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The importance of recovery from work in intensified working life

Saija Mauno & Ulla Kinnunen

1.0. Introduction

1.1. Background and aims

Societies today are characterized by acceleration and intensity in actions and processes occurring in everyday life (Rosa, 2003, 2013). The phenomenon known as the “fast-speed society” is also evident in working life, and in this context is often referred to as *work intensification/intensity* (e.g., Chesley, 2014; Franke, 2015; Granter, Wankhade, McCann, & Hyde, 2019; Green, 2004; Menon, Salvatori, & Zwysen, 2019). Specifically, work intensification refers to an accelerated pace of work where employees feel pressures to intensify their work effort by working harder and/or faster (Granter et al., 2019; Green, 2004; Green & McIntosh, 2001; Korunka, Kubicek, Pâskvan, & Ulferts, 2015; Mauno, Kubicek, Minkkinen, & Korunka, 2019a; Menon et al., 2019). Moreover, there is also some empirical evidence to show that work intensification has increased in recent decades (e.g., Chesley, 2015; Franke, 2015; Green, 2004; Green & McIntosh, 2001; Menon et al., 2019). More importantly, this trend of acceleration has been forecast to continue as technological development via robotization, machine learning, and artificial intelligence increasingly speed up work processes and production (Alasoini, 2018; Autor, 2015; Rosa, 2003, 2013; Mauno et al., 2019abc; Menon et al., 2019). Technological acceleration will probably even speed up because technology benefited societies so greatly in the Covid19 pandemic. Altogether, these prospects are challenging, as technological acceleration is often seen as one major antecedent of work intensification (Chesley, 2014; Mauno et al., 2019abc; Menon et al., 2019; Rosa, 2003, 2013).

The above facts and scenarios would suggest that work intensification is certainly a topical issue likely to affect employees in several ways. One negative implication of work intensification is its detrimental effects on employees' well-being, health, and role performance (see Chesley, 2014; Chowhan et al., 2019; Franke, 2015; Korunka et al., 2015; Kubicek, Paskvan, & Korunka 2015; Mauno, Kubicek, Feldt, & Minkkinen, 2020). However, we reasoned that work intensification may also affect employees' opportunities to *recover from work* (defined in 1.3.) during off-job time, a viewpoint which has not yet been paid much attention while the costs of work intensification for employees are assessed. Furthermore, successful recovery may also mitigate the relationships between work intensification and employee outcomes.

Accordingly, the present chapter focuses on work intensification from the perspective of recovery from work by paying particular attention to the potential mediating and mitigating/buffering role of recovery in the linkages between work intensification and its consequences. We start by defining the concepts of (multifaceted) work intensification and recovery from work then introduce a conceptual model that might be useful in connecting work intensification and recovery to employee outcomes. After this conceptual introduction, we also present some relevant empirical findings based on the ongoing research project “*Managing new intensified job demands through self-regulative resources* (IJDFIN-study)” where we are able to investigate prospectively the relationships between work intensification, recovery, and employee outcomes. We end this chapter with theoretical and practical conclusions and recommendations.

1.2. Defining work intensification: a multifaceted model of intensified job demands

Austrian scholars have recently suggested that work intensification is actually a multifaceted phenomenon, consisting of four to five specific facets/dimensions, which are included in the *Intensified Job Demands* model (henceforth *IJDs model*, see Kubicek et al., 2015), which we also utilize in this chapter. Overall the five facets of IJDs describe how the work effort

required of an employee has become qualitatively more intense (greater mental effort at work is increasingly expected of employees) and/or quantitatively (employees are expected to work faster or otherwise more effectively). Next we focus on each facet of the IJDs model.

The first facet of work intensification is called *work intensification* and illustrates best the traditional nature of work intensification, that is, increased pace of work (see also Green, 2004). Specifically, Kubicek et al. (2015) have defined work intensification as a need to work faster, reduce downtime, and perform different work tasks simultaneously, that is, deal with multitasking demands. This last-mentioned aspect is new; multitasking has not been included in traditional definitions of work intensification (e.g., Chesley, 2004; Franke, 2015; Green, 2004; Menon et al., 2019). However, technological acceleration in working life may indeed increase multitasking demands as technology is conducive to multitasking.

The second facet of the IJDs model is *intensified job-related planning and decision-making demands* which refers to increases in decision-making authority, putting more pressures on employees to decide which tasks they need to perform (planning) and how to perform them (doing). The third facet, *career-related planning and decision-making demands*, means that employees are increasingly required to maintain their employability with the current employer, but simultaneously be increasingly aware of and open to other (external) career opportunities. As traditional (stable) career lines seem to be changing, there are more demands for employees to manage and pursue their careers on their own (Van Der Heijden & De Vos, 2015; Pongratz & Voss, 2003). Indeed, both job- and career-related planning and decision-making demands highlight that employees need to show increasing initiative and be proactive not only in their current work, but also in the long-run, over the career span. Also, today's HR management practices, which empower employees via improved agency, self-management, and autonomy, may paradoxically increase employees' job- and career-related planning and decision-making demands (Boxall & Macky, 2014), which may then turn into harmful stressors.

Finally, *intensified learning demands* means that the demands to improve one's work-related knowledge, skills, and competencies have also intensified. Initially learning demands consisted of two types; those in relation to *knowledge* (e.g., new expertise) and *skills* (e.g., new devices), but these facets were found to be highly inter-correlated in empirical data and are therefore described one-dimensionally (see e.g., Kubicek et al., 2015; Mauno et al., 2020). Due to the rapid technological development and frequent organizational changes, employees are increasingly required to constantly update their job-relevant knowledge and competencies and adjust their skills in order to be able to accomplish their work (see Glaser, Seubert, Hornung, & Herbig, 2015; Kubicek et al., 2015; Mauno et al., 2019abc, 2020). Demands for life-long learning may turn out to be a new, and also stressful, paradigm in working life.

1.3. Defining recovery from work

Recovery refers to the process that restores employees' energy and mental resources (Zijlstra & Sonnentag, 2006). Theoretically, according to the *Effort-Recovery model* (Meijman & Mulder, 1998), recovery from work occurs when an individual is no longer confronted with job demands. Effort expenditure at work causes psychophysiological load reactions, and recovery occurs when the psychophysiological systems activated stabilize at their pre-stressor level. This occurs when the exposure to job demands ceases. If the recovery process is hindered, load reactions may accumulate and lead to chronic health and well-being problems in the long term (Cropley & Zijlstra, 2011; Geurts & Sonnentag, 2006; Sonnentag, Venz, & Casper, 2017). Thus, the Effort-Recovery model (Meijman & Mulder, 1998) suggests that the investment of mental and physical resources to deal with job-related demands results in a depletion of resources (e.g., energy) and "a need to recover" (van Veldhoven, 2008). As recovery will only

occur when the depleted systems are no longer taxed during off-job time, two experiences that are critical in the facilitation of successful recovery are *psychological detachment from work* and *relaxation* during time off the job (Sonnentag & Fritz, 2007). Psychological detachment refers to refraining from job-related activities and not thinking about one's job during non-work time. Relaxation is a state characterized by low (sympathetic) activation and increased positive affect.

However, recovery may also occur via a more active process offered by the *Conservation of Resources (COR) theory* (Hobfoll, 1989). The core assumption of the COR theory is that people are motivated to protect existing and gain new resources, which are defined broadly. Internal resources, such as energy and positive mood, are the most important resources in the context of recovery from work (Sonnentag & Fritz, 2007). According to the COR theory, stress is caused by depletion of resources, experiencing a threat of losing resources, or not regaining resources after investing effort. To recover from job stress, employees must actively engage in activities that help to replenish the resources depleted at work. Accordingly, the favorable effects of two experiences presented by Sonnentag and Fritz (2007) – *mastery* and *control* – can be attributed to regaining internal resources depleted at work, which advances recovery according to the COR theory. Mastery refers to the experience of competence or proficiency arising from challenging experiences or learning opportunities outside the work domain. Engaging in activities that create mastery experiences typically requires some effort. Nevertheless, mastery experiences are believed to promote recovery as they help to create new resources, such as self-efficacy, and potentially increase positive affect. Control can be described as the degree to which people can decide for themselves how to spend their free time.

There is evidence to show that all these four recovery experiences during off-job time (detachment, relaxation, mastery, and control) promote recovery from work and employee well-being (Bennett, Bakker, & Field, 2018; Steed, Swider, Keem, & Liu, 2019; Wendsche & Lohmann-Haislah, 2017, for meta-analyses). However, of the experiences, psychological detachment from work has been shown to be the most powerful recovery experience promoting recovery (Sonntag & Fritz, 2015; Sonnentag et al., 2017; Wendsche & Lohmann-Haislah, 2017).

2.0. A conceptual model of the role of recovery between IJDs and employee outcomes

The conceptual model for exploring the role of recovery between intensified job demands (IJDs) and their consequences is presented in Figure 1. It is noteworthy that there may naturally also exist other relevant macro- and micro-level factors that affect this process, but here we focus on factors which have theoretical foundations and relevance from the viewpoint of an individual/employee. The main societal context factor behind IJDs is *social acceleration* (see the left box, Figure 1), which, according to Rosa (2003, 2013), consists of three intertwined processes of acceleration taking place in technology, social structures, and pace of living (see also Korunka et al., 2015; Kubicek et al., 2015; Mauno et al., 2019abc, 2020). In this model, technological acceleration is seen as the prime cause of intensification occurring in working life because its various forms (e.g., digitalization, robotization, machine learning, artificial intelligence) are changing the content of jobs, occupations, and even entire industries (Autor, 2015; Menon et al., 2019). Technological acceleration will speed up all work processes and information transfer, thereby creating a need for more effective and intensive work effort on

the part of employees (Rosa, 2003, 2013). Indeed, the use of technology was found to predict higher IJDs (across facets) in a recent longitudinal study (Mauno et al., 2019b), lending support to Rosa's (2003, 2013) acceleration theory behind the IJDs.

Insert Figure 1 about here

Moreover, technological acceleration has been claimed also to fuel acceleration in social structures and pace of living (Rosa, 2003, 2013). Manifestations of the former include faster and unpredictable changes in social structures that challenge traditional institutions and habits, and of the latter short-lived trends and lifestyles. One concrete example of technological acceleration in society is social media use in our daily lives where new updates are a “must”, and very easy to do, encouraging fast-speed lifestyles and overall “life intensification”. As a consequence of the extension of work to private life, due to new technology, work and non-work spheres cannot be separated in individuals' lives, and thus acceleration occurring in different life domains may easily accumulate and be reinforced. Hence, acceleration-prompting changes in social structures and pace of living may increase acceleration in working life, and vice versa.

Consequently, three forms of social acceleration can be hypothesized to increase the likelihood of IJDs (see the second box, Figure 1), which characterize not only the elements of fast-speed work (intensifying working pace and multitasking), but also illustrate the intensified mental effort needed at work (intensifying planning, decision-making, and learning demands). Thus, acceleration in the context of work is experienced, from the employees' side as IJDs, which then as job stressors (Korunka et al., 2015; Kubicek et al., 2015; Mauno et al., 2019ac, 2020) are expected, and have also been shown, to have *negative outcomes* for employees' well-being, health, and role performance across the contexts (see the right box, Figure 1). For instance, there is empirical evidence that IJDs relate to job burnout, impaired job performance, and job dissatisfaction (e.g., Korunka et al., 2015; Kubicek et al., 2015; Mauno et al., 2019ac, 2020). Moreover, the most compelling evidence in this regard concerns increased working pace, which has been studied most widely as a hallmark of a stressful work intensification (Chesley, 2014; Franke, 2015; Green, 2004).

However, our model also proposes that *recovery*, and particularly four specific recovery experiences (see the third box, Figure 1) play an important role in the relationships between IJDs and employee outcomes. Specifically, we suggest that recovery operates in this stress process via two mechanisms/routes, that is, either as a mediator or/and as a moderator (a stress buffer). Both these mechanisms are involved in the *Stressor-Detachment model* introduced by Sonnenetag and Fritz (2015). The model identifies detachment as a key variable influencing strain in addition to job stressors, and it also suggests that detachment attenuates the stressor-strain relationship and functions as a mediator in the stressor-strain process. In fact, there is empirical evidence to show that all recovery experiences can have these two roles.

First, concerning mediation, it has been shown in a meta-analysis (Bennett et al., 2018) that recovery experiences, as a partial mediator, explained 26% more variance in fatigue and 62% more variance in vigor beyond work characteristics models. Detachment, relaxation, and mastery functioned as partial mediators between job demands and fatigue, whereas all experiences partially mediated the effects of job demands on vigor. Second, the moderating role of detachment and relaxation has gained most research attention in earlier studies. Detachment has been reported to buffer against increased job exhaustion under high workload consisting of tough time demands at work (e.g., Korunka, Kubicek, Prem, & Cvitan, 2012;

Sianoja, Kinnunen, Mäkikangas, & Tolvanen, 2018). Psychological detachment has also been identified as a moderator of the stressor–strain relationship, for example, between workplace bullying and psychological strain (Moreno-Jiménez, Rodríguez-Muñoz, Pastor, Sanz-Vergel, & Garrosa, 2009), emotional conflicts at work and poor well-being (Sonnetag, Unger, & Nägel, 2013) as well as between self-control demands and exhaustion (Rivkin, Diestel, & Schmidt, 2015). Relaxation has been shown to buffer against high need for recovery under high job insecurity (Kinnunen, Mauno, & Siltaloppi, 2010) and under high time demands (Siltaloppi et al., 2009). In addition, work–home conflict predicted a decrease in vigor over time only when preschool teachers were not able to achieve higher levels of relaxation experiences during off-job time (Gu, Wang, & You, 2020). Also, in the presence of high levels of emotional dissonance, preschool teachers who experienced higher levels of relaxation experiences during off-job time tended to report fewer insomnia symptoms over time. Mastery and control have been paid less attention, but in one study the relationship between workload and work-family conflict was particularly strong in the presence of low psychological detachment, low relaxation, and low control (Molino, Cortese, Bakker, & Ghislieri, 2015). Mastery has protected against increased need for recovery in the presence of lack of control at work (Siltaloppi et al., 2009).

To sum up, our conceptual model presented in Figure 1 suggests that social acceleration is increasing work intensity/intensification, manifested in IJDs as experienced by employees. IJDs, as job stressors, are then expected to lead to negative consequences for employees' health, well-being, and role performance. However, successful off-job recovery (via four recovery experiences) may hinder this detrimental stress-strain process by buffering against IJDs, thus mitigating their negative outcomes. Furthermore, a different negative pathway is also possible, where IJDs first impair employees' off-job recovery and this impairment, in turn, mediates the relationship between IJDs and outcomes. Next we turn to an empirical test of this conceptual model. Specifically, we shall present preliminary evidence recently obtained in an ongoing IJDFIN project (e.g., Mauno et al., 2019c; 2020), where we explore the relationships between IJDs and employee outcomes, also paying attention to the role of recovery (via psychological detachment) in these linkages.

3.0 Empirical findings of the IJDFIN study on the role of psychological detachment

3.1. IJDs as predictors of impaired psychological detachment from work

To explore the role of psychological detachment in relation to IJDs and their employee outcomes, we analyze two-wave data collected on the IJDFIN project in 2018 (Time 1) and 2019 (Time 2) with a time-lag of one year. This follow-up data consists of Finnish employees working in teaching ($n = 507$), services ($n = 234$) and industry ($n = 279$). Specifically, we test two assumptions of the conceptual model (Figure 1), that is, (1) whether IJDs impair detachment and (2) whether detachment buffers against IJDs in relation to certain employee outcomes. We selected self-rated *job performance* (see Koopmans et al., 2016) and *meaning of work* (see Steger et al., 2012) as the outcomes because these phenomena have not yet gained much attention in studies focusing on the consequences of IJDs. It is noteworthy that the mediator hypothesis presented in Figure 1 (i.e., off-job recovery mediates the relationship between IJDs and outcomes), is not tested here due to the fact, that we use only two measurement points. Three measurement points would be needed to test a mediation. All the relationships are to be examined prospectively (i.e., independent and moderator variables at Time 1 and dependent variables at Time 2) by analyzing separately two occupational groups (teachers vs. others). We noticed that the correlations were quite different for the samples of

teachers ($n = 507$) vs. others ($n = 513$), and for this reason, we created these two groups (henceforth teachers and other employees). The groups were also about the same size, helping us to interpret the findings across the sub-samples.

First, we analyzed, using hierarchical regression analysis, whether IJDs predict poorer detachment over time while accounting for control variables (sex, age, and education). In the first model, where the baseline of detachment (Time 1) was not controlled for, the facet of *work intensification* (i.e., increased pace of work and multitasking demands) prospectively predicted impairment in detachment among teachers ($\beta = -.15, p < .01$) and others ($\beta = -.19, p < .001$). Moreover, in other employees (but not in teachers), *intensified learning demands* predicted poorer detachment over time ($\beta = -.19, p < .001$). Altogether, IJDs explained 3% ($p < .01$) of the variance of detachment in teachers and 13% ($p < .001$) in other employees.

In order to test the robustness of these prospective effects, we next ran new regression models where the baseline of detachment was controlled for in the first step of the analysis (other steps were similar to those reported above). In these revised models, none of the facets of IJDs significantly predicted detachment among teachers, whose detachment was explained only by their level of detachment of the previous year ($\beta = .61, p < .001$) and age ($\beta = -.09, p < .05$); teachers who detached mentally well at Time 1 were likely to continue to do so one year later at Time 2. Furthermore, younger teachers reported better detachment from work than older ones. However, in the group of other employees, higher learning demands predicted poorer detachment over time ($\beta = -.11, p < .01$), even when the baseline detachment was controlled for. Also, in the group of other employees, detachment was highly stable over one-year period ($\beta = .64, p < .001$).

To sum up the above results, IJDs played only a minor role in predicting a change in psychological detachment from work over a one-year time period. A change was noticed only in the group of other employees among whom high learning demands at work predicted a decrease in detachment over time.

3.2. Psychological detachment as a buffering factor between IJDs and employee outcomes

Next we tested, based on the same longitudinal data as reported above (see 3.1.), the second proposition of the conceptual model (Figure 1), that is, whether psychological detachment prospectively buffers against IJDs in relation to job performance and meaning of work. Specifically, we performed hierarchical moderated regression analyses with interaction terms based on the standardized variables of IJDs and detachment derived from Time 1. Thus, altogether four interactions were analyzed. Control variables included sex, age, and education derived from Time 1, whereas the dependent variables (job performance, meaning of work) were based on the Time 2 measurement. We ran the regression models again in two sub-samples (teachers vs. other employees). Significant interaction effects were also graphically inspected based on the key parameter values (β -coefficients and confidence intervals). Again, we analyzed two types of models; first, without controlling for the baseline effect of the dependent variable (i.e., job performance/meaning of work at Time 1) and, second, entering this baseline effect into the model in the first step.

These regression analyses indicated three significant (prospective) moderator effects, which were similar in both models (without and with baseline control). Here, we report only the effects based on a more robust testing (i.e., including the baseline control of the dependent variable at T1). The facet of work intensification interacted with psychological detachment among teachers in predicting job performance ($\beta = .11, p < .05$, see Figure 2) and meaning of work ($\beta = .12, p < .05$, see Figure 3). Figure 2 indicates that, among teachers, high psychological detachment (PSYD) + 1 SD) buffered against work intensification over time in relation to job performance. Under conditions of experiencing high work intensification, good psychological detachment from work during off-job time helped to maintain higher job

performance over time. Figure 3 reveals a rather similar prospective buffering effect regarding meaning of work; those teachers' meaning of work was less negatively impacted whose psychological detachment was high (compared to poorly detached teachers) in the presence of high work intensification.

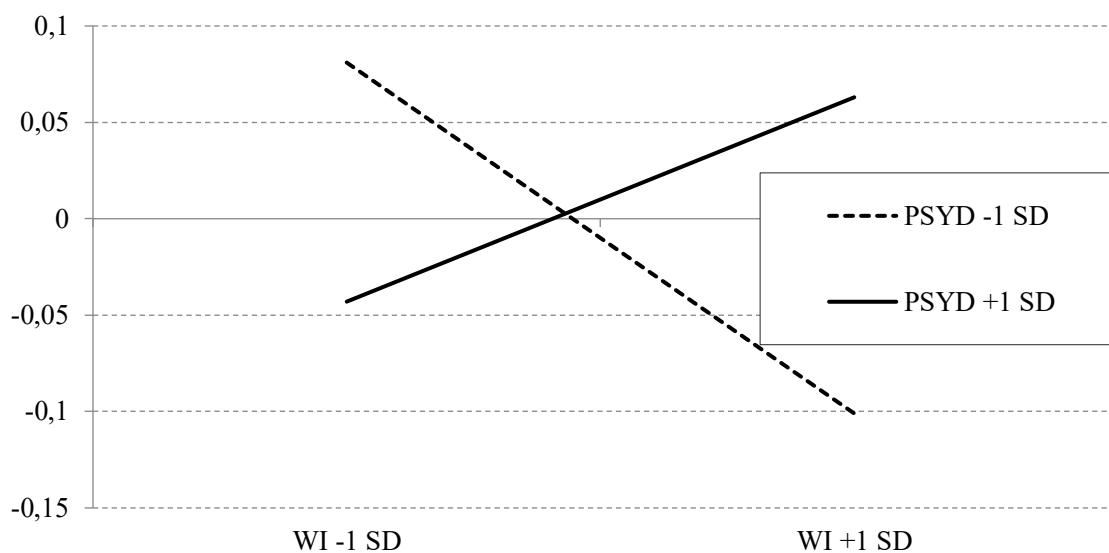


Figure 2. Interaction effect of work intensification (WI at Time 1) and psychological detachment (PSYD, at T1) on job performance (at Time 2) among teachers. Job performance at T1 is controlled for.

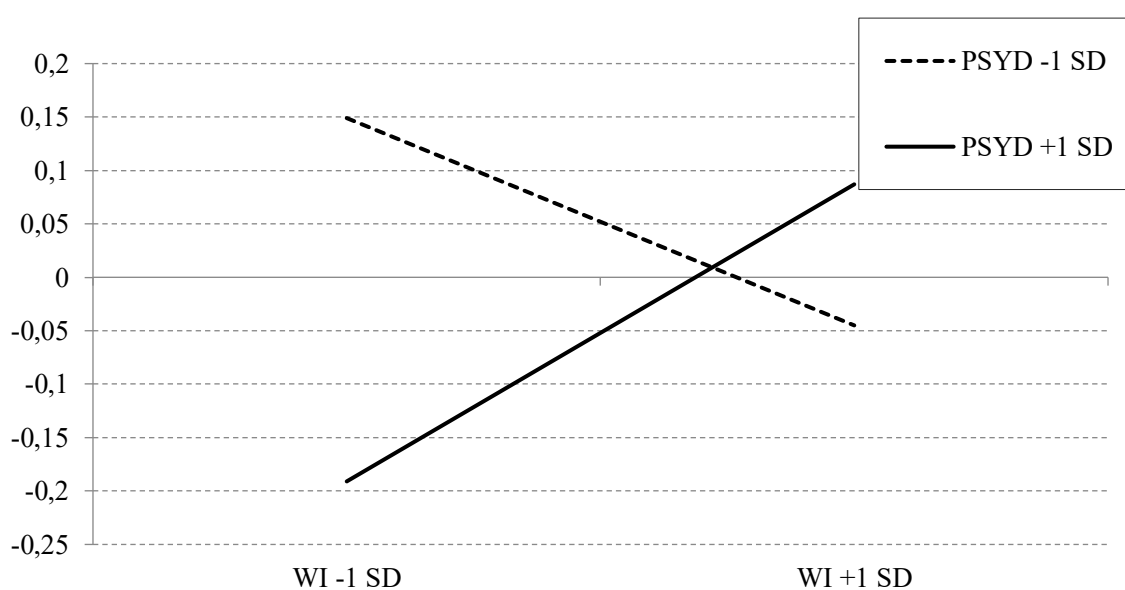


Figure 3. Interaction effect of work intensification (WI at Time 1) and psychological detachment (PSYD, at T1) on meaning of work (at Time 2) among teachers. Meaning of work at T1 is controlled for.

However, only one marginally significant interaction effect was found among other employees (industry and service workers): intensified career-related planning and decision-making demands interacted with psychological detachment ($\beta = -.09, p < .06$) in relation to job performance. As this effect was also significant in the model without the baseline control ($\beta = -.14, p < .05$), we inspected it graphically. Figure 4 shows that under high career-related demands high psychological detachment (PSYD + 1 SD) did not protect against poor job performance, but by contrast, low psychological detachment (PSYD - 1 SD) seemed to improve job performance over time. Thus, in a situation of high career-related demands low detachment was beneficial in terms of job performance. Maybe those who perceive high career-related planning and decision-making demands do not even feel a need to detach mentally from work as they are so highly committed to their careers.

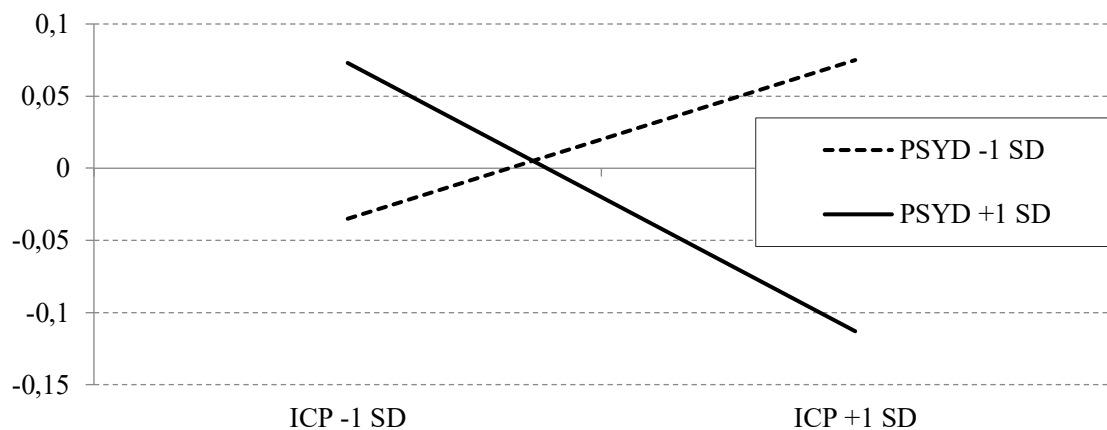


Figure 4. Interaction effect of intensified career-related planning and decision-making demands (ICP at Time 1) and psychological detachment (PSYD, at Time 1) on job performance (at Time 2) among service and industry workers. Job performance at T1 is controlled for.

In addition to the above-reported interaction effects, longitudinal regression analyses also revealed whether IJDs and psychological detachment directly predicted job performance and meaning of work over time. After controlling for the baseline effect of dependent variables (robust testing), only intensified career-related planning and decision-making demands predicted a decrease in meaning of work among teachers ($\beta = -.11, p < .05$). Interestingly, psychological detachment did not predict either performance or meaning of work over time in either sub-sample, and the respective correlation coefficients were also low ($r < .12$).

Altogether, the moderating role of psychological detachment turned out to be modest in the present longitudinal analysis: detachment functioned as predicted in Figure 1 only among teachers and concerning the relationship between work intensification (a stressor) and job performance and meaning of work (employee outcomes). Accordingly, good detachment during off-job time mitigated the association between work intensification and job performance and meaning of work over time.

3.3. Conclusions on the findings based on the IJDFIN project

Altogether, the above-reported prospective analyses suggest that *work intensification* was the most predictive facet of IJDs regarding impairment in psychological detachment from work. Consequently, intensified pace of work and increased demands to multitask would require more attention to improve employees' psychological detachment from work. Moreover, besides work intensification, *intensified learning demands* also impaired detachment over time among service and industry workers but not among teachers. Maybe less highly educated workers are not so well adapted to increasing work-related learning demands, and workers may experience these as stressful, with negative implications for their psychological detachment from work during off-job time. Contemporary working life, and even more so in the future, seems to require lifelong learning, and it is vital to recall that continuous learning demands may be risky for off-job recovery, particularly among less highly educated/blue-collar workers.

Longitudinal moderator analyses, in turn, revealed that psychological detachment was not a strong or very consistent buffering resource against negative outcomes related to IJDs in a prospective design. We found prospective buffering effects only among teachers and regarding only one facet of the IJDs, namely, *work intensification*. Thus, if teachers experience intensified pace of work and multitasking demands, they should be encouraged and trained to detach mentally from work (see more at 4.2). We would like to point out that relatively similar findings have already been found in our cross-sectional data based on these same sub-samples (Minkkinen, Kinnunen, & Mauno, 2019). In this earlier study, a few buffering effects were found in relation to job exhaustion, but they were relatively weak and varied across the sub-samples, as also here. Maybe psychological detachment and other recovery experiences (see Figure 1) would rather mediate than moderate the effects between IJDs and employee outcomes, a proposition which needs to be tested in future using multi-wave data.

Furthermore, it also turned out that neither IJDs nor psychological detachment played an important role in predicting job performance or meaning of work when these linkages were analyzed prospectively. However, the weak (buffering, direct) findings found here do not rule out the possibility that other types of employee outcomes (e.g., work engagement, organizational commitment, psychosomatic symptoms) would show significant effects over time. It should also be recalled that job demands do not occur in a vacuum, but often co-emerge. Thus, it is possible that IJDs become more stressful (also leading to more negative outcomes) if they co-emerge with other job stressors, e.g., job insecurity and emotional labor. We have actually already found some cross-sectional evidence that IJDs may co-occur with other mental job demands (Mauno & Minkkinen, 2020).

4.0. General outlook: Future scenarios and recommendations

Even though there is evidence to show that IJDs entail harmful costs for employees' well-being and motivation (e.g., Franke, 2015; Korunka et al., 2015; Kubicek et al., 2015; Mauno et al., 2019a, 2020), this evidence is not consistent or strong regarding all dimensions of IJDs. Thus, more studies, also longitudinal, would be needed to explore the various outcomes of IJDs. Indeed, some dimensions of IJDs, e.g., intensified learning demands, may act rather as positive challenges/resources with no negative costs for employees, at least if they do not pile up (e.g., Glaser et al., 2015; Mauno et al., 2019a). Furthermore, it has been predicted that working life will change permanently after the Covid19 pandemic, and therefore an interesting question is what happens to intensified working life; will work intensity and its various forms, decrease or increase and what would be the accumulated costs of increased job insecurity and work intensity for employees and organizations? One future scenario is that societies will move to a less intensified mode of living and working, in contrast to social acceleration theory (Rosa, 2003, 2013), meaning the beginning of a new era. However, it is also very likely that

technological acceleration, one key phenomenon of acceleration in Rosa's theory, will actually speed up in future, as technology has widely benefited societies and economies during Covid19. Altogether, these future scenarios imply that researchers and other working life specialists need to be alert in observing visible changes but also weak signals of societies to find out what the most relevant and topical job demands are in this new era.

Psychological detachment has been indicated to be one the most powerful experiences of off-job recovery in earlier studies (see Sonnentag et al., 2017) and was therefore also focused on here as a potential stress buffer. Despite its theoretically plausible role as a buffer against IJDs (see Figure 1), we found only weak empirical evidence for this in this prospective study (only concerning the dimension of work intensification in teachers). Nevertheless, two facets of IJDs, i.e., work intensification and intensified learning demands, were directly related to poor detachment, making detachment from work more difficult during off-job time. Our modest findings should not, however, undermine the crucial role of psychological detachment for employees' well-being and motivation established earlier, as our (weak) findings may relate, e.g., to the occupational groups studied, country context, less optimal time-frame or to the selected outcomes (performance, meaning of work). It has been suggested that psychological detachment requires self-regulative capacity of an employee (Sonnentag & Fritz, 2015), further suggesting that under high IJDs, it is difficult to refrain from thinking about work-related issues due to depleted energy resources and reduced self-control. In addition, blurring boundaries between work and non-work time and spheres can render detachment from work difficult during off-job time (Kinnunen et al., 2016). Therefore, the other more active and concrete recovery experiences outlined in Figure 1 (relaxation, mastery, control; see also Sonnentag & Fritz, 2007) would need more attention in future studies on IJDs and their outcomes.

Nevertheless, although the experience of high job demands calls for effective recovery processes, empirical research shows, including our study, that recovery processes are actually impaired when job demands are high (Bennett et al., 2018; Sonnentag, 2018). Sonnentag (2018) calls this observation the "recovery paradox". Given the strong empirical evidence that recovery-enhancing processes (like detachment from work) are impaired when job demands are high, it is crucial to keep job demands within certain limits and to support employees to adequately cope with these job demands. A key question is what organizations and individuals can do to sidestep the recovery paradox and to promote recovery processes even when job demands are high. According to Sonnentag (2018), being mindful at work would likely help to reduce negative activation as a reaction to job demands and therefore aid recovery. In addition, the development of new recovery habits (e.g., physical exercise) may help in starting recovery processes even under unfavorable affective and energetic circumstances, although this is not always easy and may require goal-driven attempts.

Several sociological and psychological theoretical models have been developed for working life, and here we utilized social acceleration theory (Rosa, 2003, 2013), the effort-recovery model (Meijman & Mulder, 1998) and conservation of resources theory (Hobfoll, 1989), which we combined into a specific, testable model on the role of recovery between IJDs and their outcomes (see Figure 1). Nevertheless, this is only one suggested model, which is admittedly limited regarding other potential factors that might affect employees' well-being and motivational outcomes in contemporary, and even more so, in future working life. Consequently, we encourage scholars to develop alternative, preferably empirically testable, models including different macro- and micro-level factors that might be relevant in future working life, which will bring possibly totally new job demands into the spotlight. This work will require multi-disciplinary collaborative efforts among researchers and practitioners working in the field of occupational health.

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