Workaholism, Burnout, and Work Engagement: Three of a Kind or Three Different Kinds of Employee Well-being?

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The present study investigated in a sample of 587 telecom managers whether workaholism, burnout, and work engagement—the supposed antipode of burnout—can be distinguished empirically. These three concepts were measured with existing, validated multi-dimensional questionnaires. Structural equation modeling revealed that a slightly modified version of the hypothesised model that assumed three distinct yet correlated constructs—burnout, engagement, and workaholism—fitted the data best. Multiple regression analyses revealed that these three concepts retained unique hypothesised patterns of relationships with variables from five clusters representing (1) long working hours, (2) job characteristics, (3) work outcomes, (4) quality of social relationships, and (5) perceived health, respectively. In sum, our analyses provided converging evidence that workaholism, burnout, and engagement are three different kinds of employee well-being rather than three of a kind.

La présente étude examine auprès d'un échantillon de 587 cadres des télécommunications la question de savoir si l'addiction au travail, le burnout et l'engagement au travail—supposé l'inverse du burnout—peuvent être distingués empiriquement. Ces trois concepts sont mesurés à partir de questionnaires multi-dimensionnels existants et validés. La modélisation d'équation structurale indique qu'une version légèrement modifiée du modèle testé selon lequel le burnout, l'engagement au travail et l'addiction au travail sont trois formes distinctes bien que corrélées du bien-être, rend mieux compte des résultats. Des analyses de régression multiples montrent que ces trois concepts renvoient

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à des modèles de relations supposés uniques entre les variables des cinq groupes suivants: 1) le nombre d'heures travaillées, 2) les caractéristiques du travail, 3) les résultats du travail, 4) la qualité des relations sociales et 5) la santé perçue. En conclusion, les analyses montrent de façon convergente que l'addiction au travail, le burnout et l'engagement au travail sont trois formes différentes de bien-être des employés plutôt que trois facettes du bien-être.

INTRODUCTION

This article attempts to demonstrate the empirical distinctiveness of workaholism, burnout, and work engagement by examining their interrelationships (*internal* validity) as well as their relationships with other variables (*external* validity). In order to be considered three different kinds of employee well-being factors rather than three of a kind, workaholism, burnout, and work engagement should *not* constitute one single common factor and the three concepts should relate *differently*—and as predicted—to other variables such as excess working time, job characteristics, work outcomes, quality of social relationships, and perceived health.

The issue of empirical distinctiveness is particularly important because some conceptual confusion exists about the nature of these three overlapping kinds of employee well-being. For instance, the leading model of workaholism (Spence & Robbins, 1992) assumes three underlying dimensions, the so-called "workaholic-triad", consisting of work involvement, drive, and work enjoyment. Different combinations of these three elements are assumed to produce six types of "workaholism". One of these types represents "real workaholism", whereas two others seem to overlap with burnout and work engagement, respectively. More specifically, according to Spence and Robbins (1992), "real workaholics" are high in involvement, high in drive, and low in enjoyment, whereas "work enthusiasts" are high in involvement and enjoyment, and low in drive (thus resembling *engaged* workers), and "disenchanted workers" are low in involvement and enjoyment, and high in drive (thus resembling *burned-out* workers).

We strongly believe that subsuming different types of employee well-being under the same heading is not a very good strategy because it blurs the meaning of workaholism and adds to the conceptual confusion. Rather, we argue that workaholism, burnout, and work engagement are conceptually and empirically distinct. To our knowledge, so far *no* study has included these three kinds of employee well-being simultaneously so that an empirical test of their distinctiveness is still outstanding. Only one study has included both burnout and workaholism (Burke & Matthiesen, 2004), but rather than investigating the empirical *distinctiveness* of workaholism and burnout this study compared *levels of burnout* across the types of workaholism as proposed by Spence and Robbins (1992). Indeed, it was found that "disenchanted workers" scored highest on the two most prominent burnout dimensions (i.e. exhaustion and cynicism), whereas no significant difference between the six types of

workaholism was observed on the remaining inefficacy dimension. This result lends credit to our assertion that "disenchanted" workers are high in burnout. Accordingly, the study of Burke and Matthiesen (2004) underscores the importance of investigating the empirical distinctiveness of workaholism and burnout.

WORKAHOLISM, BURNOUT, AND WORK ENGAGEMENT (INTERNAL VALIDITY)

The term "workaholism" was coined by Oates (1971), who describes it as ". . . the compulsion or the uncontrollable need to work incessantly" (p. 11). This early description entails two core elements which return in most later definitions of workaholism: working excessively hard and the existence of a strong, irresistible inner drive (cf. McMillan, O'Driscoll, & Burke, 2003). The former points to the fact that workaholics tend to allocate an exceptional amount of time to work and that they work beyond what is reasonably expected to meet organisational or economic requirements. The latter recognises that workaholics persistently and frequently think about work, even when not working, which suggests that workaholics are "obsessed" with their work. In fact, these two elements—that represent the behavioral and cognitive component of workaholism, respectively—refer to the very origin of the term workaholism which was meant to correspond to alcoholism (Oates, 1986). We agree with Porter (1996, p. 71), who calls on students of workaholism to ". . . return to the origin of the term as a starting point for future research". She posits that workaholism should be interpreted as an addiction, that is, as excessive and persistent behavior with harmful consequences, thus excluding views that consider workaholism a positive state (e.g. Machlowitz, 1980; Scott, Moore, & Miceli, 1997; Spence & Robbins, 1992). In our view, workaholics work harder than their job prescriptions require and they put much more effort into their jobs than is expected by the people with whom or for whom they work, and in doing so they neglect their life outside their job. Typically, they work so hard out of an inner compulsion, need, or drive, and not because of external factors such as financial rewards, career perspectives, organisational culture, or poor marriage.

Burnout is a metaphor that is commonly used to describe a state of mental weariness. Although there is some discussion about the nature of burnout (see Schaufeli & Taris, 2005), the most widely used conceptualisation originates from Maslach (1993), who describes burnout as a three-dimensional construct that consists of: (1) exhaustion (i.e. the depletion or draining of mental resources); (2) cynicism (i.e. indifference or a distant attitude towards one's job); and (3) lack of professional efficacy (i.e. the tendency to evaluate one's work performance negatively, resulting in feelings of insufficiency and poor job-related self-esteem). It has been estimated that over 90 per cent of the studies on burnout use the Maslach Burnout

Inventory that is based on this three-dimensional definition (Schaufeli & Enzmann, 1998, p. 71). The fact that studies on burnout and workaholism are virtually lacking is all the more remarkable because already 20 years ago it was suggested that workaholism may act as a the root cause of burnout since excessively and frantically working employees use up their mental resources, leaving them depleted and "burned out" (Maslach, 1986). Clearly, this contention implies that workaholism and burnout are different constructs that can also be discriminated empirically.

The concept of work engagement emerged from burnout research, namely as an attempt to cover the entire spectrum running from employee *unwell*-being (burnout) to employee *well*-being (Maslach, Schaufeli, & Leiter, 2001). Unlike those who suffer from burnout, engaged employees have a sense of energetic and effective connection with their work activities and they see themselves as able to deal well with the demands of their job. More specifically, Schaufeli, Salanova, González-Romá, and Bakker (2002a) define work engagement as a positive, fulfilling, work-related state of mind that is characterised by: (1) vigor (i.e. high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence also in the face of difficulties); (2) dedication (i.e. a sense of significance, enthusiasm, inspiration, pride, and challenge); and (3) absorption (i.e. being fully concentrated and engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work). Absorption comes close to what has been called "flow" (Csikszentmihalyi, 1990)—a state of optimal experience—although flow refers to short-term peak experiences instead of a more pervasive and persistent state of mind, as is the case with absorption. Work engagement and burnout are moderately negatively related, with correlations typically ranging from −.30 to −.65 (for an overview see Schaufeli & Salanova, in press). Recently, it was found that exhaustion and vigor as well as cynicism and dedication each span a dimension that might be labeled *activation* and *identification*, respectively (González-Romá, Schaufeli, Bakker, & Lloret, 2006). So far, the relationship between work engagement and workaholism has not been studied. However, interviews with engaged employees who scored high on vigor, dedication, and absorption suggest that they are *not* addicted to work (Schaufeli, Taris, Le Blanc, Peeters, Bakker, & De Jonge, 2001). Unlike workaholics, they enjoy doing things outside work, they do not feel guilty when not working, and they do not work hard because of a strong and irresistible inner drive but because for them work is fun.

WORKAHOLISM, BURNOUT, AND WORK ENGAGEMENT (EXTERNAL VALIDITY)

In order to assess the external validity of workaholism, burnout, and engagement, their relationships with five sets of variables are investigated. As can

TABLE 1
Summary of Expected Relationships of Workaholism, Burnout, and Work
Engagement with Other Variables

	Workaholism	*Burnout*	*Engagement*
Excess working time	+	0	+
Job characteristics			
Demands	+	+	0
Recourses	0	−	+
Work outcomes	+	−	+
Social relations	−	−	+
Perceived health	−	−	+

Note: + = positive relationship; − = negative relationship; 0 = no significant relationship.

be seen from Table 1, each of the three focal concepts is expected to be related in a specific way to the external variables. Below we discuss the relationships that are summarised in Table 1 in greater detail, and formulate six hypotheses.

Excess Working Time

The most obvious characteristic of *workaholics* is that they work beyond what is required (e.g. Buelens & Poelmans; 2004; Scott et al., 1997). North American workaholics work on average 50–60 hours per week (Brett & Stroh, 2003), with those who score high on the drive component working the longest hours (Burke, 1999; Kanai, Wakabayashi, & Fling, 1996; Peiperl & Jones, 2001; Spence & Robbins, 1992; Taris, Schaufeli, & Verhoeven, 2005). Typically, a positive relationship between working time and *burnout* is almost exclusively observed for perceived time pressure and only very occasionally for more objective measures, such as caseload or the number of working hours per week (Lee & Ashforth, 1996; Schaufeli & Enzmann, 1998, p. 82). It appears from a large representative sample of the Dutch full-time workforce that *engagement* is associated with overwork (Beckers, Van der Linden, Smulders, Kompier, Van Veldhoven, & Van Yperen, 2004).

Hence, it is expected that workaholism and engagement are positively related to excess working time, whereas no relationship is expected with burnout (Hypothesis 1).

Job Characteristics

In their attempts to continue working, *workaholics* may go as far as to actively create more work for themselves; for instance, by making projects

more complicated than necessary or by refusing to delegate work (Machlowitz, 1980). As expected, strong positive relationships were found between workaholism and job demands such as work overload (Kanai et al., 1996; Kanai & Wakabayashi, 2001). Taris et al. (2005) showed that the relationship between workaholism and exhaustion was partly mediated by perceived job demands: workaholics experience high job demands, which in turn are related to exhaustion. Most studies on *burnout* have included job characteristics because these are considered to be the root cause of the syndrome. The most convincing and consistent findings were obtained with job demands—notably work overload—and with poor resources, such as lack of social support from co-workers and superiors, and lack of job control. For instance, a meta-analysis by Lee and Ashforth (1996) showed that exhaustion shared 42 per cent of its variance with work overload, whereas 14 per cent of the variance in exhaustion overlapped with support from supervisors and 5 per cent with support from co-workers. Their meta-study also showed that—depending on the dimension—job control accounted for 3–10 per cent of the variance of burnout. Using discriminant analysis, Demerouti, Bakker, De Jonge, Janssen, and Schaufeli (2001) found that levels of job demands and job control were predicted by two discriminant functions that were labeled "burnout" and "engagement". In a similar vein, Sonnentag (2003) observed a significant positive relationship between engagement and method control, whereas engagement was unrelated with job demands. These findings corroborate Schaufeli and Bakker's (2004) finding that engagement was related to job resources (e.g. social support from colleagues) but *not* to job demands, whereas burnout was related to both. Positive associations between engagement and rewarding co-worker and supervisor relations were also found in a recent study by May, Gilson, and Harter (2004).

In sum, we expect that workaholism and burnout are positively related to job demands, whereas engagement is unrelated to demands (Hypothesis 2a). In addition, we expect that work engagement is positively related with job resources (i.e. job control and social support), whereas burnout is negatively related with job resources and workaholism is unrelated to job resources (Hypothesis 2b).

Work Outcomes

It seems that *workaholics* might be working harder than others but do not receive more rewards for their efforts (Burke, 2001). This is contingent with the idea that workaholics are motivated by a strong inner drive rather than by external motivators (Spence & Robbins, 1992). Nevertheless, it appears that a weak positive relationship exists between workaholism, and job satisfaction and organisational commitment (Burke, 1999; Burke & Koskal, 2002; Burke, Richardsen, & Mortinussen, 2004). The major work outcomes

that have been studied in relation to *burnout* are job satisfaction and organisational commitment. Schaufeli and Enzmann (1998, pp. 89–91) computed meta-correlations based on almost 50 studies and showed that between 5 and 27 per cent of the variance of these two variables was shared with burnout, depending on the dimension studied. Schaufeli and Bakker (2004) showed that *engagement* was negatively related to the intention to quit, which might be interpreted as a proxy of organisational commitment (i.e. continuance commitment). This meshes well with Schaufeli et al.'s (2001) qualitative findings that engaged workers are committed and satisfied with their jobs, as well as with Demerouti et al. (2001), who reported moderate positive correlations between organisational commitment and all three engagement dimensions.

Hence, we expect that both workaholism and engagement are positively related to work outcomes (i.e. job satisfaction and organisational commitment), whereas burnout is negatively related with these outcomes (Hypothesis 3).

Quality of Social Relationships

If *workaholism* is a pervasive phenomenon that urges people to spend as much time as possible at their jobs at the cost of other activities, workaholics should differ from non-workaholics as regards the quality of their interpersonal relationships, as well as their social functioning outside work. Previous research has supported these notions. For instance, levels of marital estrangement are relatively high among workaholics (Robinson, Flowers, & Carroll, 2001), workaholics experience poorer relational satisfaction than non-workaholics (Burke & Koksal, 2002), and they report poorer social functioning (McMillan & O'Driscoll, 2004). Since *burnout* is considered a negative mental state, it is expected to have an adverse impact on home and family life (the so-called negative spill-over hypothesis; see Schaufeli & Enzmann, 1998, p. 88). Although associations have been found between employee burnout on the one hand and marital dissatisfaction and family stress on the other, the causal direction is still unclear so that there is no conclusive evidence on negative spill-over of burnout to private life (Schaufeli & Enzmann, 1998, pp. 88–89). The already mentioned qualitative study on *work engagement* (Schaufeli et al., 2001) suggested that engaged employees do not neglect their social life outside work; rather, they spend time on socialising, hobbies, and work as volunteers. This agrees with recent findings of Grzywacz and Marks (2000) that suggest a positive spill-over effect from work to private life: having a fulfilling job has a positive impact on family life. In a similar vein, Montgomery, Peeters, Schaufeli, and Den Ouden (2003) found that employees who take the positive feelings from their work home—or vice versa—exhibit higher levels of engagement compared to those where there is no positive cross-over between both life domains.

Thus, we expect that both workaholism and burnout are related to poor social functioning, whereas engagement is related to good social functioning (Hypothesis 4).

Perceived Health

Previous research has shown that working long hours is associated with elevated levels of strain and ill-health (see Van der Hulst, 2003, for a review), presumably because workers who work hard have insufficient opportunity to recover from their excessive efforts (Sonnentag, 2003). Consistent with such reasoning, workaholics report relatively high levels of job strain and health complaints (Burke, 1999, 2000; Burke et al., 2004; Kanai et al., 1996; McMillan et al., 2003; Spence & Robbins, 1992; Taris et al., 2005). Despite this rather compelling evidence, a recent study concluded that "it appears that work-aholism may be less toxic to personal health and well-being than at first thought" (McMillan & O'Driscoll, 2004, p. 509). Research has revealed positive relationships between *burnout* and various mental and physical health problems (for an overview see Shirom, Melamed, Toker, Berliner, & Shapira, 2005). This is particularly true for distress, depression, and psychosomatic complaints. Typically, the exhaustion component of burnout is most strongly related to health problems, for instance, sharing up to 40 per cent of its variance with depression and 45 per cent with self-reported psychosomatic complaints (Schaufeli & Enzmann, 1998, pp. 86–89). So far, only two studies included *work engagement* and perceived health (Schaufeli & Bakker, 2004; Hakanen, Bakker, & Schaufeli, 2006). The model that was tested successfully in both studies assumed that burnout was negatively related to health, whereas engagement was unrelated to health problems. However, unlike the latent job engagement construct, vigor and dedication showed weak to moderate positive correlations with perceived health. In other words, there is limited evidence that at least two aspects of engagement are positively related to perceived health. This agrees with the qualitative study of Schaufeli et al. (2001) that suggests that engaged employees enjoy good mental health.

Therefore, we expect that perceived health is negatively related to both workaholism and burnout, and positively related to work engagement (Hypothesis 5).

THE PRESENT STUDY

Internal Validity

Using Structural Equation Modeling (SEM), three different models are tested. The first model (M1) assumes that all scales that assess workaholism, burnout, and work engagement load on *one* common factor ("general well-

being") and, therefore, that the three focal concepts cannot be differentiated. It has been argued that positive and negative affect (Clark & Watson, 1991) and positive and negative well-being (Huppert & Whittington, 2003) constitute two independent dimensions. Therefore, a second model (M2) was specified that assumes *two* negatively correlated factors that include all positively worded scales and all negatively worded scales, respectively. Finally, the third model (M3) assumes *three* correlated factors that represent workaholism, burnout, and work engagement.

External Validity

The six hypotheses that have been formulated before can be summarised as follows: *workaholism* is related to excess working time, job demands, positive work outcomes, poor quality of social relations and health problems; *burnout* is unrelated to excess working time, but is related to job demands, lack of resources, poor work outcomes, poor quality of social relationships, and health problems; and finally, work *engagement* is related to working excess time, job resources, positive work outcomes, good quality of social relations, and health. Accordingly, we expect that each type of employee well-being is related in a unique way to each of the five sets of variables (see also Table 1).

METHOD

Sample

In total, 854 middle managers and executives of a Dutch telecom company were invited to participate in the study that was part of a recurring employee health and well-being survey (response rate 69%; $N = 587$). The majority were men (78%); 86 per cent lived together with a partner; 58 per cent held at least a college degree; 2 per cent were aged under 24, 22 per cent between 24 and 34, 35 per cent between 35 and 44, 34 per cent between 45 and 54, and 7 per cent were aged over 55 years; 5 per cent were employed less than one year at the company, 23 per cent between 1 and 5 years, 15 per cent between 6 and 10 years, and 56 per cent over 10 years. On average, the managers had worked 1.83 years in their current jobs (SD = .75). Thus, we deal with a typical managerial sample consisting of predominantly highly educated, experienced, middle-aged, and married men. The telecom managers in the sample had to effectively manage—in addition to their daily work—redundancy programs, thereby trying to diminish adverse effects on their subordinates. Moreover, they had to coach the survivors and thus to deal with fairness issues that were related to redundancies. These managerial tasks called for social leadership, but most managers had a technical background and had been promoted because they were good at their job.

Procedure

All participants received a paper-and-pencil questionnaire with an accompanying letter that explained the purpose of the survey, emphasised voluntary participation, and guaranteed confidentiality. Participants were asked to fill out the questionnaire and put it back into an envelope that was collected by the occupational health service of the company.

Instruments

In line with our conceptualisation of workaholism, we operationalised workaholism in terms of two scales, namely "Working Excessively" (working extremely hard) and "Drive" (being propelled by an inner drive), representing the behavioral and cognitive components of workaholism, respectively. These two scales were taken from two frequently used workaholism inventories: the *Work Addiction Risk Test* (WART; Robinson, 1999) and the *Workaholism Battery* (Spence & Robbins, 1992), respectively. However, the original label of the excess work scale—"Control Tendency"— is somewhat misleading because most of its items refer to working hard, without any reference to the underlying motivation, whereas the remaining items refer to the inability to relax and to feeling guilty when not working. For that reason we re-labeled this scale Working Excessively. A recent validity study, using three independent Dutch samples, showed that the nine-item excess work scale could be used as a short version of the full 25-item WART (Taris et al., 2005). In the current study, one item ("It is hard for me to relax when I'm not working") was eliminated because it proved to be unsound, so that eight items remained. The eight-item drive scale explicitly refers to the compulsive nature of the underlying motivation to work hard as well as to the compulsiveness of excessive work behavior. 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" (drive). Both scales were scored on a 4-point rating scale, ranging from 1 ("totally disagree") to 4 ("totally agree") and correlated positively ($r = .59$, $p < .001$). The internal consistencies (Cronbach's α) of all scales that are used in the current study are presented in Table 2.

Burnout.   Burnout was assessed with the Dutch version (Schaufeli & Van Dierendonck, 2000) of the Maslach Burnout Inventory-General Survey (MBI-GS; Schaufeli, Leiter, Maslach, & Jackson, 1996). The MBI-GS includes three subscales: Exhaustion (five items), Cynicism (five items), and Professional Efficacy (six items). All items were scored on a 7-point frequency rating scale ranging from 0 ("never") to 6 ("always").

TABLE 2
Means (*M*), Standard Deviations (SD), Internal Consistencies (Cronbach's α), and Zero-Order Correlations of the Study Variables (*N* = 587)

Variable	M	SD	α	1	2	3	4	5	6	7	8	9
1. Overwork	4.01	1.59	n.a.	–								
2. Overtime (%)	16.93	17.04	n.a.	.55***	–							
3. Job demands	2.61	.41	.72	.26***	.33***	–						
4. Job control	3.02	.42	.83	.32***	.32***	.16**	–					
5. Support co-workers	2.38	.36	.72	.07	−.04	−.09*	.19**	–				
6. Support supervisor	2.46	.47	.82	.03	−.08*	−.19**	.22**	.58***	–			
7. Job satisfaction	2.44	.57	.90	.26**	.25***	.12**	.62***	.29***	.40***	–		
8. Org. commitment	2.41	.60	.83	.09*	.00	.02	.19**	.25**	.33***	.41***	–	
9. Negative reactions	1.44	1.96	.72	−.01	−.01	.08	.05	−.11*	−.12*	−.11*	−.12*	–
10. Impaired soc. func.	1.41	1.15	.82	.06	−.02	.11*	.03	−.12*	−.17**	−.15**	−.12*	.23**
11. Distress	.29	.36	.92	.02	−.06	.15**	−.17*	−.20**	−.19**	−.27***	−.15**	.24**
12. Depression	.06	.20	.83	−.04	−.07	.03	−.15*	.14**	.08*	−.21**	−.05	.29***
13. Anxiety	.04	.11	.74	−.08*	−.10*	.03	−.12*	−.13**	−.12*	−.24**	−.08	.21**
14. Psychosom. comp.	.23	.23	.76	−.04	−.11*	.07	−.11*	−.16**	−.14**	−.22**	−.14**	.16**
15. Exhaustion	1.28	.92	.87	.02	.00	.33***	−.18**	−.15**	−.27***	−.22**	−.20**	.16**
16. Cynicism	1.08	1.02	.82	−.05	−.05	.07	−.37***	−.21**	−.37***	−.54***	−.45***	.18**
17. Red. prof. efficacy	4.25	.82	.80	.20**	.21**	−.02	.53***	.34***	.31***	.53***	.31***	−.17**
18. Vigor	4.33	1.00	.88	.19***	.27***	.10*	.41***	.23**	.24**	.45***	.30***	−.08*
19. Dedication	4.37	1.11	.93	.24***	.24**	.11*	.59***	.31***	.34***	.68***	.42***	−.10*
20. Absorption	3.76	1.01	.80	.26***	.24**	.24**	.38***	.14*	.14*	.41***	.28***	.03
21. Work excess	3.01	.68	.77	.43***	.50***	.58***	.22**	−.03	−.08*	.21**	.09*	.05
22. Drive	2.53	.73	.85	.17**	.08*	.33***	−.18**	−.15**	.21**	−.15*	−.01	.24**

Table 2
Continued

Variable	10	11	12	13	14	15	16	17	18	19	20	21
1. Overwork												
2. Overtime (%)												
3. Job demands												
4. Job control												
5. Support co-workers												
6. Support supervisor												
7. Job satisfaction												
8. Org. commitment												
9. Negative reactions												
10. Impaired soc. func.	–											
11. Distress	.56***	–										
12. Depression	.40***	.65**	–									
13. Anxiety	.37***	.52***	.51***	–								
14. Psychosom. comp.	.48***	.61***	.31***	.37***	–							
15. Exhaustion	.48***	.58***	.37***	.31***	.43***	–						
16. Cynicism	.28***	.46***	.33***	.23**	.27**	.52***	–					
17. Red. prof. efficacy	−.24**	−.34***	−.24**	−.21**	−.22**	−.40***	−.50***	–				
18. Vigor	−.36***	−.23**	−.25***	−.22**	−.27***	−.48***	.50***	.66***	–			
19. Dedication	−.23**	−.32***	−.22**	−.23**	−.18**	−.34***	−.64***	.68***	.79***	–		
20. Absorption	−.08*	−.12**	−.08*	−.06	−.07	−.10*	−.34***	.45***	.70***	.72***	–	
21. Work excess	.12*	.11*	−.00	−.00	.06	.32***	.07	−.06	.14*	.16*	.37***	–
22. Drive	.26**	.39***	.23**	.24	.30***	.41***	.27***	−.23**	−.12*	−.12*	.20*	.59***

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

High scores on exhaustion and cynicism and *low* scores on professional efficacy are indicative of burnout (i.e. the efficacy items were reverse-scored). Example items are: "I feel emotionally drained from my work" (exhaustion); "I have become more cynical about whether my work contributes anything" (cynicism); "At my work, I feel confident that I am effective at getting things done" (professional efficacy). Intercorrelations among the three scales ranged from .40 to .52. The MBI-GS has been extensively psychometrically validated in the Netherlands and elsewhere (e.g. Bakker, Demerouti, & Schaufeli, 2002; Schutte, Toppinen, Kalimo, & Schaufeli, 2000).

Work Engagement.   Work engagement was assessed with the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2002a). The UWES includes three subscales that reflect the underlying dimensions of engagement: Vigor (six items), Dedication (DE; five items), and Absorption (six items). The engagement items were similarly scored as those of the MBI-GS and inter-correlations among the three scales ranged from .70 to .79. Example items are: "At my job, I feel strong and vigorous" (vigor); "I am enthusiastic about my job" (dedication); "When I am working, I forget everything else around me" (absorption).

Excess Working Time.   Time spent at work was measured with two questions: "How often do you take work home?" and "How often do you work at weekends?" (1 = "almost never", 4 = "almost always"). The answers on both questions correlated strongly ($r = .63$, $p < .001$), so that they were added in order to constitute one score: overwork. In addition, an index was calculated of the percentage of overtime, computed as the number of hours worked overtime divided by the number of working hours according to one's contract, multiplied by 100. The mean percentage of overtime in this sample was 16.9 per cent (SD = 17.0). As expected, overwork and percentage overtime were correlated positively ($r = .55$, $p < .001$).

Job Characteristics.   Job characteristics were measured with the *Job Content Questionnaire* (JCQ; Karasek, Brisson, Kawakami, Houtman, & Bongers, 1998) that includes (1) psychological job demands (nine items); (2) job control (nine items); (3) co-worker support (four items); and (4) supervisor support (four items). All JCQ-items were scored on a 4-point rating scale (1 = "completely disagree", 4 = "completely agree"). Intercorrelations among the three job resources ranged from .28 to .36 (mean $r = .33$). Example items are: "Do you have to work very fast?" (job demands); "Do you have freedom in carrying out your work activities?" (job control); and "If necessary, can you ask your colleagues (supervisor) for help?" (social support).

Work Outcomes.   Work outcomes were assessed by two self-constructed scales that were based on the Questionnaire on the Experience and Evaluation of Work (QEEW), which is widely used by both Dutch occupational health services and applied researchers (Van Veldhoven, De Jonge, Broersen, Kompier, & Meijman, 2002): (1) job satisfaction (seven items: e.g. "I like my job at <name of the company>") and (2) organisational commitment (four items: e.g. "I like to work for <name of the company>"). All items were scored on a 4-point rating scale (1 = "completely disagree", 4 = "completely agree"). Both outcomes were positively correlated ($r = .41$).

Quality of Social Relationships and Social Functioning.   This was measured with two self-constructed indicators: *negative reactions* during the past week from others outside work and *impaired social functioning*, or the extent to which one's current mental or physical condition impeded social functioning outside work. Negative reactions were assessed by an eight-item scale (e.g. "Lack of understanding"). Items were scored on a 4-point rating scale (1 = "almost never", 4 = "very often"). Impaired social functioning was measured by four questions that refer to feeling impaired in: (1) one's social contacts with one's family; (2) one's social contacts outside the family; (3) one's recreational activities; (4) performing household chores. All items were scored on a 5-point rating scale (1 = "not at all impaired", 5 = "severely impaired"). Impaired social functioning correlated positively with negative reactions of others ($r = .23$, $p < .01$).

Perceived Health.   Perceived health was assessed by the Four-Dimensional Symptom Questionnaire (4DSQ; Terluin, Van Rhenen, Schaufeli, & de Haan, 2004),[1] which consists of four symptom clusters: (1) Distress (16 items); (2) Depression (six items); (3) Anxiety (12 items) and (4) Psychosomatic Complaints (16 items). All 50 items were scored on a 5-point rating scale (0 = "no", 5 = "very often"). However, following the scoring instruction (Terluin et al., 2004), every symptom is recoded as absent (0 = "no"), doubtfully present (1 = "sometimes"), or present at a clinically significant level (2 = "regularly"/"often"/"very often"). Intercorrelations among the four scales ranged from .31 to .65 (mean $r = .41$). Example items are: "Do you feel easily irritated?" (distress); "Do you feel that everything is meaningless?" (depression); "Do you feel frightened?" (anxiety); "Do you suffer from headaches?" (psychosomatic complaints). The 4DSQ is frequently used in Dutch primary health care settings to

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[1] An English version is available from the internet: http://www.emgo.nl/utilities/4DSQ.asp.

distinguish between psychiatric illness and uncomplicated stress-related disorders since its discriminant validity has been convincingly demonstrated (Terluin, 1998).

RESULTS

Internal Validity: The Relationship between Burnout, Work Engagement, and Workaholism

Structural equation modeling methods as implemented by AMOS 5 (Arbuckle, 2003) were used to test the fit of the three competing models. Maximum likelihood estimation methods were used and the input for each analysis was the covariance matrix of the items. Missing values (maximum 2.5%) were replaced by the series mean. The goodness-of-fit of the models was evaluated using the χ^2 goodness-of-fit statistic and the Root Mean Square Error of Approximation (RMSEA). However, χ^2 is sensitive to sample size, so that the probability of rejecting a hypothesised model increases when sample size increases, even if the difference between the fitted model and the "true" underlying model is very small. To overcome this problem, the computation of relative goodness-of-fit indices is strongly recommended (Bentler, 1990). Two relative goodness-of-fit indices were computed: the Non-Normed Fit Index (NNFI) and the Comparative Fit Index (CFI). The latter is particularly recommended for model comparison purposes (Goffin, 1993). For both relative-fit indices, as a rule of thumb, values greater than .90 are considered as indicating a good fit (Byrne, 2001, pp. 79–88), whereas values smaller than .08 for RMSEA indicate acceptable fit (Cudeck & Browne, 1993).

M1 assumes that all workaholism, burnout, and work engagement scales load on one common general well-being factor; M2 assumes that the positive scales (Vigor, Dedication, Absorption, Professional Efficacy) and the negative scales (Exhaustion, Cynicism, Working Excessively, Drive) each load on a separate factor; M3 assumes a workaholism factor (Working Excessively, Drive), a burnout factor (Exhaustion, Cynicism, Professional Efficacy), and an engagement factor (Vigor, Dedication, Absorption). Table 2 presents the correlations between the scales measuring workaholism, burnout, and work engagement, as well as their means, standard deviations, and internal consistencies.

As revealed by Table 3, M1, M2, and M3 showed a poor fit to the data, with none of the fit-indices meeting their respective criterion for acceptable fit.

Inspection of the so-called Modification Indices for M3 revealed that the fit of the model could be increased by allowing: (1) the errors of Vigor and Exhaustion, and of Cynicism and Dedication to correlate; (2) Professional Efficacy to load on the latent Work Engagement factor instead of the Burnout factor; (3) Absorption to load on the latent workaholism factor as well.

TABLE 3
Fit of Models that Specify the Relationship between Workaholism, Burnout, and Work Engagement (*N* = 587)

Model	χ^2	df	RMSEA	NNFI	CFI
M1	821.93	20	.21	.57	.69
M2	716.89	19	.11	.61	.73
M3	533.09	17	.09	.68	.80
M4	193.64	14	.07	.93	.93

Notes: For M1–M4 see text; all χ^2, *p* < .001.

The first and the second re-specification agreed with previous studies (e.g. Schaufeli et al., 2002a Schaufeli, Martinez, Marques Pinto, Salanova, & Bakker, 2002b). The third re-specification indicated that, obviously, being absorbed in one's work is related to workaholism as well (see Discussion). The revised model (M4) fitted significantly better to the data than M3 ($\Delta\chi^2$ (*df* = 3) = 339.45, *p* < .001), with RMSEA, NNFI, and CFI meeting their respective criteria (see Table 3).

As can be seen from Figure 1, the latent burnout and workaholism factors were positively correlated (*r* = .53), whereas—as expected—burnout was negatively correlated with work engagement (*r* = −.65). In contrast, *no* significant correlation existed between workaholism and engagement (*r* = −.04). Moreover, and as mentioned above, the error terms of exhaustion and vigor as well as cynicism and dedication were negatively related. Figure 1 further shows that exhaustion and cynicism, working excessively and drive, and vigor and dedication loaded about equally strongly on burnout, workaholism, and work engagement, respectively. In contrast, professional efficacy and absorption contributed less to engagement, whereas absorption contributed even less to workaholism. In sum, instead of the hypothesised model, a more complex revised model with professional efficacy loading on engagement and absorption having a double loading on both engagement and workaholism fitted better to the data.

External Validity: Associations between Well-being and Other Variables

The second aim of our study was to test a set of five hypotheses about the relationships of workaholism, burnout, and work engagement on the one hand and excessive working time (overwork, percentage overtime), job characteristics (job demands, job control, social support from co-workers and from one's superior), work outcomes (job satisfaction, organisational commitment), quality of social relationships (negative social reactions, impaired
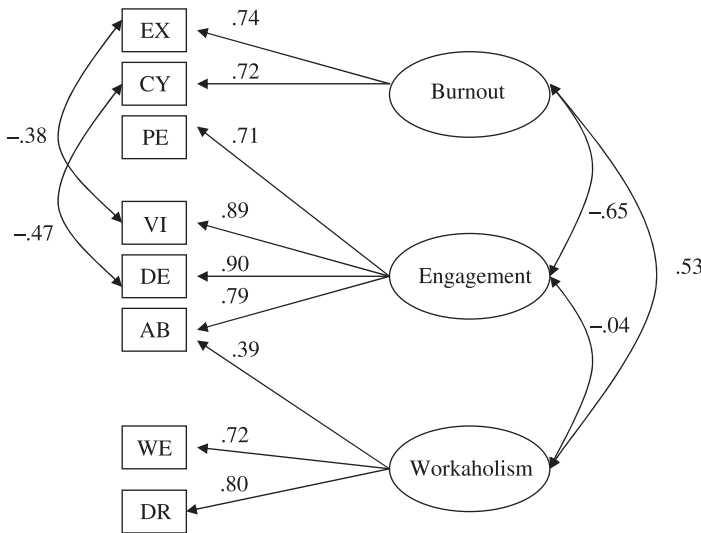
FIGURE 1.   The relationship between workaholism, burnout, and work engagement (M4; *N* = 587).
Note: EX = Exhaustion; CY = Cynicism; PE = Professional Efficacy; VI = Vigor; DE = Dedication; AB = Absorption; WE = Working Excessively; DR = Drive.

social functioning), and perceived health (distress, depression, anxiety, psychosomatic complaints), on the other hand.

As Table 2 shows, virtually all correlations were in the expected direction. The only exception was the negative correlation of drive with job satisfaction, indicating that managers with a strong inner work drive were *less* satisfied with their jobs. At first glance, it seemed that the patterns of correlations of burnout and drive with the external variables were rather similar, solely with the exception of excess working time and organisational commitment. Furthermore, the pattern of correlations of engagement was quite similar to that of burnout and drive, albeit in the opposite direction. Finally, the pattern of correlations of working excessively differed from that of all other scales. Taken together, this suggests that drive is somewhat similar to the engagement and burnout constructs in terms of its relations with external concepts, whereas working excessively hard seems to be a rather different concept.

In order to test our hypotheses, a series of eight multiple regression analyses was conducted, whereby each of the well-being scales was regressed on 17 independent variables. A hierarchical procedure was used, where in the first step age, gender, and level of education were entered in order to control for socio-demographic characteristics. In the next step the remaining 14 external variables were entered.

TABLE 4
Multiple Regression of Burnout, Engagement, and Workaholism on the Study
Variables (β-values) ($N = 587$)

	Burnout			*Work engagement*			*Workaholism*	
	EX	*CY*	*rPE*	*VI*	*DE*	*AB*	*WE*	*DR*
Excess working time								
1. Overwork	−.04	.01	.07	.02	.04	.07	.24**	.01
2. Overtime (%)	−.05	−.01	.04	.15**	.03	.05	.15**	.15**
Job characteristics								
3. Job demands	.26**	.04	.02	.09*	.09*	.22**	.46**	.23**
4. Job control	−.03	−.02	−.27**	.11*	.21**	.21**	−.03	−.17**
5. Support co-workers	−.01	−.04	−.21**	.11*	.16**	.08	−.02	.00
6. Support supervisor	−.09*	−.15**	−.04	.01	.01	.06	−.00	−.10*
Work outcomes								
7. Job satisfaction	−.11**	−.31**	−.19**	.16**	.39**	.15**	.01	.03
8. Org. commitment	−.06	−.20**	−.10*	.11*	.16**	.16**	.10**	.11**
Social relations								
9. Negative reactions	.03	.06	.07	−.05	−.01	.07	.07	.18**
10. Impaired soc. funct.	.17**	.00	.09*	−.19**	−.10**	.08	.07	.02
Perceived health								
11. Distress	.36**	.30**	.16**	−.41**	−.18**	−.08	.07	.17**
12. Depression	.03	.11*	.03	−.13*	−.04	−.02	−.09	−.00
13. Anxiety	.02	.11**	.05	−.06	.00	−.09	.03	.06
14. Psychosom. complaints	.09*	−.06	.07	.13**	.13**	.07	.09**	.15**
Explained variance (R^2)	.48	.48	.43	.40	.57	.23	.48	.32

Notes: EX = Exhaustion; CY = Cynicism; rPE = Reduced Professional Efficacy; VI = Vigor;
DE = Dedication; AB = Absorption; WE = Working Excessively ; DR = Drive; * $p < .05$; ** $p < .01$.
All β-values are controlled for the influence of socio-demographics (age, gender, and level of education).

It appeared that the employee's socio-biographical background did *not* play an important role: only cynicism was weakly but significantly related to level of education ($\beta = .08$; $p < .05$). Therefore, the results of the first step of the regression analyses are not presented in Table 4. Although the sizes of most β-weights were small to moderate (see Table 4), the proportion of explained variance was substantial and ranged from .32 (drive) to .57 (dedication), with the exception of absorption (23% explained variance).

H1 assumes that workaholism and work engagement are positively related to excess working time, whereas burnout is not significantly related to excess working time. Consistent with H1, Table 4 reveals that vigor, working excessively, and drive were positively related to the proportion of overtime, and that working excessively was additionally related to overwork. As expected, none of the burnout scales was related to excess working time (H1 partly confirmed).

H2a, assuming that workaholism and burnout are positively related to job demands, whereas work engagement is not significantly related to job demands, was also partially confirmed. As expected, exhaustion, working excessively, and drive were positively related to job demands, but against expectations all three engagement scales showed similar, albeit somewhat weaker relationships with job demands (H2a partly confirmed).

H2b assumes that burnout is negatively related to resources, whereas work engagement is positively related to resources and workaholism is not related to job resources. More specifically, lack of supervisor support was related to exhaustion and cynicism, whereas job control and/or co-worker support was positively related to vigor, dedication, and absorption, and negatively related to reduced personal efficacy. This means that H2b was partially confirmed, with the exception of drive which was negatively related to job control and supervisor support.

H3 assumes that burnout is negatively related to job satisfaction and organisational commitment, whereas work engagement and workaholism are positively related to these work outcomes. All engagement scales were positively related to both work outcomes, whereas cynicism and reduced professional efficacy were negatively related to both. In addition, and against expectations, both workaholism scales were positively related to commitment and exhaustion was negatively related to satisfaction (H3 partly confirmed).

H4 assumes that workaholism and burnout are related to poor social relationships, whereas work engagement is related to good quality relationships. As expected, exhaustion, reduced personal efficacy, and drive were positively related to negative reactions of others or to impaired social functioning, whereas vigor and dedication were negatively related to the latter (H4 partly confirmed).

Finally, H5 assumes that workaholism and burnout are related to poor perceived health, whereas engagement is related to good health. As expected, burnout and workaholism were positively related to perceived ill-health—particularly to distress and psychosomatic complaints—whereas vigor and dedication were negatively related to distress and/or depression. However, psychosomatic complaints were—against expectations—*positively* related to vigor and dedication. This was remarkable since the correlations between perceived ill-health and engagement were negative (see Table 4), which suggests that this unexpected result is a statistical artifact that should not be interpreted further (H5 partly confirmed).

To recapitulate: *workaholism* was related to excess working time (over-work and percentage overtime), poor quality of social relations (negative reactions of others), health problems (distress and psychosomatic complaints), job demands, and positive work outcomes (organisational commitment). However, the pattern of associations differs between both workaholism

scales: compared to working excessively, drive was more strongly associated with negative aspects (i.e. negative social reactions outside work, psychosomatic complaints, and distress).

Burnout was *not* related to excess working time but to impaired social functioning, health problems (distress, depression, anxiety, and psychosomatic health complaints), job demands, lack of resources (lack of job control, and lack of support from co-workers and supervisor), and negative work outcomes (job dissatisfaction and low organisational commitment). Furthermore, exhaustion was particularly associated with distress and job demands, cynicism was particularly associated with distress and job dissatisfaction, and reduced professional efficacy was particularly associated with lacking job resources (job control and support from co-workers).

Work engagement was related to working excess time (percentage overtime), unimpaired social functioning, health, job resources (job control and co-worker support), and positive work outcomes (job satisfaction and poor organisational commitment). However, unexpectedly, all three components of engagement were *positively* related to job demands. Obviously, engaged managers worked in demanding jobs, but unlike their colleagues who score high on burnout or workaholism, they experienced good mental health.

In conclusion, workaholism, burnout, and engagement are differently related to five sets of variables in ways that were by and large predicted by our hypotheses.

DISCUSSION

Are workaholism, burnout, and work engagement three of a kind, or are they three different kinds of employee well-being factors that can be distinguished empirically? We sought to answer this question using a typical managerial sample of highly educated and experienced telecom managers. Although in our sample workaholism, burnout, and engagement can be separated empirically, the relationships among the three constructs are more complex than expected. It seems that burnout and engagement act as each other's opposites, whereas workaholism shares some features with both. This general conclusion is based on the interrelationships among the constituting components of the three focal concepts (internal validity), as well as on the relationships of these three concepts with five sets of external variables (external validity).

Internal Validity

The best-fitting model indicates that workaholism, burnout, and work engagement are correlated constructs (see Figure 1). As expected, burnout and engagement are negatively correlated, whereas burnout and workaholism are positively correlated. The former is consistent with other recent

studies (see Schaufeli & Salanova, in press). The latter agrees with the contention that workaholism may act as a root cause of burnout (Maslach, 1986; Porter, 2001) in the sense that workaholics are "burning up" their mental energy resources. However, the pattern of relationships between the eight subscales that constitute workaholism, burnout, and engagement is slightly more complex than expected.

First, it appeared that absorption not only loads on work engagement (as expected) but also on workaholism, albeit that the latter factor loading is relatively weak (see Figure 1). This double loading of absorption might be explained by the fact that workaholism is characterised by a reluctance to disengage from work (McMillan et al., 2001) and by a compulsory indulgence in work (Porter, 1996). Such descriptions clearly overlap with absorption that is characterised by being fully immersed in one's work and having difficulties detaching from it (Schaufeli et al., 2002a). Thus, our analyses suggest that workaholism and work engagement overlap as far as feelings of being absorbed in one's work are concerned. However, the underlying motivation for being completely immersed in one's work differs: in the case of engagement this motivation is intrinsic (work is fun), whereas in the case of workaholism it is compulsive (being driven to work).

Second, professional efficacy loaded on the "wrong" factor; that is, instead of loading on the latent burnout factor (as expected), professional efficacy loaded on work engagement. This has been observed in other studies as well using data from the Netherlands, Spain, and Portugal (e.g. Schaufeli et al., 2002a, 2002b; Schaufeli & Bakker, 2004). It cannot be completely ruled out that this finding reflects an artifact resulting from answering bias because all engagement and professional efficacy items are positively worded, whereas all exhaustion and cynicism items are negatively worded. This would call for future research that instead of a positively worded professional efficacy scale includes a negatively worded *in*efficacy scale. For instance, Bouman, Te Brake, and Hoogstraten (2002) demonstrated that positively rephrasing the professional efficacy items dramatically increases correlations with the other two burnout scales. Based on this finding one could speculate that, compared to efficacy, correlations of inefficacy with engagement might be lower. However, M2—that assumes that the positively worded items and the negatively worded items load on two separate factors—did *not* fit the data, which argues against such an artifact. On the other hand, a two-dimensional burnout factor agrees with Green, Walkey, and Taylor (1991), who called exhaustion and cynicism "the core of burnout". Also this agrees with cumulating evidence that points to the divergent role that lack of professional efficacy plays compared to exhaustion and cynicism. For instance, a series of studies of Leiter and his colleagues shows that efficacy develops largely independently from both other core burnout dimensions (Leiter, 1993). In a similar vein, the results of a meta-analysis confirm the independent role of professional efficacy, as

compared to exhaustion and cynicism (Lee & Ashforth, 1996). Moreover, an extended engagement factor is in line with Maslach and Leiter (1997), who have argued that energy (i.e. vigor), involvement (i.e. dedication), and *efficacy* should be considered the constituting elements of engagement. In contrast to Maslach and Leiter (1997), we added absorption as another distinct engagement component (Schaufeli et al., 2002a), but obviously, our results suggest that absorption as well as efficacy may be subsumed under a broader heading of engagement.

Third, it appeared that the errors of exhaustion and vigor and of cynicism and dedication were correlated. Despite the danger of chance capitalisation (MacCallum, Roznowski, & Necowitz, 1992) we decided to include these correlated error terms in our re-specified model (M4) because both correlated error terms have been found in previous research (e.g. Schaufeli et al., 2002a, 2002b; Schaufeli & Bakker, 2004) and they can be interpreted straightforwardly. Thus, exhaustion and vigor, as well as cynicism and dedication, span a dimension that has been labeled activity and identification, respectively (González-Romá et al., 2006). Obviously, part of the initial error variance is common and might be explained by each of these two dimensions.

In conclusion, psychometrically speaking workaholism, burnout, and work engagement can be discriminated empirically. Instead of one undifferentiated, common employee well-being factor (M1; see Table 3), we uncovered a more complex multi-faceted structure that differed slightly from the hypothesised model. This multi-faceted structure agrees with other models of well-being that distinguish between various dimensions (Ryff & Keyes, 1995; Warr, 1994). Hence, rather than being a unitary concept, well-being differentiates into various components. In addition, the fact that the fit of the alternative model with one positive and one negative factor (M2; see Table 3) was inferior rules out a possible artifact due to the wording of the items.

External Validity

What about the relationships of workaholism, burnout, and work engagement with other variables? Burnout and engagement produced highly similar—yet reversed—patterns of correlations with five clusters of variables representing excess work, job characteristics, work outcomes, social relations, and perceived health (see Table 2). This similarity supports the notion that, conceptually speaking, burnout and engagement act as each other's opposites (Maslach et al., 2001). To a somewhat lesser degree, the pattern of correlations of the drive component of workaholism is similar to that of the burnout and engagement components. In contrast, the work excess component does *not* overlap with any other component of employee well-being, including drive. This might be caused by its narrow operationalisation in terms of excess work *behavior*, whereas all remaining components are *affective*

or *cognitive* in nature. Working excessively—as operationalised by our scale—is about working hard, neither taking into account how one feels about it, nor what are the underlying reasons.

The specific profiles of the three concepts that were specified in Hypotheses 1 to 5 can be summarised as follows. Managers high on *burnout* are characterised exclusively by *negative* features; they suffer from health problems, their social functioning is impaired, and they work in demanding jobs with poor resources and poor outcomes. Although these managers experience high job demands, they do *not* work long hours. Compared to workaholics and engaged managers, those who score high on burnout are too tired to work hard and too cynical to feel committed. In contrast, managers high on *work engagement* are almost exclusively characterised by *positive* features: they enjoy good mental health, their social functioning is smooth, and they work in resourceful jobs with positive outcomes. They also work long hours. Finally, managers high on *workaholism* work hard and are characterised by similar *negative* features as their colleagues who score high on burnout, but additionally—like engaged managers—they feel committed to the organisation as well. So far, results agreed with our hypotheses. It should be noted, however, that the sizes of most relationships were small to moderate (see Tables 2 and 4). Nevertheless, the total amount of variance that was explained by the eight scales that assess workaholism, burnout, and work engagement was quite high (mean = 42%; range 23–57%).

Although all hypotheses were at least partly confirmed, there was also one notable unexpected finding: workaholism is unexpectedly associated with lack of job resources; that is, with poor job control and lack of supervisory support. This suggests that workaholics work in unfavorable psychosocial job environments that might inhibit growth, development, and learning (Karasek & Theorell, 1990). Nevertheless, they work excessively hard. Obviously, unlike engaged workers, who also work hard but in more resourceful jobs (Demerouti et al., 2001; Schaufeli & Bakker, 2004), workaholics are not propelled to do so because they work in an encouraging psychosocial job environment. This is supported by Brett and Stroh (2003), who found that American managers who worked 61 plus hours a week do not do so because of extrinsic rewards. So, it can be speculated that instead of a favorable external job environment a strong inner drive elicits workaholism, which is particularly true for "perfectionist workaholics" who have a very strong desire to be in control (Scott et al., 1997).

In conclusion, despite one somewhat unexpected finding, it seems that workaholism, burnout, and work engagement each show a unique pattern of relationships with variables representing working long hours, job characteristics, work outcomes, social relationships, and perceived health.

Implications

Our results have at least two implications for the conceptualisation and measurement of employee well-being. First, our findings mesh with accumulating evidence that burnout and engagement are each constituted by *two* core dimensions: exhaustion and cynicism, and vigor and dedication, respectively (Schaufeli & Bakker, 2004; Demerouti, Bakker, Nachreiner, & Ebbinghaus, 2002; Hakanen et al., 2006). Rather than being a component of burnout, professional efficacy seems to be a component of engagement, while absorption is perhaps not a unique feature of work engagement. Hence, the complex interrelationships between workaholism, burnout, and engagement (see Figure 1) could possibly be reduced by excluding professional efficacy and absorption as indicators of burnout and engagement, respectively. An additional argument for excluding these two components is that with their removal virtually no loss of information occurs in terms of relationships of the (reduced) burnout and engagement concepts with the five sets of variables (see Table 4). That is, professional efficacy and absorption are *not* uniquely related to each of the five sets of variables as compared to both other components of burnout and engagement, respectively.

Second, our results make a strong case for combining work excess and drive into the concept of workaholism since both components are substantively correlated ($r = .51$) and partly overlap as far as their relationships with the five sets of variables are concerned. That is, they share a common core but each component also has its unique contribution. Both components are similarly related to percentage overtime, job demands, organisational commitment, and psychosomatic complaints (the common core). But whereas the work excess component is most strongly and almost exclusively related to indicators of working hard (i.e. percentage overtime, overwork, job demands), the drive component is also related to negative features such as poor job resources, distress, and poor social relations (the unique contribution). Hence, rather than constituting two mutually exclusive concepts, both components of workaholism complement each other. This underscores the importance of using a *combination* of both hard work (a behavioral indicator) and strong inner drive (a cognitive indicator) to assess workaholism.

Limitations and Suggestions for Further Research

All data are based on self-reports which means that the magnitudes of the effects that we reported may have been biased due to common method variance or the wish to answer consistently (Conway, 2002). Unfortunately, we cannot test the strength of this type of variance, but several studies (e.g. Semmer, Zapf, & Greif, 1996; Spector, 1992) have indicated that common method variance is not as troublesome as one might expect in studies such

as the current one. In a somewhat similar vein, it can be argued that personality traits such as negative affectivity (NA; Watson & Clark, 1984) might act as a third variable that is related to the three types of well-being as well as to the five sets of independent variables. Research, however, justifies the omission of this potential confounder in research using self-reports. For instance, Moyle (1995), in a study of possible influences that NA could have on the stressor–strain relationship, concluded that NA cannot generally account for the observed correlations between work environment measures and strains. Similarly, Schonfield (1996) concluded that NA does not overly distort self-report measures and strain outcomes. Spector, Zapf, Chen, and Frese (2000) go one step further by warning not to "throw out the baby with the bath water" by controlling for NA in job stress research. Nevertheless, we believe that future research could greatly benefit from including more objectively measured variables such as company records for measuring actual working time, turnover, and absenteeism rates; peer ratings, supervisor ratings, and expert ratings for social functioning, social support, performance, and job characteristics; and medical consumption, and physiological and immunological markers as indicators of health. By using these types of assessments the previously mentioned problems with self-reports would be avoided.

Another limitation is the homogeneous sample that predominantly consists of highly educated, experienced, middle-aged, male managers from one particular company. This might have led to a restriction of range and therefore could have reduced the size of the correlations. For instance, compared to a Dutch representative sample (Schaufeli & Van Dierendonck, 2000), the variance in all three burnout dimensions is significantly lower in the current sample. Hence, future research should include more heterogeneous samples, preferably from different companies and consisting of employees holding various types of jobs. This would also increase the generalisability of the results.

The most important limitation, however, is the cross-sectional nature of our study that precludes cause–effect relationships being uncovered. Although regression analysis is often used to examine causal associations, we merely employ this type of analysis because it is a practically feasible way to examine associations among our various well-being indicators and other variables, controlling for possible confounders such as age and gender. Thus, our strategy of analysis should not be taken to suggest that we actually consider the relationships studied here as indicating causal relationships. Yet, for at least two reasons, longitudinal research is particularly important when it comes to discriminating workaholism, burnout, and work engagement. First, these three types of well-being might be causally linked. For instance, as noted before, it has been suggested that workaholism might precede burnout (Maslach, 1986; Porter, 2001). In a similar vein, a qualitative study (Schaufeli et al., 2001) reports that some currently burned-out employees were initially engaged, which agrees with Pines (1993, p. 41),

who wrote that "… in order to burn out one has to first be 'on fire'". But Schaufeli et al. (2001) also observed the reverse process; some employees who were currently engaged had burned out on their pervious jobs. Thus, it seems that various types of causal linkages are plausible between the three types of employee well-being. Clearly, these can only be examined by using longitudinal research designs. Second, the variables included in the five sets might play a different causal role in the case of workaholism, burnout, and work engagement. For instance, some empirical evidence documents that high job demands may cause burnout (see Schaufeli & Enzmann, 1988, pp. 82–83, for an overview), whereas high job demands might be the result of work- aholism since workaholics tend to "create" their own demands (Machlowitz, 1980). Likewise, it has been argued that poor social functioning outside work might be the result of burnout—the so-called spillover hypothesis (see Schaufeli & Enzmann, 1998, p. 88, for an overview)—whereas it was recently demonstrated that smooth social functioning outside work might foster job engagement (Montgomery et al., 2003). These examples illustrate that the associations that were found in the current study can be interpreted in vari- ous causal ways, depending on which type of well-being is concerned. This means that it is likely that different underlying psychological mechanisms operate in producing different types of employee well-being. Future longi- tudinal research should set out to uncover these mechanisms.

Final Remark

Our study demonstrated that rather than being three of a kind, workaholism, burnout, and engagement are three different kinds of employee well-being factors. Therefore, future (longitudinal) research should examine more comprehensive models of employee well-being that include these concepts simultaneously. This would increase our understanding beyond traditional models that are restricted to just one type of employee well-being.

REFERENCES

Arbuckle, J.L. (2003). *AMOS 5.0* (Computer Software). Chicago, IL: SPSS.

Bakker, A., Demerouti, E., & Schaufeli, W.B. (2002). Validation of the Maslach Burnout Inventory—General Survey: An internet study. *Anxiety*, *Stress and Coping*, *15*, 245–260.

Beckers, D.G.J., Van der Linden, D., Smulders, P.G.W., Kompier, M.A.J., Van Veldhoven, J.P.M., & Van Yperen, N.W. (2004). Working overtime hours: Relations with fatigue, work motivation, and the quality of work. *Journal of Occupational and Environmental Medicine*, *46*, 1282–1289.

Bentler, P.M. (1990). Comparative fit indexes in structural equation models. *Psychological Bulletin*, *107*, 238–246.

Bouman, A.H., Te Brake, H., & Hoogstraten, J. (2002). Significant effects due to

rephrasing the Maslach Burnout Inventory's personal accomplishment items. *Psychological Reports*, *91*, 825–826.

Brett, J.M., & Stroh, L.K. (2003). Working 61 plus hours per week: Why do managers do it? *Journal of Applied Psychology*, *88*, 67–78.

Buelens, M., & Poelmans, S.A.Y. (2004). Enriching the Spence and Robbins' typology of workaholism: Demographic, motivational and organizational correlates. *Organizational Change Management*, *17*, 459–470.

Burke, R.J. (1999). It's not how hard you work but how you work hard: Evaluating workaholism components. *International Journal of Stress Management*, *6*, 225–240.

Burke, R.J. (2000). Workaholism in organizations: Psychological and physical well-being consequences. *Stress Medicine*, *16*, 11–16.

Burke, R.J. (2001). Workaholism components, job satisfaction, and career progress. *Journal of Applied Social Psychology*, *31*, 2339–2356.

Burke, R.J., & Koksal, H. (2002). Workaholism among a sample of Turkish managers and professionals: An exploratory study. *Psychological Reports*, *91*, 60–68.

Burke, R.J., & Matthiesen, S. (2004). Short communication: Workaholism among Norwegian journalists: Antecedents and consequences. *Stress and Health*, *20*, 301–308.

Burke, R.J., Richardsen, A.M., & Mortinussen, M. (2004). Workaholism among Norwegian managers: Work and well-being outcomes. *Journal of Organizational Change Management*, *7*, 459–470.

Byrne, B.M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Mahwah, NJ: Erlbaum.

Clark, L.A., & Watson, D. (1991). General affective dispositions in physical and psychological health. In C.R. Snyder & D.R. Forsyth (Eds.), *Handbook of social and clinical psychology* (pp. 221–245). New York: Pergamon.

Conway, J.M. (2002). Method variance and method bias in industrial and organizational psychology. In S.G. Rogelberg (Ed.), *Handbook of research methods in organizational and industrial psychology* (pp. 344–365). Malden, MA: Blackwell Publishers.

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper.

Cudeck, R., & Browne, M.W. (1993). Alternative ways of assessing model fit. In K.A. Bollen & J. Scott Long (Eds.), *Testing structural equation models* (pp. 1–9). Newbury Park, CA: Sage.

Demerouti, E., Bakker, A.B., De Jonge, J., Janssen, P.P.M., & Schaufeli, W.B. (2001). Burnout and engagement at work as a function of demands and control. *Scandinavian Journal of Work, Environment and Health*, *27*, 279–286.

Demerouti, E., Bakker, A.B., Nachreiner, F., & Ebbinghaus, M. (2002). From mental strain to burnout. *European Journal of Work and Organizational Psychology*, *11*, 423–441.

Goffin, R.D. (1993). A comparison of two new indices for the assessment of fit of structural equation models. *Multivariate Behavioral Research*, *28*, 205–214.

González-Romá, V., Schaufeli, W.B., Bakker, A., & Lloret, S. (2006). Burnout and engagement: Independent factors or opposite poles? *Journal of Vocational Behavior*, *68*, 165–174.

Green, D.E., Walkey, F.H., & Taylor, A.J.W. (1991). The three-factor structure of the Maslach Burnout Inventory. *Journal of Science Behavior and Personality*, *6*, 453–472.

Grzywacz, J.G., & Marks, N.F. (2000). Reconceptualizing the work–family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, *5*, 111–126.

Hakanen, J.J., Bakker, A.B., & Schaufeli, W.B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, *43*, 495–513.

Huppert, F.A., & Whittington, J.E. (2003). Evidence for the independence of positive and negative well-being: Implications for quality of life assessment. *British Journal of Health Psychology*, *8*, 107–122.

Kanai, A., & Wakabayashi, M. (2001). Workaholism among Japanese blue-collar employees. *International Journal of Stress Management*, *8*, 129–145.

Kanai, A., Wakabayashi, M., & Fling, S. (1996). Workaholism among employees in Japanese corporations: An examination based on the Japanese version of the Workaholism Scales. *Japanese Psychological Research*, *38*, 192–203.

Karasek, R.A., Brisson, C., Kawakami, N., Houtman, I., & Bongers, P. (1998). The Job Content Questionnaire (JCQ): An instrument for internationally comparative assessments of psychosocial job characteristics. *Journal of Occupational Health Psychology*, *3*, 322–355.

Karasek, R.A., & Theorell, T. (1990). *Healthy work: Stress, productivity and the reconstruction of working life*. New York: Basic Books.

Lee, R.T., & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, *81*, 123–133.

Leiter, M.P. (1993). Burnout as developmental process: Consideration of models. In W.B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 237–250). Washington, DC: Taylor & Francis.

MacCallum, R., Roznowski, M., & Necowitz, L.B. (1992). Model specifications in covariance structure analysis: The problem of capitalization on chance. *Psychological Bulletin*, *111*, 490–504.

Machlowitz, M. (1980). *Workaholics: Living with them, working with them*. New York: Simon & Schuster.

McMillan, L.H.W., & O'Driscoll, M.P. (2004). Workaholism and health: Implications for organizations. *Journal of Organizational Change Management*, *17*, 509–519.

McMillan, L.H.W., O'Driscoll, M.P., & Burke, R.J. (2003). Workaholism: A review of theory, research, and future directions. In C.L. Cooper & I.T. Robertson (Eds.), *International review of industrial and organizational psychology*, Vol. 18 (pp. 167–189). New York: Wiley.

McMillan, L.H.W., O'Driscoll, M.P., Marsh, N.V., & Brady, E.C. (2001). Understanding workaholism: Data synthesis, theoretical critique, and future design strategies. *International Journal of Stress Management*, *8*, 69–91.

Maslach, C. (1986). Stress, burnout and workaholism. In R.R. Killberg, P.E. Nathan, & R.W. Thoreson (Eds.), *Professionals in distress: Issues, syndromes and solutions in psychology* (pp. 53–73). Washington, DC: American Psychological Association.

Maslach, C. (1993). Burnout: A multidimensional perspective. In W.B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 19–32). Washington, DC: Taylor & Francis.

Maslach, C., & Leiter, M. (1997). *The truth about burnout*. San Francisco, CA: Josey-Bass.

Maslach, C., Schaufeli, W.B., & Leiter, M.P. (2001). Job burnout. *Annual Review of Psychology*, *52*, 397–422.

May, D.R., Gilson, R.L., & Harter, L.M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, *77*, 11–37.

Montgomery, A.J., Peeters, M.C.W., Schaufeli, W.B., & Den Ouden, M. (2003). Work–home interference among newspaper managers: Its relationship with burnout and engagement. *Anxiety, Stress and Coping*, *16*, 195–211.

Moyle, P. (1995). The role of negative affectivity in the stress process: Tests of alternative models. *Journal of Organizational Behavior*, *16*, 647–668.

Oates, W. (1986). On being a "workaholic" (A serious jest). *Pastoral Psychology*, *19*, 16–20.

Oates, W. (1971). *Confessions of a workaholic: The facts about work addiction*. New York: World.

Peiperl, M., & Jones, B. (2001). Workaholics and overworkers: Productivity or pathology? *Group and Organization Management*, *26*, 369–393.

Pines, A.M. (1993). Burnout: An existential perspective. In W.B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 33–52). Washington, DC: Taylor & Francis.

Porter, G. (1996). Organizational impact of workaholism: Suggestions for researching the negative outcomes of excessive work. *Journal of Occupational Health Psychology*, *1*, 70–84.

Porter, G. (2001). Workaholic tendencies and the high potential for stress among co-workers. *International Journal of Stress Management*, *8*, 147–164.

Robinson, B.E. (1999). The Work Addiction Risk Test: Development of a tentative measure of workaholism. *Perceptual and Motor Skills*, *88*, 199–210.

Robinson, B.E., Flowers, C., & Carroll, J. (2001). Work stress and marriage: A theoretical model examining the relationship between workaholism and marital cohesion. *International Journal of Stress Management*, *8*, 165–175.

Ryff, C.D., & Keyes, C.L.M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, *69*, 719–727.

Schaufeli, W.B., & Bakker, A.B. (2004). Job demands, job resources and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, *25*, 293–315.

Schaufeli, W.B., & Enzmann, D. (1998). *The burnout companion to study and research: A critical analysis*. London: Taylor & Francis.

Schaufeli, W.B., Leiter, M.P., Maslach, C., & Jackson, S.E. (1996). Maslach Burnout Inventory—General Survey. In C. Maslach, S.E. Jackson, & M.P. Leiter (Eds.), *The Maslach Burnout Inventory—Test Manual* (3rd edn.; pp. 22–26). Palo Alto, CA: Consulting Psychologists Press.

Schaufeli, W.B., & Salanova, M. (in press). Work engagement: An emerging psychological concept and its implications for organizations. In S.W. Gilliland, D.D.

Steiner, & D.P. Skarlicki (Eds.), *Research in social issues in management*. Green-wich, CT: Information Age Publishers.

Schaufeli, W.B., Salanova, M., González-Romá. V., & Bakker, A.B. (2002a). The measurement of engagement and burnout: A confirmatory factor analytic approach. *Journal of Happiness Studies*, *3*, 71–92.

Schaufeli, W.B., Martinez, I., Marques Pinto, A. Salanova, M., & Bakker, A.B. (2002b). Burnout and engagement in university students: A cross national study. *Journal of Cross-Cultural Psychology*, *33*, 464–481.

Schaufeli, W.B., & Taris, T.W. (2005). Commentary. The conceptualization and measurement of burnout: Common ground and worlds apart. *Work and Stress*, *19*, 356–362.

Schaufeli, W.B., Taris, T., Le Blanc, P., Peeters, M., Bakker, A., & De Jonge, J. (2001). Maakt arbeid gezond? Op zoek naar de bevlogen werknemer [Can work produce health? The quest for the engaged worker]. *De Psycholoog*, *36*, 422–428.

Schaufeli, W.B., & Van Dierendonck, D. (2000). *Handleiding van de Utrechtse Burnout Schaal (UBOS)* [Manual for Utrecht Burnout Scale]. Lisse: Swets Test Services.

Schonfield, I.S. (1996). Relation of negative affectivity to self-reports of job stressors and psychological outcomes. *Journal of Occupational Health Psychology*, *1*, 397–412.

Schutte, N., Toppinnen, S., Kalimo, R., & Schaufeli, W.B. (2000). The factorial validity of the Maslach Burnout Inventory—General Survey (MBI-GS) across nations and occupations. *Journal of Occupational and Organizational Psychology*, *73*, 53–66.

Scott, K.S., Moore, K.S., & Miceli, M.P. (1997). An exploration of the meaning and consequences of workaholism. *Human Relations*, *50*, 287–314.

Shirom, A., Melamed, S., Toker, S., Berliner, S., & Shapira, I. (2005). Burnout and health review: Current knowledge and future research directions. In G.P. Hodgkinson & J.K. Ford (Eds.), *International review of industrial and organizational psychology* (Vol. 20; pp. 269–309). Palo Alto, CA: Consulting Psychologists Press.

Semmer, N., Zapf, D., & Greif, S. (1996). "Shared job strain": A new approach for assessing the validity of job stress measurements. *Journal of Occupational and Organizational Psychology*, *69*, 293–310.

Sonnentag, S. (2003). Recovery, work engagement, and proactive behavior: A new look at the interface between non-work and work. *Journal of Applied Psychology*, *88*, 518–528.

Spector, P.E. (1992). A consideration of the validity and meaning of self-report measures of job conditions. In C.L. Cooper & I.T. Robertson (Eds.), *International review of industrial and organizational psychology* (Vol. 7; pp. 281–328). Chichester: Wiley & Sons.

Spector, P.E., Zapf, D., Chen, P.Y., & Frese, M. (2000). Why negative affectivity should not be controlled in job stress research: Don't throw out the baby with the bath water. *Journal of Organizational Behavior*, *21*, 79–95.

Spence, J.T., & Robbins, A.S. (1992). Workaholism: Definition, measurement, and preliminary results. *Journal of Personality Assessment*, *58*, 160–178.

Taris, T.W., Schaufeli, W.B., & Verhoeven, L.C. (2005). Internal and external validation of the Dutch Work Addiction Risk Test: Implications for jobs and non-work conflict. *Journal of Applied Psychology: An International Review*, *54*, 37–60.

Terluin, B. (1998). De Vierdimensionale Klachtenlijst (4DKL) in de huisartspraktijk [The Four-Dimensional Symptom Questionnaire (4DSQ) in general practice]. *De Psycholoog*, *33*, 18–24.

Terluin, B., Van Rhenen, W., Schaufeli, W.B., & de Haan, M. (2004). The Four-Dimensional Symptom Questionnaire (4DSQ): Measuring distress in a working population. *Work and Stress*, *18*, 187–207.

Van der Hulst, M. (2003). Long work hours and health. *Scandinavian Journal of Work*, *Environment and Health*, *29*, 171–188.

Van Veldhoven, M., De Jonge, J., Broersen, S., Kompier, M., & Meijman, T.F. (2002). Specific relations between psychosocial job conditions and job-related stress: A three-level analytic approach. *Work and Stress*, *16*, 207–228.

Warr, P.B. (1994). A conceptual framework for the study of work and mental health. *Work and Stress*, *8*, 84–97.

Watson, D., & Clark, L.A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin*, *96*, 465–490.