

## Understanding Workaholics' Motivations: A Self-Determination Perspective

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In order to explain the diverging well-being outcomes of workaholism, this study aimed to examine the motivational orientations that may fuel the two main components of workaholism (i.e. working excessively and working compulsively). Drawings on Self-Determination Theory, both autonomous and controlled motivation were suggested to drive excessive work, which therefore was expected to relate positively to both well-being (i.e. vigor) and ill-health (i.e. exhaustion). Compulsive work, in contrast, was hypothesised to originate exclusively out of controlled motivation and therefore to only associate positively with ill-being. Structural equation modeling in a heterogeneous sample of Belgian white-collar workers ( $N = 370$ ) confirmed that autonomous motivation associated positively with excessive work, which then related positively to vigor. Controlled motivation correlated positively with compulsive work,

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which therefore related positively with exhaustion. The hypothesised path from controlled motivation to exhaustion through excessive work was not corroborated. In general, the findings suggest that primarily compulsive work yields associations with ill-being, since it may stem from a qualitatively inferior type of motivation.

## INTRODUCTION

The use of flexible work and recent developments in technology have gradually blurred the boundaries between work and home. Accordingly, employees may experience increasing difficulty in disengaging from work and therefore turn into workaholics (Porter, 2004; Sparks, Faragher, & Cooper, 2001). Although workaholism has become a regular topic of discussion in the popular press (Burke, Matthiesen, & Pallesen, 2006; Taris, Schaufeli, & Verhoeven, 2005), scholarly research has only recently started clarifying the concept and detailing its consequences (e.g. Ng, Sorensen, & Feldman, 2007). In this literature, consensus seems to be growing that workaholism may be defined by two core characteristics: working an excessive amount of time and having a compulsive drive to work (Ng et al., 2007; Schaufeli, Taris, & Bakker, 2006, 2008). However, divergent results have been reported for the relations between these core components of workaholism and employees' well-being (McMillan, O'Driscoll, Marsh, & Brady, 2001). The present study aims to shed light on these findings by examining employees' motivation underlying the tendencies to work excessively and to work compulsively.

Although various authors have stressed the importance of workaholics' motivation, to date little research has been conducted to advance the understanding of this phenomenon from a theoretical point of view (McMillan et al., 2001; Schaufeli, Shimazu, & Taris, 2009). Drawing on Self-Determination Theory (SDT; Deci & Ryan, 2000; Gagné & Deci, 2005), we suggest that the tendencies to work excessively and compulsively may be fueled by qualitatively different types of motivation and therefore yield divergent associations with employees' well-being. Before detailing these different types of motivation, we first elaborate upon the concept of workaholism.

## WORKAHOLISM

In the academic literature, various definitions and conceptualisations of workaholism have emerged (e.g. Robinson, 1999; Spence & Robbins, 1992). Originally, workaholism was defined as "the compulsion or the uncontrollable need to work incessantly" (Oates, 1971, p. 11). In line with this definition, workaholism can be defined by two characteristics: working excessively and working compulsively (Schaufeli et al., 2006, 2008).

First, working excessively pertains to actual behavior: Workaholics spend a great deal of time on work-related activities when given the opportunity to

do so (Snir & Harpaz, 2006; Snir & Zohar, 2008), up to 50 hours a week (Brett & Stroh, 2003; Buelens & Poelmans, 2004; Burke, 2001). As such, they work beyond what is reasonably required to meet the expectations of colleagues or organisational demands (Scott, Moore, & Miceli, 1997). Spending much time working, herein labeled working excessively, figures in just about all conceptualisations of workaholism. Spence and Robbins (1992), for example, included work involvement, while McMillan and colleagues (2001) note that workaholism is evidenced by the tendency to work anytime at any place. People may, however, work long hours for a variety of reasons without necessarily being addicted to work, for example because they need to meet economic demands or deadlines (Schaufeli, Taris, & Van Rhenen, 2007). In addition to working long hours, workaholism is therefore also characterised by another tendency: the inner compulsion to work.

This second component, i.e. working compulsively (Schaufeli et al., 2006), closely resembles the drive to work (Spence & Robbins, 1992) and the personal reluctance to disengage from work (McMillan et al., 2001) previously ascribed to workaholics. In general, these labels refer to workaholics' uncontrollable preoccupation with working (Robinson, 1999). Workaholics are obsessed with work activities: They persistently and frequently think about work, even when not working (Scott et al., 1997). The tendency to work compulsively is cognitive—rather than behavioral—in nature, such that the syndrome of workaholism consists of overlapping yet complementary aspects: A behavioral component (i.e. working excessively) and a cognitive component (i.e. working compulsively; Schaufeli et al., 2007).

Drawing on Spence and Robbins' (1992) tripartite model of workaholism, some scholars have argued that workaholism also contains an affective dimension: Work enjoyment (e.g. Burke et al., 2006). Others have contested this view (e.g. Ng et al., 2007). Schaufeli et al. (2007), for instance, make a strong case that hardworking people who greatly enjoy work closely resemble engaged workers, with work engagement being conceptually and empirically distinct from workaholism. Accordingly, herein, the conceptualisation of workaholism includes only two components, working excessively and working compulsively.

In general, workaholism is assumed to undermine employees' well-being (Ng et al., 2007). Empirical research has indeed shown that workaholics, relative to non-workaholics, generally report more ill-health as indexed by job stress, burnout, and negative affect, and exhibit lower levels of well-being in terms of job and life satisfaction (e.g. Aziz & Zickar, 2006; Burke & Matthiesen, 2004; Taris et al., 2005). However, results are not consistent. McMillan and O'Driscoll (2004) as well as Snir and Zohar (2008), for example, found no differences between workaholics and non-workaholics in terms of mental health and positive affect.

The conflicting results may in part be explained by the different conceptualisations of workaholism: While some authors included work enjoyment in the definition of workaholism, others did not. More generally, it seems that the different components of workaholism may exert differential influences on employees' well-being (Burke, 1999; McMillan & O'Driscoll, 2004; Scott et al., 1997). This possibility is often ignored, especially in studies using composite workaholism scores (Burke & Matthiesen, 2004) or comparing different types of workaholics (Aziz & Zickar, 2006).

Regarding workaholics defined as excessive and compulsive workers, research has evidenced that the cognitive, compulsive tendency mainly drives the health-impairing effects of being a workaholic (see also McMillan et al., 2001). The results concerning the behavioral component of excessive work are inconclusive. While some scholars found negative associations between working long hours and employees' well-being (e.g. Schaufeli et al., 2007; Taris, Ybema, Beckers, Verheijden, Geurts, & Kompier, in press), others reported no such association (Taris, Geurts, Schaufeli, Blonk, & Lagerveld, 2008) or even positive relations between excessive work and well-being (Kinnunen, Feldt, & Mäkikangas, 2008). Tellingly, a large-scale study suggested that overtime in itself may not be health-impairing. Instead, other conditions such as the quality of work may account for the suggested negative associations between overtime and employees' health (Beckers, van der Linden, Smulders, Kompier, van Veldhoven, & van Yperen, 2004).

The current study aims to advance the understanding of the relations between working excessively, working compulsively, and employees' well-being, which is operationalised in terms of exhaustion and vigor, which may be considered among the core components of burnout and work engagement, respectively (Demerouti, Mostert, & Bakker, 2010). Exhaustion is said to result from intensive physical, affective, and/or cognitive strain (Maslach, Schaufeli, & Leiter, 2001). Vigor, by contrast, is characterised by high levels of energy, mental resilience, persistence, and the willingness to invest effort in one's job (Schaufeli, Salanova, González-Romá, & Bakker, 2002). It represents a eudaimonic aspect of work-related well-being, which goes beyond mere pleasure or positive feelings (Ryan & Deci, 2001).

Vigor and exhaustion may be regarded as complementary, non-reducible aspects of employees' well-being and ill-health, respectively (Demerouti et al., 2010). Both aspects may coexist for workaholics as follows: By working long hours and being unable to disengage from work, workaholics may on the one hand lack sufficient time and opportunity to recover from work. The resulting continuous high state of preparedness may increasingly wear out workaholics' energy and eventually result in exhaustion (Schaufeli et al., 2008; Taris et al., 2008). Being immersed in one's work can, on the other hand, also be psychologically rewarding in and of itself. Brown and colleagues (Brown,

Cron, & Slocum, 1997), for example, found a direct positive effect of effort investment on task satisfaction. Similarly, in a within-person study, Fisher and Noble (2004) found that exerting effort was positively associated with positive emotions. Hence, it seems that sheer effort or knowing that one has given one's best culminates in a state of fulfillment and vigor.

Previous research has indicated that burnout and work engagement may coexist (De Witte & De Cuyper, 2003). This seemingly contradictory finding may be reconciled by taking into account the temporal dynamics underlying negative (i.e. exhaustion) and positive (i.e. vigor) states of mind. When feeling energetic and enthusiastic, individuals may exert high levels of effort, and therefore become exhausted (Maslach et al., 2001). After a period of recovery, the previous satisfactory experience of exerting effort may then trigger a new cycle of effort investment. Alternatively, rather than alternating experiences, exhaustion and vigor may also coexist in the continuous flow of employees' emotional life: Either exhaustion or vigor may momentarily come to the fore, depending on employees' conscientious focus of attention (Barrett, Mesquita, Ochsner, & Gross, 2007).

Although it goes beyond the scope of this study to examine the dynamic interplay of exhaustion and vigor as a response to working excessively and compulsively, based on the rationale presented above, we expect working compulsively in particular to be health-impairing and, accordingly, to relate positively to exhaustion. Excessive work, in contrast, might yield both positive and negative associations with employees' well-being, and hence relate positively to both exhaustion and vigor, depending on the motivation driving the excessive work behavior. Self-Determination Theory (SDT; Deci & Ryan, 2000) might shed light on this underlying motivation.

## A SELF-DETERMINATION PERSPECTIVE ON MOTIVATION

Most motivational theories (e.g. Vroom, 1964) consider motivation from a quantitative point of view. They conceive the degree to which individuals are motivated (high or low) as a crucial predictor of their well-being and performance. According to this view, workaholics would experience enhanced well-being and function optimally as they are highly motivated employees (Mudrack & Naughton, 2001; Ng et al., 2007). Self-Determination Theory (SDT; Deci & Ryan, 2000; Gagné & Deci, 2005), however, maintains that besides the quantity or intensity of motivation, the quality or type of motivation also matters. In this regard, SDT considers it important whether individuals experience the reason for behavioral engagement as coming from themselves. Herein, SDT builds upon the notion of external or internal locus of causality as previously defined by deCharms (1968).

A qualitative less optimal type of motivation, labeled controlled motivation, occurs when individuals experience an external locus of causality; that

is when they consider the reason to engage in a particular activity to be outside their self (Deci & Ryan, 2000). In this case, they have not or have only to a small degree internalised the reasons for behavioral enactment. Instead, they act out of external or internal pressure (Deci & Ryan, 2000). For example, they work hard to be acknowledged by their supervisor, to receive a bonus, or to attain job security (i.e. external pressure), or they engage in a particular activity to attain personal pride and ego-enhancement or to avoid guilt, shame, or anxiety (i.e. internal pressure). As no or only very little internalisation has taken place, controlled motivation is likely to go along with feelings of pressure and conflict, and, hence suboptimal functioning (Deci & Ryan, 2000).

In contrast, SDT considers autonomous motivation to be characterised by an internal perceived locus of causality (Deci & Ryan, 2000), that is, individuals perceive the reasons for autonomously motivated behavior as emanating from their self and therefore experience volition and psychological freedom when enacting the activity. Individuals act autonomously when they have internalised the reason for enacting the behavior and personally value the activity, as well as when they consider the activity to be interesting or enjoyable (Deci & Ryan, 2000). Employees might work long hours because they value a particular project or because they are completely immersed in a challenging or fascinating task.

According to SDT, adopting autonomous instead of controlled regulation yields positive effects in terms of higher well-being and better performance (Ryan & Deci, 2006). Extant research has validated this assumption (see Gagné & Deci, 2005; Van den Broeck, Vansteenkiste, & De Witte, 2008a, for overviews). Being autonomously motivated as opposed to being controlled has been positively related to various aspects of employees' well-being, for example, in terms of increased job satisfaction and work engagement (Richer, Blanchard, & Vallerand, 2002), decreased exhaustion and burnout (Fernet, Guay, & Sénécal, 2004), less anxiety (Parker, Jimmieson, & Amiot, 2010), and physical symptoms (Otis & Pelletier, 2005). Furthermore autonomous motivation relates positively to (affective) organisational commitment (Gagné, Chemolli, Forest, & Koestner, 2008), and associates positively with job performance (Bono & Judge, 2004). Finally, autonomous motivation is positively related to knowledge sharing (Foss, Minbaeva, Pedersen, & Reinholt, 2009) and relates negatively to turnover intentions (Milette & Gagné, 2008).

In the present paper, we argue that the two qualitative types of motivation might help to explain the divergent associations between the two workaholism components and their well-being correlates. Specifically, as outlined in the following paragraphs, we suggest that controlled motivation associates with compulsive work, whereas both controlled and autonomous motivation link to excessive work (see Figure 1).

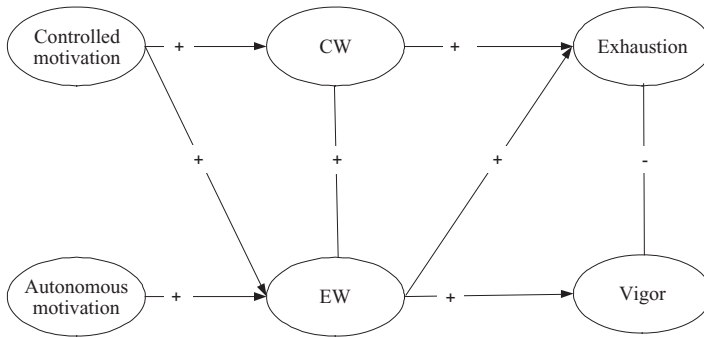


FIGURE 1. Theoretical model of the associations between autonomous and controlled motivation, workaholism, and well-being.

## WORKAHOLISM AND QUALITY OF MOTIVATION

Various scholars have speculated upon the motivation of workaholics (e.g. Porter, 1996; Schaufeli et al., 2009). First of all, it is suggested that the social environment of workaholics may foster workaholism, and particularly the component of working compulsively, by lauding and praising workaholics' strong work involvement (McMillan, O'Driscoll, & Burke, 2003; Ng et al., 2007). Workaholics are assumed to be stimulated to gain prestige, peer admiration, and supervisors' approval (Spence & Robbins, 1992). This is evidenced by workaholics' tendency to pursue work that might result in a pay raise, promotion, or other external signs of worth (Porter, 1996). Workaholics might also be negatively reinforced and might escape into their work to avoid unpleasant non-work activities or involvements (Aziz & Zickar, 2006). In line with this assumption, workaholism has been linked to higher levels of marital estrangement and work-home interference (Aziz & Zickar, 2006; Taris et al., 2005). Thus, workaholics may feel controlled by their social environment to invest a lot of time and effort in their work, even though there are no objective environmental necessities such as deadlines or high financial needs (Taris et al., 2008).

Second, working compulsively may also be related to internal pressure, as it is generally agreed that workaholics may consider excessive investment in work as a means to bolster their self-esteem and reduce feelings of guilt, shame, or anxiety (e.g. McMillan et al., 2003; Porter, 2004). Support for this view comes from studies showing that working compulsively is positively related to the urge to prove oneself and to perfectionism (Burke, 1999), which, in turn, have been linked to controlled motivation (Miquelon, Valleurand, Grouzet, & Cardinal, 2005).

Although working compulsively can be reasonably linked with controlled motivation, the motivational pattern driving excessive work may be more complex. We suggest that this quantitative behavioral component of workaholism might result from both controlled and autonomous motivation. Indeed, employees may work long hours out of external or internal pressure (i.e. controlled motivation) as outlined above, but may also volitionally invest many hours in their jobs because they find their work important, interesting, or enjoyable (i.e. autonomous motivation). Various studies in the realm of SDT have linked autonomous motivation to long-term behavioral persistence. For example, autonomously motivated high school students (Vallerand, Fortier, & Guay, 1997) and competitive swimmers (Pelletier, Fortier, Vallerand, & Brière, 2001) have been found to drop out of college and swimming competitions less frequently than their controlled counterparts. When individuals are autonomously stimulated for activities such as recycling or sport, they are also more likely to freely engage in similar additional activities, whereas such persistence is not evident when individuals feel forced to engage in the initial behaviors (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). When feeling controlled, individuals are likely to persist in a particular activity only for a short time, but not a long while (Pelletier et al., 2001) and to experience less interest and enjoyment (Ryan, Koestner, & Deci, 1991). Building on these results, we argue that working excessively might be fueled by both autonomous and controlled motivation. The motivational base for working excessively may then drive the impact of working long hours on employees' well-being.

Specifically, as shown in Figure 1, we hypothesise that:

*Hypothesis 1:* Controlled motivation associates with compulsive work, which, in turn relates positively to exhaustion.

Excessive work, in contrast, may stem from both autonomous and controlled motivation, which results in the following two hypotheses:

*Hypothesis 2a:* Controlled motivation is positively associated with excessive work, which in turn relates positively to exhaustion.

*Hypothesis 2b:* Autonomous motivation is positively associated with excessive work, which in turn relates positively to vigor.

This implies that working compulsively and working excessively may mediate the associations of controlled and autonomous motivation with employees' exhaustion and vigor (Baron & Kenny, 1986). However, as other mechanisms may also be involved (e.g. Baard, Deci, & Ryan, 2004), we expect that the workaholism components only partially mediate the relationship between motivation and well-being.



## METHOD

### Procedure

Data were gathered in Flanders, the Dutch-speaking part of Belgium. As part of an introductory course on quantitative research, 76 undergraduate students distributed five questionnaires among friends or relatives with at least 3 years of working experience. In line with previous research (e.g. Aziz & Zickar, 2006), only full-time working white-collar workers were invited to participate. As white-collar workers' responsibilities are generally open-ended and not restricted to time and place, they may have both the opportunity and the possibility of engaging in workaholic behaviors (Spence & Robbins, 1992).

The questionnaires included a cover letter emphasising that participation was voluntary and anonymous. The completed questionnaires were either picked up by the students in sealed envelopes or sent back to the researchers in pre-stamped envelopes. In total, 370 questionnaires were returned.

### Participants

The sample included somewhat more male (54%) than female respondents. Participants' ages varied between 21 and 60 years ( $M = 37.95$  years;  $SD = 11.19$  years). As only white-collar workers were selected, educational level was rather high; 2 per cent of the participants had completed only primary school, 24 per cent had left education after secondary school, 54 per cent had acquired a bachelor's degree, and 21 per cent had obtained a master's degree. With regard to professional level, 47 per cent of the respondents were lower level white-collar workers, 24 per cent were professionals (e.g. teachers, nurses), and 30 per cent held a managerial job. Most respondents (93%) had a permanent job. Participants' working experience within their current employment varied between 1 month and 38 years ( $M = 8.95$  years;  $SD = 9.38$  years).

### Measurements

All questionnaires were available in Dutch. Information on the means and standard deviations of the scales can be found in Table 1. The Cronbach's alphas indicate that the internal consistency of all scales was satisfactory (Table 1).

*Workaholism* was measured using the Dutch Workaholism Scale (DUWAS; Schaufeli et al., 2008), which is based on the Work Addiction Risk Test (Robinson, 1999) and the Workaholism Battery (Spence & Robbins, 1992). The DUWAS has been previously used to assess workaholism in other

TABLE 1  
Means, Standard Deviations, Alphas, and Correlations among all Studied Variables

	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Gender	1.47	.55									
2. Age	37.95	11.19	-.11*								
3. Educational level	5.69	1.24	-.05	-.06							
4. Compulsive Work	2.08	.62	.09	.00	.00	(.77)					
5. Excessive Work	2.55	.59	-.05	.03	.04	.48**	(.71)				
6. Controlled Motivation	2.53	.68	.03	-.06	-.03	.38**	.12*	(.78)			
7. Autonomous Motivation	3.69	.69	.07	-.01	-.01	-.08	.11*	-.01	(.88)		
8. Vigor	4.23	.96	-.02	.17**	-.01	.04	.32**	-.02	.57**	(.85)	
9. Exhaustion	1.91	1.05	.00	-.01	.02	.33**	.17**	.19**	-.40**	-.40**	(.85)

Note: \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Dutch-speaking samples and has shown good internal consistency, and internal and external validity (e.g. Schaufeli et al., 2009). Excessive work included five items such as “I seem to be in a hurry and racing against the clock”. Compulsive work included five items such as “It is hard for me to relax when I am not working”. Both scales were scored on a 4-point Likert scale, ranging from 1 (“totally disagree”) to 4 (“totally agree”).

*Exhaustion* was measured using the five-item scale of the Dutch version of the Maslach Burnout Inventory General Survey (Schaufeli & van Dierendonck, 2000). The participants scored items such as “I feel totally exhausted in my job” on a 7-point Likert scale ranging from 0 (“never”) to 6 (“always, every day”). *Vigor* was assessed via five items of the Utrecht Work Engagement Scale (Schaufeli et al., 2002; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008b). Again the participants indicated on a scale from 0 (“never”) to 6 (“always, every day”) how often they experienced vigor. A sample item is “At my work, I feel bursting with energy”.

*Self-Regulation* was assessed with 12 items based on the general Self-Regulation Scales of Ryan and Connell (1989). These items were adapted to tap the different motivations for doing one’s job, rather than a general regulatory style. Respondents indicated on a scale from 1 (“totally disagree”) to 5 (“totally agree”) to what extent each of the statements corresponded with their motivations for doing their job. In line with previous research (e.g. Vansteenkiste et al., 2004; Parker et al., 2010), controlled motivation included items such as “because others [partner, parents, friends, . . .] expect me to do so” and “because I have to be good in this job, otherwise I would feel disappointed in myself”. Autonomous motivation was assessed with items such as “because this job aligns with my personal values” and “because I have fun doing this job”.

## Plan of Analysis

Following the two-step approach procedure recommended by Anderson and Gerbing (1988), we first tested the divergent validity of our constructs by means of item-level confirmatory factor analyses (CFA). We continued by conducting structural equation modeling (SEM) applying the maximum-likelihood method in LISREL 8.54 (Jöreskog & Sörbom, 2004) to test the hypotheses. Data screening using Prelis 2.71 (Jöreskog & Sörbom, 2004) revealed data non-normality at the univariate and multivariate levels. Therefore in all subsequent models, in addition to the covariance matrix, the asymptotic covariance matrix was used and the Satorra-Bentler Scaled chi-square (SBS- $\chi^2$ ; Satorra & Bentler, 1994) instead of the common chi-square was inspected. As suggested by Hu and Bentler (1999), model fit was evaluated using three goodness of fit indices: The Root Mean Square Error of Approximation (RSMEA), the Comparative Fit Index (CFI), and the

Standardised Root Mean Square Residuals (SRMR). CFI values larger than .95 indicate excellent fit; values larger than .90 indicate good fit (Hoyle, 1995). RSMEA below .05 in combination with SRMR values below .09 indicate excellent fit, whereas values below .08 and .10, respectively, indicate good fit (Byrne, 2001). The chi-square difference test was used to compare the fit of nested models.

To test the hypotheses, following Holmbeck (1997), we first tested the full mediation model in which the hypothesised paths were allowed from autonomous and controlled motivation to working compulsively and working excessively, and from these two workaholism components to exhaustion and vigor. We then tested whether allowing direct relations from autonomous and controlled motivation to employees' well-being resulted in increased model fit (partial mediation model). In all analyses, results were considered to be significant if the accompanying *p*-value was at least .05.

## RESULTS

### Preliminary Analysis

As shown in Table 1, of the background variables only age related to the variables under study, that is, it related positively to vigor. As expected, the two workaholism components were positively related. Compulsive work was furthermore positively related to controlled motivation and exhaustion. Excessive work related positively to both controlled and autonomous motivation, as well as to vigor and exhaustion. Whereas controlled motivation associated positively with exhaustion, autonomous motivation related negatively to exhaustion and positively to vigor. Vigor and exhaustion were negatively correlated.

### Measurement Model

We estimated a full measurement model including the two types of motivation, the excessive and compulsive component of workaholism, vigor and exhaustion. All variables were presented by their respective items. This model, including 32 observed variables and six latent factors, yielded a good fit,  $SBS-\chi^2(559) = 1131.36, p < .001$ ; RSMEA = .07; SRMR = .08, and CFI = .93. All observed variables had significant ( $p < .001$ ) loadings ranging from .48 to .87 on their latent factor (mean  $\lambda = .67$ ). A valid measurement model was thus obtained.

### Structural Model

First, we calculated the full mediation model which related controlled and autonomous motivation to working compulsively and working excessively,

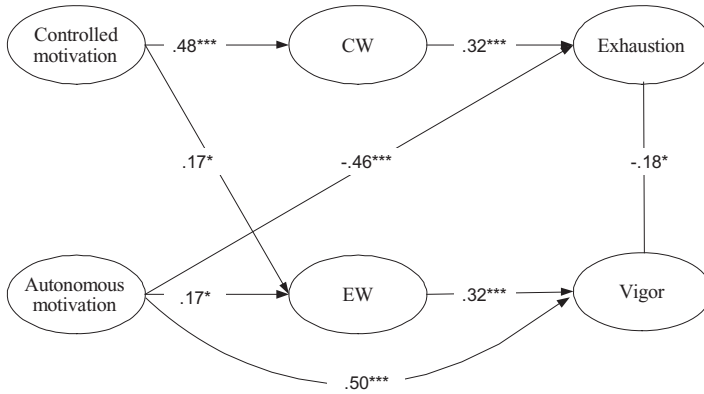


FIGURE 2. Structural model of the relationships between autonomous and controlled motivation, workaholism, and well-being. Coefficients represent standardized estimates.

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

and the workaholism components to exhaustion and vigor (Baron & Kenny, 1986). In line with previous research, vigor and exhaustion were allowed to correlate (Van den Broeck et al., 2008b). This model yielded acceptable fit to the data, but showed room for improvement;  $SBS-\chi^2(456) = 1344.31$ ,  $p < .001$ ;  $RSMEA = .07$ ;  $SRMR = .13$ , and  $CFI = .90$ .

We therefore computed the partial model in which direct paths from employees' motivation to exhaustion and vigor were added (Figure 2). This model fit the data well;  $SBS-\chi^2(454) = 1204.31$ ,  $p < .001$ ;  $RMSEA = .07$ ;  $SRMR = .10$ , and  $CFI = .92$ , and yielded an improved fit compared to the full mediation model;  $\Delta SBS-\chi^2(2) = 140$ ,  $p < .001$ . In line with the hypothesis, controlled motivation related positively to both excessive work ( $\gamma = .17$ ,  $p < .05$ ) and compulsive work ( $\gamma = .48$ ,  $p < .001$ ). As expected, autonomous motivation yielded a direct positive relation with excessive work ( $\gamma = .17$ ;  $p < .05$ ). As predicted, compulsive work was positively associated with exhaustion ( $\gamma = .32$ ,  $p < .001$ ), whereas excessive work related positively to vigor ( $\gamma = .32$ ,  $p < .001$ ). In addition, autonomous motivation related positively to vigor ( $\gamma = .50$ ,  $p < .001$ ), and associated negatively with exhaustion ( $\gamma = -.46$ ,  $p < .001$ ).

Finally, Sobel tests were applied to formally evaluate whether controlled and autonomous motivation yielded indirect associations with exhaustion and vigor through compulsive and excessive work (Sobel, 1982). The indirect relation between controlled motivation and exhaustion through compulsive work ( $z = .15$ ,  $p < .001$ ) was confirmed, as was the indirect association between autonomous motivation and vigor ( $z = .05$ ,  $p < .05$ ) through exces-

sive work. Notably, from a methodological point of view, this model suggests that an indirect relationship may emerge between controlled motivation and vigor through excessive work. The Sobel test, however, did not support this relation ( $z = .03$ , *ns*).

## DISCUSSION

In this paper, we aimed to further the understanding of workaholism, defined by both a behavioral (i.e. working excessively) and a cognitive (i.e. working compulsively) component (Taris et al., 2008). This two-dimensional definition is in line with the original conceptualisation of workaholism (Oates, 1971) and includes the commonly agreed upon workaholism components (Schaufeli et al., 2007). Gaining more insight into workaholism might be important (Sparks et al., 2001), as the incidence of workaholism seems to be increasing (Porter, 2004), and workaholism might yield negative consequences for various stakeholders, including employees, family members, and organisations (McMillan, O'Driscoll, & Brady, 2004).

Specifically, the present study wanted to shed light on the different associations of excessive work and compulsive work with employees' well-being (e.g. Taris et al., 2008). Based on SDT's differentiation between autonomous and controlled motivation, we hypothesised that compulsive work would relate positively to exhaustion because it would originate from controlled motivation (Hypothesis 1). Excessive work was hypothesised to be fueled by both controlled motivation and autonomous motivation and therefore to relate positively to exhaustion (Hypothesis 2a) and vigor (Hypothesis 2b), respectively.

The current findings seem to confirm Hypotheses 1 and 2b. First, regarding Hypothesis 1, controlled motivation related positively to compulsive work, which, in turn was positively related to exhaustion. Moreover, compulsive work fully explained the positive association between controlled motivation and exhaustion. These results provide evidence that people work compulsively because they are concerned about extrinsic rewards and punishments, or because they would feel ashamed or guilty if not working, thereby undermining their well-being. Second, as expected in Hypothesis 2, both autonomous and controlled motivation related positively to the tendency to work excessively. Excessive work, furthermore, partially explained the association between autonomous motivation and vigor. These findings provide support for Hypothesis 2b that working long hours may be energising rather than depleting when people find their work useful and interesting.

Unexpectedly, despite the correlation between excessive work and exhaustion, these concepts did not yield a significant structural relation after controlling for compulsive work. Accordingly, indirect effects of controlled motivation on employees' exhaustion through excessive work did not

emerge. Hypothesis 2b was therefore not corroborated. Perhaps the relationship between excessive work and exhaustion might be attenuated by a restriction of range in excessive work in the present study. Previously it has been suggested that only fairly high levels of overtime would be health-impairing (Beckers et al., 2004). Alternatively, the weak relation between excessive work and exhaustion might perhaps be attributed to qualitative, rather than quantitative, differences in overtime, hinting at moderating variables such as the quality of work (Beckers et al., 2004).

In sum, the present results suggest that working compulsively is likely to have health-impairing correlates since it is fueled by a qualitatively poor type of motivation. Working excessively, on the other hand, may not be related to ill-health in the event that it is driven by a qualitatively good type of motivation.

## Theoretical and Practical Implications

The present findings contribute to the literature on workaholism in several ways. First, this study adds to the understanding of the motivation of workaholics. Although this topic is widely discussed in the literature (e.g. Burke & Matthiesen, 2004; Spence & Robbins, 1992), it has not yet been fully empirically or theoretically substantiated. Workaholics are generally assumed to be highly motivated (e.g. Ng et al., 2007). The present findings, however, indicate that their motivation might, in part, be of inferior quality, thereby possibly resulting in suboptimal functioning. Second, our findings seem to confirm that working excessively is a necessary but not sufficient condition of succumbing to the syndrome of workaholism. Excessive work may be motivated by various factors, both autonomous and controlled. In the former case, it relates positively to well-being, as is hypothesised in SDT. This confirms that excessive work might in itself not be negative, a suggestion that was previously made in a large-scale study on long working hours (Beckers et al., 2004). Working compulsively, however, relates positively to health-impairment. The health-impairing associations of workaholism might thus primarily be attributed to working compulsively, as was previously suggested by Taris and colleagues (2008).

The present findings may also add to SDT. They confirm, once more, that autonomous motivation relates positively and controlled motivation relates negatively to optimal functioning, that is, employees' work-related well-being in terms of decreased exhaustion and increased vigor (e.g. Judge, Bono, Erez, & Locke, 2005). Interestingly, these findings indicate that autonomous motivation may hold strong direct associations with both well-being and ill-health, whereas controlled motivation may relate, less strongly, to employees' poor well-being via other aspects of employee functioning such as compulsive work.

At the practical level, results suggest that practitioners might primarily focus on decreasing workaholics' tendency to work compulsively. This might be achieved, for instance, by creating a growth culture rather than a pressurising culture (Buelens & Poelmans, 2004) or by decreasing job demands (e.g. work pressure, role conflicts, and emotional demands) and increasing job resources (e.g. job control and social support; Johnstone & Johnson, 2005; Schaufeli et al., 2007, 2008).

The present findings furthermore confirm that the quality of motivation matters. That is, highly motivated employees may either experience well-being and function optimally, or lack well-being and develop problematic attitudes towards work, depending on the type of regulation underlying their behavior. Practitioners might therefore aim to stimulate in employees autonomous rather than controlled motivation. According to SDT, this may be achieved by adopting an autonomy supportive style which is characterised by being empathic and offering choices and by providing rationales if choice is restricted. Previous research has shown that such an interaction style may foster autonomous motivation in others (e.g. Otis & Pelletier, 2005; Senécal, Vallerand, & Guay, 2001).

## Limitations and Suggestions for Further Research

This study is not without limitations. First, as the present sample does not necessarily provide an accurate view of the prevalence of workaholism in the population, future studies might aim to focus on the prevalence of workaholism. The primary aim of the current study was, however, to study the associations between workaholism and employees' functioning. The current sample seemed suitable for this end, as the mean levels of excessive and compulsive work in the present sample are comparable to those of the samples employed in similar studies (e.g. Schaufeli et al., 2009).

Second, as all data were gathered through self-reports, common method variance might have increased the strength of the observed relationships. However, as similar results have been found for both workaholics' and acquaintances' ratings (e.g. Aziz & Zickar, 2006; McMillan et al., 2004), we do not expect the use of self-reports to significantly downplay our results. Furthermore, self-ratings seem to be the most feasible way to assess individuals' workaholism, as acquaintances seem to underestimate workaholics' tendency to work compulsively (McMillan et al., 2004).

Third, because of the present study's cross-sectional design, the causal order between workaholism, motivation, and well-being remains to be addressed. Possibly, workaholism and the different types of motivation might influence well-being over time. Alternatively, workers' levels of well-being might set the conditions for workaholism and autonomous versus



controlled motivation to emerge. Individuals who feel vigorous, satisfied, or efficacious in their jobs might, for instance, have the energy to work long hours and seek out important, fun, or interesting tasks (de Lange, De Witte, & Notelaers, 2008).

Similarly, the dynamic interplay between employees' motivation and workaholism remains to be studied. The present study conceptualises autonomous and controlled motivation as drivers of workaholism, as motivation refers to a more general orientation towards one's job, whereas workaholism might be considered a more specific attitude towards work. Although no conclusions about causality can be drawn, the current study nonetheless contributes to our understanding of workaholism, as it shows that working compulsively and working excessively are associated with qualitatively different types of work motivation.

## Conclusions

In sum, the present study adds to the understanding of workaholism by disentangling the positive and negative well-being associates of the two workaholism components, that is, working excessively and working compulsively (Taris et al., 2008). The present research furthermore helps to understand workaholics' motivation from a theoretical point of view and therefore answers the calls for a theoretically based approach in the study of workaholism (e.g. McMillan et al., 2001). In general, the findings seem to suggest that the propensity to work compulsively relates to ill-health (i.e. exhaustion) because it is associated with feelings of coercion (i.e. controlled motivation). Excessive work, by way of contrast, is accompanied by experiences of joy and interest or awareness of the significance of their job (i.e. autonomous motivation) and therefore associates positively with workers' well-being (i.e. vigor).

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