

Workaholic and Work Engaged Employees: Dead Ringers or Worlds Apart?

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Building on Deci and Ryan's Self-Determination Theory and Meijman and Mulder's Effort-Recovery Model, the present study examined the nature, antecedents, and consequences of working hard (i.e., workaholism and work engagement) in a Dutch convenience sample of 1,246 employees. A confirmatory factor analysis showed that workaholism and work engagement were two largely independent concepts. Crossing these two concepts yielded four types of workers: workaholic employees, engaged employees, engaged workaholics, and nonworkaholic/nonengaged employees. MANOVA and subsequent ANOVAs were used to compare these four groups regarding their motivation, working hours, and levels of burnout. As expected, study results revealed that workaholic employees were driven by controlled motivation, whereas engaged employees were driven by autonomous motivation. Engaged workaholics were driven by both controlled and autonomous motivation. In addition, the results revealed that engaged workaholics spent most time on working. Unlike workaholic employees, engaged workaholics did not experience the highest levels of burnout, suggesting that high engagement may buffer the adverse consequences of workaholism. The present study emphasizes the importance of differentiating among at least three categories of employees who work hard: workaholic employees, engaged employees, and—for the first time—engaged workaholics.

Keywords: workaholism, work engagement, work motivation, self-determination theory, effort-recovery model

People hold radically different ideas regarding the value and consequences of working hard. Whereas some hold that nobody ever died of working hard, others contend that the figures on *karoshi* (death due to overwork) and *karo-jisato* (suicide due to work overload) in Japan prove otherwise (Kanai, 2006). To date, there has been no compelling evidence for either of these positions. Although working long hours may have adverse consequences for employee health and well-being (Taris et al., in press; Van der Hulst, 2003), the strength of this association is modest at best and depends on aspects such as rewards and the extent to which employees experience pressure from others to work overtime (Van der Hulst & Geurts, 2001). To complicate matters even more, moderate levels of working overtime have been found to be positively associated with health and well-being as

well (e.g., Beckers et al., 2004), contesting that working hard does not necessarily have adverse consequences.

These diverging ideas and findings on high-effort expenditure at work may be explained by the fact that different types of and different reasons for working hard can be distinguished. For example, Spence and Robbins (1992) distinguished among three types of workaholics (work addicts, work enthusiasts, and enthusiast workaholics) and three types of nonworkaholics, depending on the extent to which employees (a) are involved in their work, (b) feel driven toward their work, and (c) enjoy their work—the so-called workaholic triad. This classification has been criticized by Mudrack (2006), who rightly argued that enjoyment is not a constituting element of work addiction, because workaholics may or may not enjoy their work. Moreover, enthusiastic workers are not necessarily work addicts, as they do not experience the inner compulsion that is characteristic of any addiction. More recently, Schaufeli, Taris, and Van Rhenen (2008) distinguished between a “bad” and a “good” type of working hard: workaholism (this category is similar to Spence and Robbins' work addicts) and work engagement (this category overlaps with Spence and Robbins' work enthusiasts), respec-

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tively. In our view, *workaholism* is characterized by “the tendency to work excessively hard and being obsessed with work, which manifests itself in working compulsively” (Schaufeli, Shimazu, & Taris, 2009, p. 322). Workaholic employees spend an excessive amount of time on their work and they work harder than their colleagues and harder than required in order to meet organizational or economic standards. Moreover, workaholic employees are unwilling and unable to disengage from work and think about their work constantly; that is, even when they are not working. They experience a strong and uncontrollable inner drive to work hard (Scott, Moore, & Miceli, 1997). Conversely, *work engagement* refers to “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74). Vigor refers to high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties. Dedication refers to being strongly involved in one’s work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. Finally, absorption refers to being fully concentrated and deeply engrossed in one’s work, whereby time passes quickly and one has difficulties with detaching oneself from work.

Interestingly, the individual-level and organizational-level consequences of working hard appear to be contingent upon its type. Whereas workaholism is primarily associated with negative outcomes, work engagement is usually linked with positive outcomes. For instance, workaholic employees experience more interpersonal conflict at work (Mudrack, 2006), are less satisfied with their jobs (Burke & MacDermid, 1999), report more work–home interference (Schaufeli, Bakker, Van der Heijden, & Prins, 2009; Taris, Schaufeli, & Verhoeven, 2005), and have poorer social relationships outside work (Robinson, 2007; Schaufeli, Taris, & Van Rhenen, 2008) than nonworkaholic employees. Moreover, they experience low life satisfaction (Bonebright, Clay, & Ankenmann, 2000) and high levels of job strain and health complaints (Burke, 1999, 2000). In contrast, engaged employees are more satisfied with their jobs and are more committed to the organization (Schaufeli, Taris, & Van Rhenen, 2008), show more personal initiative (Sonnentag, 2003), exhibit more extrarole behavior and perform better (Salanova, Agut, & Peiró, 2005; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009), have a lower intention to leave the organization (Schaufeli & Bakker, 2004), and are less often absent (Schaufeli, Bakker, & Van

Rhenen, 2009) than nonengaged employees. Further, engaged employees spend time on socializing, hobbies, and volunteer work (Schaufeli et al., 2001), experience high life satisfaction, and good mental and physical health (Schaufeli & Salanova, 2007a; Schaufeli, Taris, & Van Rhenen, 2008).

Thus, despite the fact that both workaholic employees and engaged employees work hard, workaholism and work engagement apparently represent different psychological states as exemplified by their associations with different types of outcomes. Generally speaking, workaholism is associated with negative outcomes, while work engagement is linked with positive outcomes. This is why workaholism is considered inherently “bad” and work engagement is considered inherently “good” (Schaufeli, Taris, & Bakker, 2008). The difference between both constructs is also found at the measurement level: Schaufeli, Shimazu et al. (2009) showed that workaholism and work engagement correlate only weakly, with r s of $-.19$ in their Dutch and $-.05$ in their Japanese samples. Apparently, it makes good sense to distinguish between workaholism and work engagement. However, this raises the question of how these two concepts relate to each other. For example, are the well-being correlates the same for both concepts? Can high levels of work engagement compensate the adverse consequences of workaholism? And does the underlying work motivation differ for workaholism and work engagement? The latter question is especially interesting because the motivational antecedents of workaholism and work engagement have as yet hardly been examined. The present study addresses these and other issues by studying workaholism and work engagement simultaneously.

Furthermore, the relative independence of both concepts implies that four types of workers may be distinguished: (a) employees who are workaholic and nonengaged (*workaholic employees*), (b) employees who are nonworkaholic and engaged (*engaged employees*), (c) employees who are both workaholic and engaged (*engaged workaholics*), and (d) employees who are nonworkaholic and nonengaged (*nonworkaholic/nonengaged workers*). The latter type of workers refers to those who are satisfied with accomplishing the prescribed tasks without going beyond organizational requirements: they are satiated, rather than activated. This classification of the four groups resembles that of Spence and Robbins (1992), but builds on contemporary concepts in occupational health psychology: workaholism (excluding enjoyment, cf. Mudrack, 2006) and work engagement. By exploring the differences and similarities of these

four groups, the present study seeks to clarify the nature, antecedents, and consequences of working hard.

Below we first address the theoretical frameworks used in the present study regarding motivation, health, and well-being. Then we consider how the four workaholism-work engagement combinations can be linked to these concepts.

Motivation

Self-Determination Theory (SDT; Deci & Ryan, 1985, 2000; Ryan & Deci, 2000) is a valuable theoretical framework for examining the motivation underlying the various combinations of workaholism and work engagement (Van Beek, Hu, Schaufeli, Taris, & Schreurs, in press). SDT postulates that a fundamental distinction in the motivational regulation of behavior is that between intrinsic and extrinsic motivation. *Intrinsic motivation* refers to performing an activity because it is experienced as inherently enjoyable and satisfying. Intrinsically motivated people engage in an activity with a full sense of volition and choice. Hence, intrinsically motivated behavior is truly autonomous or self-determined. Conversely, *extrinsic motivation* refers to performing an activity because of its instrumental value. Within SDT, four forms of extrinsic motivation are distinguished that vary regarding the extent to which people engage in an activity with a sense of volition and choice. In other words, the different types of extrinsic motivation can be placed along a continuum ranging from

non-self-determined behavior to self-determined behavior (Deci & Ryan, 2000; Ryan & Deci, 2000, cf. Figure 1).

First, two controlled or non-self-determined forms of extrinsic motivation are distinguished: external and introjected regulation. *Externally regulated behavior* is motivated by external contingencies involving threats of punishments, or material or social rewards (Deci & Ryan, 2000; Ryan & Deci, 2000). Applied to work, employees whose behavior is externally regulated may be motivated by fear of being laid off or by monetary incentives. Since externally regulated behavior is regulated by forces in the social environment, it is considered fully non-self-determined. *Introjected regulation* is the product of an internalization process in which people rigidly adopt external standards of self-worth and social approval without fully identifying with them (Deci & Ryan, 2000; Ryan & Deci, 2000). Meeting these standards produces feelings of high self-worth and self-esteem, whereas failing to meet these standards leads to self-criticism and negative affect (Koestner & Losier, 2002; Ryan and Deci, 2002). Employees whose behavior is introjectedly regulated are motivated by acquiring positive feelings such as pride or avoiding negative feelings like unworthiness. Since people do not fully identify with the adopted external standards, they experience a conflict between behaving in accord with the adopted external standards and what they personally find important and want. For this reason, introjectedly regulated behavior is somewhat non-self-determined. External regulation and

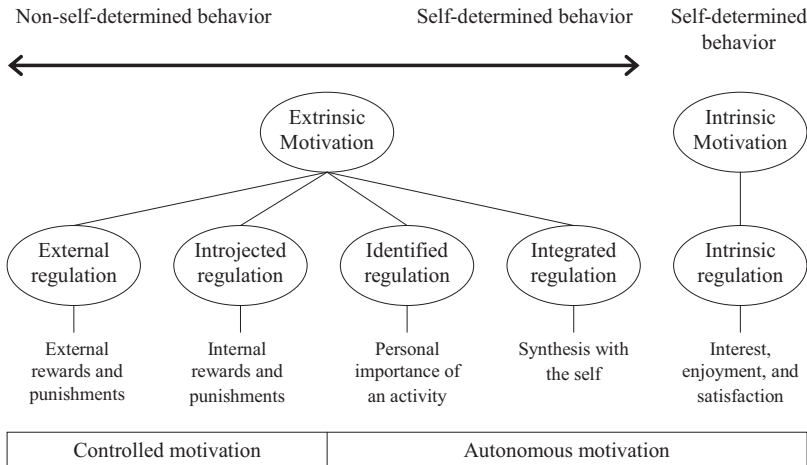


Figure 1. Self-Determination Theory (based on Ryan & Deci, 2000).

introjected regulation constitute controlled motivation, because people experience an external or internal pressure to engage in a particular activity (Deci & Ryan, 2000; Ryan & Deci, 2000).

Second, two autonomous or self-determined forms of extrinsic motivation are distinguished: identified and integrated regulation. These two forms are not only the product of an internalization process in which people adopt external standards, but also of an integration process in which these standards become part of their self. When people identify themselves with the reason for a particular behavior, their motivational regulation is labeled as *identified* (Deci & Ryan, 2000; Ryan & Deci, 2000). Applied to work, employees whose behavior is regulated this way may be motivated by its importance for their own career path. Since there is identification with the reason for a particular activity, people will experience some ownership of their behavior. As a result, behavior characterized by identified regulation is somewhat self-determined. When the reason for a behavior is experienced as consistent with other important values and needs and constitutes an integral part of the self, the motivational regulation is labeled as *integrated* (Deci & Ryan, 2000; Ryan & Deci, 2000). For example, employees whose behavior is regulated this way are motivated to perform their job because it is completely in line with their core values and with "who they are." Like intrinsically motivated behavior, behavior characterized by integrated regulation is fully self-determined, because people experience their behavior as entirely volitional. However, in SDT it is still considered as extrinsic motivation, since an activity is performed for its instrumental value. Because of its overlap with intrinsic regulation (Ryan & Deci, 2000) and because it is psychometrically difficult to distinguish items measuring integrated regulation from the other items (Gagné et al., 2010), integrated regulation is not included in the present study. Identified regulation and intrinsic regulation constitute autonomous motivation, because people experience at least some ownership of their behavior when they engage in a particular activity (Deci & Ryan, 2000).

Health and Well-Being

Meijman and Mulder's (1998) Effort-Recovery (E-R) model is a valuable theoretical framework for examining health and well-being. The E-R model focuses on the consequences of working hard for employee health and well-being. The model posits that working requires investment of effort that is

accompanied by short-term load reactions that occur at the physiological, behavioral, and subjective levels (i.e., physiological and psychological costs). When employees stop working (e.g., during a break or after a work day), their psychobiological systems will return to and stabilize at baseline levels, leading to diminishing load reactions (recovery). However, when employees cannot fully recover from their work (e.g., due to long working hours), a downward spiral may be activated: compensatory effort is needed to keep their performance at the same level. As a consequence, the physiological and psychological costs as well as the need for recovery increase (Hockey, 1997), and so forth. Frequent and/or continuous exposure (i.e., sustained activation) to work accompanied by insufficient possibilities for recovery may lead to an accumulation of load reactions (allostatic load) and in the long term to impaired well-being and health problems (Ursin & Eriksen, 2004) such as exhaustion, sleeping disturbances, and psychosomatic complaints. These reactions may persist for a longer period of time and may become irreversible (Sonnentag, 2001; Taris et al., 2006).

The Present Study

With these theoretical frameworks in mind, the four groups can be characterized in terms of their expected motivation, working hours, and well-being (i.e., levels of burnout).

Controlled Motivation

Workaholic employees are assumed to be motivated by the desire to avoid negative emotions, since not working elicits distress and negative emotions such as irritability, anxiety, shame, and guilt (Killingger, 2006; Schaufeli, Taris, & Bakker, 2008). In addition, workaholic employees are expected to be motivated by a higher need to prove themselves, since it has been suggested that workaholism develops in response to feelings of low self-worth and insecurity (Mudrack, 2006; Robinson, 2007). Ego involvement is characteristic of introjected regulation (Ryan, 1982); if people meet the (partially) adopted external standards, they buttress themselves with feelings of self-esteem and self-worth. If they fail to meet these standards, they experience negative emotions and low self-worth (Koestner & Losier, 2002; Ryan and Deci, 2002). In line with this reasoning, recent research among Chinese nurses and physicians demonstrated that workaholism and introjected regulation are positively associated (Van Beek et al., in

press). It is likely that the same holds for engaged workaholics. Accordingly, workaholic employees and engaged workaholics are expected to be sensitive to and motivated by threats of punishments and social rewards. For instance, disapproval by others can undermine a sense of self-esteem, whereas appreciation by others can provide a sense of self-esteem and self-worth. This agrees with the assumption that workaholic employees are stimulated by status, peer admiration, and supervisors' approval (Spence & Robbins, 1992). Contrary to workaholic employees, engaged employees experience high self-esteem and self-efficacy (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). People with a positive view of themselves are less strongly influenced by others and their feedback (Brockner, 1988). Hence, *workaholic employees and engaged workaholics will be more strongly driven by controlled motivation (i.e., external regulation and introjected regulation) than engaged employees and nonworkaholic/nonengaged employees* (Hypothesis 1).

Autonomous Motivation

People with a positive view of themselves are more likely to pursue goals that they believe to be important, joyful, and interesting (Judge, Bono, Erez, & Locke, 2005). Since engaged employees experience high self-esteem and self-worth (Xanthopoulou et al., 2007), it can be assumed that engaged employees work hard because they value their work, have integrated their work goals into their selves, and enjoy their work for its own sake. They seem to be passionately fond of their work and they seem to derive great pleasure from it. Recent findings indeed suggest that work engagement increases with increasing autonomous motivation (Van Beek et al., in press). It is likely that the same holds for engaged workaholics. Since workaholic employees are strongly absorbed in their work to preserve a positive self-evaluation, they will be hindered in performing activities that they find important and joyful. Hence, *engaged employees and engaged workaholics will be more strongly driven by autonomous motivation (i.e., identified regulation and intrinsic regulation) than workaholic employees and nonworkaholic/nonengaged employees* (Hypothesis 2).

Working Hours

We assume that both workaholic employees and engaged employees work hard and spend much time on their work, albeit for different reasons. While

workaholic employees are driven by controlled motivation, engaged employees are driven by autonomous motivation. However, engaged workaholics may work even harder than workaholic employees and engaged employees because they are driven by controlled *and* autonomous motivation. Specifically, the eagerness to obtain feelings of self-worth and self-esteem in combination with interest in and enjoying the job may strengthen workers' perseverance and their willingness to go the extra mile. Whereas workaholic employees stop working when external standards and partially adopted external standards of self-worth are met, engaged workaholics may continue because they enjoy it. And whereas engaged employees stop working when they do not enjoy it anymore, engaged workaholics may continue because they have not yet met the external and partially adopted external standards of self-worth. Conversely, nonworkaholic/nonengaged employees are expected to stop working when the prescribed tasks have been accomplished. Therefore, *nonworkaholic/nonengaged employees will spend least time and engaged workaholics will spend most time on work* (Hypothesis 3).

Burnout

Past research has frequently studied burnout as an outcome of (lack of) recovery (e.g., Taris et al., 2006), as it is related to various health complaints, including sleeping disturbances, psychosomatic complaints, depression, cardiovascular diseases, anxiety, and acute infections (Shirom, Melamed, Toker, Berliner, & Shapira, 2005). Burnout is "a state of exhaustion in which one is cynical about the value of one's occupation and doubtful of one's capacity to perform" (Maslach, Jackson, & Leiter, 1996, p. 20). Previous theorizing and research has shown that exhaustion (referring to the depletion of mental resources) and cynicism (an indifferent and detached attitude toward one's work) are the core of the burnout syndrome (cf. Schaufeli & Taris, 2005; Schaufeli & Salanova, 2007b).

Although engaged workaholics are expected to spend most time on work, workaholic employees may be most vulnerable for developing burnout. Workaholic employees invest behaviorally and cognitively much effort in their work, and they report more work-home interference (Schaufeli, Bakker, Van der Heijden et al., 2009), have poorer social relationships outside work (Schaufeli, Taris, & Van Rhenen, 2008), and experience higher levels of job strain (Burke, 1999, 2000; Taris, Van Beek, &

Schaufeli, 2010) than others. Therefore, they have little opportunity to recover from work sufficiently and, hence, they will deplete their energy more than others. This corresponds with earlier suggestions that workaholism may be a root cause of burnout (Maslach, 1986; Porter, 2001). Unlike workaholic employees, engaged employees are characterized by high levels of energy and mental resilience, do not experience work-home interference, and spend time on socializing, hobbies, and volunteer work (Schaufeli et al., 2001). As a result, they are likely to recover sufficiently from work. This is consistent with findings that work addicts (comparable with workaholic employees) and enthusiastic addicts (engaged workaholics) experience higher levels of exhaustion than work enthusiasts (engaged employees; Burke & Matthiesen, 2004). However, we expect that the characteristics that are associated with work engagement may buffer the adverse effects of high workaholism in engaged workaholics. Hence, *workaholic employees will experience more burnout and engaged employees will experience less burnout than other employees* (Hypothesis 4). Table 1 summarizes our four hypotheses.

Method

Sample and Procedure

During a 3-month study period, visitors to an Internet site addressing career-related issues were invited to complete an online survey on work motivation. After completing the questionnaire, participants received automatically generated feedback on their scores. During the study, 1,329 out of 2,431 visitors who responded to our call completed the question-

naire. Of these 1,329 respondents, 58 were unemployed and excluded from further analysis. Closer inspection of the data revealed that 25 respondents had filled out the questionnaires more than once. Duplicate cases were randomly removed, leaving a single set of responses for each participant. As a result, 1,246 respondents (472 males, with a mean age of 45.5 years, $SD = 9.4$, and 774 females, with a mean age of 42.5 years, $SD = 9.1$) were included in the present study.

Instruments

Workaholism was measured with the Dutch Work Addiction Scale (DUWAS; Schaufeli, Shimazu & Taris, 2009). The DUWAS consists of two subscales ($r = .75$, $p < .05$): Working Excessively (9 items) and Working Compulsively (7 items). The first subscale is based on the Compulsive Tendencies scale of Robinson's (1999) Work Addiction Risk Test, whereas the second scale is based on the Drive scale of Spence and Robbins' (1992) Workaholism Battery. Example items are: "I seem to be in a hurry and racing against the clock" (Working Excessively) and "I feel that there's something inside me that drives me to work hard" (Working Compulsively), 1 = (almost) never, 4 = (almost) always. Since workaholism can be considered a syndrome (i.e., a set of two characteristics that go together; see Schaufeli, Bakker, Van der Heijden et al., 2009), a composite workaholism score (based on 16 items, $\alpha = .89$) was used in the present study.

Work engagement was measured with the Utrecht Work Engagement Scale (UWES; Schaufeli, Bakker, & Salanova, 2006). The UWES consists of three

Table 1
Summary of the Hypotheses

Variable	Nonworkaholic/ nonengaged employees	Engaged employees	Workaholic employees	Engaged workaholics
Time investment				
Working hours	0	+	+	++
Controlled motivation				
External regulation	0	0	+	+
Introjected regulation	0	0	+	+
Autonomous motivation				
Identified regulation	0	+	0	+
Intrinsic regulation	0	+	0	+
Outcome				
Burnout	0	-	+	0

subscales: Vigor (3 items), Dedication (3 items), and Absorption (3 items). Example items are: "At my work, I feel strong and vigorous" (Vigor), "I am enthusiastic about my job" (Dedication), and "I am immersed in my work" (Absorption), 0 = *never*, 6 = *always*. Since it is recommended to use the overall scale as a measure of work engagement (Schaufeli et al., 2006), the overall UWES score (9 items, $\alpha = .95$) was used in the present study.

Motivation was measured with a 13-item scale that was based on the scales of Ryan and Connell (1989) and Vansteenkiste, Sierens, Soenens, Luyckx, and Lens (2009). This scale contains four subscales: External regulation (3 items, such as "I work to get others' approval (e.g., supervisor, colleagues, family, clients)," $\alpha = .78$), Introjected regulation (4 items, such as "I work because I must prove myself that I can," $\alpha = .78$), Identified regulation (3 items, such as "I work because I personally consider it important to put efforts in this job," $\alpha = .85$), and Intrinsic regulation (3 items, including "I work because I have fun doing my job," $\alpha = .88$). All items were scored on a scale ranging from 1 (*totally disagree*) to 5 (*totally agree*).

Working hours were measured with one self-constructed item: "How many hours do you actually work in an average week?" Previous research has shown that single-item measures are not necessarily inferior to multiple-item measures, especially where it concerns one-dimensional and unambiguous constructs like working hours (cf. Van Hooff, Geurts, Kompier, & Taris, 2007).

Burnout was operationalised using the Emotional Exhaustion (5 items) and Cynicism (4 items) scales ($r = .62, p < .05$) of the Maslach Burnout Inventory-General Survey (MBI-GS; Schaufeli, Leiter, Maslach, & Jackson, 1996). For example, emotional exhausted employees report that they are burned out from their work and cynical employees report that they question the significance of their work, 0 = *never*, 6 = *always*. As burnout is a syndrome (Schaufeli & Taris, 2005), an overall score of burnout (9 items, $\alpha = .93$) was used in the present study.

Statistical Analysis

Preliminary analyses. Structural Equation Modeling (SEM) methods as implemented in AMOS 16.0 (Arbuckle, 2007) were used to check: (a) whether the DUWAS and the UWES indeed measure two different kinds of working hard (divergent validity), and (b) whether the hypothesized four-factor structure for the motivation scale holds (factorial

validity). Maximum likelihood estimation methods were used and the goodness-of-fit of the models were evaluated using the χ^2 test statistic, the Normed Fit Index (NFI), the Tucker Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). Values larger than .90 for NFI and TLI and .08 or lower for RMSEA indicate acceptable model fit (Byrne, 2009).

Because it is recommended to have at least three or more indicators per factor in a confirmatory factor analysis (Chen, Bollen, Paxton, Curran, & Kirby, 2001), two parcels of items were created for each subscale of the DUWAS by randomly selecting items. For the subscale Working Excessively, one parcel contained 4 items and the other included 5 items. As regards the subscale Working Compulsively, one parcel consisted of 3 items, whereas the other included 4 items. Results of the confirmatory factor analyses showed that a two-factor model in which the item parcels of the DUWAS loaded on a latent factor and the subscales of the UWES loaded on a second latent factor fitted the data relatively well, $\chi^2(N = 1,246, df = 13) = 331.4$, NFI = .94, TLI = .91, RMSEA = .14, and significantly better, $\Delta\chi^2(N = 1,246, df = 1) = 2,564.8, p < .001$, than a one-factor model in which the item parcels of the DUWAS and the subscales of the DUWES loaded on a single latent factor, $\chi^2(N = 1,246, df = 14) = 2,896.2$, NFI = .51, TLI = .26, RMSEA = .41. The simplicity of our two-factor model (Kenny & McCoach, 2003) and/or the high factor loadings (standardized regression weights varying from .69 to .94, median .86) in our model (Saris & Satorra, 1993), presumably explain the relatively high RMSEA. In addition, the correlation between the two latent factors was weak ($r = -.07, p < .05$), meaning that workaholism and work engagement share less than 0.5% of their variance and, importantly, that these two concepts are relatively independent. Hence, the DUWAS and the UWES assess two different kinds of working hard.

As regards the hypothesized four-factor structure of the motivation scale, a four-factor model with items loading on the expected dimensions fitted the data well, $\chi^2(N = 1,246, df = 59) = 539.9$, NFI = .93, TLI = .91, RMSEA = .08, and significantly better, $\Delta\chi^2(N = 1,246, df = 4) = 4,276.1, p < .001$, than a one-factor model in which all items loaded on a single latent factor, $\chi^2(N = 1,246, df = 65) = 4,816$, NFI = .35, TLI = .22, RMSEA = .24. The correlations among the four latent factors varied from $-.12$ to $.66$, median correlation = $.12$. Additional analyses showed that the four-factor model fitted the

data also significantly better, $\Delta\chi^2(N = 1,246, df = 5) = 1,511.0, p < .001$, than a two-factor model in which the items of external regulation and introjected regulation loaded on one latent factor (representing controlled motivation) and all items of identified regulation and intrinsic regulation loaded on a second latent factor (tapping autonomous motivation), $\chi^2(N = 1,246, df = 64) = 2,050.9, NFI = .72, TLI = .67, RMSEA = .16$. Thus, our measure apparently assessed four distinct regulatory styles.

Main analyses. Since preliminary analyses revealed that workaholism and work engagement were relatively independent concepts, we distinguished among four groups of employees: (a) workaholic employees, (b) engaged employees, (c) engaged workaholics, and (d) nonworkaholic/nonengaged employees. These four groups were created by Z-transforming the overall DUWAS and UWES scores, after which the two scales were dichotomized on their means. Crossing these two scales yielded the four groups of interest, with approximately equal numbers of participants in each group: 25.2% workaholic employees, 27.3% engaged employees, 22.2% engaged workaholics, and 25.3% nonworkaholic/nonengaged employees. Table 2 shows that the four groups differed significantly in terms of their mean scores on workaholism and work engagement.

A 2 (Workaholism: workaholic vs. nonworkaholic) \times 2 (Work engagement: engaged vs. nonengaged) multivariate analysis of variance (MANOVA) tested whether the four groups varied on motivational regulation, working hours, and burnout. Since the four groups differed on more than one criterion variable, Pillai's trace was used as test statistic. Separate post hoc 2 (Workaholism: workaholic vs. nonworkaholic) \times 2 (Work engagement: engaged vs. nonengaged) univariate analyses of variance (ANOVAs) were conducted for all criterion variables.

Results

Table 3 shows the mean values, standard deviations, and intercorrelations for the study variables. Workaholism was mainly positively associated with the two types of controlled motivation, whereas work engagement was predominantly positively related to the two types of autonomous motivation.

A 2 \times 2 MANOVA revealed significant main effects for both Workaholism, $F(6, 1,237) = 56.86, p < .001$, partial $\eta^2 = .22$, and Work engagement, $F(6, 1,237) = 165.45, p < .001$, partial $\eta^2 = .45$. Furthermore, there was a significant interaction between Workaholism and Work engagement, $F(6,$

Table 2
Results of MANOVA: Comparison of Time Investment, Motivation, and Burnout Among the Four Groups

Variable	Workaholism		Work engagement		Workaholism \times Work engagement		Nonworkaholic/nonengaged employees (N = 315)		Engaged employees (N = 340)		Workaholic employees (N = 314)		Engaged workaholics (N = 277)	
	F	SD	F	SD	F	SD	M	SD	M	SD	M	SD	M	SD
Workaholism	2279.83**						1.64 ^a	.27	1.66 ^a	.24	2.52 ^b	.37	2.47 ^b	.35
Work engagement	4.36*		56		3.43		2.02 ^a	.77	4.21 ^b	.65	2.23 ^c	.63	4.16 ^b	.70
Time investment			2750.42**		5.14**		33.00 ^a	8.87	36.47 ^b	9.53	37.16 ^b	9.57	40.49 ^c	10.20
Working hours			39.35**		.02		2.52 ^a	.95	2.28 ^b	.83	3.02 ^c	.89	2.78 ^d	.89
Controlled motivation			21.60**		.00		2.69 ^a	.86	2.55 ^a	.83	3.22 ^b	.84	3.14 ^b	.84
External regulation	97.59**		4.85*		.41		3.64 ^a	.81	4.15 ^b	.61	3.78 ^a	.71	4.24 ^b	.64
Introjected regulation	136.33**		8.41*		.37		2.86 ^a	.93	4.22 ^b	.57	3.00 ^a	.69	4.00 ^c	.64
Autonomous motivation	8.41*		150.39**		19.69**		2.43 ^a	1.16	1.02 ^b	.60	2.97 ^c	1.09	1.85 ^d	1.06
Identified regulation	1.19		833.30**		6.23*									
Intrinsic regulation			499.64**											
Outcome														
Burnout	148.49**													

* $p < .05$. ** $p < .001$; means with different superscripts differ significantly at $p < .05$.

Table 3
Means (M), Standard Deviations (SD), and Correlations for the Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Workaholism	2.05	.52	—							
2. Work engagement	3.15	1.24	.00	—						
Time investment										
3. Working hours	36.66	9.87	.25	.19	—					
Controlled motivation										
4. External regulation	2.64	.93	.33	-.13	.01	—				
5. Introjected regulation	2.89	.89	.41	-.05	.02	.55	—			
Autonomous motivation										
6. Identified regulation	3.95	.74	.11	.44	.10	-.01	.10	—		
7. Intrinsic regulation	3.52	.94	-.06	.79	.13	-.12	-.05	.45	—	
Outcome										
8. Burnout	2.05	1.24	.41	-.61	-.08	.29	.27	-.26	-.60	—

Note. $r > |.06|$ significant at $p < .05$; $r > |.08|$ significant at $p < .01$.

1,237) = 3.59, $p < .01$, partial $\eta^2 = .02$. These effects did not change after adjusting for age and gender. For simplicity we report the unadjusted findings.

Subsequent 2×2 ANOVAs (cf. Table 2) revealed significant main effects of Workaholism for time investment, external regulation, introjected regulation, identified regulation, and burnout. Furthermore, significant main effects were found of Work engagement for all six criterion variables. Regarding the interaction between Workaholism and Work engagement, significant effects were found for intrinsic regulation and burnout. Figure 2 shows how the four different combinations of levels of workaholism and work engagement relate to participants' levels of intrinsic regulation and burnout.

Examining the Hypotheses

Controlled motivation. Hypothesis 1 stated that workaholic employees and engaged workaholics would be more strongly driven by controlled motivation than engaged employees and nonworkaholic/nonengaged employees. The findings presented in Table 2 confirmed Hypothesis 1. Although workaholic employees were significantly more driven by external regulation than engaged workaholics, there were no significant differences observed between the two types of workers regarding introjected regulation. Hence, our findings support the idea that workaholic employees and engaged workaholics are driven by controlled motivation.

Autonomous motivation. Hypothesis 2 proposed that engaged employees and engaged workaholics would be more strongly driven by autonomous

motivation than workaholic employees and non-workaholic/nonengaged employees. Table 2 shows that, although engaged employees and engaged workaholics did not significantly differ in the extent to which they were motivated by identified regulation, engaged employees showed the highest levels of intrinsic regulation. Specifically, the interaction effect revealed that high levels of workaholism lower the effects of high levels of work engagement on intrinsic regulation. The simple slope of the association between workaholism and intrinsic regulation was .08, $p < .05$, for the nonengaged group, and $-.18$, $p < .05$, for the engaged groups. Thus, our findings corroborate the idea that engaged employees and engaged workaholics are driven by autonomous motivation (Hypothesis 2 confirmed).

Working hours. Hypothesis 3 stated that non-workaholic/nonengaged employees would spend least time and engaged workaholics would spend most time on work. Table 2 shows that nonworkaholic/nonengaged employees worked on average 33 hours per week, while engaged workaholics worked on average over 40 hours per week. Workaholic employees and engaged employees did not differ significantly from each other regarding the amount of working hours per week: Both groups worked approximately 37 hours per week (Hypothesis 3 confirmed).

Burnout. Finally, Hypothesis 4 proposed that workaholic employees would experience more burnout and engaged employees would experience less burnout than others. As Table 2 shows, our findings confirmed Hypothesis 4. In addition, whereas engaged workaholics experienced significantly less burnout than workaholic employees, they reported

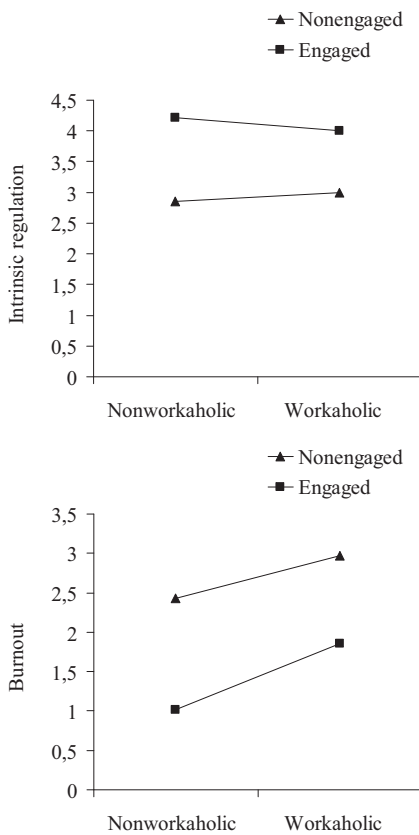


Figure 2. Levels of intrinsic regulation and burnout for the four different groups.

significantly more burnout than engaged employees. Specifically, the interaction effect revealed that high levels of work engagement lower the effects of high levels of workaholism on burnout. The simple slope of the relation between workaholism and burnout was .24, $p < .05$, for the nonengaged employees and .44, $p < .05$, for the engaged employees. Hence, our findings support the idea that work engagement buffers the adverse effects of workaholism.

Discussion

The present study was designed to clarify previous diverging findings concerning the nature, antecedents, and consequences of working hard. Drawing on a convenience sample of 1,246 Dutch participants, our findings showed that workaholism and work engagement are two relatively independent concepts.

Four types of workers were distinguished—workaholic employees, engaged employees, engaged workaholics, and nonworkaholic/nonengaged employees—and compared regarding motivation, working hours, and burnout. We believe that the three most interesting findings are the following:

First, our findings suggest that whereas workaholic employees are mainly driven by controlled motivation, work engaged employees are mainly driven by autonomous motivation. Thus, the underlying motivation of both types of working hard differs fundamentally, confirming similar findings in a Chinese sample (Van Beek et al., in press). Workaholic employees engage in job activities for their instrumental value. Apparently, they are motivated by external contingencies involving threats of punishments; that is, disapproval by others, and social rewards; that is, appreciation by others. This finding is in line with the idea that workaholic employees are encouraged by status, peer admiration, and supervisors' approval (Spence & Robbins, 1992). In addition, they seem to have adopted external standards of self-worth and social approval without fully identifying with them. Since failing to meet these external standards results in self-criticism and negative feelings (Koestner & Losier, 2002; Ryan and Deci, 2002), workaholic employees seem to be eager to meet these standards in order to experience self-worth and self-esteem. This supports earlier observations of clinical psychologists who reported that workaholic employees depend on their work to define who they are and to gain a positive sense of themselves (e.g., Robinson, 2007). Our survey findings and these observations converge in explaining why workaholic employees have an inner compulsion to work hard.

Engaged employees engage in their job for its own sake. Apparently, they experience their job as inherently enjoyable and satisfying, and they work so hard just for the fun of it. In addition, they seem to value their work personally. This may explain why engaged employees experience high levels of energy and mental resilience while working, are willing to invest effort in their work, persist in the face of difficulties, and are strongly involved in their work (Schaufeli et al., 2002). This finding confirms that people with a positive self-evaluation are likely to pursue goals that they find joyful, interesting, and important (Judge et al., 2005) and are less strongly influenced by others and their feedback (Brockner, 1988). While workaholic employees experience some pressure, engaged employees act with a sense of volition. Put differently, workaholics are "pushed" to their work, whereas engaged employees are

“pulled” to their work (Taris, Schaufeli, & Shimazu, 2010).

Engaged workaholics are driven by both controlled and autonomous motivation. They seem to be sensitive to external contingencies and partially adopted external standards of self-worth and social approval, and they personally value and enjoy their job activities. So, they are simultaneously pushed and pulled to their work. Nonworkaholic/nonengaged employees are not strongly driven by any of these motivations, which is in line with the idea that they are satisfied with accomplishing their prescribed work tasks and will not go the extra mile.

Second, our findings suggest that whereas both workaholism and work engagement increase the expenditure of time to work, the combination of workaholism and work engagement leads to spending even more time on work. Although workaholic employees’ and engaged employees’ underlying motivations differ, both groups work equally hard and harder than nonworkaholic/nonengaged employees. However, engaged workaholics spend most time on work. The combination of controlled and autonomous motivation may foster perseverance and the willingness to continue working after others have called it quits. Whereas workaholic employees may stop working as soon as they have met external standards and partially adopted external standards of self-worth, engaged workaholics may continue because they enjoy it as well. And whereas engaged employees may stop working as soon as they do not enjoy it anymore, engaged workaholics may continue because they have not yet met the external standards and partially adopted external standards of self-worth.

Third, our findings suggest that despite working equally hard, workaholic employees experience the highest and engaged employees experience the lowest levels of burnout. The high levels of burnout among workaholic employees may be due to some characteristics that are associated with workaholism; that is, work-home interference (Schaufeli, Bakker, Van der Heijden et al., 2009), poor social relationships outside work (Schaufeli, Taris, & Van Rhenen, 2008), and high levels of job strain (Burke, 2000; Taris, Van Beek, & Schaufeli, 2010). These issues are energy consuming and impede the recovery process after working. When this unfavorable situation persists over a longer period of time, load reactions accumulate and may result in burnout. Since burnout is related to various other health complaints (Shirom et al., 2005), workaholic employees may well suffer poor health and well-being. Conversely, engaged employees appear to be able to recover adequately from

their work (Sonnetag, 2003). Interestingly, in spite of working harder than others, engaged workaholics experience less burnout than workaholic employees, but more burnout than engaged employees. Apparently, work engagement buffers against the adverse effects of workaholism, rendering engaged workaholics less vulnerable for developing burnout.

Study Limitations

Three limitations of the present study must be discussed. Two of these relate to the nature of the data; that is, a cross-sectional convenience sample. First, the cross-sectional nature of the sample implies that causal inferences are not warranted. Although it is tempting to conclude that differences in underlying motivations account for differential levels of workaholism and work engagement, the present study only shows that there are significant and interpretable differences among the four study groups. Thus, it is unclear whether the difference in intrinsic regulation for nonworkaholic/nonengaged employees versus engaged employees is a cause or merely a correlate of work engagement. Only a longitudinal design can address such issues. Although the evidence presented here is not conclusive, it demonstrates that longitudinal follow-up research on workaholism, work engagement, motivation, and well-being is worthwhile and may lead to practically relevant as well as scientifically important insights on why employees work so hard.

Second, since the data were collected using a relatively unstructured Internet-based design, we have only modest insight in the type of employees completing our questionnaire. Thus, we cannot claim that our sample represents the average Dutch worker. The study participants may well have been more interested in career-related information than the average worker, since the questionnaire was hosted on an Internet site addressing career-related issues. The implications for the present findings are unclear. It is possible that workaholics, engaged and (perhaps) burnt-out workers are overrepresented in our sample, as these groups may be assumed to be interested in career-related information. If so, this will have led to a restriction of range of the true scores on these concepts, a corresponding lack of power, and effect sizes that are estimated conservatively. However, this lack of power will be counterbalanced by the sheer size of the present sample. The fact that most analyses presented in this study yielded significant differences among the groups suggests that lack of power did not present major problems. Furthermore, since

our findings are in line with recent findings by Van Beek et al. (in press) who studied two well-defined samples, there is no reason to assume that the findings presented here are unique to the current sample.

Finally, it should be noted that although the two multiplicative interactions between workaholism and work engagement obtained in this study were statistically significant, the main effects of these two concepts on the study outcomes were far more important. This suggests that the primary importance of these interactions lies in their theoretical implication that the effects of workaholism on work outcomes may vary slightly as a function of work engagement, rather than in their practical implications.

Study Strengths and Implications

In spite of these limitations, the present study extends and enhances our current knowledge on workaholism and work engagement in several respects. A first contribution of the present study is that it provides knowledge about the motivational bases underlying workaholism and work engagement. Workaholic employees are apparently driven by external pressure as well as by an inner pressure to work hard, while engaged employees act with a sense of volition. These findings strengthen the notion that workaholism and work engagement are two relatively independent concepts, each with a different underlying motivational dynamic.

A second contribution is that our study revealed the existence of a sizable group of employees who are simultaneously workaholic and work-engaged, meaning that three different groups of hard workers can be distinguished: workaholic employees, engaged employees, and engaged workaholics. This result superficially resembles Spence and Robbins' (1992) earlier classification that included three types of workaholics: work addicts, work enthusiasts, and enthusiast workaholics. The strength of the current findings is that they build upon concepts that are currently used in occupational health psychology: workaholism (measured in terms of working excessively and compulsively) and work engagement. The existence of three different groups provides an explanation for the contradictory findings (Beckers et al., 2004; Taris et al., in press; Van der Hulst, 2003) regarding the relationship between working hard and employee health and well-being. The sign of this association may well depend on the type of "workaholics" dominating the study sample.

A third contribution is that our study revealed that measuring workaholism exclusively in terms of the

number of working hours (e.g., Brett & Stroh, 2003) is inappropriate. Those who work hardest show distinct signs of workaholism as well as work engagement (i.e., high levels of vigor, dedication, and absorption). In addition, "typical" workaholic employees and "typical" engaged employees work equally hard. Consequently, the findings of studies in which workaholism is exclusively measured in terms of the number of working hours are likely to be confounded by not distinguishing among very different groups of hard workers. Hence, such simple measures of workaholism are inappropriate. In order to distinguish workaholic employees from other hard-working employees, workaholism should be measured by both working excessively and working compulsively.

A fourth contribution is that our study discredited the assumption that workaholic employees can only be found in countries where the average number of working hours is high, such as Japan and the U.S. (OECD, 2004). External (social) standards, including the prevailing number of working hours that the average employee spends on working, differ among countries, implying that in some countries workaholic employees will spend more hours working than in other countries to avoid social disapproval, to obtain feelings of being appreciated by others, and to "earn" feelings of self-worth. Therefore, it is likely that the number of working hours typically worked by workaholic employees differs across countries and that workaholic employees can be found in countries with a high "regular" number of working hours as well as in countries such as the Netherlands, where the regular number of working hours is substantially lower.

A fifth contribution is that our study suggests that engaged employees are most valuable for companies—they work hard and experience low levels of burnout. Since engaged employees are driven by autonomous motivation, work engagement may be promoted by enhancing autonomous motivational regulation. One obvious way of doing this is by creating a supporting and challenging work environment (Van den Broeck, Vansteenkiste, & De Witte, 2008); that is, by clarifying the purpose for work activities, admitting that some work activities are not interesting, offering choices, giving positive feedback, and offering challenging activities. It may be interesting for future research to examine this notion in more detail. By contrast, workaholic employees work hard and experience high levels of burnout. Therefore, employees should be vigilant not to become workaholic. Although engaged workaholics

work harder than others and experience less burnout than workaholic employees, at present it is too soon to draw strong inferences regarding the value of this type of worker for companies. For instance, whereas we found some evidence that engagement may buffer the adverse effects of high levels of workaholism, the magnitude of this effect was only small. It is up to future research to unravel the antecedents as well and the consequences of engaged workaholism. Thus, our findings should not be taken to mean that organizations should promote “engaged workaholism” among their employees.

Concluding Comment

All in all, the present study emphasizes that although they may look similar from the outset, workaholic employees and engaged employees are not identical; rather than being dead ringers, they seem to present different worlds. Although they work equally hard, they differ regarding motivational regulation and burnout. In addition, the present study suggests the existence of a third, hardworking group: employees who are both workaholic and work engaged. In spite of working even harder than workaholic employees and engaged employees, they do not experience more burnout, which may suggest that engagement can act as a buffer against the adverse consequences of “pure”, undiluted workaholism. It is for future research to explain these findings in further detail, to focus on engaged workaholics and to broaden our knowledge about this intriguing group of workers.

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