"To work, or not to work, that is the question" – Recent trends and avenues for research on presenteeism

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Abstract:

This position paper brings together recent and emerging developments in the field of presenteeism. A critical synthesis of the evidence is needed due to persisting conceptual and methodological challenges as well as the increased volume of research in the field. This paper integrates emerging evidence and critical thinking into three areas: (1) concept, (2) measurement and methodological issues, and (3) the context of presenteeism. First, due to the variety of existing definitions, competing understandings, as well as the notion of positive presenteeism, it is important to reconsider the notion of presenteeism. Second, it is important to reflect on the measurement of the act of presenteeism and the productivity loss associated with that. Third, following the call to investigate presenteeism in specific contexts, it is important to explain the social, occupational, cross-cultural aspects, as well as the contemporary workplace changes. Based on this critical synthesis, we conclude by identifying recommendations for future research on presenteeism.

Keywords:

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Maintaining both physical and psychological health of employees has become vital for organizations, as the individual workers constitute one of the most important resources of organizations (Pfeffer, 2010). However, as humans are prone to health incidents, organizations need to deal with the reality of interruptions of a fully productive regular attendance at work (Johns, 2010). While health incidents often result in sickness absenteeism, i.e. the failure to turn up for work as scheduled (Johns, 2008), there is growing evidence that workers increasingly opt for another alternative: presenteeism, defined as attending work while ill (Johns, 2010; Karanika-Murray & Cooper, 2018).

While it can obviously be problematic for the individual, as it might generate a deterioration of health, presenteeism also creates costs for organizations and the society (Evans-Lacko & Knapp, 2016; Miraglia & Kinman, 2017). At first glance, presenteeism might sound like a reasonable deal for organizations: They avoid costs associated with the unplanned absence, such as the cost for replacement. However, data has cumulated that this calculation might be wrong, as there is evidence that employees who go to work ill tend to commit errors more frequently (Niven & Ciborowska, 2015) and report lower levels of performance and productivity (Robertson & Cooper, 2011). Yet, organizations emphasize the possible adverse consequences of absenteeism and induce employees to opt for presenteeism (Miraglia & Johns, 2016). Then again, consequences of presenteeism might be intricate and there might be situations in which presenteeism is therapeutic (Karanika-Murray & Biron, 2019).

Thus, presenteeism has important consequences for organisations and individuals yet still poorly understood, which is also shown in the increase in research on presenteeism in different disciplines (Cooper & Lu, 2018; Johns, 2010; Lohaus & Habermann, 2019). Consequently, research stems from different fields and ideas, from work and organizational psychology, human resource management, to health sciences, such as occupational health psychology and epidemiology, or even economics. While these disciplines provide us with different interests, assumptions, and approaches that add value to research on presenteeism, it

is important to find common ground and reflect on where the field stands, what the current challenges are, and how we might cope with those challenges.

Drawing on this multidisciplinary perspective, this paper brings together scholars from different disciplines and countries, in order to gain a more unified and comprehensive understanding of presenteeism and to provide guidance for further advancements of the field. The paper explores conceptual as well as methodological advances, highlights directions for future research, suggests a fruitful approaches and offers a research agenda.

Based on the increasing research, we identify three important themes that provide a framework to tackle those challenges. First, we explore and evaluate the *concept of presenteeism* and how differently it is understood. While this has been done previously (Halbesleben, Whitman, & Crawford, 2014; Johns, 2010; Karanika-Murray & Biron, 2019; Lohaus & Habermann, 2019) we will discuss the benefits of a clear definition, why and how it might be extended, and how we can address ideas such as a functional presenteeism and the individual experiences of presenteeism. Second, we discuss the *measurement of presenteeism* and related methodological issues by reflecting on the existing approaches in order to guide future research in terms of how to decide which pros and cons need to be considered when choosing a specific approach, both measuring the act of presenteeism as well as for measuring and valuing productivity loss attributable to presenteeism. Third, based on the evidence of its importance, we discuss the *role of context*, identifying important aspects that have been neglected so far in presenteeism research, but that might nevertheless have a strong influence on presenteeism. These recommendations are summarised in Table 1. Finally, we provide a brief conclusion consolidating the manifold ideas of the position paper. Thus, this paper offers valuable contributions to the literature on presenteeism, by providing insights into the state of the field, highlighting the necessity to carefully consider the underlying concept; by giving an overview of important aspects that should be considered when planning research on

presenteeism, stemming from different fields and perspectives; and by indicating various fruitful avenues for future research that will help further advance the field.

****Table 1 around here****

(A) Concept

To date, there is no uniform and generally accepted definition of presenteeism, as three main lines of understanding have developed independently and are used in parallel. The distinctions between different definitions are relevant because they have consequences for the measurement of presenteeism, the choice of study designs, and the kind of intervention strategies to deal with presenteeism.

(1) Definitions of presenteeism

First, in the mainly European line of research, employed by most organizational scholars (Johns, 2010), studies on presenteeism investigate the act of attending work while ill, aiming at understanding the antecedents and consequences of presenteeism or the motives for this behaviour. Research focussing on antecedents and consequences strives at identifying factors relating to the individual, and the context implying the work setting, the organization, and the environment, that are associated with presenteeism (for an overview see Karanika-Murray & Cooper, 2018; Lohaus & Habermann, 2019; Miraglia & Johns, 2016). Studies investigating motives for presenteeism reported that colleagues, financial reasons, and worries to be laid off were relevant aspects (e.g., Baker-McClearn, Greasley, Dale, & Griffith, 2010; Johansen, Aronsson, & Marklund, 2014; Johansen, 2018; Kim et al., 2016; Krane et al., 2014; Lu, Lin, & Cooper, 2013; Navarro, Salas-Nicás, Moncada, Llorens, & Molinero-Ruiz, 2018).

This line of research is characterized by the conceptualization of the act of presenteeism as the outcome of a complex decision-making process by the ill person to either attend work or stay at home. However, this decision process is influenced by external (cultural, organizational, and task-related) conditions and refrains from ascribing motives or consequences to the act of presenteeism, and thus does not confuse causes and effects (Johns, 2010; Karanika-Murray

& Cooper, 2018). Further, this definition does not obscure the possible positive effects of presenteeism that are often neglected (Lohaus & Habermann, 2019). A growing number of researchers stress the occurrence of positive impacts of presenteeism at least in certain cases of illness (e.g., Demerouti, Le Blanc, Pascale M., Bakker, Schaufeli, & Hox, 2009; Karanika-Murray & Biron, 2019; Steinke & Badura, 2011), which is discussed in the next section of this paper (Section 2). Further, this definition of presenteeism has some overlap with the concept of *leaveism* (Hesketh & Cooper, 2014), which utilizes allocated time off, such as annual leave days or flexi hours banked when feeling unwell, instead of engaging in either absenteeism or presenteeism.

The second line of research, which has mainly been developed in North America (Johns, 2010), defines presenteeism as the measurable loss of productivity due to attending work with health problems (e.g., Burton, Chen, Li, Schultz, & Abrahamsson, 2014; J. J. Collins et al., 2005; Goetzel et al., 2009; Zhou, Martinez, Ferreira, & Rodrigues, 2016). Within this line, two key aspects of interest are discernible: the measurement of productivity loss and health-related interventions to reduce it. In this definition, health problems include acute minor (e.g., common cold), periodic (e.g., migraine headaches), and chronic illnesses (e.g., diabetes) as well as health-damaging or health-threatening behaviour (e.g., smoking). This line of research focuses on the impact of the individuals' health condition on their productivity and the financial loss for the organization. The standard of comparison for performance impairments is the healthy and thus fully productive worker. Research efforts concentrate on the measurement of reductions in productivity (e.g., Koopman et al., 2002; Lerner et al., 2001; Lofland, Pizzi, & Frick, 2004; Mattke, Balakrishnan, Bergamo, & Newberry, 2007; Ospina, Dennett, Waye, Jacobs, & Thompson, 2015; Shikiar, Halpern, Rentz, & Khan, 2004) and the calculation of the monetary cost incurred (e.g., Goetzel et al., 2004; Iverson, Lewis, Caputi, & Knospe, 2010; Kessler et al., 2004; Pauly, Nicholson, Polsky, Berger, & Sharda, 2008; Schmid et al., 2017; Schultz, Chen, & Edington, 2009; Strömberg, Aboagye, Hagberg, Bergström, & Lohela-

Karlsson, 2017), which will be discussed later (see Section 5). Health-related interventions constitute another field of interest and are useful in reducing health-related productivity loss (e.g., Ammendolia et al., 2016; Block et al., 2008; Brown, Gilson, Burton, & Brown, 2011; Burton, Chen, Conti, Schultz, & Edington, 2006; Cancelliere, Cassidy, Ammendolia, & Côté, 2011).

This line of research has fuelled the interest in presenteeism for practitioners, as it ascribes costs to work being attended with a health impairment (Böckerman, 2018). Critics of this approach argue that it defines presenteeism solely by its (negative) consequences (Johns, 2010). Further, several scholars argue that this understanding ignores the fact that not every health problem necessarily entails productivity losses (e.g., Vingård, Alexanderson, & Norlund, 2004) or negative effects on the future health and workability of the individual (e.g., Steinke & Badura, 2011). However, both views have in common that they conceptualize presenteeism as a health-related phenomenon. In order to clarify this position, some researchers use the term sickness presenteeism (e.g., Bergström, Bodin, Hagberg, Lindh et al., 2009; Hansen & Andersen, 2008; Johansen et al., 2014; Navarro et al., 2018). As a result, presenteeism has a rather negative connotation and is seen as a phenomenon that should be brought under control.

A third line of research attempts to broaden the scope of presenteeism research, as the literature on presenteeism has been largely influenced by the definition of "coming to work while ill". However, this definition is confined to one aspect of why an individual may not fully engage in work, the illness. For example, Gilbreath and Karimi (2012) used the term presenteeism to describe not being able to muster cognitive energies at work due to stress, thus limiting presenteeism to being stress-related. Cooper defined presenteeism as being physically present but functionally absent (Cooper, 1996; Cooper & Lu, 2016), which is not strictly confined to illness. In other words, dysfunctional presence at work may be due to reasons that are unrelated to health. While such approaches do extend the meaning of presenteeism, they are still confined to productivity loss. However, it is not necessary that indulging in non-task-

related activities at work would always result in productivity loss, which is discussed in detail in the next section.

In essence, this stream of research suggests that the definition of presenteeism needs to be broader to accommodate both productivity loss and potential productivity gain as well as non-illness-related reasons. An advantage of this line of reasoning is that it establishes a parallel to the definition of absenteeism, in which researchers make a distinction between health-related absence from work (sickness absenteeism) and absence due to other reasons (sometimes termed voluntary absenteeism, e.g. Halbesleben et al., 2014). It enables grasping the behaviour of someone at work who is neither ill nor working, thus opening up inquiries such as what that person might be doing and what consequences this might have for the organization. However, including reasons unrelated to sickness in the definition of presenteeism makes this notion more general at the expense of its current focus.

In view of these different streams of research, and the broader increase of research in the field of presenteeism, we argue that efforts in the clarification of the definition to achieve a common understanding of the phenomenon are necessary. A consistent understanding of presenteeism would indisputably entail substantial advantages for research and practice likewise. First, it is a necessary condition for the development of reliable and valid measurement methods (see Sections 4 and 5). Second, it would allow for the unambiguous interpretation and comparative analysis of research results gained in different contexts and by various research designs. Third, it would be a basis for the deduction of useful recommendations for intervention strategies to manage the phenomenon (see Section 7).

Thus, we propose that research on presenteeism should recognize the basic understanding of presenteeism as **behaviour of working in the state of ill-health**. This understanding should encompass all kinds of health conditions, including those labelled broadly – and sometimes distinguished artificially – as mental disorders. Research on presenteeism should refrain from evaluating and labelling the behaviour in itself as positive or negative.

Further, the definition should not imply any motives or consequences (such as productivity loss or future health impairments). Additionally, such a definition can be applied to any kind of work. It should be based on the understanding of work not only including employed and self-employed work, but also taking into account work that is not formally remunerated, such as housekeeping and volunteer work. It should further include other work-like activities that do not immediately serve one's livelihood but are a person's main occupation, such as studying at school or university (e.g., Johansen, 2018). In addition, previous research that defines presenteeism using other aspects (such as productivity loss) has its legitimization and benefits, but we argue that separating causes (e.g. specific sickness) and consequences (e.g. changes in productivity) will help to better understand the phenomenon in general. Consequently, we propose to follow the idea that productivity loss associated with working while ill is not to be regarded as presenteeism, but rather productivity changes attributable to presenteeism (Johns, 2010; Karanika-Murray & Cooper, 2018).

Moreover, research has to take into consideration that sickness is a non-dichotomous state. One end of the continuum is characterized by complete health with the individual feeling well and not perceiving any symptoms of illness. The other end is marked by manifest sickness or disease that is accompanied by severe subjective health impairments and that indubitably requires professional medical treatment. It also has to acknowledge that the degree of illness that triggers presenteeism or absenteeism mainly depends on the individual's status, which is why we use the more inclusive term "ill-health".

(2) Functional consequences of presenteeism

As mentioned above, attention to potentially positive consequences of presenteeism is still scarce in the presenteeism literature, which is why we focus on the possible functional consequences in this section. The tendency to view presenteeism as negative has precluded these lines of investigation thus far. However, limited productivity may be better than no productivity, attendance in the face of illness might be therapeutic, and some presentees might

be seen as exhibiting organizational citizenship behaviour (OCB) (Karanika-Murray & Biron, 2019). Therefore, it is important that presenteeism is not viewed as an either positive or negative phenomenon (Karanika-Murray & Biron, 2019; Karanika-Murray & Cooper, 2018; Karanika-Murray, Pontes, Griffiths, & Biron, 2015; Miraglia & Johns, 2016), but rather as a trigger for a range of outcomes which have the potential to be negative or positive. Problematic outcomes do not arise automatically from attending work when unwell, but from doing so without appropriate management or adjustments being made to the work tasks, environment, or equipment, to ensure that the effect on the person's health is restorative rather than detrimental. Thus, the focus should not be on preventing presenteeism as such, but on ensuring that attending work is the most appropriate course of action considering both the health condition and the nature of the work (Whysall, Bowden, & Hewitt, 2018).

A growing body of literature (e.g., Biron & Saksvik, 2009; Demerouti et al., 2009; Karanika-Murray & Biron, 2019) has already provided initial insights into positive consequences of presenteeism for both the individual and the organization. Work is good for health and wellbeing (Waddell & Burton, 2006). As highlighted by Karanika-Murray and Biron (2019) work is meaningful in several ways: it can help to fulfil basic psychological needs (van den Broeck, Ferris, Chang, & Rosen, 2016), and relatively few health conditions are debilitating enough to preclude any engagement with work, whereas work can support recovery from ill-health (Halonen et al., 2016). Knani, Biron, and Fournier (2018) highlight that a family-like work-environment helped employees with an illness overcome isolation and distracted them from their health impairment. Abstaining from work during the full course of ill health is not always advisable, and consequently, misconceptions of presenteeism as a solely negative behaviour entail the risk of mismanaged work, under-utilised capabilities, and attendance pressures (e.g., punitive attendance policies) that can impede gradual recovery and return to work. Therefore, if managed correctly and supported with adequate resources, attending work during illness has the potential to benefit health and

performance. According to Biron and Saksvik (2009), presenteeism can help to preserve the quality of working relationships, sustain job control as workers adjust their workload and tasks to their health impairment. However, this might be a function of the specific health condition.

As acknowledged by Baker-McClearn et al. (2010) and Whysall et al. (2018), early rehabilitation inevitably involves a degree of presenteeism, yet is known to be beneficial to both organisations and employees alike. Dew, Keefe, and Small (2005), for example, found that some nurses metaphorically termed their workplace a 'sanctuary', described their teams as 'family', and claimed that with the support of their co-workers they worked through mild sickness and eventually felt better or ignored their discomfort altogether.

Thus, employers should acknowledge that some measure of presenteeism is beneficial to both employees and organizations, so long as it is well managed. Such constructive presence–as proposed by Kaiser (2018)–is achieved when both trust and climate strength are high within an organization. In such an environment, employees will be strongly committed to both the organization and its goals and will meet their responsibility towards other members of the workgroup as well.

Additionally, research states that the consequences of presenteeism can be positive if adequate resources support some degree of flexibility and adjustment to work tasks, depending on the employee's health status. Karanika-Murray and Biron (2019) describe presenteeism as functional engaging with work when individuals opt for presenteeism without taxing their health. In such circumstances, presenteeism is considered sustainable–in terms of the balance between performance efforts and health–when individuals who go to work despite being ill act in agreement with their preferred regulatory focus of preventing losses or promoting gains in terms of their health and performance (Brockner & Higgins, 2001). By doing so, employees might be able to achieve some levels of performance and recovery simultaneously.

For example, one such relationship might be between presenteeism and work-anxieties. Workplaces may contain a variety of anxiety-provoking characteristics, such as rivalries between colleagues, controlling by supervisors, demands for achievement, environmental dangers, and uncertainty concerning future developments (Muschalla, 2016). If work-related anxieties manifest themselves, they can result in presenteeism with observable work capacity problems, absenteeism, or even long-term sick leave or disability pension. Mental disorders impact the ability to work and are often associated with absenteeism (Ekberg, Wåhlin, Persson, Bernfort, & Öberg, 2015) or presenteeism (Esposito, Wang, Williams, & Patten, 2007). Empirically, work-related anxieties have been found to be especially risky, resulting in the impairment of working ability and sick leave (Muschalla, 2016; Muschalla & Linden, 2009). However, healing the symptoms and the mental illness itself is often not a primary aim because mental disorders are chronic health problems. Thus, improving the capacity status of a person and compensation of the impairment by work adjustment is a more fruitful way (Baron & Linden, 2009). Preventive action at work may be done by designing "minimally anxiety-triggering workplaces", assigning tasks to employees which fit their capacity levels, and offering psychosomatic counselling by an occupational physician (Rothermund et al., 2016). The evaluated concept of work-related anxieties (Muschalla, 2016) can be useful for mental-health-oriented work analysis and job designs for employees with different psychological constitutions and capacity levels.

Further, presenteeism might be acknowledged as a type of OCB and the literature has provided first arguments for the relationship between presenteeism and OCB (Demerouti et al., 2009; Johns, 2010). Displaying citizenship behaviours at work regardless of having health problems can be considered as taking on an extraordinary role—beyond regular job-related behaviours—when employees are not feeling healthy. For example, individuals who show reluctance to take sick leave might be considered as exhibiting

altruism and courtesy toward others. Still, according to Miraglia and Johns (2016, p. 276) "more research is needed to understand when going to work while ill can represent a sustainable choice, as in the case of a gradual recovery from long-term sickness, a self-affirming choice in the face of chronic illness, or being an example of citizenship behavior". (p. 276)

Overall, we propose that the optimal management and rehabilitation path will vary drastically depending on the health condition. Therefore, future research into the patterns of presenteeism and absenteeism adopted by individuals is important for developing an understanding of the extent to which this is likely to be a long and short-term functional or dysfunctional behaviour. This is a necessary step to identify beneficial interventions as well as adequate management strategies.

(3) Considering the function of presenteeism for the individual

So far, presenteeism has been studied primarily in order to further our understanding of the antecedents and consequences of the phenomena. Although this approach has been beneficial for understanding the factors that drive presenteeism, it has also promoted a relatively narrow view by neglecting the person and individual processes behind presenteeism and implies that all presentees are a homogenous group (Karanika-Murray & Biron, 2019). In this section, we build on the principle that behaviour is a function of the person and the environment (field theory, see Lewin, 1939). We discuss how a renewed focus on the function presenteeism serves for the person is needed and can be beneficial for understanding variation in outcomes, the context, and the dynamic nature of presenteeism.

Focusing on the function of presenteeism for individuals allows to ask questions about how and why the individual enacts presenteeism at a particular time and in a specific context. It also implies an understanding of the meaning and affect that surround it. Lewin's field theory (1943) suggests that in order to "predict and begin to change a person's behaviour, it is necessary to take into account everything about the person and his/her perceptual or

psychological environment in order to construct the person's life space" (Burnes & Cooke, 2013, p. 412, p. 412). This life space includes perceptions (conscious or not) of forces in one's life at work, at home, and in their other activities. As argued by Burnes and Cooke (2013), in order to bring about behavioural change and eventually organizational interventions to better manage presenteeism, there is a need to move away from a simplistic mechanical-behaviourist approach and closer to a complex social system perspective.

In line with the suggestion to investigate presenteeism with a focus on its function, we argue for a more dynamic approach and process view of presenteeism, as it offers a more holistic understanding of the experience or behaviour (Halbesleben et al., 2014). Such understanding of the phenomenon of presenteeism should not just facilitate a method of research; it is more broadly about the principles of inquiry, from conceptualization, to method, to analysis, and — consequently — to practice. Presenteeism is to some extent intentional and pre-meditated, and grounded in a decision-making process (Karanika-Murray et al., 2015, and see Section 1). Focusing on this process can help to answer questions around the patterns of the behaviour as well as the values and costs of the behaviour for the individual, such as the emerging evidence on the adaptive function of presenteeism (Karanika-Murray & Biron, 2019; and see Section 2). A focus on the adaptive function also means that presenteeism behaviour varies with internal and external conditions. The decision-making process is occurring within a complex and intricate network of forces between organizational policies (e.g. on sickness absence), informal and formal group norms of the workplace, leadership style, characteristics of the psychosocial work environment, and individuals' capacity and propensity to make use of the resources available to balance the performance demands at work, and their health ailment. In essence, we suggest that putting the individual at the centre of attention recognizes that the function of presenteeism is specific to this individual and to some extent dynamic in nature (Karanika-Murray & Biron, 2019).

Considering presentees in terms of the range of characteristics that they share and the differences among them implies that we focus on groups of individuals and their access to and use of resources in their workplace (Hobfoll, 2001). It also implies that workers are not static in one type but can move from one type of presenteeism to a different type that would allow a better equilibrium between the health limits and performance demands (Karanika-Murray & Biron, 2019), or, even better, promote full recovery from the health situation (Howard, Mayer, & Gatchel, 2009). In order to grasp these variations in health and in performance, research designs that focus on the person and the process can detect trajectories between types of presenteeism, especially if they take a longitudinal approach. Further, they help to broaden the understanding of what it means to be present at work in order to include varying work contexts, such as occupations or sectors (Section 8). Such focus that takes into account the nuances of individual experiences, the dynamic nature of presenteeism, and its potential positive consequences for the individual opens new avenues for both research and practice.

Therefore, we propose that research with a broader and more complete understanding of the process and pattern of human development (Laursen & Hoff, 2006) is especially beneficial and needed for understanding presenteeism. This could be done by using qualitative or quantitative methods that allow to understand processes and dynamics of a behaviour. For example, longitudinal or diary studies to capture individual experiences, specific decision-making processes, or trajectories between types of presenteeism, and adaptive processes for the respective subgroups (Karanika-Murray & Biron, 2019).

(B) Measurement and methodological issues

By far, the most widely studied consequence of presenteeism has been individual productivity loss and the estimated aggregate economic impact stemming from this loss. Research shows that a wide variety of self-reported medical conditions is associated with self-reported productivity loss (reviewed by Schultz & Edington, 2007). A second area that has received some concerted research attention concerns the health and attendance consequences

of presenteeism. A systematic review by Skagen and Collins (2016) concluded that baseline presenteeism leads to poor self-rated health and elevated absenteeism in the future. However, to understand presenteeism, research needs to carefully consider what measure is adequate, given the respective research interest. Hence, we will discuss different approaches to measuring both the act of presenteeism as well as the productivity loss attributable to it.

(4) Measuring the act of presenteeism

While research on presenteeism as a reason for health-related productivity loss has developed a multitude of different instruments (see Section 5), studies focusing on presenteeism as a behaviour mainly draw upon unvalidated single items (Miraglia & Johns, 2016; Lohaus & Habermann, 2019). More importantly, as shown in Table 2, these measures differ with regard to (1) their wording, emphasizing different definitional aspects of presenteeism (content of the measure), (2) their response format and (3) their recall period, impeding the comparability of the current research findings (Skagen & Collins, 2016).

****Table 2 around here****

Starting with content-related differences, we distinguish three types of measures based on their *content*: The first type of measures captures how many days/times individuals "have gone to work despite feeling sick?" (Demerouti et al., 2009), without any restriction regarding the consequences or reasons for doing so. Despite slightly different wording, these types of measures reflect the definition of presenteeism as "attending work while ill" (Johns, 2010), as they neither restrict the health problems nor the motives. As an exception, studies in the German-speaking countries frequently draw on a multi-item scale by Hägerbäumer (2017). By applying multiple items this scale additionally captures the seriousness of the illness related to presenteeism (e.g. working against the advice of the physician) and gives information about the reliability of the measurement. Translating the scale or developing similar validated measures may help to establish a valid and reliable multi-item measure for presenteeism.

The second type of presenteeism measures is more restrictive, as the items assess only presenteeism that exceeds a certain degree of perceived seriousness of illness. This is depicted in the items by using a frame of reference (e.g. illness that has justified or legitimized sick leave). The most frequently applied measure of this type is the single-item "Has it happened over the previous 12 months that you have gone to work despite feeling that you really should have taken sick leave due to your state of health?" (Aronsson, Gustafsson, & Dallner, 2000b p. 504). On the one hand, this kind of measure facilitates the comparison of sickness absenteeism and presenteeism by adjusting for the seriousness of health complaints. On the other hand, the phrase "should have taken sick leave" implies that the behaviour is dysfunctional or deviates from the norm, judging that presenteeism at an excessive level, as judged by the presentee, is negative.

The wording of the third type of items emphasizes the perceived pressure to work despite illness (e.g. "Although you feel sick, you still force yourself to go to work", Lu et al., 2013: p. 411). This type of measure excludes presenteeism in cases in which ill people come to work voluntarily (e.g. to distract from pain; Vries, Brouwer, Groothoff, Geertzen, & Reneman, 2011; Vries, Reneman, Groothoff, Geertzen, & Brouwer, 2012; Holland & Collins, 2018). Thus, this type of measure does not consider other motives unrelated to perceived pressure.

With respect to *response format*, measures of presenteeism differ in terms of what they capture, as they either measure the act or presenteeism ("yes" or "no"), the frequency of showing presenteeism, or the total amount of presenteeism days. Although the last two count measures are probably strongly related, they may diverge, as a single presenteeism episode may cover different numbers of presenteeism days. Arnold (2016) therefore argues that the amount of presenteeism days is more relevant for the economic consequences of presenteeism. Furthermore—with regard to sickness absence— Johns and Al Hajj (2016) indicate that frequency "is not likely a typical metric that people use to think about their

attendance behavior" (p. 459), recommending the total amount instead of spells of presenteeism as default format.

Complexity is increased even further by frequency measures coming along with different response options. They usually offer discrete response options such as never, once, 2 to 5 times and over 5 times in a 1-year period (Aronsson et al., 2000b) or relative frequency response formats such as "never in the case of illness" to "very often in the case of illness" (Baeriswyl, Krause, Elfering, & Berset, 2017). However, predefined response categories are criticized, as they restrict information and possibilities of statistical analysis (Skagen & Collins, 2016), and might influence response behaviour, as categories provide information about the conventional frequency of the behaviour (Schwarz, Hippler, Deutsch, & Strack, 1985). In contrast, total amount measures use mainly an open-ended, fill-in-the-blank response format capturing the number of presenteeism days (e.g. Johns, 2011). Overall, different researchers recommend total amount measures by using an open-ended, fill-in-the-blank option (Arnold, 2016; Johns, 2010; Skagen and Collins, 2016).

Besides the aforementioned differences, measures also vary with respect to their *recall period*. Most measures refer retrospectively to the last 12 months (Miraglia & Johns, 2016). Only very few studies use recall periods of less than half a year (e.g. A. M. Collins, Cartwright, & Cowlishaw, 2018; Dhaini et al., 2016; Strasser, Varesco-Kager, & Häberli, 2017). However, the appropriate time frame for measuring presenteeism is still unclear (A. M. Collins et al., 2018; Johns, 2010). Short recall periods might be more susceptible to seasonal fluctuations, whereas predominantly used recall periods of 12 months could be affected by poor memory (S. Deery, Walsh, & Zatzick, 2014). Additionally, these long recall periods could threaten internal validity for studies examining the antecedents of presenteeism, as presenteeism measured retrospectively for the last 12 months might have occurred at the beginning of the recall period, but antecedents were measured afterward. Therefore, it is suggested to examine presenteeism jointly with its antecedents and consequences on a daily or

weekly basis. This might reduce memory loss and provide more accurate information (S. Deery et al., 2014; Johns, 2010).

In addition, further problems when measuring the act of presenteeism need to be considered. First, count measures of presenteeism are a composition of (i) an individual's tendency to choose presenteeism instead of absenteeism when faced by a health problem and (ii) their vulnerability (i.e. their number of health problems) in the period of observation. Consequently, presenteeism and sickness absenteeism count measures will be more positively correlated in populations with low heterogeneity regarding their decision tendencies (but varying degrees of health-related vulnerability), but will be more negatively correlated in populations with low heterogeneity regarding vulnerability, but varying decision behaviour. As most of the previous research found positive correlations between sickness absenteeism and presenteeism count measures (Miraglia & Johns, 2016) it can be assumed that count measures of presenteeism are more strongly dominated by individuals' health-related vulnerability compared to differences regarding individuals' decision tendencies (Gerich, 2015).

These circumstances have important implications for research that aims at analysing antecedents of presenteeism, because antecedents may affect either individuals' decision process or their health-related vulnerability. Some factors may also affect both—decision and vulnerability—which are denoted as double risk factors (Hansen & Andersen, 2008, Aronsson & Gustafsson, 2005). Other conditions–for example, high-quality relationships with leaders, which are thought to be beneficial for followers' wellbeing–may reduce individuals' vulnerability but increase their tendency to decide for presenteeism (Wang, Chen, Lu, Eisenberger, & Fosh, 2018, Anand, Hu, Liden, & Vidyarthi, 2011). Because of the composition of the count measure of presenteeism, the effects could cancel out each other, resulting in a zero correlation.

Such and other biases regarding count measures (Gerich, 2015) suggest that research strategies are needed to separate health-related and decision-related effects. One suggested strategy is to adjust for sickness absence measures (Hansen & Andersen, 2008). The aim of this strategy is to identify factors associated with more presenteeism of individuals that could be expected from their volume of sickness absenteeism. Simulation studies confirm that this strategy is better suited to identify factors that are associated with the decision process (Gerich, 2015). As an alternative, Gerich (2016) suggests computing an estimator of an individual's presenteeism propensity, which is calculated by dividing presenteeism days by the sum of sickness absenteeism and presenteeism days. This propensity measure is an estimate for individuals' probability to choose presenteeism over absenteeism regardless of their number of health problems and therefore it is suited to identify factors that are associated with the decision process and to dismiss factors that are associated with vulnerability.

The second problem is that the measurement of presenteeism—especially when it is contrasted with sickness absence data—is often criticized for its subjective nature. It could be argued that the number of days of sick leave (especially when registered data is used) is a more objective measure, because it is often certified by physicians. However, we argue that the subjective perspective of illness is fundamental for sickness absence and presenteeism behaviour and not necessarily a source of bias (see Section 1). As the subjective illness perspective represents a common ground for both behaviours, we recommend that research should primarily focus on the subjective illness perspective. Additionally, we argue that the "objective" character of sickness absence data tends to be overestimated. This is grounded in the following arguments: Not all cases of sickness absence are certified by physicians. Even certified spells of sick leave are usually initiated by and based on the subjective perception of illness because feelings and symptoms motivate an individual to consult the physician. Moreover, research has shown that there is a considerable lack of consensus between physicians regarding sickness certifications (Haldorsen et al. 2009). Furthermore, measures of

subjective illness were found to be among the best single predictors of mortality and therefore we follow Schnittker and Bacak (2014) that "self-rated health is fundamentally subjective, but it stands as a uniquely strong predictor of mortality and, thus, provides a pedestal upon which the psychosocial approach to health rests" (p. 10).

In sum, we argue that the choice for presenteeism measure should be determined by research interest. Studies aiming to compare presenteeism and sickness absenteeism or focusing on the dysfunctional aspect of presenteeism should use items with a frame of reference regarding the seriousness of health complaints. Items without this frame of reference are suitable to examine functional as well as dysfunctional presenteeism regardless of the seriousness of the associated health complaints. However, regardless of the selected combination, it is important to describe the measures used in detail, to increase comparability of results across studies. Further, independent of the item content, we recommend using total amount measures with an open response format, rather than categories, and considering presenteeism propensity when analysing predictors affecting the decision process. Yet, results regarding presenteeism propensity and count measures should be compared to draw valid conclusions. With regard to the optimal way to measure presenteeism, more research comparing different measures of the act of presenteeism that acknowledges the above-mentioned challenges is needed.

(5) Measuring and Valuing Productivity Loss Attributable to Presenteeism

Productivity losses related to presenteeism refer to the economic consequences associated with the amount of perceived work impairment or time loss of normal activities from paid work (Kigozi, Jowett, Lewis, Barton, & Coast, 2017). When analysing productivity loss, a distinction can be made between impaired performance at paid work, productivity loss due to absence from paid work, and unpaid employment concerned with lost home productivity (van Roijen, Essink-bot, Koopmanschap, Bonsel, & Rutten, 1996). Although the latter two can be of importance, we concentrate on productivity costs related to impaired

performance due to health problems, i.e. productivity loss related to presenteeism, which is arguably of great importance for organizations.

The perceived productivity loss is mostly measured over a specific period, e.g. seven days, six or twelve months, and can be constructed in several different ways using responses from surveys. For example, the Health & Labour Questionnaire (van Roijen et al., 1996) includes a workplace presenteeism scale that measures the number of additional hours that should have been worked to compensate productivity losses due to health impairments. The Work Limitations Questionnaire (Lerner et al., 2004) has a productivity loss score that measures presenteeism considering the percent reduction (from 0 – least limited to 100 – most limited) in output (considering the past 2 weeks) compared with the output of a healthy (i.e., not limited) employee. Another well-known instrument is the Stanford Presenteeism Scale 6 (Koopman et al., 2002) that comprises a six-item scale measuring how health impairments affect employees' capacity to complete their work and how to avoid distractions while performing tasks.

However, as mentioned earlier, questions have been raised regarding the psychometric quality of many productivity loss instruments (e.g. Brooks, Hagen, Sathyanarayanan, Schultz, & Edington, 2010; Johns, 2012; Thompson & Waye, 2018), especially a lack of convergence between various instruments and the absence of true construct validity evidence. Interestingly, many measures lack a history of basic psychometric properties but lay claim to being construct-valid (Ospina et al., 2015), by drawing on parallel self-report measures of productivity, ability to work, or perceived impact of health on work instead of independent estimates of productivity loss (Beaton et al., 2010).

Recently, Thompson and Waye (2018) employed multi-trait multi-method analysis to compare four productivity loss instruments designed to measure the impact of going to work ill on the quantity and quality of work. Failing to find convergence, they concluded that "… the structural attributes of these instruments and their mode of administration (i.e., method

variance) contribute more to the ultimate test score than does the nature of productivity, whether amount or quality (p. 665)." Such a lack of convergence has frequently been reported in the literature (Brouwer, Koopmanschap, & Rutten, 1999; Meerding, IJzelenberg, Koopmanschap, Severens, & Burdorf, 2005) and can get worse when a variety of methods are used to attach economic costs to presenteeism, which even compounds the error. For example, Zhang, Gignac, Beaton, Tang, and Anis (2010) estimated productivity loss among arthritis sufferers to cost between $15 and $143 per week, depending on the measure. Such widely varying estimates, which have been found repeatedly (Braakman-Jansen, Taal, Kuper, & van de Laar, Mart A. F. J., 2012), are untenable and require for reconciliation.

Another widespread approach to estimate productivity losses related to presenteeism is the multiplier approach (Pauly et al., 2008; Strömberg et al., 2017; Zhang, Sun, Woodcock, & Anis, 2015). For example, job-dependent presenteeism multipliers have been estimated to indicate the effects of presenteeism on team production, the absence of a suitable replacement worker, and the requirements for timely output (Pauly et al., 2008). Although these studies claim that the cost associated with presenteeism is as high as or maybe even higher than absenteeism, it is questionable whether the exact cost of presenteeism is correctly estimated. Therefore, we advise caution regarding the estimated costs of presenteeism.

One of the major problems is the covariance among loss measures, which is an example of validity issues in this domain (Thompson & Waye, 2018). Johns (2012) argued that the inherent vagueness of productivity for many kinds of jobs, and implicit theories about the connection between health and productivity, may result in inflated estimates of loss as well as the connection between health and loss. A recent meta-analysis provides indirect evidence for the latter supposition (McGregor, Sharma, Magee, Caputi, & Iverson, 2018). Contending that productivity loss measures conflate two correlated constructs, attending while ill and damage to productivity, the authors found an "artificial inflation" of correlates of productivity loss as compared to those for the act of presenteeism (McGregor et al., 2018). In

addition, the concept of productivity loss is clearly prone to employers having difficulties categorizing precisely whether productivity loss is attributable to health.

In order to determine the true value of productivity loss related to presenteeism, there is a need to compare self-reported and objective measures of productivity (i.e., physical, contextual data). This would allow automatic analyses of micro-processes with real-time continuous assessment in natural environments using other sources of information (Goyal, Singh, Vir, & Pershad, 2016).

(6) Further methodological challenges

Aside from the challenges regarding the measurement of the act of presenteeism and its associated productivity losses, further challenges regarding the evaluation of presenteeism need to be considered. First, one of the major issues in presenteeism research is the zero-inflated and highly skewed distribution of presenteeism (A. M. Collins et al., 2018). Mostly, there is a large percentage of employees reporting no or only one occasion of presenteeism within the previous 12 months (e.g., 49.4%; Janssens, Clays, Clercq, Bacquer, & Braeckman, 2013). While research often uses data categories, ascertaining the occurrence of presenteeism and minimizing recall bias (Skagen & Collins, 2016), some issues arise regarding this approach. On the one hand, the ex-post building of categories makes it hard to compare results across studies, as differences in the response options exist (Skagen & Collins, 2016; see Section 4). On the other hand, categorized presenteeism may constitute a loss of information and thus impair the possible statistical analysis (Skagen & Collins, 2016).

Second, research on presenteeism is mostly based on cross-sectional data (Lohaus & Habermann, 2019; Miraglia & Johns, 2016) leaving to future research the challenge to untangle causality and establish the temporal stability and the dynamic processes going along with presenteeism (see Section 5). Research in the field of occupational health research acknowledges the need for longitudinal designs to address changing and dynamic aspects and to overcome issues related to cross-sectional data (Liu, Mo, Song, & Wang,

2016). Longitudinal studies primarily aim to explore the change in the construct of interest and to explain how a change in one construct results in a change in another construct (Liu et al., 2016). Thus, they rely on change *within* individuals, going beyond knowledge of differences *between* persons and therefore, having clear benefits for theorizing as well as for useful practical recommendations. Notwithstanding these strengths, previous longitudinal research on presenteeism is affected by some methodological issues. Again, the varying length of periods of time between data collection across studies (between two and 36 months; Skagen & Collins, 2016) makes it hard to compare the results of various studies. Furthermore, the mainly used long periods of time (one year or longer) neglect short term processes (Skagen & Collins, 2016). However, conditions immediately leading to presenteeism or prompt effects of presenteeism are important for theorizing on presenteeism as well as for practitioners. Furthermore, long periods of follow up entail a risk of non-random attrition bias caused by dropout from studies (e.g., severe health conditions), thus disproportionately including healthy employees from the sample (Skagen & Collins, 2016). In a study by Bergström, Bodin, Hagberg, Aronsson, and Josephson (2009) participants dropped out at follow up had reported more presenteeism and bad health at baseline compared to the respondents who took part in both the baseline and the follow up.

To overcome these methodological issues future research should consider the following aspects. First, as previous research showed that some occupational groups have a higher risk of presenteeism (Aronsson et al., 2000b) (see Section 8), the sampling strategy should cautiously consider the specifics of the target population, judging the benefits of higher probabilities of finding presenteeism in specific groups with problems regarding selection bias. Second, the benefits of using total amount of days to measure presenteeism have been discussed previously in the paper (see Section 4). Third, to meet the requirement to assess the loss of productivity associated with presenteeism, daily self-report might be an

effective way. It overcomes memory bias based on the (long) recall period, and the day reconstruction method is an important methodological approach that captures individual experiences on a given day either at the end of the day or on the following day (Atz, 2013). Further, such an approach might help us to analyse short- and long-term changes in presenteeism, its antecedents, and outcomes. Other potentially useful approaches include event sampling and daily diaries (Ohly, Sonnentag, Niessen, & Zapf, 2010).

Finally, longitudinal modelling techniques such as latent change score modeling can be utilized to further increase our understanding of presenteeism (Liu et al., 2016; Raudenbush & Bryk, 2002). By controlling for stability effects, that is, the influence of constructs on themselves over time (also called autoregressive effect; Liu et al., 2016), the impact of presenteeism beyond the outcome's own history (level-to-change effect) can be better explained. This represents the basic approach to model change (Liu et al., 2016). Combining this approach with cross-lagged designs enables enhancing causal inference by examining reverse causality and reducing concerns about third variables (Liu et al., 2016). To describe the form and duration of the change in a construct (i.e. change trajectory of a construct), such as the development of presenteeism within an episode of illness, latent growth models might be appropriate (Liu et al., 2016).

While we acknowledged that—given a specific research goal—cross-sectional data can be useful (Spector, 2019), especially when used in an explorative setting, we argue that the benefits of using longitudinal data outweigh the risks of gathering longitudinal data (e.g., non-random drop-out, reduction in sample size, unrepresentative sample, recall biases, causal order). Consequently, future research should gather longitudinal and multi-sourced data to overcome the aforementioned challenges.

(7) Interventions on presenteeism

Most of the intervention studies developed with the aim of reducing sickness attendance or productivity loss due to presenteeism come from the health-related,

environmental or occupational medicine literature (Ferreira, 2018; Yang, Shen et al., 2016). These studies have emphasized three types of interventions, which can be applied in the field of presenteeism: (i) physically-oriented; (ii) psychologically-oriented and (iii) organization-related interventions. Physically-oriented interventions are primarily designed to promote the physical health of employees, including various health promotion programs (e.g., Michishita et al., 2017). Psychologically-oriented interventions aim at activities that increase well-being and productivity of employees, such as relaxation and meditation techniques or cognitive/behavioural psychotherapies. Finally, organization-related interventions are designed to influence presenteeism from the organizational perspective, including the development of skills, support from supervisors and co-workers, work flexibility, or the need to reduce (or redistribute) workloads (Dababneh, Swanson, & Shell, 2001).

For example, a successful strategy conducted with a sample of 1,227 participants suggested that interventions developed to improve middle-aged and older adults' depression symptoms and other work-related limitations resulted in an increased productivity of 44% in the work-focused intervention group (Lerner et al., 2015). These interventions included a four-month telephone-based counseling considering aspects such as coaching, care coordination, and cognitive-behavioural therapy. Other successful interventions (e.g., Michishita et al., 2017; Edwardson et al., 2018) supported the possible effect of interventions on the reduction of presenteeism.

Therefore, we suggest the following to improve interventions on presenteeism. First, while the significant impact of psychosocial factors has been examined, we still lack knowledge on how to intervene with regard to the process of presenteeism (see Section 5) (Yang, Shen et al., 2016; Yang, Zhu, & Xie, 2016). Future research may examine the impact of specific psychosocial factors and how they may be effectively influenced. Second, further interventions may explore the potential of gamification and serious games

to influence presenteeism. The literature shows the benefits of integrating autonomous virtual agents as interactive partners in such games, especially when endowed with human-like social intelligence (Prada & Paiva, 2009), empathetic behaviour, or cultural awareness (Mascarenhas, Dias, Prada, & Paiva, 2010). Therefore, gamification and serious games might be helpful to monitor presenteeism as well as to reduce presenteeism through the development of daily self-regulation strategies. Third, integration of existing research on how to develop the content and design, and how to improve the acceptability of such interventions is needed. It is beyond the scope of this article to highlight specific approaches to developing interventions targeted at changing behaviour (e.g., Bridle et al., 2005; Marley et al., 2017; Michie, Atkins, & West, 2014; Sekhon, Cartwright, & Francis, 2017). However, research on presenteeism interventions, especially as part of more complex interventions, is needed to better understand how harmful behaviours might be changed within a complex system (Skivington, Matthews, Craig, Simpson, & Moore, 2018). Such interventions might take place in the specific organizational context of working individuals (Meyers, van Woerkom, & Bakker, 2013), but also using computer-aided or internet-based formats (Horvath, Ecklund, Hunt, Nelson, & Toomey, 2015). In addition, when developing such interventions, researchers should consider a rigorous methodology (Ammendolia et al., 2016).

With regard to the specific planning of an intervention on presenteeism, we suggest it is important, as an initial step, to conduct a needs assessment regarding the diagnosis of the health condition of each participant. Further, the challenges associated with measures of presenteeism (see Sections 3 and 4) and the complexity of formation of presenteeism (see Sections 8-11) should be carefully considered. Finally, interventions should be appraised and validated, ideally with the inclusion of follow-up measures of health status and return-on-investment measures.

(C) Context of presenteeism

Several reviews of the empirical literature summarize current knowledge concerning the antecedents and correlates of presenteeism (Garrow, 2016; Johns, 2010; Knani et al., 2018; Lohaus & Habermann, 2019; McGregor et al., 2018; Miraglia & Johns, 2016; Schultz & Edington, 2007). The existing results, which we briefly describe in the following, are to serve as a foundation for the deeper analysis of the role of context, which will be described in a next step.

At the most basic level, we know that presenteeism is most prevalent among those who are relatively ill rather than in relatively good health. This is by no means inherent in the definition of presenteeism. On the one hand, unhealthy persons are more likely to go to work when ill. On the other hand, the less healthy might be more inclined toward absenteeism, with presenteeism being the behaviour of choice among those more fit. However, the Miraglia and Johns (2016) meta-analysis indicated a population correlation of -.31 between health status and presenteeism. Thus, the less healthy are more inclined to both absenteeism and presenteeism, which are positively correlated (r = .35, Miraglia & Johns, 2016).

Further, presenteeism is considerably more predictable than absenteeism. For example, a meta-analytic structural equation model that included job demands, job resources, and various constraints on absenteeism accounted for 32% of the variance in presenteeism but only for 14% of that in absenteeism. Similar findings have been reported in individual primary studies (A. M. Collins et al., 2018; Sanderson, Tilse, Nicholson, Oldenburg, & Graves, 2007). It is possible that this differential is due to presenteeism being more discretionary. However, meta-analyses reveal that this differential predictability in favour of presenteeism does not extend to demographic variables. On the contrary, Miraglia and Johns (2016) reported weak associations between presenteeism and age, gender, education, and organizational tenure, although these demographics are fairly robust correlates of absenteeism (Côté & Haccoun, 1991; Ng & Feldman, 2008, 2009, 2010; Patton & Johns, 2015).

A distinctive feature of presenteeism is its robust positive association with a wide range of job demands and various stress-related features of the workplace (Miraglia & Johns, 2016). Overall job demands, heavy workload, understaffing, and overtime are prominent correlates, as are uncivil interpersonal behaviours (abuse, harassment, discrimination), stress, and, particularly, burnout. They contribute to vulnerability and ill-health, which mediates the connection between negative workplace features and presenteeism (e.g., Pohling, Buruck, Jungbauer, & Leiter, 2016). Further, working time arrangements might impact presenteeism, especially when a perceived gap between actual and desired working hours, shift work or overlong working weeks exist (Böckerman & Laukkanen, 2010). In addition, many of the negative job design features likely cause the behaviour indirectly via the imposition of attendance pressure (Baker-McClearn et al., 2010; Biron & Saksvik, 2009; Rostad, Milch, & Saksvik, 2015; Saksvik, 1996). In addition, uncivil workplace behaviours may reflect a power differential whereby those who are prone to mistreatment also lack discretion over their work attendance.

Job resources are considerably weaker correlates of presenteeism than job demands (Miraglia & Johns, 2016). Particularly in the job design domain, resources such as task significance, overall job control, and latitude to adjust the job to one's health condition reveal zero to very weak negative associations with presenteeism. Interpersonal factors, including quality of leadership and social support from colleagues, supervisors, and the organization fare a little better, but still exhibit weak negative associations.

The tendency for job demands to trump job resources in accounting for presenteeism may be yet another manifestation of the general psychological tendency of "bad to be stronger than good" (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). More specifically, as noted, many job demands both damage health and compel attendance. Yet, the impact of resources on health is less clear, and in some cases, resources might actually encourage attendance when ill rather than discourage it, as was discussed above in the context of distinguishing between

decision tendencies and vulnerability. Such countervailing effects limit the association between resources and presenteeism.

Work attitudes comprise a final category of variables that have been studied in conjunction with presenteeism. Meta-analytic evidence suggests that job satisfaction, affective organizational commitment, and work engagement are positively related to going to work ill (Miraglia & Johns, 2016). Although these associations are not strong, the consistent positive signs are of great interest, as they reflect positive motives for what has often been portrayed as an aversive behaviour. This is reflected in the dual path meta-analytic model (Miraglia & Johns, 2016), which considers how demands, resources, and constraints on absenteeism operate via health and job satisfaction to determine presenteeism. Somewhat similar models, using primary data, have been offered by Christian, Eisenkraft, and Kapadia (2014) and by McGregor, Magee, Caputi, and Iverson (2016).

In the following, we will discuss important, yet insufficiently studied, aspects that might help increase our understanding of presenteeism. We focus on different contextual aspects that might be important areas for further research.

(8) A social perspective on presenteeism

So far, research on presenteeism has neglected a social perspective of presenteeism, particularly in view of the history of absenteeism research (Cooper & Barling, 2008; Harrison & Martocchio, 1998; Johns, 1997) and some initial evidence from narrative and meta-analytic reviews of the literature on presenteeism (Lohaus & Habermann, 2019; McGregor et al., 2018; Miraglia & Johns, 2016) suggest the value of considering the social aspect of presenteeism. Borrowing from the return-to-work literature, we draw on the IGLOO framework (Nielsen, Yarker, Munir, & Bültmann, 2018) to organize these factors into levels of influence above the Individual (I), namely the Group (G), Leader (L), Organization (O) and Overarching/social context (O). We recognize that these levels do not operate in isolation and that multiple interactions among them are possible to determine the individual behaviour of

attending work when sick.

On the group level, support and positive relationships with colleagues have been demonstrated to be negatively related to working while ill, although weak meta-analytic associations have been reported (Miraglia & Johns, 2016). More recently, hints of a more collective vision of presenteeism come from studies on group climate. For example, shared perception of the extent to which a team is concerned about health issues (Schulz, Zacher, & Lippke, 2017) has been shown to decrease attendance when ill. Similarly, employees' shared perceptions of co-worker competitiveness, the difficulty of replacement, and extra-time valuation, defined as presenteeism climate (Ferreira, Mach et al., 2019; Mach et al., 2018), have been linked to presenteeism. Despite this recent evidence, the literature on presenteeism climate is still in its infancy, and greater effort must be invested in exploring such perceptions of presenteeism. Social information processing theory (Salancik & Pfeffer, 1978), self-categorization (Abrams & Hogg, 1988) and social identity (Tajfel & Turner, 2004) theories as well as social comparison theory (Festinger, 1954; Sherif, 1936) may provide the basis to understand why and how individuals conform to the dominant presenteeism climate. These theories emphasize the normative control of individual behaviour, focusing on norms, defined as the communal perceptions of appropriate standards and behaviours in a given social unit. They illustrate why and how individuals in the same social unit follow the prevalent norm, aligning their conduct to the expected standards and values, due to various motives, such as the need for social approval, information seeking, or ambiguity reduction. Building on these theories as well as on the parallel literature on absence culture and norms (Johns & Nicholson, 1982; Ruhle & Süß, 2019), we advocate focusing attention on presenteeism climate and, more specifically, group-level presenteeism norms, based on individual perceptions of what is approved or disapproved by others regarding presence at work when ill (injunctive norms), and how people actually behave (descriptive norms).

In line with social learning theory (Bandura & Walters, 1977), factors such as the leader's attitudes toward presenteeism and his/her actual behaviour may directly influence employee tendency to work when ill by modeling appropriate, expected attendance behaviours at the workplace. Such an influence has been confirmed regarding absence behaviours (Løkke Nielsen, 2008). Moreover, leadership behaviours and styles have been proven to impact employee health and wellbeing (for reviews, see Kuoppala, Lamminpää, Liira, & Vainio, 2008; (Skakon, Nielsen, Borg, & Guzman, 2010). So far, supervisory support and quality leadership have been depicted as buffering factors able to reduce presenteeism (Lohaus & Habermann, 2019; Miraglia & Johns, 2016).

Furthermore, in line with the frameworks of relational leadership (Uhl-Bien, 2011) and contextual leadership (George, Chiba, & Scheepers, 2017), it seems imperative to explore presenteeism in relation to the leader-followers relationship. Indeed, leader-followers dynamics can influence presenteeism both directly and indirectly via the creation and transmission of presenteeism climate (Ferreira, Mach et al., 2019). In this regard, a recent study by Wang, Chen, Lu et al. (2018) shows a positive effect of leader-member exchange (LMX) on presenteeism through the mediating effect of the approach dimension of presenteeism. They also demonstrated that workload moderates the positive association between presenteeism motivation and behaviour, so that individuals experiencing higher workload are more likely to work when sick. Hence, the quality of the exchange between leaders and employees can be a key driver of employees' presenteeism (Hunter, Mahfooz A. Ansari, & Jayasingam, 2013).

Therefore, we call for further empirical research not only on the consequences of leaders' behaviour and styles for presenteeism but also on the exchange between leaders and followers. This would include the investigation of the reciprocal influence between supervisors' and employees' presenteeism behaviours and their impact on their health and safety (e.g., in the case of contagious illness), wellbeing, and productivity.

Further, the organizational environment need to be considered. Initial evidence has shown that presenteeism is affected by strict absence standards, positive organizational factors (e.g., support and justice), critical organizational features (e.g., downsizing), and HR practices (e.g., health-related practices) (Lohaus & Habermann, 2019; Miraglia & Johns, 2016). A related research question pertains to understanding the organizational circumstances that may modify the relationship between the individual- and group-level factors and working while ill, by investigating the crucial moderating role of the organizational environment.

Finally, the social context level focuses on aspects related to the overall culture and society (e.g., national cultural values), the economy (e.g., labour market), the political and legislative context (e.g., welfare system), and the environment and infrastructure in general (Lohaus & Habermann, 2019). The importance of such factors outside the immediate organizational context has been supported by some initial results (McGregor et al., 2018; Miraglia & Johns, 2016). We strongly encourage cross- and multi-level research on the role of the overarching/social context for presenteeism. Such designs can also facilitate the understanding of how the overarching, distal context can influence individual behaviour through mechanisms at lower levels, such as organizational HR practices and policies or presenteeism culture and norms.

(9) Presenteeism in specific occupations and sectors

Just how widespread is going to work when ill? This question has been of interest since Aronsson, Gustafsson, and Dallner's (2000) pioneering inquiry into the subject. In line with their findings, the results of a number of more recent large-scale studies indicate that presenteeism is a common work behaviour across occupations (Lohaus & Habermann, 2019), thus well worth being paid attention to by both researchers and managers. For instance, 66% of Australian SME owners/managers exhibited presenteeism in the past month (Cocker, Martin, Scott, Venn, & Sanderson, 2013); 57% of German teachers engaged in the behaviour (Dudenhöffer, Claus, Schöne, Letzel, & Rose, 2016); 56 % of UK academics worked when sick

either often or always (Kinman & Wray, 2018); 78% of New Zealand doctors and dentists reported 1 or more days a year (Chambers, Frampton, & Barclay, 2017).

Although these numbers are not directly comparable, they hint at occupational, sectoral, and national differences (see Section 10) in prevalence rates, all of which have been observed in the European Working Conditions Surveys. For instance, presenteeism tends to be higher among managers than among crafts and trades workers and higher in the health and education sectors than in industry (Eurofound, 2017). There has been virtually no comparative research to explore the reasons for such differences, although a line of research focusing on presenteeism among physicians has proven informative (e.g., Chambers et al., 2017; Giæver, Lohmann-Lafrenz, & Løvseth, 2016; McKevitt, Morgan, Dundas, & Holland, 1997; Rostad, Fridner, Sendén, & Løvseth, 2017).

Overall, presenteeism is predominant among the educational, welfare and health sectors (e.g., Aronsson et al., 2000b; Bergström, Bodin, Hagberg, Aronsson et al., 2009; Ferreira, da Costa Ferreira, Cooper, & Oliveira, 2019; Ferreira & Martinez, 2012; Martinez & Ferreira, 2012) and according to Aronsson, Gustafsson, and Dallner (2000a), occupations in the caring, helping, and primary teaching sectors are most prone to presenteeism, and this may be due to the existence of cultures grounded in part on loyalty to and concern for vulnerable clients (i.e., patients and children). For example, according to Zacher and Schulz (2015) health sector employees have revealed a culture of loyalty and profound concern toward their clients' vulnerability. Ferreira, da Costa Ferreira et al. (2019) claim that employees working in these sectors have more propensity to go to work while sick, due to the specific characteristics associated with their jobs (e.g., providing care or welfare services).

Some of these results might arise since educational, welfare and health sectors are usually female-dominated sectors. Research shows large differences among groups with the highest levels of presenteeism found in female-dominated workplaces in the care, welfare, and educational sectors, while there are lower levels in more male-oriented sectors such as

manufacturing and engineering (Aronsson et al., 2000b; Aronsson & Gustafsson, 2005). But while Johns (2010) states that gender is an essential personal variable when explaining presenteeism, and research provides first evidence for such effects (Leineweber et al., 2011; Martinez & Ferreira, 2012) we propose the need to broaden the perspective to systematically study the association between presenteeism, occupation, and gender, since this has not yet been a focus in the literature.

Further, according to Johns (2010), job conditions, such as high job stress, high workload or understaffing contribute to the formation of presenteeism. Within some sectors, such negative job conditions are widespread, for example when 24/7 availability or "face-time" in the health sector is expected, and when long working hours as well as working overtime are positively related to presenteeism (Miraglia & Johns, 2016). Therefore, presenteeism should be less common in sectors with higher levels of flexibility (e.g. research).

However, a study of presenteeism among the self-employed and organizationally employed in North-western Europe (Nordenmark, Hagqvist, & Vinberg, 2019) found that the self-employed report a significantly higher level of presenteeism than the employed. This difference is to a high degree explained by the variables measuring time demands, which indicates that the self-employed have a higher risk of reporting presenteeism because they experience higher time demands. Other research confirms that self-employed individuals, particularly self-employed women, report higher levels of time strain compared to organizationally employed persons (Hagqvist, Toivanen, & Vinberg, 2017).

Additional, as there is evidence for sector-specific cultures that promote presenteeism (M. Deery & Jago, 2009), especially organizations in highly competitive working environments, for example in the hospitality industry, should be interested in maintaining a healthy and happy workforce that can deliver high-quality services to meet the expectations of their customers (Chia & Chu, 2017). In fact, in such sectors, employees'

presenteeism may affect not only the individual, but also their co-workers (M. Deery & Jago, 2009), customers (Arslaner & Boylu, 2015) or clients (Widera, Chang, & Chen, 2010) and consequently, an organization's profitability.

Given that personal financial difficulties, job insecurity, as well as poor rewarding systems (Johns, 2010; Miraglia & Johns, 2016) might lead to higher rates of presenteeism, the profitability of the sector, as for example in social work environments, might be another characteristic related to the phenomenon. Issues regarding remuneration levels are key challenges to human resource management (Baum, 2012). Low-income workers fearing a loss of income are more likely to appear at work despite illness than highly paid employees. While such attitudes and fears are individual antecedents, sectors might create a systemic context in which it is plausible that presenteeism occurs more frequently than in others. Therefore, more research is needed to investigate the sector-specific effects of work environments on presenteeism.

(10) Cross-cultural and cross-national aspects

There are substantial differences in the prevalence of presenteeism across nations (Eurofound, 2012), and a small body of research has probed the reasons. Ferreira, Mach et al. (2019) found that Latin countries tend to have weaker presenteeism climates than non-Latin countries, downplaying co-worker competitiveness and the value of putting in extra hours. However, Latin countries with highly masculine values (e.g., Ecuador) exhibit elevated presenteeism (Martinez, Ferreira, & Nunes, 2018). Based on the Confucian tradition of hard work, persistence, and endurance, Lu et al. (2013) predicted and found that the prevalence of presenteeism was higher in China than in Britain (see also Lu & Kao, 2018; Wang, Chen, & Fosh, 2018). Rostad et al. (2017) reported higher presenteeism among Italian physicians than those in Norway and Sweden and attributed the differential to variation in sick leave benefits. In the Scandinavian context, where the social welfare systems are relatively well developed one could assume that presenteeism is low. However, a random sample study by Johansen et

al. (2014) found that 56 percent of the Norwegian and Swedish respondents reported presenteeism the previous year. In summary, differences in organizational climate, worker values, and social support infrastructure might contribute to cross-national disparities in presenteeism, perhaps mediated by variation in the legitimacy of absenteeism across cultures (Addae, Johns, & Boies, 2013).

Consequently, we can assume that country characteristics and culture play a pivotal role in the formation of presenteeism. However, a lot of work remains to be done, as presenteeism and its productivity losses could be influenced by specific cross-cultural dimensions (e.g. Hofstede, 2011; House, Hanges, Javidan, Dorfman, & Gupta, 2004). In particular, previous cross-cultural studies revealed that employees from countries with high masculine cultures tend to devote more time to work, and receive more incentives to stay long hours at work in highly competitive environments (e.g., Simpson, 1998). Accordingly, future research should seek to address the role of presenteeism in this equation, by examining whether presenteeism and/or productivity losses are associated with cultural dimensions.

Overall, presenteeism is undoubtedly related to economic and social constraints (Dew, Keefe, & Small, 2005), country characteristics (e.g., labour law, social security system), as well as cultural differences, which is why research should consider the cultural context in more detail.

(11) Contemporary changes in the workplace

In addition to social, occupational and cultural influences, research on presenteeism needs to consider the changes in the working life of individuals, triggered by societal, economic and technological developments. Improvements in information and communication technology (ICT) facilitate new ways of flexible work designs, giving many employees the possibility to decide when and where to work (e.g., Demerouti, Derks, Brummelhuis, & Bakker, 2014). Despite growing knowledge on changes, such as digitalization, work flexibility, boundarylessness of work and subjectivisation (Ďuranová &

Ohly, 2016; Flecker, Fibich, & Kraemer, 2017) research focusing on their importance for presenteeism is still scarce.

Building on this idea of an "employee's felt obligation to attend" (Miraglia & Johns, 2016), Ma, Meltzer, Yang, and Liu (2018) discuss the motivation for presenteeism and differentiate between in autonomous and controlled motivation. While autonomous motivation is equivalent to Miraglia and Johns (2016) attitudinal/motivational path, controlled motivation "refers to the state that one performs a behaviour with the sense of being pushed, pressured or regulated by something other than one's authentic will" (Ma et al., 2018, p. 111). Building on these findings, we assume that 'new' work characteristics may increase (1) autonomous motivation, so that employees want to show presenteeism, (2) controlled motivation, so that employees feel that they have to show presenteeism, and (3) impair individual health, increasing vulnerability and thereby the probability for presenteeism.

Digitalization may lead to higher autonomous motivation, as it offers job resources such as an increase in networks and collaboration options. For example, it simplifies the accessibility of work-related knowledge and information, allows the use of new collaboration tools (e.g., cloud working, video communication systems), and offers more opportunities to shape and take responsibilities for work tasks (Hertel, Stone, Johnson, & Passmore, 2017; Köhler, Syrek, & Röltgen, 2017). However, it also increases the "need to work faster and face tighter deadlines" (Paškvan & Kubicek, 2017, p. 26) which might foster controlled motivation. Finally, it may also be detrimental to individuals' well-being, as constant connectivity, information overload or the increased work demands might result in stress, restrict recovery (Ďuranová & Ohly, 2016; Rice, 2017), and therefore increase the risk for presenteeism.

Further, digitalization facilitates new ways of flexible work designs (Rice, 2017). Work flexibility includes flexibility regarding the work schedule (flextime) and regarding

the location (flexplace, Gerdenitsch, 2017; Jeffrey Hill et al., 2008). Research indicates that flextime, as well as flexplace, are positively associated with work satisfaction (Baltes, Briggs, Huff, Wright, & Neuman, 1999; Gajendran & Harrison, 2007; Kelliher & Anderson, 2010; Peters, Poutsma, van der Heijden, Bakker, & Bruijn, 2014), which indicates autonomous motivation. Additionally, flexplace and flextime facilitate showing presenteeism voluntarily, for example in cases of chronic illness (Holland & Collins, 2018). Flexplace may generally facilitate presenteeism, as individuals work in convenient surroundings, do not have to travel to work and are aware of not passing on their infection to their colleagues (Rousculp et al., 2010). Flextime offers the opportunity to start work later or go home earlier, making it easier to work despite illness at least part of the time (Irvine, 2011).

However, work flexibility is also associated with increased pressure to work and therefore controlled motivation. Employees with higher work flexibility tend to work longer and more intensively than those employees at the employer's premises (Eurofound, 2017; Kelliher & Anderson, 2010). Based on qualitative data, Kelliher and Anderson (2010) conclude that employees intensify their work effort as they feel a sense of obligation in exchange for the offered flexibility. Finally, with respect to the vulnerability and health impairment, research findings are contradictory, as both favourable and detrimental effects on employees' health are found (e.g., Amlinger-Chatterjee, 2016; Eurofound, 2017; Nijp, Beckers, Geurts, Tucker, & Kompier, 2012). This may result from the "risk of working time impinging on non-working time" (Eurofound, 2017, p. 56), as various types of work can be practiced anywhere without time constraints, which facilitates the extension of work into non-work time (Korunka & Kubicek, 2017). However, these prolonged work activities restrict recovery from work, leading to strain, sleep problems, and burnout in the long run (Derks, van Mierlo, & Schmitz, 2014; Ďuranová & Ohly, 2016). Further research disentangling those two concepts is necessary.

In sum, we argue that the relationship between contemporary changes in the workplace and presenteeism should be considered in terms of three different mediating mechanisms mentioned above (autonomous and controlled motivation, impaired health). Furthermore, changes in the world of work are constant and are supposed to lead to other new characteristics with relevance for presenteeism. This should be kept in view by researchers to uncover the beneficial as well as detrimental effects of these changes.

Conclusion

Publications that focus on presenteeism are steadily increasing. In view of this growth of research, we believe that for the further development of the field of presenteeism, several issues need to be addressed. Consequently, based on current findings and multiple perspectives, this position paper has aimed to provide insights into the state of the field, important aspects to consider as well as promising avenues for further research.

First, we discussed different approaches to the concept of presenteeism, as we strongly believe that the core of scientific progress is deeply rooted in a clear understanding of the phenomena under study. In an attempt to define presenteeism—as the behaviour of working with ill-health—we explicitly acknowledge that deviations from such a definition can be useful if they are grounded in well-reasoned decisions and described transparently. The same goes for any further aspects, be it the analysis of functional and dysfunctional consequences or the focus on a process perspective. Second, we provided an overview of different aspects of the measurement of the act of presenteeism, as well as the productivity loss associated with it. While we appreciate previous work, we ask for caution when costs associated with presenteeism are estimated. More research is needed before consistent claims regarding the costs and benefits of presenteeism can be made. More importantly, to avoid misleading recommendations, such analysis should take various factors into account, such as the type of illness and the type of work. Third, and related to the complexity of the phenomenon, research on presenteeism should recognise and include the specific context in

which the behaviour occurs. Social, occupational, and cross-cultural aspects, as well as contemporary changes in the workplace affect the perception of what behaviour is adequate. Comparisons that delve deep into these contextual differences will help us to better understand presenteeism, which is a necessary condition to develop and communicate adequate interventions that might help individuals and organizations deal with this phenomenon. Broadening the scope of contextual differences is especially important as initial research interest often is stimulated by specific observed phenomena, such as certain working conditions, organizational tasks or sectors. Whether findings within such a context are transferable is, despite first meta-analytic evidence (Miraglia & Johns, 2016), to some extent unclear.

Overall, we aim at providing guidance for research in the field of presenteeism, both for researchers who are unfamiliar with presenteeism and for those who are active in the field. Short of providing a systematic roadmap with normative instructions, we share impressions and experiences, possible threats and challenges, and apart from that, we outline important decisions regarding concept, measurement, and context when studying presenteeism. We believe that for the future of research on presenteeism, it is important to include the perspectives of various disciplines. To understand presenteeism, its formation and its consequences, the active interplay between different perspectives is important, because it enables a stimulating effect on each other and helps us to deal with the prevalent phenomenon of presenteeism.

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Table 1 – Recommendations for future research on presenteeism

Main Theme	Section	Future research on presenteeism should…
Concept	1	… recognize the basic understanding of presenteeism as the behaviour of working with ill-health.
	2	… investigate the long-term and short-term functional and dysfunctional effects of presenteeism.
	3	… incorporate a process perspective that focuses on individuals and their experiences.
Measurement and methodological issues	4	… carefully consider how to measure presenteeism based on plausible assumptions.
	5	… carefully consider how to value and estimate productivity loss attributable to presenteeism.
	6	… widen its methodology to include longitudinal designs to overcome current shortcomings.
	7	… carefully consider a rigorous methodology when planning an intervention on presenteeism.
Context	8	… incorporate a social perspective on the formation of presenteeism.
	9	… consider the specific occupational and sectoral context in the formation of presenteeism.
	10	… include the broader cultural context in the formation of presenteeism.
	11	… reflect contemporary changes in the workplace in the formation of presenteeism.

Table 2 – Types of single-item measures of presenteeism

Content	Measurement examples	Response format	Recall period
Presenteeism, without evaluation (e.g., Demerouti et al., 2009)	Has it happened that you have… How many times /days have you … gone to work despite feeling sick?	Yes / No Number of days Number of times with given response format Relative response format (never to very often)	12 months 6 months 3 months 4 weeks 1 week
Presenteeism, dysfunctional (e.g., Aronsson et al., 2000a)	Has it happened that you have… How many times / days have you… … gone to work despite feeling that you really should have taken sick leave due to your state of health?	Number of times with given response format / open response field Number of days Relative response format (seldom to always)	Lifetime 12 months 6 months 1 week
Presenteeism, forced (e.g., Lu et al., 2013)	Have you experienced … 1. Although you feel sick, you still force yourself to go to work. 2. Although you have physical symptoms such as headache or backache, you still force yourself to go to work.”	Number of times with given response format	12 months 6 months

Responses to Editor's Comments

Thank you for conditionally accepting our paper as well as your profound reading and important feedback on the manuscript. We apologize for the language errors. For this revision, we revised the paper based on your remarks regarding the clarity of our manuscript. Below, you find your comments directly followed by how we dealt with them in italics.

i) Last para, p 21. There are grammatical errors in this para and it is not at all clear what the intended meaning is. Please revise to ensure grammatical correctness and clarity.

We revised the paragraph regarding clarity and correctness.

ii) Similarly, the first full para on p 22 is unclear and, as a whole, needs to be revised for clarity. Also, the word physiological appears to be inappropriate and a sentence needs to be added to explain the advantages of IRT.

We discussed the benefits of IRT and concluded that it would require too much space to explain the potential benefits. Therefore, we removed this content and revised the paragraph accordingly.

iii) p 24. Sentence 'Thus, they rely on change within individuals, going beyond knowledge of change between persons …..'. The point of this entire sentence is not clear to me and the sentence needs to be revised for clarity. This might entail revising other parts of the para.

We revised the paragraph regarding clarity and correctness.

iv) p 24. 'not excluding healthy employees'. Please use another phrase that is clearer e.g. 'including healthy employees'.

Done.

v) Last sentence, first para, p 24. This sentence could be rephrased to be clearer.

Done.

vi) First para, p 25. The last sentence (only use diary/ESM studies) contradict the preceding two sentences each other (use day reconstruction methods). Please revise.

Thank you for pointing out this contradiction. We revised the latter sentence to more clearly distinguish between the methods.

vii) p 38. Replace 'chronic' with 'chronical'.

We replaced 'chronical' with 'chronic'

viii). p 38. There is only one paragraph on this page. In general, it is recommended a paragraph make one point only. Please split the paragraph into two (possibly just after citing Irvine).

Done.

ix) p 38. Last full sentence, beginning should read 'However, these prolonged work ….' not 'However, this prolonged work ….'

Done.