

When does presenteeism harm productivity the most? Employee motives as a key moderator of the presenteeism–productivity relationship

Presenteeism
productivity

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Abstract

Purpose – While presenteeism is empirically linked to lower productivity, the role of a person's motives for engaging in presenteeism has been overlooked. Using a Conservation of Resources Theory framework, we examine the moderating effects of presenteeism motives (approach and avoidance motives) on the presenteeism–productivity relationship.

Design/methodology/approach – A sample of 327 dental hygienists with chronic health conditions was surveyed. Moderated multiple regression was used to test study hypotheses.

Findings – Results indicate that presenteeism does indeed appear to detriment productivity. However, we demonstrate that motives are an important moderator, such that high approach motives appear to mitigate the negative effects of presenteeism on productivity.

Practical implications – Based on our findings, we suggest managers strive to improve the approach motives of their employees through processes such as job enrichment.

Originality/value – This study demonstrates that presenteeism is not always detrimental to productivity, as approach motives appear to mitigate the negative effects of presenteeism on productivity. These results could drive future research on presenteeism, as well as inform best practices related to managing workers with chronic health issues.

Keywords Presenteeism, Performance, Motivation, Occupational health psychology

Paper type Research paper

Introduction

An estimated 60% of adults in the United States cope with chronic illness (Centers for Disease Control and Prevention, 2020), or conditions such as heart disease, cancer and chronic pain that persist for a year or longer (Anderson and Horvath, 2004). Due to the persistent nature of their conditions, employees suffering from chronic illness must continually make choices about whether to attend work (presenteeism) or miss work (absenteeism) when they feel unwell. Presenteeism is largely framed as a costly to organizations (Burton *et al.*, 2006; Collins *et al.*, 2005), with some estimates suggesting it cuts individual productivity by one-third or more (D'Abte and Eddy, 2007; Miraglia and Johns, 2016). Yet missing work also detracts productivity (Ybema *et al.*, 2008). Thus, attendance decisions often involve the weighing of the health and work consequences of engaging in presenteeism or absenteeism. Given that attendance decisions for workers with chronic illness is a delicate balancing act, researchers have started to theorize that presenteeism may be the best choice for *certain* employees in *certain* situations to maintain their productivity and well-being at work (Karanika-Murray and Biron, 2020).

The present study positions employees' explicit motivation for presenteeism as a key factor that may differentiate unproductive and productive – or, at least, less



unproductive–presenteeism among chronically ill workers. Past research delineates that employee motives for engaging in presenteeism are either routed in (1) the desire or obligation to abide by one’s work values and demonstrate loyalty or (2) the pressure to avoid the potential damaging consequences of seeking sick leaves (Lu *et al.*, 2013). These motives are termed *approach motives* and *avoidance motives*, respectively. Building on these findings that workers do indeed employ approach and avoidance motives for engaging in presenteeism, we test the proposition that one’s explicit purpose for engaging in presenteeism may alter the extent of productivity loss associated with presenteeism behaviors (Karanika-Murray and Biron, 2020). In this way, different presenteeism motives may predict the same act of presenteeism but alter a person’s productivity while they engage in said presenteeism.

In total, our model examines presenteeism motives as a potential moderator of the presenteeism and productivity relationship. Drawing on Conservation of Resources theory (COR theory; Hobfoll, 1989) and recent arguments regarding functional presenteeism behaviors (Karanika-Murray and Biron, 2020), we propose that approach motives will mitigate the negative effects of presenteeism on productivity, while avoidance motives will exacerbate the negative effects. This information may help to drive future theory development that is sorely needed in presenteeism research (Johns, 2010). Namely, by applying COR theory (Hobfoll, 1989), we provide a theoretical framework that may help to explain the larger nomological network of antecedents, outcomes and boundary conditions related to presenteeism. Practically, these results will provide important insight into potential situations wherein the negative productivity consequences of presenteeism can be mitigated for chronically ill workers, who may be unable to abstain from presenteeism entirely while still retaining their jobs.

Direct link between presenteeism and productivity

Presenteeism is the behavior of physically attending work when a health condition could have reasonably excused absence (Robertson and Cooper, 2011), with most research focusing on chronic conditions (Miraglia and Johns, 2016). Conceptually, presenteeism should negatively impact productivity during illness. Employees who come to work unwell are considered *not all there* in terms of ability and motivation to work (Christian *et al.*, 2011; Demerouti *et al.*, 2009; Johns, 2010; Luksyte *et al.*, 2015; Nahrgang *et al.*, 2011), despite physical being *there* in the workplace (Canfield and Soash, 1955). Several empirical studies have demonstrated the expected moderate, negative relationship between presenteeism and productivity (D’Abate and Eddy, 2007; Niven and Ciborowska, 2015), including a meta-analysis (Miraglia and Johns, 2016). Though explicit longitudinal data linking presenteeism and productivity is lacking due to measurement challenges, presenteeism has been found to predict productivity-related constructs like burnout (Demerouti *et al.*, 2009) and engagement (Ferreira *et al.*, 2019) in longitudinal and diary studies, suggesting that presenteeism may indeed harm productivity in the proposed direction.

The theoretical link between presenteeism and productivity can be explained by COR theory (Hobfoll, 1989). COR theory claims that people aim to protect and build valuable resources (e.g. positive emotion, money, psychological well-being) that may help them accomplish goals. According to COR theory, resources exist in caravans such that possessing resources facilitates accumulation of additional resources and goal achievement. Unfortunately, by this same logic, depleted resources or even the threat of potential resource loss tends to result in further resource loss and, in turn, negative performance and health outcomes because a depleted person rarely invests their precious few resources in resource-building activities (Hobfoll, 1989, 2001).

Transitioning back to the present premise, work is an effortful process that requires resource investment (Troughakos and Hideg, 2009). However, to be ill is to be in a state of

depletion of core resources such as health, energy and/or mobility. Combining this information with COR theory, work requires resource investment, which is inherently difficult and stressful for chronically ill workers experiencing symptoms associated with their condition. In turn, attending work despite the inability to effectively invest resources into work tasks is theoretically likely to result in lower productivity at work. Productivity loss due to presenteeism is a fundamental assumption in the presenteeism literature yet is relatively undertested (Miraglia and Johns, 2016). Therefore, in line with COR theory and existing, but limited, past research, we expect a negative relation between presenteeism and productivity.

H1. Presenteeism negatively predicts work productivity.

Moderating effects of presenteeism motives

The overall relation between presenteeism and productivity is expected to be negative, but research suggests that the extent of this relation may not be consistent across all situations. One recent framework by Karanika-Murray and Biron (2020) posits that presenteeism differs in its functionality, with presenteeism sometimes decrementing work productivity as generally expected (i.e. dysfunctional presenteeism), but sometimes providing a refuge from inactivity or even a chance to prove one's abilities (i.e. functional presenteeism). In line with the COR perspective, Karanika-Murray and Biron (2020) suggest that a key determinant of the functionality of presenteeism is a person's resources – namely, whether the person is willing or able to invest resources in work even when they are not feeling well. We argue that presenteeism motives (i.e. the reason why a person chooses to engage in presenteeism behavior) provide relevant information about a person's resources and may therefore act as a boundary condition for the negative presenteeism–productivity relationship.

Motives are the internal forces that drive any behavior (Ployhart, 2008), with some driving forces being implicit needs (motives not directly accessible to awareness) and others being explicit values and desires (conscious intentions or strivings; McClelland *et al.*, 1989). To our knowledge, the first researchers to identify and examine the motives for presenteeism were Lu *et al.* (2013), who focus on explicit motives. More specifically, Lu *et al.* (2013) identified two presenteeism motives rooted in stress theory – approach and avoidance motives. According to Lazarus and Folkman's (1984) transactional stress theory, people react to stressful situations in two distinct ways: either they *approach* the stressor to master the situation (the “fight” response) or they *avoid* the stressor to alleviate its harmful impacts (the “flight” response; Lu *et al.*, 2013). In regard to presenteeism, approach motives refer to the desire or obligation to approach the discomfort of attending work while unwell in order to abide by one's work values and demonstrate loyalty to the profession and colleagues. Conversely, avoidance motives refer to the pressure to attend work while unwell to avoid the potential damaging consequences of seeking sick leaves (e.g. the fear of salary deduction, the pressure to conform to expectations from peers or supervisors; Lu *et al.*, 2013).

Although there may be implicit and explicit aspects of approach and avoidance motives of presenteeism, we examine them explicitly here. This distinction is important as implicit motives and explicit motives are commonly not correlated even when they tap the same class of behavior (Lang *et al.*, 2012; McClelland *et al.*, 1989). Explicit motives are typically captured via self-report measures, while implicit motives are often assessed by having participants respond to ambiguous pictures and having trained experts score the motivational content of those responses (Lang *et al.*, 2012). From the perspective of attendance decision-making (Halbesleben *et al.*, 2014), the choice to attend or miss work when feeling unwell is not one that occurs without notice; it typically involves consideration of a number of factors (e.g. the work environment, personal goals; Collins and Cartwright, 2012), thus utilizing the explicit system of motivation. Further, as is characteristic of behaviors driven by explicit motives

(McClelland *et al.*, 1989), there is a specific stimulus that elicits attendance decisions – feeling unwell.

We use COR theory (Hobfoll, 1989) to expand upon Lu *et al.*'s (2013) foundation by examining whether these explicit motives for engaging in presenteeism have differing effects on the relationship between presenteeism and work productivity. Approach motives indicate expectations that adhering to the values and goals of oneself and/or others via presenteeism will outweigh the discomfort associated with coming to work sick (Lu *et al.*, 2013). Therefore, approach motives for presenteeism suggest that people expect to gain resources like social approval and self-esteem by attending and performing at work. These expectations for resource gain may incite a resource investment approach to fixing resource depletion, rather than a conservation approach, according to COR theory (Halbesleben *et al.*, 2014). Essentially, these workers may be willing or able to “spend” current resources – not only by engaging in presenteeism in the first place but also, centrally here, by putting significant effort into work once they are there – because doing so will potentially help them gain and rebuild additional resources (Hobfoll, 2001). As such, approach motives may mitigate the negative productivity effects of presenteeism, given that employees with approach motives may be willing or able to invest resources in work tasks despite their poor health. We therefore predict that people with high approach motives will experience smaller decreases in productivity when engaging in greater presenteeism, compared to those with low approach motives.

H2. Self-reported approach motives moderate the negative relationship between presenteeism and productivity, such that the negative relationship between presenteeism and productivity will be weaker when workers have stronger self-reported approach motives.

Avoidance motives, on the other hand, suggest people expect to lose resources at work, in that they are simply attending to limit that resource loss as much as possible. If attending work is seen as resource loss, people engaging in presenteeism will likely choose a resource conservation approach to reducing resource depletion (Hobfoll, 2001), wherein they attempt to protect the resources they do have and are unlikely to invest them in work tasks (Hobfoll, 1989). As such, avoidance motives may exacerbate the effect of presenteeism on productivity, given that employees with avoidance motives may be especially unlikely to invest resources in work tasks, in addition to the productivity decrement already expected due to depleted health. We therefore predict that people with high avoidance motives will experience even greater decreases in productivity when engaging in greater presenteeism, compared to those with low avoidance motives.

H3. Self-reported avoidance motives moderate the negative relationship between presenteeism and productivity, such that the negative relationship between presenteeism and productivity will be stronger when workers have stronger self-reported avoidance motives.

Method

Participants and procedure

Dental hygienists were selected as the focus of this study since, as a population, they report high levels of health conditions (Rempel *et al.*, 2015). Further, the broader occupational group to which they belong, healthcare professionals, tends to be especially vulnerable to presenteeism (Kinman, 2019). Email lists of board-certified dental hygienists were obtained online or requested directly from four State Dental Boards (New Jersey, West Virginia, Oregon and North Carolina). A recruitment email was sent to the email addresses requesting participation in the study. Participants received an entry into a lottery for one of twenty-five

\$20 Amazon gift cards. In total, 10,590 dental hygienists were contacted, 5,234 opened the initial recruitment email (49.4%), 655 began the initial survey (6.2%) and 504 completed the initial survey (4.8% response rate). The final sample included 327 participants after the removal of 25 part-time workers (i.e. worked less than 24 h per week) and 152 workers that did not have a health condition. The participants were primarily female (99.4%) and Caucasian (94.0%), had an average age of 46.07 ($SD = 12.48$), and worked approximately 32.11 h per week ($SD = 6.55$). The majority of participants reported pain conditions (75.84%), followed by respiratory conditions (37.61%), cardiovascular conditions (20.49%) and other conditions (10.70%; participants were allowed to report more than one condition). The average number of reported conditions was 2.08 ($SD = 1.17$).

Measures

Preexisting medical conditions were measured with a one-item measure from the World Mental Health Composite International Diagnostic Interview (WMH-CIDI; [World Health Organization, 2017](#)). Participants were asked to select all applicable chronic health conditions from a list of 17 common conditions. These conditions represent four broad categories of conditions, including cardiovascular (heart attack, stroke, heart disease, high blood pressure), respiratory (hay fever, asthma, tuberculosis, other chronic lung diseases including emphysema and chronic obstructive pulmonary disease), pain (chronic back or neck problems, frequent or severe headaches, arthritis, ulcer, other chronic pain) and other (diabetes, sleep apnea, cancer, epilepsy or seizures). Number of health conditions was used as a control variable, given that such conditions are associated with both heightened presenteeism ([McGregor et al., 2018](#)) and challenges to productivity ([Kwai et al., 2017](#)), but are not a core part of the present model.

Presenteeism was measured with a one-item measure by [Aronsson and Gustafsson \(2005\)](#). Participants were asked how often they went to work over the previous month despite feeling that they really should have taken sick leave because of their chronic medical condition. Participants responded on a five-point Likert scale ranging from 1 (never) to 5 (more than 5 times).

Presenteeism productivity was measured with the six-item Stanford Presenteeism Scale ([Koopman et al., 2002](#)). Participants were asked to indicate the degree to which they agreed with the following statements regarding their work experiences over the previous month. Sample items include “Despite having my health problem, I was able to finish hard tasks in my work” and “At work, I was able to focus on achieving my goals despite my health problem.” Participants responded on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Presenteeism motives were measured with a nine-item scale by [Lu et al. \(2013\)](#) that measures both approach and avoidance motives. Participants were asked why they attended work when sick. Sample items include “I worried that I might lose my job” (avoidance motives) and “I believed that I should keep up with the team schedule” (approach motives). Participants responded on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Results

Common method variance

To address the potential issue of common method variance, we ran a Harman one-factor test ([Podsakoff and Organ, 1986](#)). All items for the predictor and criterion variables (presenteeism, approach motives, avoidance motives and presenteeism productivity) were entered into a principal components factor analysis. When the unrotated solution was examined, four

factors were identified with an eigenvalue greater than 1 and no single factor accounted for the majority of variance. The results of this test indicated that common method variance was not a significant issue in our study. If it had been an issue, a single factor would have emerged or one “general” factor would have accounted for the majority of variance (Podsakoff and Organ, 1986).

Hypothesis testing

Means, standard deviations, correlations and internal consistency reliabilities are reported in Table 1. Hypotheses were tested using hierarchical multiple regression in SPSS. Model 1 examined presenteeism as a predictor of productivity (Hypothesis 1). The total number of health conditions and approach and avoidance motives were also included as predictors in the model. Model 2 added an interaction term between presenteeism and approach motives (Hypothesis 2). Model 3 added an interaction term between presenteeism and avoidance motives (Hypothesis 3). The full results of these models are reported in Table 2.

The regression results from Model 1 indicated that presenteeism was indeed significantly negatively related to productivity, $\beta = -0.22, p < 0.001$, in support of Hypothesis 1. The results also indicated that avoidance motives were significantly negatively related to productivity ($\beta = -0.43, p < 0.001$), while approach motives for presenteeism were not significantly related to productivity ($\beta = 0.08, p > 0.05$). In other words, engaging in presenteeism out of pressure relates to lower productivity, whereas engaging in presenteeism out of desire was not related to productivity. The number of health conditions was also significantly related to productivity ($\beta = -0.12, p < 0.05$). Thus, people with more health conditions are more likely to experience decrements to productivity when attending work when unwell.

Table 1.
Means, standard deviations, correlations and internal consistency reliabilities

	<i>M</i>	<i>SD</i>	Correlations			
			1	2	3	4
1. Presenteeism	1.64	0.98				
2. Approach motives	3.94	0.91	0.13*	(0.88)		
3. Avoidance motives	2.75	1.07	0.22***	0.30***	(0.85)	
4. Presenteeism productivity	4.05	0.72	-0.32***	-0.08	-0.46***	(0.80)
5. Total health conditions	2.08	1.17	0.18**	0.04	-0.03	-0.20***

Note(s): *N* = 327
p* < 0.05; *p* < 0.01; ****p* < 0.001

Table 2.
Relationship between presenteeism and productivity

Variable	Model 1		Model 2		Model 3	
	β	<i>t</i>	β	<i>t</i>	β	<i>t</i>
Presenteeism	-0.22	-4.33***	-0.22	-4.28***	-0.25	-4.69***
Approach motives	0.08	1.52	0.08	1.51	0.12	2.22*
Avoidance motives	-0.43	-8.26***	-0.43	-8.25***	-0.44	-8.44***
Presenteeism × approach motives			0.11	2.04*	0.12	2.14*
Presenteeism × avoidance motives					-0.03	-0.65
Total health conditions	-0.12	-2.44*	-0.12	-2.34*	-0.12	-2.32*
<i>R</i> ²	0.29		0.30		0.30	
ΔR^2			0.01		0.00	
<i>F</i> (<i>df</i>)	29.86(4,297)***		24.98(5,296)***		20.84(6,295)***	
ΔF			4.18(1,296)*		0.42(1,295)	

Note(s): **p* < 0.05; ****p* < 0.001

In support of [Hypothesis 2](#), the interaction term between presenteeism and approach motives added in Model 2 was significantly positively related to productivity ($\beta = 0.11$, $p < 0.05$; i.e. approach motives are a significant moderator of the relationship between presenteeism and productivity). Simple slopes showed that high levels (1 SD above the mean) of approach motives resulted in a nonsignificant relationship between presenteeism and productivity ($\beta = -0.09$, $t = -1.85$, $p > 0.05$), while low levels (1 SD below the mean) of approach motives resulted in a significant negative relationship between presenteeism and productivity ($\beta = -0.27$, $t = -4.13$, $p < 0.001$). As can be seen in [Figure 1](#), as presenteeism increases, high levels of approach motives result in maintained levels of productivity, while low levels of approach motives result in reduced levels of productivity. Thus, approach motives appear to mitigate the negative effects of presenteeism on productivity.

However, contrary to [Hypothesis 3](#), the interaction term between presenteeism and avoidance motives added in Model 3 was not significantly related to productivity ($\beta = -0.03$, $p > 0.05$; i.e. avoidance motives are not a significant moderator of the relationship between presenteeism and productivity). Simple slopes showed that both high ($\beta = -0.20$, $t = -3.93$, $p < 0.001$) and low ($\beta = -0.15$, $t = -2.81$, $p < 0.01$) levels of approach motives resulted in a significant relationship between presenteeism and productivity. As can be seen in [Figure 1](#), as presenteeism increases, productivity decreases similarly for people with high and low levels of avoidance motives. Thus, avoidance motives do not appear to exacerbate the negative effects of presenteeism on productivity.

The magnitude and statistical significance of these effects stayed consistent when demographic control variables, including age and race (White or Black), were included in the analysis. Given that the demographic control variables did not have a significant effect on presenteeism productivity, they were excluded in the reported results.

Effect of presenteeism on productivity across medical conditions. Post-hoc regression analyses were also performed to assess the relationship between presenteeism and productivity across different medical conditions, controlling for the number of conditions. Results indicated that presenteeism was significantly negatively related to productivity

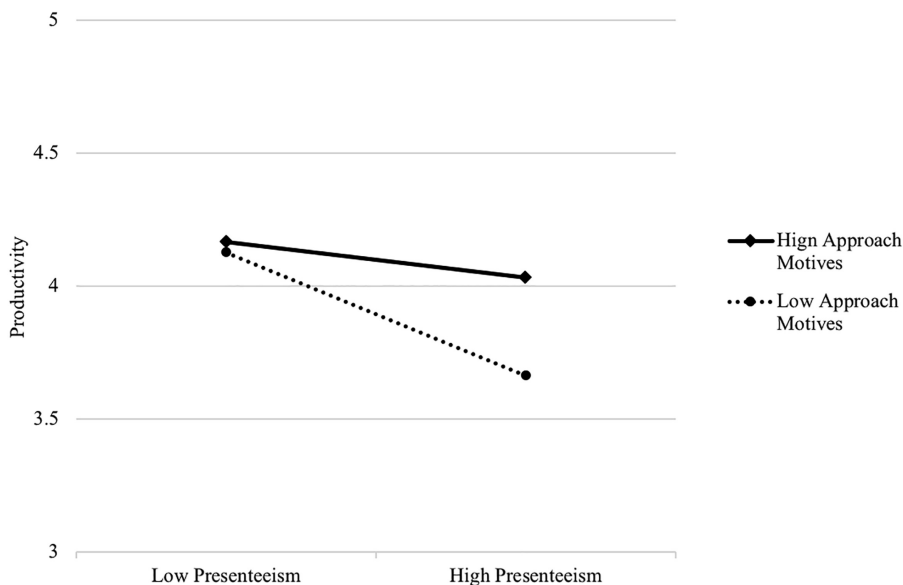


Figure 1.
Interaction effect of
presenteeism and
approach motives on
productivity

across all categories of health conditions, with the strongest effects seen for employees with cardiovascular conditions [$F = 9.57(2,54)$, $t = -3.87$, $\beta = -0.45$, $p < 0.001$], followed by pain conditions [$F = 16.64(2,231)$, $t = -5.72$, $\beta = -0.36$, $p < 0.001$], respiratory conditions [$F = 13.27(2,111)$, $t = -3.15$, $\beta = -0.27$, $p < 0.001$] and other conditions [$F = 3.08(2,30)$, $t = -1.26$, $\beta = -0.21$, $p < 0.05$]. The varying effect sizes across the categories suggest that the effect of presenteeism on productivity differs by health condition.

Effect of presenteeism motives on presenteeism. Finally, a post-hoc regression analysis was performed to examine the direct effects of motives on presenteeism, controlling for the number of health conditions. This analysis was performed to assess the replicability of previous findings (Lu *et al.*, 2013). Results [$F(3,298) = 7.79$, $p < 0.001$] indicated that avoidance motives were significantly related to presenteeism ($\beta = 0.19$, $t = 3.21$, $p < 0.01$), while approach motives were not ($\beta = 0.08$, $t = 1.34$, $p > 0.05$). The number of health conditions was significantly related to presenteeism ($\beta = 0.16$, $t = 2.90$, $p < 0.01$). Thus, people who feel pressured to attend work and people with more health conditions are more likely to attend work when unwell. These results show that presenteeism motives are not always antecedents, further supporting our recommendation to focus on presenteeism motives as moderators.

Discussion

The results of this study shed important light onto the nature and consequences of presenteeism. First, in line with previous research (D'Abate and Eddy, 2007; Miraglia and Johns, 2016) and COR theory (Hobfoll, 1989), our results demonstrate that presenteeism does generally appear to negatively affect work productivity. Second, but more importantly, the results indicate that motives moderate the presenteeism–productivity relationship, such that high approach motives appear to mitigate the negative effects of presenteeism on productivity. Furthermore, post-hoc results indicate that presenteeism may have more deleterious effects on performance depending on the specific type of health condition. Specifically, within our sample, it appears that the greatest productivity decrements occur when the individual is suffering from cardiovascular health conditions. Finally, in contrast to previous research (Johns, 2011; Lu *et al.*, 2013), additional post-hoc results suggest that only avoidance motives, but not approach motives, are predictors of presenteeism behavior within this sample.

Theoretical implications

The results of this study provide numerous theoretical implications. First, the results advance our current understanding of the impact of presenteeism on work productivity. Specifically, we demonstrate that presenteeism *generally* negatively predicts productivity. Although this overall association mirrors that found in meta-analysis (Miraglia and Johns, 2016), the authors of the meta-analysis opine that only four empirical studies had examined the relationship between presenteeism behavior and productivity loss. Given the surprising lack of attention to what is assumed to be a core consequence of presenteeism, replicating these findings is useful. We provide more evidence that attending work when unwell is harmful to productivity.

That said, we also demonstrate that presenteeism does not always have negative productivity consequences. Approach motives were found to mitigate the negative effects of presenteeism on productivity. Scholars have repeatedly requested that greater empirical attention be devoted to the motivation and decision-making processes that drive presenteeism (e.g. Dietz *et al.*, 2020; Lohaus and Habermann, 2019). The present study not only answers these calls but adds that motives are theoretically valuable not just as an

antecedent of presenteeism, but also as a moderator of its relationship with productivity. As such, we encourage researchers to incorporate motives into their theoretical models in order to accurately assess the effects of presenteeism. For example, in Johns' (2010) dynamic model of presenteeism and absenteeism, the focus is primarily on the factors driving presenteeism, with no focus on boundary conditions that might affect outcomes. Based on our findings, this model might benefit from the addition of motives as a moderator of the presenteeism–outcome relationship. Furthermore, based on support for the majority of our hypotheses, COR also seems to be a useful framework to understand presenteeism behavior. Thus, we contend that entirely new theory may not be needed to address the atheoretical nature of presenteeism research (Johns, 2010); existing theory may apply well and provide both an overarching explanation and new insights.

Additionally, this study also has important theoretical implications for the prediction of presenteeism, as our results contrast with some of the findings from previous studies focused on the prediction of presenteeism (Johns, 2011; Lu *et al.*, 2013). In an article focusing on predictors and consequences of presenteeism, Johns (2011) found a variety of work characteristics that successfully predicted presenteeism, including task significance, task interdependence and ease of replacement. These work characteristics can be categorized into approach (e.g. task significance) and avoidance (e.g. task interdependence, ease of replacement) motives. Similarly, Lu *et al.* (2013) found that approach and avoidance motives were both significant predictors of presenteeism. However, contrary to Johns (2011) and Lu *et al.* (2013), only avoidance motives were a significant predictor of presenteeism in our sample. This aberrant finding suggests that the types of motives may have differential effects on presenteeism behavior across occupations. One potential explanation is that dental hygienists who feel a desire or obligation to demonstrate loyalty to their profession, colleagues and patients (approach motives) may stay home from work when they are feeling unwell to protect their dental practice and patients because they know that their chronic illness (e.g. pain or allergy) could potentially cause them to harm their patients. In other professions, attending work when feeling unwell does not usually present a safety concern to others, so approach motives may not be hindered by these safety concerns.

Alternatively, another potential explanation may be that dental hygienists work within a rigorous and predetermined schedule (National Center for O*NET Development, 2019). It may be that although dental hygienists experience high levels of approach motivation (see means in Table 1), avoiding the damaging consequences of missing work in a highly structured environment is the more salient driving factor in their decision of whether or not to engage in presenteeism. Indeed, research shows that presenteeism in healthcare professionals is largely motivated by hopes to avoid potential repercussions for themselves, their colleagues and their patients when they miss work (Elstad and Vabø, 2008).

Practical implications

Based on the findings of this study, we extend numerous practical implications. First, based on the finding that approach motives can mitigate the negative consequences of presenteeism, we suggest employers strive to improve the approach motives of their employees. Based on the definition of approach motives (e.g. the desire or obligation to attend work in order to abide by one's work values and demonstrate loyalty; Lu *et al.*, 2013), approach motives are similar to intrinsic motivation in that both can be conceptualized as the desire to engage in work because the values are internalized and the behaviors are self-determined (Deci and Ryan, 1985). Research has repeatedly demonstrated that intrinsic motivation can be increased via job enrichment, which involves increasing the extent to which jobs possess skill variety, task identity, task significance, autonomy and feedback (Hackman and Oldham, 1976). Within the work context, this could be done by providing

employees with opportunities to rotate through different tasks and responsibilities, identify greater meaning in their work, build relationships with colleagues or clients/patients, craft their own work or receive feedback on their performance. Increasing approach motives/intrinsic motivation will not only improve job satisfaction and reduce turnover intentions (Tremblay *et al.*, 2009), but, as demonstrated in this study, ensure that employees' work productivity will not suffer if they do choose to engage in presenteeism. We therefore provide further support for the importance of creating and sustaining approach motives/intrinsic motivation among employees. Indeed, even though these effects are small, any improvement to the productivity and the health and well-being of employees is meaningful.

However, it is important to recognize that presenteeism is not ideal or acceptable in all – or even most – situations, even if the negative effects on productivity can be mitigated. Indeed, the stress associated with attending work when unwell could result in even further deterioration in health (Bergström *et al.*, 2009), which could lead to increased future healthcare costs or absenteeism. As such, employers need to be aware of when presenteeism is warranted (and when it is not) and support approach motives (or absenteeism) in those situations. Our findings do not encourage presenteeism but rather demonstrate that productivity is somewhat maintained by employees suffering from chronic illness if they have a desire or obligation to attend work despite their condition.

Second, based on the finding regarding specific health conditions, we encourage employers to be even more supportive of sickness absences for those suffering from cardiovascular health conditions. These individuals appear to have the worst decrements in productivity when attending work while sick; thus, encouraging them to attend may have little effect on overall organizational productivity, especially if they feel pressured to attend. On the other hand, individuals with more minor health conditions may be better able to maintain productivity when sick, especially when they have approach motives to attend work.

It is important to note that a large majority of the participants in this sample reported pain conditions (245 of the 327 participants). This finding is not surprising, as dental hygienists are prone to musculoskeletal pain in the hands, wrists, arms, shoulders, neck and back due to the repetitive biomechanics required by the job (Rempel *et al.*, 2015). The fact that over two-thirds of the sample experienced a pain condition, coupled with the fact that people with pain conditions reported the second strongest relationship between presenteeism and productivity, indicates that performance detriments due to presenteeism may be an issue within the dental industry. As such, we recommend that dental hygienists be provided with ergonomic interventions to help prevent or mitigate musculoskeletal disorders. Furthermore, we recommend that organizations, especially dental practices, do not pressure their employees to attend work when they report pain, but rather create an environment that fosters approach motives within the employee to attend.

Limitations and future directions

As with all research, the current study is not without limitations. First, the data was cross-sectional, thus limiting our ability to infer causality. However, conducting an experiment that manipulates illness or presenteeism behaviors would raise ethical concerns. Furthermore, previous longitudinal research has demonstrated the directionality of the relationship between presenteeism and productivity-related outcomes (e.g. Demerouti *et al.*, 2009; Ferreira *et al.*, 2019).

Second, all measures utilized in this study were self-report, which would typically raise concerns regarding common method variance. Collecting some form of objective data could have reduced concerns; however, due to the sensitive nature of some of the variables (e.g. health and presenteeism), we were unable to collect objective data from our sample. Luckily,

we were able to rule out common method variance as a likely explanation for our observed effects, as our Harman one-factor test indicated no major source of common method variance. Further, both presenteeism and productivity during presenteeism may not be highly observable to managers – especially for employees dealing with chronic conditions – making self-report data an appropriate, though not perfect, choice (Miraglia and Johns, 2016).

Third, our decision to measure explicit, self-reported presenteeism motives may have led to results and conclusions that may not apply to implicit presenteeism motives. As noted earlier, implicit motives and explicit motives are commonly not correlated even when they tap the same class of behavior (Lang *et al.*, 2012; McClelland *et al.*, 1989).

In future studies, we encourage researchers to examine these directional and moderator effects using different samples, measures and data collection methodologies to increase the generalizability of our findings. For example, we used the popular Aronsson and Gustafsson (2005) presenteeism measure that asked about attendance although one feels sick; however, other variations of this measure have been used, such as attendance despite a doctor's recommendation of sick leave (e.g. Mikos *et al.*, 2020). Measures of implicit motives could also be used to determine how these motives relate to the presenteeism–productivity relationship. Additionally, approach motives could be examined as a moderator of the relationship between presenteeism and *well-being* outcomes to see if approach motives consistently reduce the damaging effects of presenteeism. Furthermore, non-medical samples could be examined, as it may be easier to collect objective data from these samples. Finally, it is important to note that our results only apply to attendance while chronically ill (i.e. a long-term illness that is typically noncommunicable), which has been the traditional focus of presenteeism research (Miraglia and Johns, 2016). Thus, researchers may want to consider examining the motives behind attendance while acutely ill, as acute illness (e.g. cold or flu) is potentially harmful to others and typically short-lived.

Conclusion

The current study provides an expanded and nuanced examination of the relationship between presenteeism and productivity. Specifically, we confirm past findings that presenteeism does relate to lower productivity. We also demonstrate that motives are a significant moderator of the presenteeism–productivity relationship, such that high approach motives appear to mitigate the negative effects of presenteeism on productivity. These results provide information that could help drive theory-based research on presenteeism, as well as inform best practices related to managing workers with chronic health issues.

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