ARCHIVIO ISTITUZIONALE
DELLA RICERCA

Alma Mater Studiorum Università di Bologna
Archivio istituzionale della ricerca

Uncovering the main and interacting impact of workaholism on momentary hedonic tone at work: An experience sampling approach

This is the final peer-reviewed author's accepted manuscript (postprint) of the following publication:

Published Version:
Menghini, L., Spagnoli, P., Balducci, C. (2023). Uncovering the main and interacting impact of workaholism on momentary hedonic tone at work: An experience sampling approach. JOURNAL OF OCCUPATIONAL HEALTH PSYCHOLOGY, 28(6), 380-394 [10.1037/ocp0000365].

Availability:
This version is available at: https://hdl.handle.net/11585/960243 since: 2024-04-05

Published:

DOI: http://doi.org/10.1037/ocp0000365

Terms of use:

Some rights reserved. The terms and conditions for the reuse of this version of the manuscript are specified in the publishing policy. For all terms of use and more information see the publisher's website.

This item was downloaded from IRIS Università di Bologna (https://cris.unibo.it/).
When citing, please refer to the published version.

(Article begins on next page)

18 November 2026

Abstract

Workaholism is a current issue in modern organizations with well-characterized implications for individual health and well-being. Yet, the affective experience of workaholics at work and their emotional reactivity to job stressors have been poorly investigated, with the few available studies being cross-sectional or based on retrospective reports obtained outside the working time. Here, we conducted an experience sampling study to characterize workaholics' affective experience during work, and their emotional reactivity to workday accumulation and momentary workload. 139 full-time back-office workers participated to a three-day protocol by reporting on their hedonic tone and momentary workload up to six times per workday. Multilevel modeling was used to investigate the relationship between trait workaholism and job-related hedonic tone as well as the cross-level interactions between workaholism and both workday accumulation and momentary workload. As expected, our results showed lower job-related hedonic tone for individuals with higher workaholic tendencies, with workaholism interacting with the two investigated job stressors. However, contrarily to our hypotheses, we found that workaholism weakened, rather than strengthening, the negative trend of hedonic tone over the levels of both predictors, a result possibly explained by a blunted reactivity condition due to chronic job strain. Moreover, we corroborated previous findings suggesting worse outcomes in workaholic women compared to workaholic men. Organizations should consider taking actions to monitor and manage the workaholism levels in the workforce and to create a psychosocial work environment that discourages the enactment of workaholic tendencies.

Keywords: Workaholism; Emotional Reactivity; Workday accumulation; Momentary workload; Experience sampling methods

In the last decade or so, there has been increasing attention towards the phenomenon of workaholism, a dysfunctional form of heavy work investment with potentially strong implications for individual and organizational well-being (Clark et al., 2016; Ng et al., 2007; Schaufeli et al., 2008). Various reasons might explain such a trend, including the rising work intensification and digitalization, and the resulting increased demand to invest heavily at work (Green et al., 2022; Hunt & Pickard, 2022). In addition, the European Agency for Safety and Health at Work (EU-OSHA, 2018) has alerted that the widespread use of information and communication technology (ICT), by allowing people to work anytime and anywhere, may lead to work intensification, addiction to ICT, working long hours, and stress. Some workers could even "consider being seen to be available 24/7 a sign of being successful, whilst at the same time suffering from medical problems, stress and/or burnout as a result" (EU-OSHA, 2018, p. 55). Indeed, a parallel growing body of research has documented the burden of 'overwork-related disorders' (Lin et al., 2017; Yamauchi et al., 2017), consisting of physical (e.g., cardiovascular) as well as psychological dysfunctions (e.g., depression and burnout) associated with extreme outcomes such as death from overwork.

Although different definitions of workaholism have been proposed (Atroszko et al., 2019; Clark et al., 2020; Schaufeli, Shimazu, et al., 2009), Clark et al. (2016)'s highlighted two core aspects of the phenomenon that are most widely acknowledged in the literature, namely working compulsively and working excessively. First, workaholics experience compulsion towards and preoccupation about work, exhibiting a persistent loss of control over the working activity that drives them to constantly think about it even during leisure time, and to work for long time. The second main aspect of workaholism is indeed the tendency to work for very long hours, far more than what is reasonably expected of them, and even in the face of potential negative consequences. As a result, workaholics report higher levels of physical and mental strain, with repercussions for both themselves and significant others (e.g., colleagues, family members) (Atroszko et al., 2019; Clark et al., 2016; Griffiths et al., 2018; Shimazu et al., 2020; Sussman,

2018). Unsurprisingly, it is widely shared that workaholism should be equated to a behavioral addiction (Andreassen et al., 2019; Porter, 1996; Sussman, 2012).

Previous research on workaholism has mainly focused on its definition and measurement (e.g., Clark et al., 2020; Schaufeli, Shimazu, et al., 2009), in addition to its prevalence (e.g., Andreassen et al., 2019; Taris et al., 2012), while the investigation of its nomological network has often considered personality correlates (e.g., Kun et al., 2021), mental health consequences (e.g., Balducci et al., 2018; Schaufeli, Bakker, et al., 2009), and job performance (e.g., Alessandri et al., 2020). Nevertheless, despite the undoubtful advances in workaholism research, there are still important gaps concerning workaholics' short-term psychological functioning at work, such as their day-to-day cognitive appraisals, emotional reactivity, and affective experiences. In particular, whereas it is clear by definition that workaholics experience tension and irritation when impeded to remain immersed in their work (Clark et al., 2020), what moods 'color' their experiences, perceptions, and cognitions *during* work remains mostly unclear.

Affective processes matter in organizations because they are deeply implicated in a number of critically important phenomena such as job performance, decision making, and leadership (see Ashkanasy & Dorris, 2017; Barsade & Gibson, 2007). For instance, the individual tendency to experience positive moods makes leaders more effective, whereas frequently experienced negative moods may jeopardize the building of trusting relationships with collaborators (see George, 2000). Additionally, similar to infectious diseases, negative moods and mood-related disorders may spread throughout the organization via social contagion (see Kensbock et al., 2022). Thus, on the one hand, understanding job-related affective experiences of workaholics, which often occupy leadership positions (Taris et al., 2012), might provide some indication of their psychological fit to such organizational roles. On the other hand, uncovering the momentary hedonic tone experienced by workaholics at work may shed light on the mechanisms leading to the distal outcomes highlighted by previous research (see Clark et al., 2016). Indeed, affective processes are thought to play a critical role in the development of chronic

strain reactions (Meier & Cho, 2019; Pindek et al., 2019), with affective experiences being at the core of the stress response (Lazarus, 2006).

The present study primarily aimed at enriching our understanding of workaholism by investigating whether and how it might impact on momentary mood (i.e., hedonic tone) during the working time, and how it modulates mood temporal trajectories over the course of the workday as well as in response to a common job stressor with well-established implications for affective strain, namely workload (Bowling et al., 2015; Ilies et al., 2010). The investigation of such intraindividual micro-processes requires the adoption of more sophisticated research designs than those typically employed in workaholism research. Specifically, experience sampling methods (ESM), consisting of the repeated real-time sampling of psychological states and experiences, are increasingly used for modeling emotion dynamics as proxies of emotion regulation (Kuppens & Verduyn, 2015), implying promising opportunities for theoretical advancements (Beal, 2015; Gabriel et al., 2019). Here, we implemented a three-day ESM protocol with six observations per day to investigate the main and moderating role of workaholism on the affective dynamics experienced during a typical workday.

As a secondary aim, we further investigated the differential affective correlates of workaholism for men and women. Indeed, it has been proposed that women with high workaholism levels may be exposed to a unique tension due to the need to balance the internal drive to invest time and effort at work with traditional gender-role expectations (Clark et al., 2015). In line with previous studies (Balducci et al., 2018; Balducci, Spagnoli, et al., 2022), we aimed at providing further evidence of the gendered implications of workaholism.

Affective characterization of workaholism

A first attempt to characterize the affective nature of workaholism was done by Ng et al. (2007), speculating that "if a person , for whatever reason, becomes addicted to working […] then the intrinsic or extrinsic rewards which come from this activity must bring the individual some level of satisfaction or gratification" (p. 28). Later contributions (e.g., Baruch, 2011) were

consistent with such position, suggesting that workaholics report high levels of intrinsic work satisfaction, life satisfaction, and perceived career success. Similarly, a qualitative study by Kirrane et al. (2017) suggested that workaholics experience "profound enjoyment of their work, deriving particular satisfaction from working hard and achieving objectives" (p. 229).

Despite these initial findings, other studies provided more mixed results. Particularly, the meta-analysis by Clark et al. (2016) confirmed the pattern of weak-to-moderate positive relationships between workaholism and work enjoyment, but also highlighted negative relationships with job satisfaction, positive relationships with negative affect, and no significant association with positive affect. A controversial relationship between workaholism and job satisfaction has been also highlighted by more recent studies reporting negative (Gillet et al., 2022; Huyghebaert-Zouaghi et al., 2021) or mixed associations between the two constructs (Dordoni et al., 2019). Moreover, similar mixed results emerged from research focusing on obsessive work passion, a construct closely related to workaholism (see Williamson Smith et al., 2022) that was found both negatively (Horwood et al., 2021) and positively related to job satisfaction (Vergauwe et al., 2022). As a possible explanation of such controversial findings, Clark et al. (2016) proposed that the negative affect experienced by workaholics when they are not at work (e.g., guilt) might outweigh the positive one that they experience at work. They also alerted, however, about interpreting their results with caution since they were mostly based on cross-sectional data, and they encouraged future researchers to use ESM for examining the ongoing work-related emotions felt by workaholics while working since – they concluded – we really do not know enough about the affective nature of workaholism.

The prevalence of cross-sectional designs and retrospective questionnaires in workaholism research (see also Andreassen et al., 2018) is particularly problematic when it comes to capture time-varying phenomena such as work-related affective states. Indeed, the recall of one's 'usual' feelings is strongly contaminated by trait characteristics (e.g., mood disorders), contextual factors (e.g., current mood while filling the questionnaire), and recall biases (Gabriel

et al., 2019; Schwarz et al., 2011). ESM have been rarely, if ever, used in workaholism research, which only counts a few diary studies. For instance, using a 10-day diary design, Balducci et al. (2021) found that workaholism fueled higher levels of job-related negative affect as reported at the end of the working day. While these results are at odds with the idea that workaholics experience joy and satisfaction during work, they still fail to discriminate job-related affect from the negative mood rising from their reluctance to disengage from work, potentially biasing after-work retrospective ratings.

Building on the above considerations, to gain a better understanding of job-related affect in workaholism, we implemented an ESM study questioning participants about the 'color' of their momentary affective experience at work over three working days. We focused our investigation on moods, and specifically on the *hedonic tone* dimension. Moods are the consciously-available, diffuse, and subtle affective states that provide the affective background of everyday experience, varying over time conditional to discrete emotions (Beedie et al., 2010; Naragon-Gainey, 2018). Whereas multiple conceptualizations of mood and affect have been provided, most of the dominant theoretical models identify affective valence (i.e., hedonic tone) as a central mood dimension (Matthews et al., 1990; Russell, 2003; Wilhelm & Schoebi, 2007).

Specifically, our investigation of workaholics' hedonic tone at work was based on the conceptualization of workaholism as a stable trait, in line with most of the research in the field (see Clark et al., 2016). Although recent studies (e.g., Balducci, Spagnoli, et al., 2022; Clark et al., 2021) have considered intraindividual day-level fluctuations in workaholism, thus focusing on the state-level component of the construct, this does not contrast with the prevailing view that, being a behavioral addiction, workaholism can be considered in the first place as a "stable tendency" (Andreassen, 2014, p. 2) or "an individual difference characteristic" (Bakker et al., 2009, p. 24). While such recent studies conceptualized state workaholism as a direct manifestation of the corresponding trait, state-level constructs can be also influenced by other factors and forces (e.g., situational contingencies) and can be even shown by individuals with low trait levels (i.e., non-

workaholics) (Fleeson, 2017; Horstmann & Ziegler, 2020; Lance et al., 2021). As a consequence, for reaching a better understanding of the lasting impact of workaholism on individual everyday functioning – which is the main aim of the present study – and to better approximate the essence of workaholism as a progressive and chronic psychological dysfunction, we adopted a trait perspective on the phenomenon.

Based on such conceptualization, workaholism may be considered as a stable internal force or demand that pushes the individual to invest a great amount of energy and effort at work. Such high effort comes at the cost of higher levels of job stress including overload and reduced recovery (Geurts & Sonnentag, 2006; Meijman & Mulder, 1998). It is well-known that affective reactions are deeply implicated in strain processes (Lazarus, 2006; Perrewé & Zellars, 1999) possibly creating "cognitive, motivational, and/or physical pathways to distal outcomes" (Pindek et al., 2019, p. 6), and the experience of negative affect is common in such conditions (e.g., Meier & Cho, 2019). Thus, we expected the hedonic tone 'coloring' the work experience (i.e., the act of working; see Ng et al., 2007) of individuals with stronger workaholic tendencies to be negatively characterized.

Addiction theories, which are highly relevant for workaholism research (see Porter, 1996; Sussman, 2012), would lead to similar expectations on the job-related affective experiences of workaholics. For instance, the opponent process theory (see Robinson & Berridge, 2003) describes the underlying negative and positive affective processes of addiction. According to this view, the progression to addiction is accompanied by the emergence of a dysphoric state characterized by negative affect, which progressively grows both in magnitude and duration. Such a process, in the long run, annihilates the initial positive affective experiences associated with the substance, which tend to disappear. Crucially, when addiction has progressed, as in the case of chronically experienced workaholic tendencies, the substance acts as a catalyst of such dysphoric state. This would translate, moving back to workaholics' affect, into the hypothesis that negative affective experiences are pervasive in workaholics not only during leisure time, but also at work:

Hypothesis 1: Individuals with higher trait levels of workaholism experience, on average, lower momentary levels of hedonic tone at work than individuals with lower trait workaholism.

Workaholism and workday accumulation

Since we measured hedonic tone multiple times per day, the notion of *workday accumulation*, defined as the amount of time spent working on a given day, or the time course throughout the workday (e.g., Benedetti et al., 2015), becomes highly salient. Increasing research is documenting that a number of psychological phenomena follow circadian rhythms and within-days cycles. For instance, it has been shown that cognitive performance (e.g., attentional capacity, executive control) decreases throughout the day (see Schmidt et al., 2007), and that individuals feel more energetic and less tense in the morning than in the afternoon, with increasing fatigue over the work period (see Johnston et al., 2019). Such results are compatible with the basic idea that fewer and fewer resources are available to individuals as the time on the same activity accumulates (Muraven & Baumeister, 2000; van der Linden et al., 2003). In turn, the progressive loss of resources available to preserve the standard performance level and cope with job stressors might lead to strain-related experiences including worsened mood (Meijman & Mulder, 1998; Geurts & Sonnentag, 2006).

Here, we argue that the effects of workday accumulation on job-related hedonic tone might be accentuated in individuals with workaholic tendencies. Indeed, workaholics invest high levels of energy and effort at work, continue to embark in additional tasks even if they are already busy, and have difficulties in delegating activities (Schaufeli et al., 2008; Schaufeli, Shimazu, et al., 2009). Such a working style may be costly as the workday progresses, leading to lower available resources and higher strain manifesting as a lower hedonic tone. Additionally, further resources loss might be due to the difficulty shown by workaholics in disengaging from work, possibly leading them to suppress recovery experiences such as taking breaks for a coffee, lunch, or simply relaxing from time to time (see Geurts & Sonnentag, 2006). Thus, a strengthened decreasing mood trajectory over the workday was expected in workaholics:

Hypothesis 2: Individuals with higher trait levels of workaholism experience a strengthened negative relationship between workday accumulation and job-related hedonic tone than individuals with lower trait workaholism.

Workaholism and momentary workload

To further enhance our understanding of the impact of workaholism on affective strain, we also explored whether workaholism acts as a moderator of the relationship between *momentary workload* and job-related hedonic tone. Workload (e.g., tasks to be accomplished, impending deadlines, time pressure) is a prominent stressor in the modern workplace (Reid & Ramarajan, 2016), and a powerful predictor of job-related stress outcomes (for a meta-analysis, see Bowling et al., 2015). Momentary workload is different from workday accumulation in that it represents the less systematic fluctuations in quantitative job demands, whose variability over workers' daily experiences likely depends on the type of job (for a meta-analysis, see Downes et al., 2021), and which might differently impact workers' mood over the workday (Grech et al., 2009). In particular, previous research consistently found that workload has negative affective consequences (Ilies et al., 2007, 2010), justifying the expectation for a negative relationship between momentary workload and hedonic tone.

Workaholic tendencies, by acting as an internally generated personal demand (see MacKay & Cooper, 1987), may represent a vulnerability factor predicting even stronger strain responses to high workload. A similar moderating role in the stressor-strain relationship was highlighted for type A behavior and negative affectivity (Spector et al., 2000), two dispositions sharing a number of characteristics with workaholism (Clark et al., 2016; Taris et al., 2005). Due to their tendency to 'naturally' spend high effort at work (inner drive), workaholics may have difficulty in accommodating the additional effort necessary to deal with job tasks. Furthermore, the compulsive working style and the workaholics' obsessiveness and perfectionism (see Clark et al., 2016) might lead to difficulties in time management, a particularly needed skill under high

workload. Such additional effort and lack of time management skills was expected to result in a strengthened affective reactivity to workload:

Hypothesis 3: Individuals with higher trait levels of workaholism experience a strengthened negative relationship between momentary workload and job-related hedonic tone than individuals with lower trait levels of workaholism.

Workaholism and gender

While workaholism may overall lead to serious stress-related outcomes, it has been proposed that women are particularly vulnerable to the potential negative consequences of workaholism (Clark et al., 2015). According to the gender-role expectation theory (see Shockley & Shen, 2016), men and women give culturally differential values to work and family roles as a consequence of the traditional and still rooted division of labor and gender socialization. Specifically, traditional gender roles in the Western societies dictate that men place more importance on, and identify more with, the work role, investing more time and energy at work. In contrast, women are culturally expected to identify with the family role, taking care of the household chores and, if present, children and other family members. Such internalized expectations, potentially generalizable to any woman educated in such cultural contexts, may lead to a more complex and psychologically demanding experience for workaholic women, as they must find a way to balance socially promoted investment in non-work-related activities with their internal drive to work hard and invest at work (Clark et al., 2015). That is, while feeling inner pressures to work and devoting time to work-related activities, women – differently from men – might perceive that they are doing something 'wrong' that contrasts with social expectations, possibly leading to higher tension, unsatisfaction, and strain. Furthermore, given our focus on mood, the consequences of internalized gender-role expectations might be further amplified by the notorious vulnerability of women towards emotional stress symptoms and mood-related disorders such as depression, anxiety, and job burnout (Purvanova & Muros, 2010; Riecher-Rössler, 2017).

Thus, although there are not clear gender differences in workaholism levels (Clark et al., 2016), it may be that women experience more negative workaholism consequences than men. Such a differential impact of workaholism has been already supported by two previous studies. The first one (Balducci et al., 2018) suggested that the cross-sectional relationship between workaholism and both self- and other-reported negative affect is stronger in women than in men. The second study (Balducci, Spagnoli, et al., 2022) found that the within-individual relationship between day-level workaholism and systolic blood pressure reported at the end of the working day was accentuated in women compared to men. Thus, to strengthen the credibility and generalizability of previous findings while advancing theory on the gendered implications of workaholism, we aimed at replicating previous results that:

Hypothesis 4: Women experience strengthened negative effects of trait-level workaholism on job-related hedonic tone compared to men.

Figure 1 summarizes the conceptual model of the study hypotheses presented above.

[FIGURE 1 ABOUT HERE]

Method

Participants

Data were collected between 2018 and 2019 as part of a larger project evaluating the measurement qualities of new tools for the ecological momentary assessment of workplace stress (Menghini et al., 2022). Participants were recruited within the university staff and the private network of the authors and their collaborators. As inclusion criteria, participants were required to work full-time in diurnal hours only, to be white-collar and mainly involved in back-office activities. Such criteria were applied to minimize potentially confounding factors such as night shift working, physical work, and frequent contact with patients or costumers. Participation was voluntary and anonymous. All participants signed an online informed consent before starting the study, which was approved by the Ethics Committee of the Departments of Psychology

(University of Padova, protocol 2760). Of 215 recruited participants, 49 were excluded due to missing responses to the preliminary and/or all ESM questionnaires, and eight due to incompatible jobs (e.g., nurses, night-shift workers). Moreover, to achieve a minimum response rate for computing reliable estimates of intraindividual variability, we arbitrarily chose to exclude further 19 participants that provided less than five ESM data entries over the three workdays (see González-Romá & Hernández, 2022).

The resulting sample consisted of 139 Italian-speaker workers (70 women, mean age ± SD = 35 ± 9.6 years). Most participants had a university degree (81.3%) and were employed in the private sector (69%). The most represented occupational groups were science and engineering professionals (22.3%), business and administration professionals (17.3%), business and administration associate professionals (15.8%), and general and keyboard clerks (10.1%). Most participants were subordinate employees (76%), whereas 21 participants (15%) reported working as employers or managers, and the remaining 9% worked on a temporary contract. On average, included participants reported working 42.3 ± 8.0 hours per week. 67 participants (48.2%; 35 women) reported to live with their partner, 27 (19.4%; 13 women) with their children, 25 (18%; 14 women) with their parents, 29 (21%; 11 women) with other people[1], and 20 participants (14.4%; 9 women) reported to live alone.

Design and Procedure

Following the initial contact, participants received an e-mail including a description of the study, the link to an online preliminary questionnaire (Typeform S.L., Barcelona, Spain), and the instructions for installing and using the open-source Sensus Mobile app (Xiong et al., 2016) on their smartphone. Responses were matched by asking participants to self-generate and input an identification code (e.g., using their mother's name initials, month of birth, etc.) both in the preliminary questionnaire and while configuring the mobile app. The app was programmed to

[1] With the exception of "living alone", such response categories were not mutually exclusive.

prompt seven ESM questionnaires per day over three non-consecutive workdays (i.e., Monday, Wednesday, and Friday), a duration and density of the assessment that was chosen in order to minimize participants burden while at the same time reaching a degree of representativeness of weekday variability. Participants could choose in which day starting the study protocol. ESM questionnaires were signaled with push notifications scheduled, respectively, at 9:15 AM ('baseline' questionnaire, available up to 10:15 AM) and each 90 ± 10 minutes (randomly determined) from 10:30 AM to 6:15 PM ('work' questionnaires, available up to 20 minutes from the signal) (see **Figure 2**). Since momentary workload was only measured by 'work' questionnaires, in the present study we only considered the data from six time points per day (i.e., 'work' questionnaire only). Participants were instructed to ignore the signals when necessary (e.g., during meetings), and especially if they were not at work (e.g., during lunch breaks).

[FIGURE 2 ABOUT HERE]

Measures

Preliminary questionnaire

The preliminary questionnaire included questions on demographic and job-related characteristics (e.g., gender, age, job position), in addition to a set of scales measuring trait-level constructs, of which only workaholism was considered in the present study.

Trait-level workaholism was measured with the Dutch Work Addiction Scale (DUWAS; Schaufeli, Shimazu, et al., 2009), which uses 10 items reflecting two strongly correlated components, namely working compulsively (e.g., "I feel that there's something inside me that drives me to work hard") and working excessively (e.g., "I stay busy and keep many irons in the fire"). Such operationalization was used in line with the areas of consensus across different workaholism definitions (see Clark et al., 2016), with the DUWAS having been widely used also with heterogeneous samples of workers such that used in the present study. Additionally, the DUWAS has been validated in the national context of the present study (Balducci et al., 2017), showing good internal consistency and test-retest reliability, configural invariance with the Dutch

version, and expected correlations with well-being indicators. Responses were given on a four-point Likert scale from 1 (*Never or almost never*) to 4 (*Almost always or always*). Following previous operationalizations based on the idea that workaholism acts as a syndrome (i.e., two characteristics that go together) (see van Beek et al., 2011), we computed the global trait workaholism score by averaging the scores of the 10 items, showing satisfactory reliability (Cronbach's α [95% CI] = .79 [.73, .84])[2].

ESM measures

Momentary hedonic tone was measured with three items from the Italian adaptation of the Multidimensional Mood Questionnaire (Menghini et al., 2022; Wilhelm & Schoebi, 2007), introduced by the instruction "How do you feel right now?". Responses were given on a seven-point bipolar slider scale (i.e., *very unwell-very well*; *very content-very discontent*; *in a very positive-in a very negative state*). Negatively worded items were recoded so that higher scores indicated more positive ratings, and the mean score was computed for each data entry as an index of momentary hedonic tone. The measure showed satisfactory reliability (see Geldhof et al., 2014) at both intra- (ω-within = .73) and interindividual level (ω-between = .96).

Momentary workload was measured with the four-item Task Demand Scale (TDS) (Menghini et al., 2022), which was developed based on the Quantitative Workload Inventory (Spector & Jex, 1998) (e.g., "I had to do too much"). Items were introduced by the instruction "In relation to the main job task performed in the last 10 minutes …", and they were rated on a slider scale from 1 (*Not at all*) to 7 (*Very much*). The mean score was computed for each occasion as an index of momentary workload, showing satisfactory level-specific reliability (ω-within = .83, ω-between = .85). Workload scores were person-mean-centered before running the analyses in

[2] While recent studies (Gillet et al., 2018, 2022; Huyghebaert-Zouaghi et al., 2021) supported a bifactor model of workaholism, their findings also suggest that it is the global level of workaholism that shows the highest predictive value on well-being (e.g., emotional exhaustion) and job satisfaction measures, with little added value attributed to the working compulsively and working excessively components when the global score is included as a predictor. Due to this, and considering the need for parsimonious models, we only focused on the total DUWAS score.

order to focus the parameter estimates at the intraindividual level (see González-Romá & Hernández, 2022).

Workday accumulation

Workday accumulation was operationalized based on the sequence number of the ESM questionnaire within the workday, which could vary from 0 (i.e., the first 'work' questionnaire, signaled around 10:30) to 5 (i.e., the last questionnaire, signaled around 18:30). Thus, the intercept value for this variable corresponded to the first 'work' questionnaire in the morning.

Data analysis

Data analysis was conducted with Mplus 8.4 (Muthén & Muthén, 2017). Both the data and the data analysis syntax and output files are openly available in the Supplementary Materials. Following the inspection of univariate and bivariate distributions, a set of multilevel regression models was specified using the maximum likelihood estimator to predict hedonic tone by workaholism and its interactions with workday accumulation, momentary workload, and participants' gender. Multilevel modeling is widely used to deal with nested data structures including variables at both a lower (level 1) and a higher level (level 2), and when isomorphic constructs are conceptualized (González-Romá & Hernández, 2022; Stapleton et al., 2016). It is the case, here, of job-related hedonic tone, whose individual mean level (trait) is assumed to emerge as the level-2 aggregate of the momentary levels (states) of hedonic tone experienced at work over multiple time points (see Figure 1 and Figure 2). Here, we simultaneously modeled the variability in hedonic tone at both level 1 (intraindividual fluctuations around the mean level) and level 2 (individual differences in mean levels) conditional to the individual level of workaholism (level 2) and its interactions with both level-1 (workday accumulation and momentary workload) and level-2 predictors (sex).

Predictors were hierarchically added to an unconditional null model M0 only including the random intercept for individual variability in hedonic tone. First, in model M1 we included the

main effects of level-1 predictors (i.e., workday accumulation and momentary workload) and all level-2 variables except workaholism, namely sex, age, job position (i.e., employee and temporary contract workers vs. managers and employers), and weekly work hours. Second, in model M2, which we used to test Hypothesis 1, we added workaholism. Then, in model M3 we additionally estimated the random slopes of workday accumulation and momentary workload, and the covariance between random effects. In models M4 and M5 we examined, respectively, the cross-level interaction of workday accumulation by workaholism (Hypothesis 2) and momentary workload by workaholism (Hypothesis 3). Finally, in Model M6 we tested the level-2 interaction between workaholism and gender (Hypothesis 4). For each interactive model (i.e., M4, M5, and M6), the baseline model for testing the interactive term was model M3.

At each step, models were compared based on the likelihood ratio test (one-tailed, with significant level set at $p < .05$) and the Akaike weight (Aw), quantifying the strength of evidence (likelihood and parsimony) of each model from 0 to 1, conditional to the set of considered models (Wagenmakers & Farrell, 2004). We interpreted significant likelihood ratios, higher Aw than previous models, and high coefficient/standard error ratios as signs of substantial effects.

Data, materials, and code

All data and data analysis materials have been made publicly available at the Open Science Framework repository and can be accessed at the following link: https://osf.io/7ryu4/

Results

After the removal of incomplete and double responses, the sample consisted of 1,502 observations out of 2,502 scheduled ESM questionnaires (mean response rate ± SD = 60.03% ± 15.84%). On average, included participants responded to 10.8 ± 2.9 out of 18 scheduled ESM questionnaires.

As a preliminary analysis, we used the *lavaan* package (version 0.6.12; Rosseel, 2012) in R 4.2.0 (R Development Core Team, 2018) to evaluate the fit of the measurement model assuming

the distinctiveness of the study variables across levels. In the hypothesized model, hedonic tone and momentary workload were specified as two distinct latent factors at both levels, while workaholism was included as a third factor at level 2, being reflected by two item parcels (i.e., working excessively and working compulsively) to account for the small level-2 sample size relative to the number of DUWAS items (see Little et al., 2002). The fit of the hypothesized model was satisfactory ($\chi^2(37) = 86.45$, RMSEA = .030, CFI = .987, SRMR-within = .024, SRMR-between = .051) and better than two alternative models combining momentary workload either with workaholism at level 2 ($\chi^2(39) = 138.17$, RMSEA = .041, CFI = .974, SRMR-within = .024, SRMR-between = .090) or with hedonic tone at both levels ($\chi^2(40) = 1179.82$, RMSEA = .138, CFI = .706, SRMR-within = .147, SRMR-between = .212), respectively.

Table 1 reports the descriptive statistics of the considered variables. Overall, the sample reported quite symmetrical distributions of both hedonic tone, workload, and workaholism ratings. Intraclass correlation coefficients indicated that most of the variance in hedonic tone and workload was located at the intraindividual level (level 1), but with still substantial level-2 variability. At level 2, workaholism only showed a weak and nonsignificant negative correlation with hedonic tone (r = -.14, p = .20), while being moderately and positively correlated with momentary workload (r = .32, p < .001) and weekly work hours (r = .37, p < .001). Hedonic tone showed significant, although weak, negative correlations with both workload (at both levels) and workday accumulation (at level 1).

[TABLE 1 ABOUT HERE]

Table 2 reports the results of the specified multilevel models. Model M2 including workaholism showed significantly improved fit compared to M1 ($\chi^2(1) = 5.91$, p = .02) and stronger evidence than both M0 and M1 (Aw = .88), with workaholism uniquely contributing by explaining 4.31% in the hedonic tone intercept variance. The model predicted a negative relationship between workaholism and momentary hedonic tone (B = -0.31, SE = 0.13, t = -2.46) over and above the other predictors, indicating that workers with stronger workaholic tendencies

reported, on average, lower levels of momentary hedonic tone at work across the collected observations. Such negative relationship was consistent across the following models M3-M6.

[TABLE 2 ABOUT HERE]

Models M1 and M2 also showed that both workday accumulation and momentary workload were negatively related with momentary hedonic tone. That is, participants reported progressively lower hedonic tone as the workday accumulated (i.e., later responses in the day), and lower levels of hedonic tone in those occasions with higher workload than usual. Again, these relationships were consistent across the following models, including model M3 in which we freed the slopes of workday accumulation and momentary workload, finding a significant amount of slope variance between individuals for both predictors (see Table 2). Model M3, which also included the covariances between the random slopes and between each slope and the random intercept, produced a significantly better fit than model M2 ($\chi^2(5) = 32.79$, $p < .001$), and stronger evidence compared to M0, M1, and M2 (Aw = .99).

The interactive model M4 led to a better fit than M3 ($\chi^2(1) = 4.22$, $p = .04$) and stronger evidence than all preceding models (Aw = .75), explaining 14.29% of the slope variance for workday accumulation. However, contrary to our expectations, we found that workaholism weakened rather than strengthening the negative relationship between workday accumulation and hedonic tone (B = 0.06, SE= 0.03, $t = 2.08$). As shown in Figure 3, simple slope analysis based on Preacher et al. (2006) revealed that participants with lower levels of workaholism (i.e., mean of the sample - 1 SD) showed a linear decrease in hedonic tone throughout the workday (B = -0.19, SE = 0.04, $t = -4.31$), whereas participants with higher workaholism levels (i.e., mean + 1 SD) showed an almost flat and nonsignificant trend (B = -0.03, SE = 0.04, $t = -0.77$).

[FIGURE 3 ABOUT HERE]

In model M5, we modified model M3 by including the cross-level interaction between workaholism and momentary workload. Again, this resulted in a significantly better fit than model M3 ($\chi^2(1) = 6.60$, $p = .01$) and stronger evidence than models M0-M3 (Aw = .91), explaining 8.70%

of the slope variance for momentary workload. However, again contrary to our expectations, we found that workaholism weakened rather than strengthening the negative relationship between momentary workload and hedonic tone (B = 0.14, SE = 0.06, *t* = 2.60), with simple slope analysis (see Figure 3) indicating that a negative relationship between momentary workload and hedonic tone was shown by individuals with lower workaholism levels (B = -0.19, SE = 0.04, *t* = -4.34), whereas a flatter pattern was shown by individuals with higher workaholic tendencies (B = -0.04, SE = 0.04, *t* = -0.88).

Finally, in model M6 we modified model M3 by including the level-2 interaction between workaholism and gender. This resulted in a better fit than model M3 ($\chi^2(1) = 7.79$, $p = .01$) and stronger evidence than models M0-M3 (Aw = .95), with the workaholism-by-gender interaction explaining 5.75% of the hedonic tone intercept variance. As expected, the negative sign of the interaction term (B = -0.65, SE = 0.23, *t* = -2.83) indicated a stronger negative relationship between workaholism and hedonic tone in women compared to men. Coherently, simple slope analyses (see Figure 3) showed that workaholism was negatively and significantly related with the average hedonic tone in women (B = -0.63, SE = 0.17, *t* = -3.74), while the relationship was not significant in men (B = 0.02, SE = 0.17, *t* = 0.11).

Robustness checks

A robustness check was performed by reproducing the analyses with a different subsample including all the 160 participants with one or more responses to the ESM questionnaires. This less strict inclusion criterion (see Participants section above), implying 21 additional participants for a total of 1,552 observations, led to the same results obtained with the main sample described above (see Supplementary Materials). We also conducted a second check by including all the three tested interactions (i.e., workday accumulation by workaholism, momentary workload by workaholism, and workaholism by gender) in the same model (model M7). Results confirmed what reported above for the interaction between workaholism and both workload and gender, whereas the cross-level interaction with workday accumulation dropped

above the significance level (B = 0.05, SE = 0.03, t = 1.80, p = .07), suggesting that, of the three interactions, the latter was perhaps the less robust one. Again, these results were consistent in both the main and the full sample (see Supplementary Materials).

Discussion

Workaholism is a phenomenon that draws increasing attention both inside and outside the academia. It is a current issue characterized by a nonignorable prevalence (Andreassen et al., 2019; Sussman, 2012) and impact on health, well-being, and interpersonal relationships (e.g., Shimazu et al., 2020). Whereas our understanding of its correlates and outcomes has greatly advanced (Clark et al., 2016; Schaufeli, Shimazu, et al., 2009; Taris et al., 2012), less attention has been posed on the affective nature of workaholism, with most studies being based on cross-sectional evidence and retrospective reports obtained outside the working time. In this study, we aimed at shedding new and original light on the affective nature of workaholism by investigating its relationships with the momentary affective states experienced during work, and the emotional reactivity to two job stressors, namely workload and workday accumulation. Given that work is so central for workaholics, investigating their psychological functioning while they are immersed in work-related activities is crucial to characterize their affective experience.

Our results corroborated the predicted negative relationship between workaholism and job-related momentary hedonic tone (Hypothesis 1), showing that individuals with higher trait workaholism experienced, on average, lower hedonic tone during the working time compared to individuals with lower workaholic tendencies. In other words, at the between-person level workaholism implies worse mood not only outside work, which is considered as a definitional aspect of the phenomenon (Clark et al., 2020), but also during work. On the one hand, this result contrasts with previous studies (e.g., Kirrane et al., 2017; Ng et al., 2007) supporting the idea that workaholics experience higher levels of positive affect while working. On the other hand, it is in line with some recent studies indicating negative job-related affective experiences in workaholics

(e.g., Balducci et al., 2021), and with the notion that the high effort normally invested by workaholics is accompanied by an accentuated level of job strain, of which affective strain is a well-established psychological indicator (Perrewé & Zellars, 1999; Pindek et al., 2019). This result is also compatible with addiction theories (Robinson & Berridge, 2003) according to which when symptoms of addiction have developed (i.e., compulsion and excessive work in the case of workaholism) an enduring dysphoric state consolidates, leading to negative mood even when the individual is immersed in the addiction experience.

Importantly, addiction theory (Robinson & Berridge, 2003) also suggests that biological stress pathways are involved in fueling such a dysphoric state, further validating the idea that stress symptoms are prevalent in workaholics also during work. When chronically experienced, stress and its correlates, including affective reactions, may open the way to more serious health and well-being conditions such as burnout and cardiovascular disorders, which have been repeatedly found to be associated with workaholism (Balducci, Spagnoli, et al., 2022; Salanova et al., 2016; Schaufeli, Bakker, et al., 2009). Thus, the results of the present study add further pieces of evidence on the processes leading from workaholism to ill health by shedding light on the everyday work-related affective experiences that may constitute the initial stage of health impairment (see Pindek et al., 2019). Future studies might build on this result to better investigate the causal paths from short-term workaholics' experience to long-term disease.

Our results are also in line with our expectation that momentary hedonic tone decreases as the workday accumulates and that workaholic tendencies modulate such relationship. However, contrarily to our expectations (Hypothesis 2), we found that workaholics reported lower hedonic tone reductions as the workday accumulated, and specifically that their hedonic tone did not change with the passage of time, contrarily to the decreasing trend exhibited by individuals with lower workaholic tendencies. Such result does not support our prediction that, because workaholics work hard and in a compulsive way while suppressing recovery experiences

(e.g., pauses and breaks), they report accentuated strain reactions (e.g., negative mood trend) as the workday accumulates.

Similarly, we found that workaholism moderated the momentary workload-hedonic tone relationship (Hypothesis 3), but again the direction of such moderation was opposite to our expectation. That is, the negative intraindividual relationship between momentary workload and hedonic tone was less accentuated for individuals with higher trait levels of workaholism. Thus, whereas previous research consistently showed negative affective implications of workload (Bowling et al., 2015; Ilies et al., 2010; Pindek et al., 2019), as corroborated by our study for low-workaholism individuals, this was not shown by individuals with stronger workaholic tendencies.

In both cases, a possible interpretation of our findings is that workaholics are more resistant or tolerant to job stressors, and specifically to workday accumulation and increased workload, compared to their colleagues. This would also be compatible with the idea, based on the person-environment fit hypothesis (French et al., 1982), that higher workload and sustained work time are welcome by workaholics since they fulfill their need to stay busy and absorbed in their work (see Schaufeli et al., 2008). This interpretation, however, would have been supported by a positive relationship between workday accumulation, or momentary workload, and job-related hedonic tone among workaholics, which was not the case of our results, showing a rather flat trend in hedonic tone over the levels of both predictors. Moreover, the hypothesis of higher tolerance/resistance to the investigated job stressors, which might tempt employers to recruit more collaborators with workaholic tendencies, contrasts with the lack of evidence of higher workaholics' job performance compared to nonworkaholics (see Clark et al., 2016).

Whereas such explanation falls short in accounting for workaholics' emotion dynamics, the normal ups and downs in daily mood in response to fluctuating work effort might be compromised by a prolonged lack of recovery (e.g., Molino et al., 2018; Spagnoli et al., 2019), leading to a chronic strain condition. For instance, workaholism was found positively related with the time spent working in the evening during off-job hours (Bakker et al., 2013), which clearly

restricts opportunities for recovery. Such altered conditions might result in a floor effect implying an already low hedonic tone at the beginning of the workday, and a lower reactivity to job stressors. In other words, our results are compatible with a dysregulation of the psychophysiological stress pathways in workaholics, making them less responsive, rather than more tolerant/resistant, to transient job stressors. That is, external stressors do not have much room for changing significantly affective experiences, which are already negatively connotated. A related explanation is that workaholics may be characterized by inertia of negative emotions, the individual tendency of experiencing negative affective states that carry over across time and are resistant to change (Koval et al., 2015; Kuppens et al., 2010). Whereas the ability to adapt one's emotional responses to the peculiarities of environmental stimuli is a key component of emotion regulation, individuals with higher emotional inertia tend to be less responsive, and thus to adapt less effectively to environmental demands (see Kuppens et al., 2010). Particularly, in line with the arguments above, inertia of negative emotions has been related to a number of indicators of psychological maladjustment such as emotional exhaustion (Alessandri et al., 2021; De Longis et al., 2022), a key correlate of workaholism (see Clark et al., 2016).

A similar blunted reactivity of affective as well as physiological stress mediators (e.g., flattened cortisol response) has been repeatedly documented, for instance, in major depressive disorder (Dedovic & Ngiam, 2015; Kuppens et al., 2010), being linked to poorer health outcomes in the longer run. Indeed, the failure to adequately respond to environmental stressors (inadequate response or hypoactivity) (see also Geurts & Sonnentag, 2006) has been identified among the main types of allostatic load (McEwen, 2006), possibly leading to a compensatory increase in the activity of other stress mediators (e.g., Stojanovich & Marisavljevich, 2008), and thus to psychophysiological dysregulation and health impairment.

A further explanation alternative to the 'tolerance/resistance' hypothesis is that workaholics are just less aware of, or sensitive to, the short-term effects of job stressors, eventually resulting in the same outcomes affecting their colleagues, or even worse. Lack of

awareness and lack of clarity of emotional responses are core dimensions of emotion dysregulation (Gratz & Roemer, 2008) with important psychosomatic health implications and potential links with the 'blunted reactivity' hypothesis described above (see Kanbara & Fukunaga, 2016). Indeed, based on the hypoarousal model of alexithymia, it is the attenuated autonomic reactivity to stressors (possibly associated with higher baseline level of psychophysiological arousal) that inhibits the correct perception of emotional signals (Kanbara & Fukunaga, 2016; Neumann et al., 2004). However, whereas lack of emotional awareness and clarity have been found prevalent in individuals with other behavioral addictions such as gamblers (Marchica et al., 2020; Williams et al., 2012), emotion (dis)regulation is currently uncovered by workaholism research. Overall, there is a clear need for further ESM studies replicating these potentially controversial findings by focusing on the emotional correlates of workaholism both inside and outside the work environment. Particularly, the consideration of workaholics' emotion (dys)regulation, including emotional inertia, might help disambiguating the alternative interpretations that we provided for our results.

Finally, our results corroborated the expected interaction between workaholic tendencies and gender (Hypothesis 4), suggesting a stronger negative impact of workaholism on hedonic tone in women compared to men. Such result is not new in the literature but replicates and strengthens the credibility of previous findings on the peculiar workaholism implications for women (Balducci et al., 2018; Balducci, Spagnoli, et al., 2022). Clark et al. (2015) theorized that workaholic women, differently from men, may face stronger social norms that encourage greater participation in the home rather than the work domain and a potential inner clash regarding their role as 'good women' vs. 'good employees'. Workaholic women may also experience more explicit pressure from significant others who disagree with their decision to immerse themselves in the work domain at the expenses of home-related activities. As a result, workaholic women are expected to experience higher levels of negative outcomes, both self-inflicted (e.g., guilt) and inflicted by others (e.g., societal pressures), compared to workaholic men. Nevertheless, while

we consider these and previous findings as mainly informative of culturally-mediated processes, further research is needed to weight the role of both cultural (e.g., social norms) and individual factors (e.g., family responsibilities). For instance, Buchanan et al. (2022) recently found that workaholic mothers do not actually spend less parenting time as their working time increases, possibly implying further strain due to the anticipation of the effort required by family demands after work.

Limitations and implications

Our study limitations include the relatively small sample of workers involved and the short length of the data collection period, both implying threats to the results generalizability. On the one hand, ESM studies are notably time-consuming and rarely conducted with large representative samples (Gabriel et al., 2019). On the other hand, by sampling up to seven measurements per workday we placed a substantial burden on our participants, and further increasing the number of sampled days would have implied nonignorable ethical concerns and possibly lower compliance (Kirtley, 2022). Indeed, even by only sampling three workdays of the same week, we obtained a relatively low response rate, possibly due in part to the lack of monetary incentives (see Gabriel et al., 2019) and face-to-face interactions with participants (i.e., recruitment and data collection were completely automatized). The lack of in-presence meetings might have also had negative implications for participant compliance with the study instructions. Particularly, although participants were instructed to respond to the ESM surveys only if they were working, we could not assure that this was actually done for each measurement. Including an additional item checking this condition (e.g., “Are you currently working?”) might have been useful to filter cases deviating from the study instructions. However, also this kind of measures do not guarantee compliance if participants are not motivated enough (see Gabriel et al., 2019; Ohly et al., 2010), a condition that we tried to ensure by building interest towards the study and a spirit of collaboration and trust between participants and the research team.

A further concern is that job positions with known high levels of workaholism such as managers and higher-level professionals (see Taris et al., 2012) were poorly represented in our sample. Although the DUWAS scores obtained in our study were similar to those reported in previous studies (e.g., Balducci et al., 2018; van Beek et al., 2011), it may be advisable for future research to better focus on such occupations to have more participants potentially affected by the phenomenon. Regarding the DUWAS, it was the most used and empirically supported measure available at the time of data collection, providing a global indicator of the two most widely acknowledged dimensions of the phenomenon (see Clark et al., 2016). Yet, recent advancements in workaholism measurement provided initial support to more nuanced operationalizations, such as the Multidimensional Workaholism Scale (Clark et al., 2020), which might be considered by future studies aimed at replicating our findings. Similarly, future studies might consider investigating the same research questions by focusing on the state-level component of workaholism (e.g., Balducci, Spagnoli, et al., 2022; Clark et al., 2021).

Our results on the gendered implications of workaholism should be interpreted with particular caution due to the fact that we did not investigate participants' family responsibilities. Indeed, we emphasized the role of culturally-mediated gender role expectations as the main explanatory mechanisms of the unique tension that workaholic women may experience (Clark et al., 2015). Such expectations are still very widespread in the Italian context. For example, a recent national representative survey (Italian National Institute of Statistics, 2019) reported an agreement rate over 30% for statements such as "for a man, more than for a woman, it is very important to be successful at work" and "men are less suitable for doing housework". Yet, our arguments and the associated method are implicitly based on the assumption that gender role expectations affect uniformly almost all women in the Western societies, independently of their specific family and (sub)cultural contexts. On the contrary, specific family responsibilities are likely to play a major role in determining the strength of gender role expectations. For instance, living with young children might expose women to stronger expectations than living with their

parents or with their partner only. Similarly, gender role expectations have been found to exhibit substantial variation between families and sub-cultural groups (e.g., Marks et al., 2009; van de Vijver, 2007), with more egalitarian vs. traditional beliefs leading to potentially different well-being implications for (workaholic) women. Consequently, as highlighted above, future studies should take a more fine-grained approach to investigate the gendered implications of workaholism, for example by controlling for the actual level of family responsibilities and by considering potentially important factors such as cultural orientations and socioeconomic status.

Overall, we acknowledge the lack of objective indicators as another limitation of our study, partially due to the self-reported nature of the investigated phenomena and the heterogeneity of included occupations. Although the temporal separation between workaholism and hedonic tone measurement likely reduced the risk of common method bias (see Beal, 2015), future studies should attempt to corroborate our findings with multimethod approaches, while also including additional job demands and outcome variables, and considering alternative operationalizations of workaholism (Clark et al., 2020; Gillet et al., 2022).

In terms of implications, our research highlights that workaholism is associated with a lower hedonic tone during working time and that such condition seems to be enduring and hyporeactive to everyday challenges such as workload and workday accumulation, potentially depicting a chronic negative mood state. As a consequence, our study raises some concerns on the fit of workaholics for managerial positions, considering that their negative mood might not only undermine their own health and well-being, but also spread to others (e.g., Kensbock et al., 2022). Additionally, the lowered mood of workaholics may be responsible for aggressive behavior at work (Balducci, Menghini, et al., 2022; Neuman & Baron, 2005), implying further potential catastrophic consequences at the individual, organizational, and societal level.

Organizations should not only seriously consider screening managers and employees for their workaholic tendencies, possibly intervening with individual counseling when needed (tertiary prevention). They should also attempt to provide collaborators with adequate resources

and skills (e.g., emotional awareness and emotional clarity) to recognize and cope with the potential outcomes of workaholism (secondary prevention), and especially to create a psychosocial work environment that discourages workaholic behavior (primary prevention), (see Balducci et al., 2018). This may be implemented, for instance, by promoting policies on the importance of disconnecting from work, or training activities on the positive role of recovery experiences for both health and job performance. If organizations send clear messages to their employees on these crucial issues, they may create an organizational climate that dampens excessive and dysfunctional work investment.

In contrast, fueling a competitive climate, where working during evenings and weekends is considered the norm and even reworded, either explicitly or implicitly (see Reid & Ramarajan, 2016), would lead to opposite results and perhaps even to the development and consolidation of workaholism. Indeed, it has been argued that chronic exposure to demanding working conditions and environments may change personality characteristics even after relatively short periods of time (Smallfield & Kluemper, 2021), suggesting that workaholism might be, at least in part, a by-product of modern working conditions. Coherently, Pfeffer (2018) convincingly argued that the widespread idea that more work hours produce more output is simply incorrect: after some time, workers become exhausted, producing more errors. According to Pfeffer (2018), research is consistent in showing that above a certain threshold, reducing work hours can improve both health and productivity, whereas keeping such unsustainable job demands unnecessarily leads people to suffer and even die for a paycheck.

Supplementary Materials

The following supplementary materials are available online from the open repository available at <https://osf.io/7ryu4/>:

- S1: Main analysis Mplus files (inputs and outputs) on the main sample (N = 1,502).
- S2: Simple slope analysis Mplus files (inputs and outputs) on the main sample.

- S3: R script with additional analyses (i.e., sample description, reliability, descriptive statistics and correlations, likelihood ratio tests, Akaike weights, plotting of simple slope analyses).
- S4: Datasets used in the main analyses (N = 1,502) and the robustness check (N = 1,552), with data dictionary.
- S5: Robustness check Mplus files from the full sample (N = 1,552).

References

Alessandri, G., De Longis, E., & Cepale, G. (2021). Emotional inertia emerges after prolonged states of exhaustion: Evidences from a measurement burst study. *Motivation and Emotion*, *45*(4), 518–529. https://doi.org/10.1007/s11031-021-09884-4

Alessandri, G., De Longis, E., Perinelli, E., Balducci, C., & Borgogni, L. (2020). The Costs of Working Too Hard. Relationships Between Workaholism, Job Demands, and Prosocial Organizational Citizenship Behavior. *Journal of Personnel Psychology*, *19*(1), 24–32. https://doi.org/10.1027/1866-5888/a000240

Andreassen, C. S. (2014). Workaholism: An overview and current status of the research. *Journal of Behavioral Addictions*, *3*(1), 1–11. https://doi.org/10.1556/JBA.2.2013.017

Andreassen, C. S., Nielsen, M. B., Pallesen, S., & Gjerstad, J. (2019). The relationship between psychosocial work variables and workaholism: Findings from a nationally representative survey. *International Journal of Stress Management*, *26*(1), 1–10. https://doi.org/10.1037/str0000073

Andreassen, C. S., Schaufeli, W. B., & Pallesen, S. (2018). Myths about "The myths about work addiction." *Journal of Behavioral Addictions*, *7*(4), 858–862. https://doi.org/10.1556/2006.7.2018.126

Ashkanasy, N. M., & Dorris, A. D. (2017). Emotions in the Workplace. *Annual Review of*

Organizational Psychology and Organizational Behavior, *4*(1), 67–90. https://doi.org/10.1146/annurev-orgpsych-032516-113231

Atroszko, P. A., Demetrovics, Z., & Griffiths, M. D. (2019). Beyond the myths about work addiction: Toward a consensus on definition and trajectories for future studies on problematic overworking. *Journal of Behavioral Addictions*, *8*(1), 7–15. https://doi.org/10.1556/2006.8.2019.11

Bakker, A. B., Demerouti, E., & Burke, R. (2009). Workaholism and relationship quality: A spillover-crossover perspective. *Journal of Occupational Health Psychology*, *14*(1), 23–33. https://doi.org/10.1037/a0013290

Bakker, A. B., Demerouti, E., Oerlemans, W., & Sonnentag, S. (2013). Workaholism and daily recovery: A day reconstruction study of leisure activities. *Journal of Organizational Behavior*, *34*(1), 87–107. https://doi.org/10.1002/job.1796

Balducci, C., Avanzi, L., Consiglio, C., Fraccaroli, F., & Schaufeli, W. (2017). A Cross-National Study on the Psychometric Quality of the Italian Version of the Dutch Work Addiction Scale (DUWAS). *European Journal of Psychological Assessment*, *33*(6), 422–428. https://doi.org/10.1027/1015-5759/a000300

Balducci, C., Avanzi, L., & Fraccaroli, F. (2018). The Individual "Costs" of Workaholism: An Analysis Based on Multisource and Prospective Data. *Journal of Management*, *44*(7), 2961–2986. https://doi.org/10.1177/0149206316658348

Balducci, C., Menghini, L., Conway, P. M., Burr, H., & Zaniboni, S. (2022). Workaholism and the Enactment of Bullying Behavior at Work: A Prospective Analysis. *International Journal of Environmental Research and Public Health*, *19*(4), 2399. https://doi.org/10.3390/ijerph19042399

Balducci, C., Spagnoli, P., Avanzi, L., & Clark, M. (2021). A daily diary investigation on the job-

related affective experiences fueled by work addiction. *Journal of Behavioral Addictions*, *9*(4), 967–977. https://doi.org/10.1556/2006.2020.00102

Balducci, C., Spagnoli, P., Toderi, S., & Clark, M. A. (2022). A within-individual investigation on the relationship between day level workaholism and systolic blood pressure. *Work & Stress*, *36*(4), 337–354. https://doi.org/10.1080/02678373.2021.1976883

Barsade, S. G., & Gibson, D. E. (2007). Why Does Affect Matter in Organizations? *Academy of Management Perspectives*, *21*(1), 36–59. https://doi.org/10.5465/amp.2007.24286163

Baruch, Y. (2011). The positive wellbeing aspects of workaholism in cross cultural perspective. *Career Development International*, *16*(6), 572–591. https://doi.org/10.1108/13620431111178335

Beal, D. J. (2015). ESM 2.0: State of the Art and Future Potential of Experience Sampling Methods in Organizational Research. *Annual Review of Organizational Psychology and Organizational Behavior*, *2*(1), 383–407. https://doi.org/10.1146/annurev-orgpsych-032414-111335

Beedie, C., Terry, P., Lane, A., Beedie, C., Terry, P., Lane, A., Beedie, C. J., Terry, P. C., & Lane, A. M. (2010). *Distinctions between emotion and mood Distinctions between emotion and mood*. *9931*(2005). https://doi.org/10.1080/02699930541000057

Benedetti, A. A., Diefendorff, J. M., Gabriel, A. S., & Chandler, M. M. (2015). The effects of intrinsic and extrinsic sources of motivation on well-being depend on time of day: The moderating effects of workday accumulation. *Journal of Vocational Behavior*, *88*, 38–46. https://doi.org/10.1016/j.jvb.2015.02.009

Bowling, N. A., Alarcon, G. M., Bragg, C. B., & Hartman, M. J. (2015). A meta-analytic examination of the potential correlates and consequences of workload. *Work and Stress*, *29*(2), 95–113. https://doi.org/10.1080/02678373.2015.1033037

Buchanan, T., McFarlane, A., & Das, A. (2022). Gendered perceptions of workaholism and the gender gap in parenting time. *Families, Relationships and Societies*, *11*(1), 63–81. https://doi.org/10.1332/204674320X16019188269254

Clark, M. A., Beiler, A. A., & Zimmerman, L. M. (2015). Examining the work–family experience of female workaholics. In M. J. Mills (Ed.), *Gender and the work-family experience* (pp. 313–327). Springer.

Clark, M. A., Hunter, E. M., & Carlson, D. S. (2021). Hidden costs of anticipated workload for individuals and partners: Exploring the role of daily fluctuations in workaholism. *Journal of Occupational Health Psychology*, *26*(5), 393–404. https://doi.org/10.1037/ocp0000284

Clark, M. A., Michel, J. S., Zhdanova, L., Pui, S. Y., & Baltes, B. B. (2016). All Work and No Play? A Meta-Analytic Examination of the Correlates and Outcomes of Workaholism. *Journal of Management*, *42*(7), 1836–1873. https://doi.org/10.1177/0149206314522301

Clark, M. A., Smith, R. W., & Haynes, N. J. (2020). The Multidimensional Workaholism Scale: Linking the conceptualization and measurement of workaholism. *Journal of Applied Psychology*, *105*(11), 1281–1307. https://doi.org/10.1037/apl0000484

De Longis, E., Alessandri, G., Sonnentag, S., & Kuppens, P. (2022). Inertia of negative emotions at work: Correlates of inflexible emotion dynamics in the workplace. *Applied Psychology*, *71*(2), 380–406. https://doi.org/10.1111/apps.12325

Dedovic, K., & Ngiam, J. (2015). The cortisol awakening response and major depression: examining the evidence. *Neuropsychiatric Disease and Treatment*, *11*, 1181. https://doi.org/10.2147/NDT.S62289

Dordoni, P., Kraus-Hoogeveen, S., Van Der Heijden, B. I. J. M., Peters, P., Setti, I., & Fiabane, E. (2019). Live to Work or Work to Live? An Age-Moderated Mediation Model on the Simultaneous Mechanisms Prompted by Workaholism Among Healthcare Professionals.

Frontiers in Psychology, *10*(APR), 1–12. https://doi.org/10.3389/fpsyg.2019.00868

Downes, P. E., Reeves, C. J., McCormick, B. W., Boswell, W. R., & Butts, M. M. (2021). Incorporating Job Demand Variability Into Job Demands Theory: A Meta-Analysis. *Journal of Management*, *47*(6), 1630–1656. https://doi.org/10.1177/0149206320916767

European Agency for Safety and Health at Work (EU-OSHA). (2018). *Foresight on new and emerging occupational safety and health risks associated with digitalisation by 2025*. Publications Office of the European Union. https://doi.org/10.2802/515834

Fleeson, W. (2017). The production mechanisms of traits: Reflections on two amazing decades. *Journal of Research in Personality*, *69*, 4–12. https://doi.org/10.1016/j.jrp.2017.07.003

French, J. R. P., Caplan, R. D., & Van Harrison, R. (1982). *The Mechanisms of Job Stress and Strain*. Wiley.

Gabriel, A. S., Podsakoff, N. P., Beal, D. J., Scott, B. A., Sonnentag, S., Trougakos, J. P., & Butts, M. M. (2019). Experience Sampling Methods: A Discussion of Critical Trends and Considerations for Scholarly Advancement. *Organizational Research Methods*, *22*(4), 969–1006. https://doi.org/10.1177/1094428118802626

Geldhof, G. J., Preacher, K. J., & Zyphur, M. J. (2014). Reliability estimation in a multilevel confirmatory factor analysis framework. *Psychological Methods*, *19*(1), 72–91. https://doi.org/10.1037/a0032138

George, J. M. (2000). Emotions and Leadership: The Role of Emotional Intelligence. *Human Relations*, *53*(8), 1027–1055. https://doi.org/10.1177/0018726700538001

Geurts, S. A. E., & Sonnentag, S. (2006). Recovery as an explanatory mechanism in the relation between acute stress reactions and chronic health impairment. *Scandinavian Journal of Work, Environment & Health*, *32*(6), 482–492. https://doi.org/10.5271/sjweh.1053

Gillet, N., Morin, A. J. S., Ndiaye, A., Colombat, P., Sandrin, E., & Fouquereau, E. (2022). Complementary variable- and person-centred approaches to the dimensionality of workaholism. *Applied Psychology*, *71*(1), 312–355. https://doi.org/10.1111/apps.12323

Gillet, N., Morin, A. J. S., Sandrin, E., & Houle, S. A. (2018). Investigating the combined effects of workaholism and work engagement: A substantive-methodological synergy of variable-centered and person-centered methodologies. *Journal of Vocational Behavior*, *109*(April), 54–77. https://doi.org/10.1016/j.jvb.2018.09.006

González-Romá, V., & Hernández, A. (2022). Conducting and Evaluating Multilevel Studies: Recommendations, Resources, and a Checklist. *Organizational Research Methods*, 109442812110607. https://doi.org/10.1177/10944281211060712

Gratz, K. L., & Roemer, L. (2008). Multidimensional Assessment of Emotion Regulation and Dysregulation: Development, Factor Structure, and Initial Validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment*, *30*(4), 315–315. https://doi.org/10.1007/s10862-008-9102-4

Grech, M. R., Neal, A., Yeo, G., Humphreys, M., & Smith, S. (2009). An examination of the relationship between workload and fatigue within and across consecutive days of work: Is the relationship static or dynamic? *Journal of Occupational Health Psychology*, *14*(3), 231–242. https://doi.org/10.1037/a0014952

Green, F., Felstead, A., Gallie, D., & Henseke, G. (2022). Working Still Harder. *ILR Review*, *75*(2), 458–487. https://doi.org/10.1177/0019793920977850

Griffiths, M. D., Demetrovics, Z., & Atroszko, P. A. (2018). Ten myths about work addiction. *Journal of Behavioral Addictions*, *7*(4), 845–857. https://doi.org/10.1556/2006.7.2018.05

Horstmann, K. T., & Ziegler, M. (2020). Assessing Personality States: What to Consider when Constructing Personality State Measures. *European Journal of Personality*, *34*(6), 1037–

1059. https://doi.org/10.1002/per.2266

Horwood, M., Marsh, H. W., Parker, P. D., Riley, P., Guo, J., & Dicke, T. (2021). Burning passion, burning out: The passionate school principal, burnout, job satisfaction, and extending the dualistic model of passion. *Journal of Educational Psychology*, *113*(8), 1668–1688. https://doi.org/10.1037/edu0000664

Hunt, T., & Pickard, H. (2022). Harder, better, faster, stronger? Work intensity and 'good work' in the United Kingdom. *Industrial Relations Journal*, *53*(3), 189–206. https://doi.org/10.1111/irj.12364

Huyghebaert-Zouaghi, T., Caesens, G., Sandrin, É., & Gillet, N. (2021). Workaholism and work engagement: An examination of their psychometric multidimensionality and relations with employees' functioning. *Current Psychology*. https://doi.org/10.1007/s12144-021-01820-6

Ilies, R., Dimotakis, N., & De Pater, I. E. (2010). Psychological and physiological reactions to high workloads: Implications for well-being. *Personnel Psychology*, *63*(2), 407–436. https://doi.org/10.1111/j.1744-6570.2010.01175.x

Italian National Institute of Statistics (ISTAT). (2019). *Stereotypes about gender roles and the social image of sexual violence*. https://www.istat.it/en/archivio/236678

Johnston, D. W., Allan, J. L., Powell, D. J. H., Jones, M. C., Farquharson, B., Bell, C., & Johnston, M. (2019). Why does work cause fatigue? A real-time investigation of fatigue, and determinants of fatigue in nurses working 12-hour shifts. *Annals of Behavioral Medicine*, *53*(6), 551–562. https://doi.org/10.1093/abm/kay065

Kanbara, K., & Fukunaga, M. (2016). Links among emotional awareness, somatic awareness and autonomic homeostatic processing. *BioPsychoSocial Medicine*, *10*(1), 16. https://doi.org/10.1186/s13030-016-0059-3

Kensbock, J. M., Alkærsig, L., & Lomberg, C. (2022). The Epidemic of Mental Disorders in

Business—How Depression, Anxiety, and Stress Spread across Organizations through Employee Mobility*. *Administrative Science Quarterly*, *67*(1), 1–48. https://doi.org/10.1177/00018392211014819

Kirrane, M., Breen, M., & O'Connor, C. (2017). A Qualitative Study on the Consequences of Intensive Working. *Human Resource Development Quarterly*, *28*(2), 227–268. https://doi.org/10.1002/hrdq.21284

Kirtley, O. J. (2022). Ethical Issues in Experience Sampling Method Research. In I. Myin-Germeys & P. Kuppens (Eds.), *The Open Handbook on Experience Sampling Methodology* (pp. 91–101). Center for Research on Experience sampling and Ambulatory methods Leuven (REAL).

Koval, P., Brose, A., Pe, M. L., Houben, M., Erbas, Y., Champagne, D., & Kuppens, P. (2015). Emotional inertia and external events: The roles of exposure, reactivity, and recovery. *Emotion*, *15*(5), 625–636. https://doi.org/10.1037/emo0000059

Kun, B., Takacs, Z. K., Richman, M. J., Griffiths, M. D., & Demetrovics, Z. (2021). Work addiction and personality: A meta-analytic study. *Journal of Behavioral Addictions*, *9*(4), 945–966. https://doi.org/10.1556/2006.2020.00097

Kuppens, P., Allen, N. B., & Sheeber, L. B. (2010). Emotional Inertia and Psychological Maladjustment. *Psychological Science*, *21*(7), 984–991. https://doi.org/10.1177/0956797610372634

Kuppens, P., & Verduyn, P. (2015). Looking at Emotion Regulation Through the Window of Emotion Dynamics. *Psychological Inquiry*, *26*(1), 72–79. https://doi.org/10.1080/1047840X.2015.960505

Lance, C. E., Christie, J., & Williamson, G. M. (2021). Do State and Trait Measures Measure States and Traits? The Case of Community-Dwelling Caregivers of Older Adults.

Assessment, *28*(3), 829–844. https://doi.org/10.1177/1073191119888582

Lazarus, R. S. (2006). Emotions and Interpersonal Relationships: Toward a Person-Centered Conceptualization of Emotions and Coping. *Journal of Personality*, *74*(1), 9–46. https://doi.org/10.1111/j.1467-6494.2005.00368.x

Lin, R.-T., Lin, C.-K., Christiani, D. C., Kawachi, I., Cheng, Y., Verguet, S., & Jong, S. (2017). The impact of the introduction of new recognition criteria for overwork-related cardiovascular and cerebrovascular diseases: a cross-country comparison. *Scientific Reports*, *7*(1), 167. https://doi.org/10.1038/s41598-017-00198-5

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To Parcel or Not to Parcel: Exploring the Question, Weighing the Merits. *Structural Equation Modeling: A Multidisciplinary Journal*, *9*(2), 151–173. https://doi.org/10.1207/S15328007SEM0902_1

MacKay, C. J., & Cooper, C. L. (1987). Occupational stress and health: Some current issues. In C. L. Cooper & R. Robertson (Eds.), *International review of industrial and organizational psychology* (pp. 167–199). Wiley.

Marchica, L. A., Keough, M. T., Montreuil, T. C., & Derevensky, J. L. (2020). Emotion regulation interacts with gambling motives to predict problem gambling among emerging adults. *Addictive Behaviors*, *106*(February), 106378. https://doi.org/10.1016/j.addbeh.2020.106378

Marks, J. L., Lam, C. B., & McHale, S. M. (2009). Family Patterns of Gender Role Attitudes. *Sex Roles*, *61*(3–4), 221–234. https://doi.org/10.1007/s11199-009-9619-3

Matthews, G., Jones, D. M., & Chamberlain, A. G. (1990). Refining the measurement of mood: The UWIST Mood Adjective Checklist. *British Journal of Psychology*, *81*(1), 17–42. https://doi.org/10.1111/j.2044-8295.1990.tb02343.x

McEwen, B. S. (2006). Protective and damaging effects of stress mediators: Central role of the

brain. *Dialogues in Clinical Neuroscience*, *8*(4), 367–381. https://doi.org/10.31887/dcns.2006.8.4/bmcewen

Meier, L. L., & Cho, E. (2019). Work stressors and partner social undermining: Comparing negative affect and psychological detachment as mechanisms. *Journal of Occupational Health Psychology*, *24*(3), 359–372. https://doi.org/10.1037/ocp0000120

Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. D. Drenth & H. Thierry (Eds.), *Handbook of Work and Organizational Psychology* (Vol. 2, pp. 5–33). Psychology Press.

Menghini, L., Pastore, M., & Balducci, C. (2022). Workplace Stress in Real Time: Three Parsimonious Scales for the Experience Sampling Measurement of Stressors and Strain at Work. *European Journal of Psychological Assessment*, 1–9. https://doi.org/10.1027/1015-5759/a000725

Molino, M., Cortese, C., & Ghislieri, C. (2018). Daily Effect of Recovery on Exhaustion: A Cross-Level Interaction Effect of Workaholism. *International Journal of Environmental Research and Public Health*, *15*(9), 1920. https://doi.org/10.3390/ijerph15091920

Muthén, L. K., & Muthén, B. O. (2017). *Mplus User's Guide. Eighth Edition*. Muthén & Muthén.

Naragon-Gainey, K. (2018). Distinguishing affective constructs:: Structure, trait-vs. state-ness, and responses to affect. In A. S. Fox, R. C. Lapate, A. J. Shackman, & R. J. Davidson (Eds.), *The Nature of Emotion: Fundamental Questions* (2nd ed., pp. 45–48). Oxford University Press.

Neuman, J. H., & Baron, R. A. (2005). Aggression in the Workplace: A Social-Psychological Perspective. In S. Fox & P. E. Spector (Eds.), *Counterproductive work behavior: Investigations of actors and targets.* (pp. 13–40). American Psychological Association. https://doi.org/10.1037/10893-001

Neumann, S. A., Sollers, J. J., Thayer, J. F., & Waldstein, S. R. (2004). Alexithymia predicts attenuated autonomic reactivity, but prolonged recovery to anger recall in young women. *International Journal of Psychophysiology*, *53*(3), 183–195. https://doi.org/10.1016/j.ijpsycho.2004.03.008

Ng, T. W. H., Sorensen, K. L., & Feldman, D. C. (2007). Dimensions, antecedents, and consequences of workaholism: a conceptual integration and extension. *Journal of Organizational Behavior*, *28*(1), 111–136. https://doi.org/10.1002/job.424

Ohly, S., Sonnentag, S., Niessen, C., & Zapf, D. (2010). Diary Studies in Organizational Research. *Journal of Personnel Psychology*, *9*(2), 79–93. https://doi.org/10.1027/1866-5888/a000009

Perrewé, P. L., & Zellars, K. L. (1999). An examination of attributions and emotions in the transactional approach to the organizational stress process. *Journal of Organizational Behavior*, *20*(5), 739–752. https://doi.org/10.1002/(SICI)1099-1379(199909)20:5<739::AID-JOB1949>3.0.CO;2-C

Pfeffer, J. (2018). *Dying for a Paycheck: How Modern Management Harms Employee Health and Company Performance—and What We Can Do About It*. Harper-Collins.

Pindek, S., Arvan, M. L., & Spector, P. E. (2019). The stressor–strain relationship in diary studies: A meta-analysis of the within and between levels. *Work and Stress*, *33*(1), 1–21. https://doi.org/10.1080/02678373.2018.1445672

Porter, G. (1996). Organizational impact of workaholism: Suggestions for researching the negative outcomes of excessive work. *Journal of Occupational Health Psychology*, *1*(1), 70–84. https://doi.org/10.1037/1076-8998.1.1.70

Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational Tools for Probing Interactions in Multiple Linear Regression, Multilevel Modeling, and Latent Curve Analysis. *Journal of Educational and Behavioral Statistics*, *31*(4), 437–448.

https://doi.org/10.3102/10769986031004437

Purvanova, R. K., & Muros, J. P. (2010). Gender differences in burnout: A meta-analysis. *Journal of Vocational Behavior*, *77*(2), 168–185. https://doi.org/10.1016/j.jvb.2010.04.006

R Development Core Team. (2018). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, http://www.r-project.org/. http://www.r-project.org/

Reid, E., & Ramarajan, L. (2016). Managing the High-Intensity Workplace. *Harvard Business Review*, Retrieved from https://hbr.org/.

Riecher-Rössler, A. (2017). Sex and gender differences in mental disorders. *The Lancet Psychiatry*, *4*(1), 8–9. https://doi.org/10.1016/S2215-0366(16)30348-0

Robinson, T. E., & Berridge, K. C. (2003). Addiction. *Annual Review of Psychology*, *54*(1), 25–53. https://doi.org/10.1146/annurev.psych.54.101601.145237

Rosseel, Y. (2012). lavaan : An R Package for Structural Equation Modeling. *Journal of Statistical Software*, *48*(2), 1–36. https://doi.org/10.18637/jss.v048.i02

Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review*, *110*(1), 145–172. https://doi.org/10.1037/0033-295X.110.1.145

Salanova, M., López-González, A. A., Llorens, S., del Líbano, M., Vicente-Herrero, M. T., & Tomás-Salvá, M. (2016). Your work may be killing you! Workaholism, sleep problems and cardiovascular risk. *Work & Stress*, *30*(3), 228–242. https://doi.org/10.1080/02678373.2016.1203373

Schaufeli, W. B., Bakker, A. B., van der Heijden, F. M. M. A., & Prins, J. T. (2009). Workaholism, burnout and well-being among junior doctors: The mediating role of role conflict. *Work & Stress*, *23*(2), 155–172. https://doi.org/10.1080/02678370902834021

Schaufeli, W. B., Shimazu, A., & Taris, T. W. (2009). Being Driven to Work Excessively Hard. *Cross-Cultural Research*, *43*(4), 320–348. https://doi.org/10.1177/1069397109337239

Schaufeli, W. B., Taris, T. W., & Bakker, A. B. (2008). It takes two to tango: Workaholism is working excessively and working compulsively. *The Long Work Hours Culture: Causes, Consequences and Choices*, 203–226.

Schmidt, C., Collette, F., Cajochen, C., & Peigneux, P. (2007). A time to think: Circadian rhythms in human cognition. *Cognitive Neuropsychology*, *24*(7), 755–789. https://doi.org/10.1080/02643290701754158

Schwarz, N., Kahneman, D., & Xu, J. (2011). Global and Episodic Reports of Hedonic Experience. In *Calendar and Time Diary* (Issue April 2009, pp. 156–174). SAGE Publications, Inc. https://doi.org/10.4135/9781412990295.d15

Shimazu, A., Bakker, A. B., Demerouti, E., Fujiwara, T., Iwata, N., Shimada, K., Takahashi, M., Tokita, M., Watai, I., & Kawakami, N. (2020). Workaholism, Work Engagement and Child Well-Being: A Test of the Spillover-Crossover Model. *International Journal of Environmental Research and Public Health*, *17*(17), 6213. https://doi.org/10.3390/ijerph17176213

Shockley, K. M., & Shen, W. (2016). Couple dynamics: Division of labor. In T. D. Allen & L. T. Eby (Eds.), *The Oxford handbook of work and family* (pp. 125–139). Oxford University Press New York, NY.

Smallfield, J., & Kluemper, D. H. (2021). An Explanation of Personality Change in Organizational Science: Personality as an Outcome of Workplace Stress. *Journal of Management*, 014920632199842. https://doi.org/10.1177/0149206321998429

Spagnoli, Balducci, Fabbri, Molinaro, & Barbato. (2019). Workaholism, Intensive Smartphone Use, and the Sleep-Wake Cycle: A Multiple Mediation Analysis. *International Journal of*

Environmental Research and Public Health, *16*(19), 3517. https://doi.org/10.3390/ijerph16193517

Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal Conflict at Work Scale, Organizational Constraints Scale, Quantitative Workload Inventory, and Physical Symptoms Inventory. *Journal of Occupational Health Psychology*, *3*(4), 356–367. https://doi.org/10.1037/1076-8998.3.4.356

Spector, P. E., Zapf, D., Chen, P. Y., & Frese, M. (2000). Why negative affectivity should not be controlled in job stress research: don't throw out the baby with the bath water. *Journal of Organizational Behavior*, *21*(1), 79–95. https://doi.org/10.1002/(SICI)1099-1379(200002)21:1<79::AID-JOB964>3.3.CO;2-7

Stapleton, L. M., Yang, J. S., & Hancock, G. R. (2016). Construct Meaning in Multilevel Settings. *Journal of Educational and Behavioral Statistics*, *41*(5), 481–520. https://doi.org/10.3102/1076998616646200

Stojanovich, L., & Marisavljevich, D. (2008). Stress as a trigger of autoimmune disease. *Autoimmunity Reviews*, *7*(3), 209–213. https://doi.org/10.1016/j.autrev.2007.11.007

Sussman, S. (2012). Workaholism: A Review. *Journal of Addiction Research & Therapy*, *135*(2), 612–615. https://doi.org/10.4172/2155-6105.S6-001

Sussman, S. (2018). Ten myths (or facts?) about workaholism: An appetitive motivation framework. *Journal of Behavioral Addictions*, *7*(4), 884–887. https://doi.org/10.1556/2006.7.2018.120

Taris, T. W., Schaufeli, W. B., & Verhoeven, L. C. (2005). Workaholism in the Netherlands: Measurement and Implications for Job Strain and Work-Nonwork Conflict. *Applied Psychology*, *54*(1), 37–60. https://doi.org/10.1111/j.1464-0597.2005.00195.x

Taris, T. W., Van Beek, I., & Schaufeli, W. B. (2012). Demographic and Occupational Correlates of Workaholism. *Psychological Reports*, *110*(2), 547–554. https://doi.org/10.2466/03.09.17.PR0.110.2.547-554

van Beek, I., Taris, T. W., & Schaufeli, W. B. (2011). Workaholic and work engaged employees: Dead ringers or worlds apart? *Journal of Occupational Health Psychology*, *16*(4), 468–482. https://doi.org/10.1037/a0024392

van de Vijver, F. J. R. (2007). Cultural and Gender Differences in Gender-Role Beliefs, Sharing Household Task and Child-Care Responsibilities, and Well-Being Among Immigrants and Majority Members in The Netherlands. *Sex Roles*, *57*(11–12), 813–824. https://doi.org/10.1007/s11199-007-9316-z

Vergauwe, J., Wille, B., De Caluwé, E., & De Fruyt, F. (2022). Passion for work: Relationships with general and maladaptive personality traits and work-related outcomes. *Personality and Individual Differences*, *185*(June 2020), 111306. https://doi.org/10.1016/j.paid.2021.111306

Wagenmakers, E.-J., & Farrell, S. (2004). AIC model selection using Akaike weights. *Psychonomic Bulletin & Review*, *11*(1), 192–196. https://doi.org/10.3758/BF03206482

Wilhelm, P., & Schoebi, D. (2007). Assessing mood in daily life: Structural validity, sensitivity to change, and reliability of a short-scale to measure three basic dimensions of mood. *European Journal of Psychological Assessment*, *23*(4), 258–267. https://doi.org/10.1027/1015-5759.23.4.258

Williams, A. D., Grisham, J. R., Erskine, A., & Cassedy, E. (2012). Deficits in emotion regulation associated with pathological gambling. *British Journal of Clinical Psychology*, *51*(2), 223–238. https://doi.org/10.1111/j.2044-8260.2011.02022.x

Williamson Smith, R. W., Min, H., Ng, M. A., Haynes, N. J., & Clark, M. A. (2022). A Content

Validation of Work Passion: Was the Passion Ever There? *Journal of Business and Psychology*, *0123456789*. https://doi.org/10.1007/s10869-022-09807-1

Xiong, H., Huang, Y., Barnes, L. E., & Gerber, M. S. (2016). Sensus: a cross-platform, general-purpose system for mobile crowdsensing in human-subject studies. *Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing*, 415–426. https://doi.org/10.1145/2971648.2971711

Yamauchi, T., Yoshikawa, T., Takamoto, M., Sasaki, T., Matsumoto, S., Kayashima, K., Takeshima, T., & Takahashi, M. (2017). Overwork-related disorders in Japan: recent trends and development of a national policy to promote preventive measures. *Industrial Health*, *55*(3), 293–302. https://doi.org/10.2486/indhealth.2016-0198

Table 1. Descriptive statistics and correlations between the study variables.

	No. obs.	Mean (SD)	ICC	1	2	3	4	5
1. Hedonic tone (1-7)	1,502	3.38 (1.08)	.43		-.18***	-.05		
2. Workload (1-7)	1,502	4.09 (1.30)	.39	-.18		-.06		
3. Workday accumulation (0-5)	1,502	2.44 (1.69)	.00	-.08	-.03			
4. Workaholism (1-4)	139	2.42 (0.53)		-.14	.32***			
5. Age	139	35.04 (9.65)		-.05	.14		-.14	
6. Weekly work hours	139	42.27 (8.04)		.07	.07		.37***	-.11

Notes: SD, standard deviation; ICC, intraclass correlation coefficient. Correlations at level 2 (N = 139) are reported below the main diagonal, whereas correlations at level 1 (N = 1,502) are reported above the main diagonal. Two-tail significance levels were Benjamini-Hochberg-corrected. ***, $p < .001$.

Table 2. Parameter estimates of the multilevel regression analysis predicting hedonic tone (N = 139; observations [N x occasions] = 1,502).

	M0	M1	M2	M3	M4	M5	M6
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Fixed effects							
Intercept	4.60 (0.06)***	4.60 (0.45)***	5.08 (0.48)***	5.14 (0.49)***	5.50 (0.52)***	5.09 (0.48)***	4.52 (0.52)***
Gender [Women]		0.07 (0.13)	0.09 (0.13)	0.08 (0.13)	0.08 (0.13)	0.08 (0.13)	1.63 (0.56)**
Position [Employers/managers]		0.28 (0.18)	0.33 (0.18)	0.33 (0.18)	0.33 (0.18)	0.33 (0.18)	0.40 (0.18)*
Age (years)		-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Weekly work hours (No.)		0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
WDA (0-5)		-0.05 (0.01)***	-0.05 (0.01)***	-0.04 (0.01)**	-0.18 (0.08)**	-0.04 (0.01)**	-0.04 (0.01)**
Momentary workload (1-7)		-0.10 (0.02)***	-0.10 (0.02)***	-0.11 (0.03)***	-0.11 (0.03)***	-0.46 (0.14)**	-0.11 (0.03)***
Workaholism (1-4)			-0.31 (0.13)*	-0.31 (0.13)*	-0.46 (0.14)**	-0.29 (0.13)*	-0.02 (0.17)
WDA × Workaholism					0.06 (0.03)*		
Workload × Workaholism						0.14 (0.10)**	
Workaholism × Gender [Women]							-0.65 (0.23)**
Random effects							
1. Random intercept	0.49 (0.07)***	0.47 (0.06)***	0.45 (0.06)***	0.52 (0.09)***	0.52 (0.09)***	0.52 (0.09)***	0.50 (0.08)***
2. Residual variance	0.66 (0.02)***	0.65 (0.03)***	0.64 (0.03)***	0.58 (0.02)***	0.58 (0.02)***	0.58 (0.02)***	0.58 (0.03)***
3. Random slope (WDA)				0.01 (0.003)*	0.01 (0.003)	0.01 (0.003)	0.01 (0.003)
4. Random slope (Momentary workload)				0.05 (0.01)**	0.05 (0.01)**	0.04 (0.01)**	0.05 (0.01)**
6. Covariance 1-3				-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)
7. Covariance 1-4				0.03 (0.03)	0.04 (0.03)	0.03 (0.03)	0.03 (0.03)
8. Covariance 3-4				-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
-2 log lilkelihood	3943.86	3905.82	3899.91	3867.12	3862.90	3860.52	3859.33
No. of estimated parameters	3	9	10	15	16	16	16

χ^2 (df)		38.04 (6)***	5.91 (1)*	32.79 (5)***	4.22 (1)*	6.60 (1)*	7.79 (1)**
AIC	3949.86	3923.82	3919.91	3897.12	3894.90	3892.52	3891.33

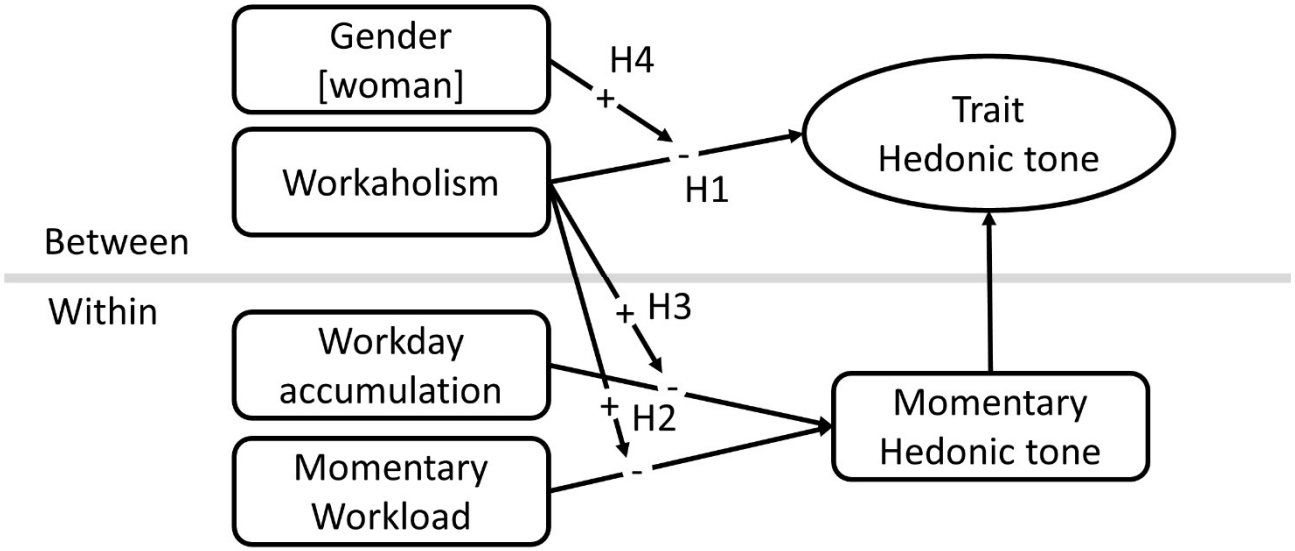
Notes. B, unstandardized parameter estimate; SE, standard error; WDA, workday accumulation; χ^2, likelihood ratio test statistic; df, degrees of freedom; AIC, Akaike Information Criterion. *, $p < .05$; **, $p < .01$; ***, $p < .001$.

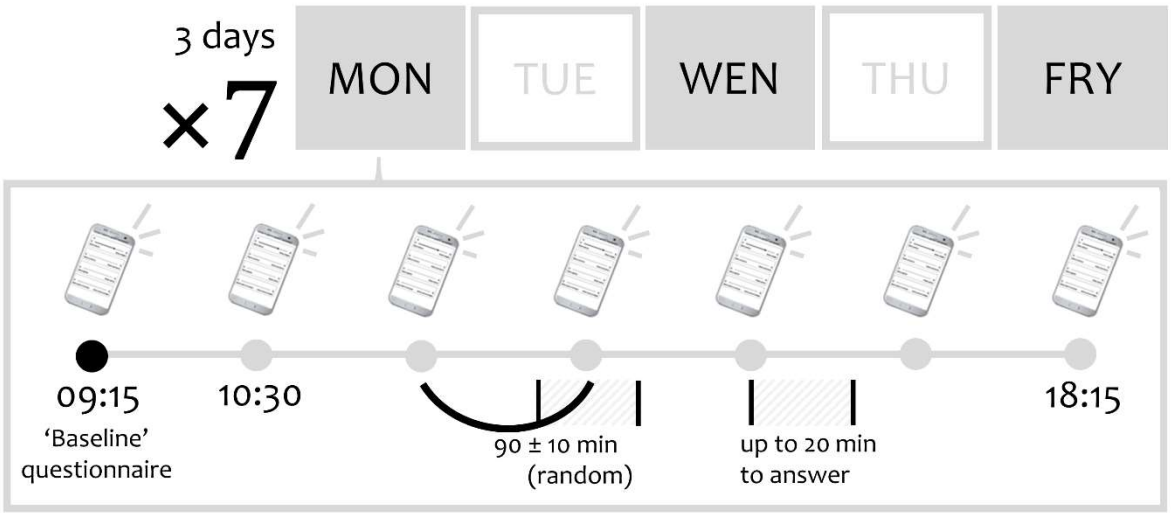
Figure Captions

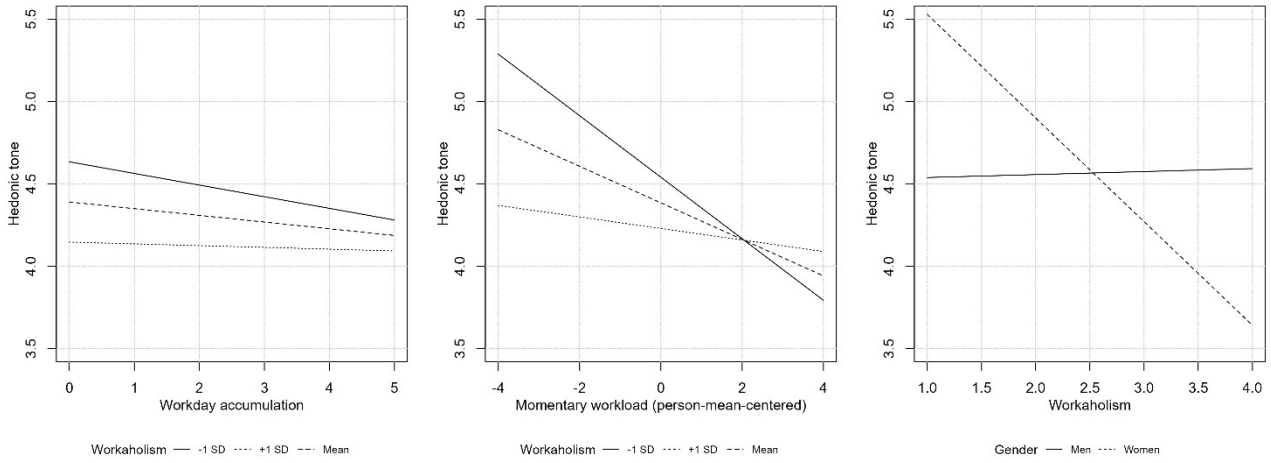
Figure 1. Conceptual model of the study hypotheses at the intra- (level 1, within) and interindividual level (level 2, between).

Figure 2. Experience sampling protocol at the weekly (upper panel) and daily level (lower panel). Gray dots in the lower panel indicate the six scheduled 'work' questionnaires considered in the present study, following the 'baseline' questionnaire (black dot, not included in the present study).

Figure 3. Simple slope analysis of the multilevel interactions estimated in models M4-M6. SD = standard deviation.


Gender [woman]
Workaholism
Between
Within
Workday accumulation
Momentary Workload
H4
+
-
H1
Trait Hedonic tone
+ H3
-
+ H2
-
Momentary Hedonic tone


3 days
×7
MON
TUE
WEN
THU
FRY
09:15
'Baseline' questionnaire
10:30
90 ± 10 min (random)
up to 20 min to answer
18:15


Hedonic tone
Workday accumulation
Workaholism -1 SD +1 SD Mean
Momentary workload (person-mean-centered)
Workaholism -1 SD +1 SD Mean
Workaholism
Gender Men Women