publications/article/2006/prevalence-of-sickness-absence-and-presenteeism>

- Duke, A. B., Goodman, J. M., Treadway, D. C., & Breland, J. W. (2009). Perceived organizational support as a moderator of emotional labor/outcomes relationships. *Journal of Applied Social Psychology, 39*(5), 1013-1034. <https://doi.org/10.1111/j.1559-1816.2009.00470.x>
- Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. D. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology, 82*(5), 812-820. <https://doi.org/10.1037/0021-9010.82.5.812>
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71*(3), 500-507. <https://doi.org/10.1037/00219010.71.3.500>
- Eisenberger, R., & Stinglhamber, F. (2011). *Perceived organizational support: Fostering enthusiastic and productive employees*. Washington, DC: American Psychological Association.
- Erdogan, B., & Enders, J. (2007). Support from the top: Supervisors' perceived organizational support as moderator of leader-member exchange to satisfaction and performance relationships. *Journal of Applied Psychology, 92*(2), 321-330. <https://doi.org/10.1037/0021-9010.92.2.321>
- Fernando, M., Caputi, P., & Ashbury, F. (2017). Impact on employee productivity from presenteeism and absenteeism: evidence from a multinational firm in Sri Lanka. *Journal of Occupational and Environmental Medicine, 59*(7), 691-696. <https://doi.org/10.1097/JOM.0000000000001060>
- Fisher, G. G., Matthews, R. A., & Gibbons, A. M. (2015). Developing and investigating the use of single-item measures in organizational research. *Journal of Occupational Health Psychology, 21*(1), 3-23. <https://doi.org/10.1037/a0039139>

- Fuchs, C., & Diamantopoulos, A. (2009). Using single-item measures for construct measurement in management research. *Business Administrative Review*, 69(2), 195-210. Retrieved on <https://pdfs.semanticscholar.org/9bc8/ecd511fcb0bbf7300945c675eeca7000ac81.pdf>
- Geurts, S. A. E., & Sonnentag, S. (2006). Recovery as an explanatory mechanism in the relation between acute stress reactions and chronic health impairment. *Scandinavian Journal of Work, Environment and Health*, 32(6), 482-492. <https://doi.org/10.5271/sjweh.1053>
- Giallonardo, L. M., Wong, C. A., & Iwasiw, C. L. (2010). Authentic leadership of preceptors: Predictor of new graduate nurses' work engagement and job satisfaction. *Journal of Nursing Management*, 18(8), 993-1003. <https://doi.org/10.1111/j.1365-2834.2010.01126.x>
- Goetzel, R. Z., Long, S. R., Ozminkowski, R. J., Hawkins, K., Wang, S., & Lynch, W. (2004). Health, absence, disability, and presenteeism cost estimates of certain physical and mental health conditions affecting U.S. employers. *Journal of Occupational and Environmental Medicine*, 46(4), 398-412. <https://doi.org/10.1097/01.jom.0000121151.40413.bd>
- Gosselin, E., Lemyre, L., & Corneil, W. (2013). Presenteeism and absenteeism: Differentiated understanding of related phenomena. *Journal of Occupational Health Psychology*, 18(1), 75-86. <https://doi.org/10.1037/a0030932>
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *Journal of Sociological Review*, 25(2), 161-178. <https://doi.org/10.2307/2092623>
- Gustafsson, M. S., Schenck-Gustafsson, K., & Fridner, A. (2016). Gender differences in Reasons for Sickness Presenteeism: A study among GPs in a Swedish health care organization. *Annals of Occupational and Environmental Medicine*, 28(50), 1-7. <https://doi.org/10.1186/s40557-016-0136-x>.

- Hansen, C. D., & Andersen, J. H. (2008). Going ill to work – What personal circumstances, attitudes and work-related factors are associated with sickness presenteeism? *Social Science & Medicine*, 67(6), 956-964. <https://doi.org/10.1016/j.socscimed.2008.05.022>
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.
- Hemp, P. (2004). Presenteeism: At work—But out of it. *Harvard Business Review*, 82, 49-58. Retrieved on <https://hbr.org/2004/10/presenteeism-at-work-but-out-of-it>
- Hobfoll, S. E., Freedy, J., Lane, C., & Geller, P. (1990). Conservation of social resources: Social support resource theory. *Journal of Social and Personal Relationships*, 7(4), 465-478. <https://doi.org/10.1177/0265407590074004>
- Hochwarter, W. A., Witt, L. A., Treadway, D. C., & Ferris, G. R. (2006). The interaction of social skill and organizational support on job performance. *Journal of Applied Psychology*, 91(2), 482-489. <https://doi.org/10.1037/0021-9010.91.2.482>
- Jawahar, I. M., Stone, T. H., & Kisamore, J. L. (2007). Role conflict and burnout: The direct and moderating effects of political skill and perceived organizational support on burnout dimensions. *International Journal of Stress Management*, 14(2), 142-159. <https://doi.org/10.1037/1072-5245.14.2.142>
- Johns, G. (2010). Presenteeism in the workplace: A review and research agenda. *Journal of Organizational Behavior*, 31(4), 519-542. <https://doi.org/10.1002/job.630>
- Johns, G. (2011). Attendance dynamics at work: The antecedents and correlates of presenteeism, absenteeism, and productivity loss. *Journal of Occupational Health Psychology*, 16(4), 483-500. <https://doi.org/10.1037/a0025153>

- Karanika-Murray, M., & Biron, C. (2019). The health-performance framework of presenteeism: Towards understanding an adaptive behaviour. *Human Relations*, Online publication. <https://doi.org/10.1177/0018726719827081>
- Karanika-Murray, M., Pontes, H. M., Griffiths, M. D., & Biron, C. (2015). Sickness presenteeism determines job satisfaction via affective-motivational states. *Social Science et Medicine*, 139, 100-106. <https://doi.org/10.1016/j.socscimed.2015.06.035>
- Kinnunen, U., Feldt, T., & Mäkikangas, A. (2008). Testing the effort-reward imbalance model among Finnish managers: The role of perceived organizational support. *Journal of Occupational Health Psychology*, 13(2), 114-127. <https://doi.org/10.1037/1076-8998.13.2.114>
- Krishnan, J., & Mary. V. S. (2012). Perceived organisational support – An overview on its antecedents and consequences. *International Journal of Multidisciplinary Research*, 2(4), 1-13.
- Kwan, H. K., Zhang, X., Liu, J., & Lee, C. (2018). Workplace ostracism and employee creativity: An integrative approach incorporating pragmatic and engagement roles. *Journal of Applied Psychology*, 103(12), 1358-1366. <https://doi.org/10.1037/apl0000320>
- Lauzier, M., Melançon, S., & Côté, K. (2017). L'effet du stress perçu sur les comportements d'absentéisme et de présentéisme : le rôle médiateur de l'état de santé. *Canadian Journal of Behavioral Science*, 49(4), 221-230. <http://dx.doi.org/10.1037/cbs0000081>
- Leineweber, C., Westerlund, H., Hagberg, J., Svedberg, P., Luukkala, M., & Alexanderson, K. (2011). Sickness presenteeism among Swedish police officers. *Journal of Occupational Rehabilitation*, 21(1), 17-22. <https://doi.org/10.1007/s10926-010-9249-1>

- Lohaus, D., & Habermann, W. (2019). Presenteeism: A review and research directions. *Human Resource Management Review*, 29(1), 43-58. <https://doi.org/10.1016/j.hrmr.2018.02.010>
- Lu, L., Lin, H. Y., & Cooper, C. L. (2013). Unhealthy and present: Motives and consequences of the act of presenteeism among Taiwanese employees. *Journal of Occupational Health Psychology*, 18(4), 406-416. <https://doi.org/10.1037/a0034331>
- Mach, M., Ferreira, A. I., Martinez, L. F., Lisowskaia, A., Dagher, G. K., & Perez-Nebra, A. R. (2018). Working conditions in hospitals revisited: A moderated-mediated model of job context and presenteeism. *PLoS ONE*, 13(10), 1-9. <https://doi.org/10.1371/journal.pone.0205973>
- Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. D. Drenth & H. Thierry (Eds.), *Handbook of work and organizational psychology* (Vol. 2, pp. 5–33). Hove, United Kingdom: Psychology Press.
- Miao, R.-T. (2011). Perceived organizational support, job satisfaction, task performance and organizational citizenship behavior in China. *Journal of Behavioral and Applied Management*, 12(2), 105-127. Retrieved from https://file.scirp.org/pdf/JSSM20100200009_40543420.pdf
- Miraglia, M., & Johns, G. (2016). Going to work ill: A meta-analysis of the correlates of presenteeism and a dual-path model. *Journal of Occupational Health Psychology*, 21(3), 261-283. <https://doi.org/10.1037/ocp0000015>
- Murthy, R. (2017). Perceived organizational support and work engagement. *International Journal of Applied Research*, 3(5), 738-740. Retrieved from <http://www.allresearchjournal.com/archives/2017/vol3issue5/PartK/3-5-140-492.pdf>

- Muthén, L. K., & Muthén, B. O. (2011). *Mplus User's Guide* (6th edition). Los Angeles, CA: Routledge.
- Pauly, M. V., Nicholson, S., Polsky, D., Berger, M. L., & Sharda, C. (2008). Valuing reductions in on-the-job illness: "Presenteeism" from managerial and economic perspectives. *Health Economics*, 17(4), 469-485. <https://doi.org/10.1002/hec.1266>
- Podsakoff, P. M., MacKenzie, S. M., Lee, J., & Podsakoff, N. P. (2003). Common method variance in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 65, 539-569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12(4), 531-544. <https://doi.org/10.1177/014920638601200408>
- Reizer, A., & Mey-Raz, N. (2018). Slowing down vacation fade-out effects. *International Journal of Stress Management*, 26(3), 213-222. <https://doi.org/10.1037/str0000103>
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87(4), 698-714. <https://doi.org/10.1037/0021-9010.87.4.698>
- Riggle, R. J., Edmondson, D. R., & Hansen, J. D. (2009). A meta-analysis of the relationship between perceived organizational support and job outcomes: 20 years of research. *Journal of Business Research*, 62(10), 1027-1030. <https://doi.org/10.1016/j.jbusres.2008.05.003>

- Salanova, M., Schaufeli, W. B., Xanthopoulou, D., & Bakker, A. B. (2010). The gain spiral of resources and work engagement: Sustaining a positive worklife. In Bakker A. B., & Leiter, M. P., *Work engagement: A handbook of essential theory and research* (pp. 118-131). New York, NY: Psychology Press.
- Schaufeli, W. B., Salanova, M., Gonzalez-Roma, V., & Bakker, A. (2002). The measurement of burnout and engagement: A confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71-92. <https://doi.org/10.1023/A:1015630930326>
- Service public fédéral. (2018). *Statistiques annuelles des professionnels des soins de santé en Belgique*. Retrieved from https://organesdeconcertation.sante.belgique.be/sites/default/files/documents/statan_2018_fr_1.pdf
- Shantz, A., Alfes, K., & Latham, G. P. (2016). The buffering effect of perceived organizational support on the relationship between work engagement and behavioral outcomes. *Human Resource Management*, 55(1), 25-38. <https://doi.org/10.1002/hrm.21653>
- Siu, O.-L., Lu, J.-F., Brough, P., Lu, C.-Q., Bakker, A. B., Kalliath, T. ... Shi, K. (2010). Role resources and work-family enrichment: The role of work engagement. *Journal of Vocational Behavior*, 77(3), 470-480. <https://doi.org/10.1016/j.jvb.2010.06.007>
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th edition). Boston, MA: Allyn and Bacon.
- Tejpal, P. (2016). Enhancing the job satisfaction level through dimensions of employee engagement: An empirical study on private sector bank managers. *Drishtikon: A Management Journal*, 7(1), 22-40.

- Trybou, J., Gemmel, P., Vaerenbergh, Y. V., & Annemans, L. (2014). Hospital-physician relations: The relative importance of economic, relational and professional attributes to organizational attractiveness. *BMC Health Services Research*, 14, 1-9. <https://doi.org/10.1186/1472-6963-14-232>
- Van Bogaert, P., Clarke, S., Roelant, E., Meulemans, H., & Van de Heyning, P. (2010). Impacts of unit-level nurse practice environment and burnout on nurse-reported outcomes: A multilevel modelling approach. *Journal of Clinical Nursing*, 19(11-12), 1664-1674. <https://doi.org/10.1111/j.1365-2702.2009.03128.x>
- Van Bogaert, P., Clarke, S., Willems, R., & Mondelaers, M. (2012). Nurse practice environment, workload, burnout, job outcomes, and quality of care in psychiatric hospitals: A structural equation model approach. *Journal of Advanced Nursing*, 69(7), 1515-1524. <https://doi.org/10.1111/jan.12010>
- Vandenbroeck, S., Van Gerven, E., De Witte, H., Vanhaecht, K., & Godderis, L. (2017). Burnout in Belgian physicians and nurses. *Occupational Medicine*, 67(7), 546-554. <https://doi.org/10.1093/occmed/kqx126>
- van Hooff, M. L. M., Flaxman, P. E., Söderberg, M., Stride, C. B., & Geurts, S. A. E. (2018). Basic psychological need satisfaction, recovery state, and recovery timing. *Human Performance*, 31(2), 125-143. <https://doi.org/10.1080/08959285.2018.1466889>
- Viswesvaran, C., Sanchez, J. I., & Fisher, J. (1999). The role of social support in the process of work stress: A meta-analysis. *Journal of Vocational Behavior*, 54(2), 314-334. <https://doi.org/10.1006/jvbe.1998.1661>
- Widera, E., Chang, A., & Chen, H. L. (2010). Presenteeism: A public health hazard. *Journal of General Internal Medicine*, 25(11), 1244-1247. <https://doi.org/10.1007/s11606-010-1422-x>

- Zhang, W., Sun, H., Woodcock, S., & Anis, A. (2015). Illness related wage and productivity losses: Valuing 'presenteeism'. *Social Science & Medicine*, 147, 62-71. <https://doi.org/10.1016/j.socscimed.2015.10.056>
- Zhu, Y. (2013). A review of job satisfaction. *Asian Social Science*, 9(1), 293-298. <http://dx.doi.org/10.5539/ass.v9n1p293>

Presenteeism and job satisfaction: a mediated moderation model

Table 1

Mean, standard deviation and correlations (bivariate) between the study's variables

	<i>M</i>	<i>SD</i>	1	2	3	4
1. Presenteeism	4.60	8.64	---			
2. Work engagement	5.17	.96	-.16**	(.86)		
3. Job satisfaction	5.37	1.32	-.24**	.69**	(.90)	
4. POS	3.69	1.19	-.28**	.49**	.53**	(.86)

Notes. *N* (listwise) = 289; *M* = Mean; *SD* = Standard deviation; POS = Perceived organizational support; The internal consistency coefficients (Cronbach's alpha) are presented in parentheses on the diagonal; ** $p < .01$.

Table 2

Results of mediation and moderation analyses

	Work engagement		Job satisfaction	
	β	<i>SE</i>	β	<i>SE</i>
Presenteeism	-.15**	.06	-.18**	.06
Work engagement			.72***	.07
POS			.31***	.06
Work engagement X POS			-.19***	.04
	$R^2 = .02$		$R^2 = .56$	
	$F(1, 287) = 6.04$		$F(4, 284) = 93.09$	
Conditional indirect effect (through work engagement) on job satisfaction by three levels of POS ^a				
	Effect	<i>SE</i>	LL 95% CI	UL 95% CI
-1 from SD	-.14	.06	-.27	-.03
Equal to the mean	-.11	.04	-.20	-.03
+1 from SD	-.07	.03	-.14	-.02
<i>Index of mediated moderation</i>	.03	.01	.01	.06

Notes. *N* = 289; *SE* = Standard error; LL = Lower limit; UL = Upper limit; CI = Confidence interval; POS = Perceived organizational support; ** $p < .01$; *** $p < .001$.

^a Bootstrap analyses based on 5000 replications (corrected and accelerated bias)

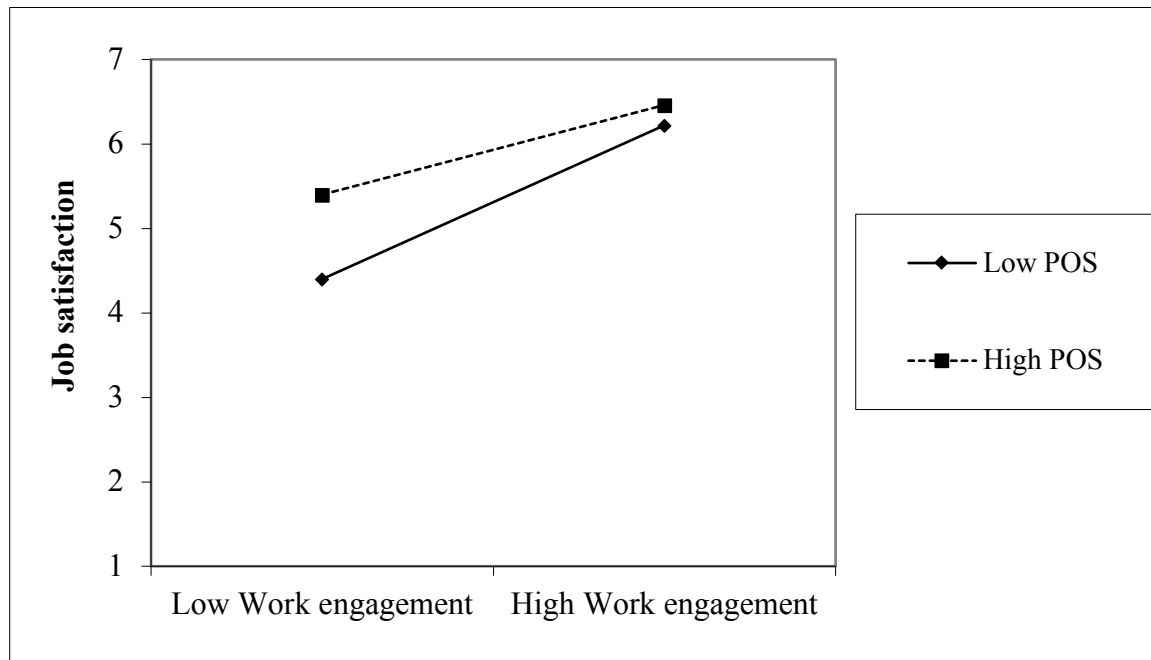


Figure 1. *Moderating effect of perceived organizational support*