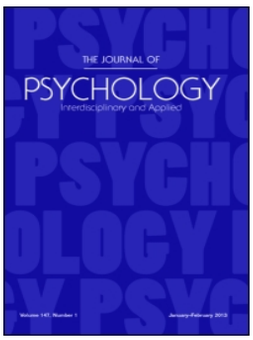

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Momentary Work Happiness as a Function of Enduring Burnout and Work Engagement

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ABSTRACT

The present study ($N = 136$) combined global measures with specific, experience-based measures to investigate how enduring job burnout and engagement influence the impact of daily work activities on momentary need satisfaction and happiness. We used the day reconstruction method (DRM) to ask employees from various occupations to reconstruct their working days. On the basis of employee work engagement and self-determination theories, we hypothesized that time spent on (a) core work tasks; (b) administrative work tasks; (c) client interactions; (d) interactions with colleagues; and (e) meetings would be negatively related to need satisfaction on the task level for employees high (vs. low) in enduring burnout; and positively related to need satisfaction on the task level for employees high (vs. low) in enduring work engagement. In addition, we predicted that psychological need satisfaction would mediate the relationships between time spent on work tasks and happiness during the tasks. The results of multilevel analyses largely supported these hypotheses. Our findings contribute to the literature by showing how those with high levels of burnout do not manage to satisfy their basic needs through their work, whereas those with high levels of work engagement satisfy their daily needs and stay happy.

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Burnout; day reconstruction method; employee engagement; happiness; self-determination theory

Compared to unhappy workers, happy workers are more active, approach-oriented, interested in their work, and persistent in the face of difficulties, on a daily basis (Bakker & Oerlemans, 2011). Consequently, happy workers are productive workers (Lyubomirsky, King, & Diener, 2005). This suggests that the pursuit of happiness at work is a worthwhile endeavor. However, this endeavor may not be equally successful for all individuals. Can employees at risk for burnout attain daily happiness through their work?

In the present study, we combine global measures with specific, experience-based measures to investigate how differences between individuals in terms of enduring burnout and work engagement influence within-day fluctuations in momentary, activity-related happiness. With "enduring" we want to indicate that employees can have a similar level of burnout or work engagement for a long time, just like 'traits' indicate individuals' stability in personality. Such enduring levels of work-related well-being can be distinguished from fluctuating

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levels of well-being. The latter are referred to as 'states'. Our research model goes beyond studies that investigated how daily job demands or resources influence state work engagement (e.g., Simbula, 2010; Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, 2008) in suggesting that the ability to find personal value in everyday work activities also matters (cf. Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). We use work engagement (Bakker, 2011) and self-determination theories (Deci & Ryan, 2000) to argue that individuals who are engaged (vs. burned-out) in their work are better able to satisfy their basic psychological needs through their work activities, because there is congruence between the person and the situation.

This study contributes to the literature in the following ways. First, we examine moment-to-moment fluctuations in psychological need satisfaction and happiness at work as a function of enduring qualities using a day reconstruction method (DRM). Although we are aware of some descriptive DRM studies that focused on employees during a workday (Hertel & Stamov-Roßnagel, 2013; Stone et al., 2006), no studies tested theory-based, cross-level interactions between enduring well-being and daily work activities. Previous research has not investigated the possibility that employees react differently to work activities, depending on their enduring well-being. It would be informative to find out whether self-determination theory also operates at the within-person, within-day level in the workplace. Second, we combine the job burnout and engagement literatures with the SDT literature to design a cross-level congruence model (cf. Bakker, 2015) delineating how employees low vs. high in enduring job burnout and engagement react to fluctuations in daily work activities. A test of this congruence model may reveal why engaged workers stay engaged and experience higher happiness compared to their colleagues low in engagement and/or high in burnout. Third, we contribute to the debate regarding the relationship between burnout and work engagement (Cole, Walter, Bedeian, & O'Boyle, 2012; González-Romá, Schaufeli, Bakker, & Lloret, 2006; Leon, Halbesleben, & Paustian-Underdahl, 2015). Is the work engagement concept redundant and can it be measured using only a burnout instrument? Do employees low in burnout react to daily work events in a similar way as employees high in engagement? And vice versa, do employees low in engagement react in a similar way to work events as those high in burnout?

Theoretical Background

During the past decades, organizational psychologists have argued and shown that employees' subjective experience of work and their psychological connection to work tasks and roles is crucial for organizational performance. Two subjective experiences have received considerable research attention, namely burnout and work engagement. Burnout is usually defined as "…a state of exhaustion in which one is cynical about the value of one's occupation and doubtful of one's capacity to perform" (Maslach, Jackson, & Leiter, 1996, p. 20). Exhaustion and cynicism are the core dimensions of burnout (e.g., Demerouti, Bakker, Vardakou, & Kantas, 2003; Maslach, Schaufeli, & Leiter, 2001). Exhaustion refers to a feeling of extreme chronic fatigue, caused by continuous exposure to demanding working conditions. Cynicism is defined as a callous, distanced, and cynical attitude toward the work itself or the people with whom one works. The third dimension of burnout, reduced professional efficacy, is often excluded in burnout research. Several scholars have argued that reduced professional

efficacy is not at the core of burnout, but may rather be interpreted as a possible consequence (e.g., Demerouti, Mostert, & Bakker, 2010; Shirom, 1989).

Employees suffering from burnout feel disillusioned, helpless, irritated, and completely worn-out (Kahill, 1988; Schaufeli & Enzmann, 1998). They have lost the connection with their work, and distance themselves emotionally and mentally from their work activities (e.g., Schaufeli, Leiter, & Maslach, 2011; Taris, LeBlanc, Schaufeli, & Schreurs, 2005). Burned-out individuals feel overwhelmed and unable to meet constant demands—they are often exposed to high job demands and low job resources (Bakker, Demerouti, & Euwema, 2005). As the exposure to stressors continues, they begin to lose the interest and motivation that led them to take on their job in the first place. Not surprisingly then, employees high in burnout do not enjoy their work. Moreover, burnout has a negative impact on job performance and reduces productivity (Bakker, Van Emmerik, & Van Riet, 2008; Taris, 2006).

Work engagement is the presumed opposite of burnout (González-Romá et al., 2006). Engaged employees are fully physically, cognitively, and emotionally connected with their work roles (Kahn, 1990). Work engagement refers to an enduring, positive work-related state that is characterized by vigor, dedication, and absorption (Schaufeli, Bakker, & Salanova, 2006). Engaged employees have high levels of energy and mental resilience while working (vigor), and they experience a sense of significance, enthusiasm, and challenge (dedication). In addition, they are often happily engrossed in their work, such that time passes quickly (absorption). Engagement refers to focused energy that is directed toward organizational goals (Macey, Schneider, Barbera, & Young, 2009). Thus, engaged employees enjoy their work, and are more likely to work harder through increased levels of discretionary effort than are those who are disengaged.

Recent meta-analyses have indicated that engaged workers differ from burned-out workers in that they have access to more job resources such as autonomy, opportunities for development, and skill variety (Alarcon, 2011; Crawford, LePine, & Rich, 2010; Halbesleben, 2010). In addition, whereas burned-out employees feel worn-out and exhausted, engaged employees are full with energy; they proactively mobilize their own job challenges and job resources (Bakker, 2011; Tims, Bakker, & Derks, 2013). Consequently, they show higher levels of job performance (e.g., Christian, Garza, & Slaughter, 2011; Halbesleben & Wheeler, 2008). Taken together, these findings suggest that engaged employees are better able to satisfy their psychological needs through their work than burned-out employees.

Self Determination Theory

Self-determination theory (SDT; Deci & Ryan, 2000; Deci & Vansteenkiste, 2004) focuses on the social or contextual conditions that facilitate versus hinder self-motivation and healthy psychological functioning. Accordingly, individuals have three innate psychological needs that form the basis for self-motivation, development, and well-being. The need for autonomy refers to people's universal wish to be causal agents and to experience volition (deCharms, 1968), whereas the need for competence concerns people's inherent desire to be effective in dealing with the environment (White, 1959). The need for relatedness refers to the universal propensity to interact with, be connected to, and experience caring for other people (Baumeister & Leary, 1995). When these needs are satisfied, they yield enhanced self-motivation and well-being. However, when these needs are frustrated, they lead to diminished motivation and well-being.

In a work setting, the theory predicts that if an individual's job provides the stimuli that satisfy the basic needs, the person will be more likely to experience greater task enjoyment, job satisfaction, and psychological adjustment (Ilardi, Leone, Kasser, & Ryan, 1993). Questionnaire research investigating between-person differences has generally supported this proposition. Thus, in a study conducted in Bulgaria and the United States, Deci et al. (2001) assessed satisfaction of employees' needs for competence, autonomy, and relatedness at work and found direct positive relations in both countries between need satisfaction on the one hand, and well-being (reduced anxiety and increased self-esteem) on the other hand. In addition, fulfillment of psychological needs at the workplace has been positively linked to enduring work-related vigor (Van den Broek, Vansteenkiste, De Witte, & Lens, 2008), and negatively linked to depression/anxiety (Baard, Deci, & Ryan, 2004), and job burnout (Fernet, Austin, Trépanier, & Dussault, 2013).

Some studies have indicated that an individual's level of psychological need fulfillment may also vary in the short run. Theoretically, following predictions from SDT, changes in psychological need satisfaction from either moment-to-moment (within the day) or day-to-day (between days) should impact momentary and daily well-being, respectively. Consistent with these ideas, Sheldon, Ryan, and Reis (1996) demonstrated that psychology students experienced higher daily well-being on days when autonomy and competence needs were relatively more fulfilled, after controlling for enduring psychological need satisfaction. Reis et al. (2000) replicated these findings and further found that increased daily relatedness was also positively related to increased daily well-being. However, as far as we know, no studies examined moment-to-moment (within the day) need satisfaction and happiness in order to examine the relationships hypothesized by SDT. Moreover, we are not aware of any study in an organizational setting that combined global measures of job burnout and work engagement with the ability of employees to satisfy their psychological needs on the within-day, moment-to-moment level.

Present Study

In the present study, we combine global measures of job burnout and work engagement with specific, experience-based measures to investigate how enduring burnout and engagement influence the impact of daily work activities on momentary need satisfaction and happiness. Specifically, we used the day reconstruction method (DRM; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004) to ask employees to reconstruct their working days. The DRM allows an examination of momentary behaviors, feelings, and thoughts during the workday that vary *within* individuals across time and across different situations (Oerlemans & Bakker, 2013). The general idea of reconstruction methods is to use episodic memory traces in order to access momentary experiences without interfering with a person's ongoing activities (see Kahneman et al., 2004).

As alluded to before, employees with symptoms of burnout often feel disillusioned and worn-out (Kahill, 1988; Schaufeli & Enzmann, 1998), and they have lost the connection with their work (e.g., Leiter, 1993). Their work environment is suboptimal, in that a high workload and role conflicts often coincide with a lack of support, performance feedback, or opportunities for development (Bakker et al., 2005; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). More time spent on tasks in this unfavorable work environment will presumably contribute to lower happiness on the task level, because there is no congruence

between the person with a high level of enduring burnout and the work environment. The tasks will often exceed the person's capacities. Moreover, previous research has shown that burnout can lead to a negative spiral of stress in which job demands accumulate over time (Bakker, Schaufeli, Sixma, Bosveld, & Van Dierendonck, 2000; Demerouti, Le Blanc, Bakker, Schaufeli, & Hox, 2009).

Although Deci and Ryan (1985, 2000) posit psychological needs as universal, this does not preclude the possibility that some persons are more responsive to moment-to-moment variations in (causes of) need satisfaction than are others. Our hypothesis that burned-out individuals will become unhappier when carrying out more work-related activities is consistent with the ideas of Bem and Funder (1978). These authors refer to the "personality of situations" (p. 485) and describe this interaction in terms of "template matching" (p. 488). Accordingly, individuals respond to situations to the extent that its features match important dispositional templates. Consistent with a congruence or sensitization model, Reis et al. (2000) found that daily need satisfaction was particularly important for daily well-being when individuals also had higher scores on enduring need satisfaction. They argued that high scores on a dispositional variable reflect heightened concern about, or sensitivity to, a given process and, consequently, a relatively stronger reaction to environmental events relevant to that process. In contrast, low scores are thought to indicate relative indifference or insensitivity, so that environmental events have correspondingly less impact. As the sample used in the present study mainly consisted of white-collar workers, we included five types of work activities that were most often reported among this group. On the basis of the aforementioned theoretical arguments, we argue that the more time employees high in burnout spend on work activities, the less they are able to satisfy their basic needs for autonomy, competence, and relatedness. Since burned-out employees are exhausted and cynical about their work, there is no congruence between their enduring well-being and their moment-to-moment work activities.

Moreover, we hypothesized that 'low' levels of burnout are not enough to experience higher psychological need satisfaction during work activities. Bakker and Oerlemans (2011) argued that employees high in burnout can be characterized as passive individuals, who often experience negative emotions (cf. the circumplex model; Russell & Carroll, 1999)—they want to withdraw from their work environment. In contrast, engaged employees are absorbed in their work—they have high levels of energy and dedication. They are proactive and want to explore their work environment. Individuals low on burnout function somewhere in-between these two extremes: They lack the activity level and positive emotions needed to satisfy their psychological needs through their work activities. Hence:

> *Hypothesis 1*: Time spent on (a) core work tasks; (b) administrative work tasks; (c) client interactions; (d) colleague interactions; and (e) meetings is negatively related to need satisfaction on the task level for employees high in enduring burnout, and unrelated to need satisfaction on the task level for employees low in enduring burnout.

Engaged employees are open to new experiences (Bakker, 2011), proactive (Sonnentag, 2003), and they craft their own jobs such that their job content is aligned with their personal abilities and preferences (Parker & Griffin, 2011; Tims, Bakker, & Derks, 2012, 2013). This job crafting even happens on a daily basis (Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012). Engaged employees take care that there is a match between their skills and preferences on the one hand and the work environment on the other hand. Thus, the more time engaged

employees spend on tasks in this favorable work environment, the higher their levels of happiness, because they can satisfy their basic needs for autonomy, competence, and relatedness. Since engaged employees really enjoy their work, there is congruence between their enduring well-being and their moment-to-moment work activities. Hence,

Hypothesis 2: Time spent on (a) core work tasks; (b) administrative work tasks; (c) client interactions; (d) colleague interactions; and (e) meetings is positively related to need satisfaction on the task level for employees high (vs. low) in enduring work engagement.

According to SDT, changes in psychological need satisfaction from moment to moment (within the day) should impact momentary well-being. However, only a limited number of studies have demonstrated that individuals experience higher daily well-being on days when autonomy and competence needs were relatively more fulfilled (Sheldon et al., 1996; Reis et al., 2000), and, as far as we know, no studies examined moment-to-moment (within the day) need satisfaction and happiness in order to examine the within-day relationships hypothesized by SDT. Based on SDT, we expect that time spent on work activities will first satisfy one's momentary needs (also depending on one's enduring levels of burnout and engagement as described above). In turn, the satisfaction of momentary psychological needs will be associated with happiness at the work task level. Thus,

Hypothesis 3: Psychological need satisfaction on the task level will mediate the direct effects of time spent on (a) core work tasks; (b) administrative work tasks; (c) client interactions; (d) colleague interactions; and (e) meetings, on happiness on the task level.

Method

Procedure and Participants

Participants were recruited in the Netherlands through social media such as Facebook and LinkedIn. We posted a link on these social media with a message asking employees in our social networks to participate in the study. This recruitment process has some disadvantages, including self-selection bias. In addition, non-response rate tracking is difficult to ascertain in online research. These sampling issues may inhibit the ability to make generalizations about study findings (Wright, 2005). However, since we focus on within-person effects and aim to contrast employees scoring low and high on burnout and work engagement, the representativeness of the sample is less of a concern. We discuss this issue further in the Discussion section. The data was collected online through a website that was specifically constructed for the present study. The website gave background information about the study, explained the procedure, and offered participants the opportunity to get in touch with the researchers in case of questions. On the website, participants were first invited to fill in a background questionnaire with demographics, their personal e-mail address, and enduring levels of burnout, work engagement, psychological need satisfaction, and happiness. Next, participants were asked to fill in a happiness diary, based on the DRM, on three consecutive working days—at the end of each workday. Thus, the measurement of the enduring states preceded the measurement of the momentary states. We sent daily reminders to the participants via an e-mail that included a link to the diary (see the following section).

In total, 136 employees completed the background questionnaire and filled in the happiness diary on one or more consecutive workdays. Sixty-seven participants (49.3%)

completed the diary on three consecutive workdays, 21 (15.4%) on two consecutive workdays, and 48 (35.3%) during one workday. The sample included 81 female (59.6%) and 55 male (40.4%) participants. Participants' mean age ranged from 26 to 34 years ($M = 29.87$, $SD = 1.73$). They were highly educated; 63 persons (46.3%) finished higher professional education, and 57 persons (41.9%) held a university degree; 11.8% finished higher secondary education. Participants worked on average 36 hours per week ($SD = 7.92$). The participants worked for various organizations, and were heterogeneous in terms of occupations. Consultants (29%) and account managers (19%) formed the largest occupational groups. Other job types were project engineer (7%), researcher (4%), financial planner (4%), human resource manager (4%), fiscal manager (1%), teacher (1%), university researcher (1%), and so on. Most employees of the sample held "white collar" jobs. Inclusion of job type in the analyses did not affect the results that follow. This is consistent with the finding that most of the variance in happiness and need satisfaction lies on the within-person level (see Descriptive Statistics).

Measures

Enduring burnout was assessed with the Oldenburg Burnout Inventory (OLBI; Demerouti et al., 2010), which includes two subscales—exhaustion and disengagement. The eight items of the exhaustion subscale refer to feelings of emptiness, overtaxing from work, a strong need for rest, and a state of physical exhaustion, for example "After my work, I usually feel worn-out and weary." Disengagement refers to distancing oneself from the object and the content of one's work and to negative, cynical attitudes and behaviors toward one's work. This subscale also comprises eight items, including "It happens more and more often that I talk about my work in a negative way." The OLBI uses a four-point rating scale, ranging from 1 (totally disagree) to 4 (totally agree). All items of both subscales were summed to form one index of burnout (Cronbach's alpha = .83).

Enduring work engagement was measured with the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006). The UWES consists of three subscales that include three items each: vigor (e.g., "At my work, I feel bursting with energy"); dedication (e.g., "I am enthusiastic about my job"); and absorption (e.g., "I am immersed in my work"). Participants could respond on a scale ranging from (0) "never" to (6) "always/every day." All items were summed and formed an overall work engagement score (Cronbach's alpha = .91).

A series of confirmatory factor analyses were performed to test whether enduring burnout and enduring work engagement could be empirically distinguished. We first estimated a second-order factor model, in which burnout was indicated by exhaustion and disengagement (which were, in turn, indicated by their respective items), and in which engagement was indicated by vigor, dedication, and absorption (which were, in turn, indicated by their respective items). The results showed that the second-order factor model showed an imperfect, though reasonable fit to the data, $\chi^2(269) = 496.73$; CFI = .89; TLI = .87; RMSEA = .07. The modification indices showed that this was due to covariances between two pairs of errors for the items indicating engagement (between two vigor items, and between two absorption items), and two pairs of errors for the items indicating burnout (between two exhaustion items, and between two disengagement items). Since the covariances can be ascribed to similarity in item content,

we decided to allow the errors to correlate. The fit of the second-order factor model was now acceptable: $\chi^2(265) = 417.19$; CFI = .91; TLI = .90; RMSEA = .06. Importantly, the original second-order factor model (without modifications), fit significantly better to the data than a model in which all items for burnout and engagement were estimated to load on a single factor ($\Delta\chi^2 = 718.16$; $p < .001$), or a two-factor model for engagement and burnout, without a further distinction of the sub-dimensions for each of the constructs, $\Delta\chi^2 = 582.34$; $p < .001$. Taken together, these findings show that enduring burnout and enduring work engagement can be empirically distinguished. Additional information is available from the first author on request.

Enduring psychological need satisfaction at work was included as a control variable in the analysis where need satisfaction during work activities was the dependent variable. Enduring need satisfaction was measured with the Basic Need Satisfaction at Work Scale (Deci et al., 2001). The scale includes 21 items concerning the three needs for competence, autonomy, and relatedness. The need for autonomy was measured with seven items (e.g., "I am free to express my ideas and opinions on the job"), competence with six items (e.g., "People at work tell me I am good at what I do"), and relatedness with eight items (e.g., "I get along with people at work"). Participants could indicate the extent to which the statements were true (1 = not at all true, 7 = very true). All items were summed to form one overall index of psychological need satisfaction (Cronbach's alpha = .89).

Enduring happiness was included as a control variable in the analysis where happiness during work activities was the dependent variable. Enduring happiness was assessed with one item using a "faces scale" that ranged from 0 (extremely unhappy) up to 10 (extremely happy). The item specifically asked: "How happy did you feel in the past month?" A single item for happiness has good temporal stability and concurrent, convergent, and divergent validity (Abdel-Khalek, 2006).

Happiness Diary Based on the DRM

The DRM combines elements of experience sampling and time diaries, and has been designed to facilitate accurate emotional recall (Kahneman et al., 2004). In the present study, participants were kindly requested to fill in a happiness diary based on the DRM at the end of each workday. They first indicated in chronological order the kind of activities they performed at work, by specifying the beginning and end time of each work activity. They could choose from a pre-selected list of activities which included six main categories; performing their "core" activity, administration, client interactions, attending a meeting, interactions with colleagues, and taking a break. In addition, participants could select "other" and define their own specific work activity during a particular time of the day. Participants were asked to indicate from half hour to half hour the kind of activity they were doing. When participants performed multiple activities in one half hour, we asked them to report on the activity that was dominant during that specific time. After participants had reconstructed their day, they were shown a second screen where all their activities were reported in chronological order. For each activity, they could indicate the extent to which the activity satisfied their need for (1) autonomy, (2) competence, and (3) relatedness. Subsequently, participants were asked to indicate how happy they had felt during each of the reported activities on a scale from 0 (extremely unhappy) to 10 (extremely happy). Previous research has indicated that the DRM can assess actual experiences with good accuracy, as indicated by their convergence

with concurrent mood reports collected with experience sampling methods (e.g., Dockray et al., 2010; Kahneman et al., 2004; Stone, Shiffman, Atienza, & Nebeling, 2007).

Work Activities

Participants reported a total of 1,619 activities on 291 working days. The HRM departments of both the financial organization and the consultancy agency provided information as to what kind of activities were common among their workers. Six types of activities were distinguished, being: 542 core tasks (33%); 298 client interactions (18%); 201 colleague interactions (12%); 168 meetings (10%); 144 administration (9%); 133 breaks (8%). Respondents could also define unique activities in the DRM, which amounted to 133 (8%) other activity types. This latter category "other" was dropped and not analyzed further.

Psychological Need Satisfaction During Work Activities

In the present study, we used a new way of measuring Psychological Need Satisfaction during Work Activities (PNS-WA). Participants first received a short explanation concerning the three psychological needs, and then indicated the extent to which each activity satisfied their need for autonomy, competence, and relatedness (0 = not at all, 10 = completely). We used one item for each psychological need to avoid an overly long DRM questionnaire. Other authors have also used one-item measures for psychological need satisfaction constructs (e.g., Howell, Chenot, Hill, & Howell, 2011). In the present study, the correlations between momentary need satisfaction and the validated psychological need satisfaction at work scale (Deci et al., 2001) were .31, .26, and .23 for autonomy, relatedness, and competence, respectively. The three items showed acceptable internal consistencies (Cronbach's alpha) across the work activity types, ranging from .68 for administrative work to .80 for attending meetings. In addition, the internal consistency across all work activities was good (Cronbach's alpha = .77). A multilevel confirmatory factor analysis for PNS-WA across all work activities with a one-factor solution for the three items (autonomy, competence, and relatedness) on both the between-person and the within-person (activity) level showed a good fit to the data, $\chi^2 = 7.823$, $df = 3$, $p = .05$; CFI = .99, TLI = .99; RMSEA = .02, RMR-within = .01, RMR-between = .01. Standardized factor-loadings for PNS-WA on the within (activity) level were .55 for autonomy, .68 for relatedness, and .70 for competence. Standardized factor loadings on the between (person) level were .74 for autonomy, .94 for relatedness, and .95 for competence. In our multilevel analyses, we therefore used the mean score of the three items to measure psychological need satisfaction on the work activity level.

Happiness During Work Activities

Happiness during each work activity was measured by asking respondents "How happy did you feel during this activity?" A smiley faces scale was used, ranging from 0 (extremely unhappy) to 10 (extremely happy). Note that other DRM designs also included one-item measures for affective states such as happiness (e.g., Dockray et al., 2010).

Strategy of Analyses

Because the data have a hierarchical structure with workdays nested in persons, and work activities nested within workdays we used hierarchical linear modeling for analyzing the data (Bryk & Raudenbush, 1992; Rasbash, Browne, Healy, Cameron, & Charlton, 2000) with

MLwin software (Rasbach et al., 2000). To test for indirect effects of time spent on work activities on happiness on the task level through psychological need satisfaction, we applied multi-level structural equation modelling to our data (Mehta & Neale, 2005) using the Mplus software (Muthen & Muthen, 2006). We centered the person-level predictors (i.e. enduring burnout, enduring work engagement, and enduring psychological need satisfaction) at the grand mean; work activities were centered at the person mean (group mean centering). We applied this group mean centering because we were interested in within-person relations.

In all of the analyses, we corrected for lagged effects of momentary psychological need satisfaction and happiness during the *previous* work activity. Thus, we analyzed the impact of time spent on work activities on *changes* in momentary need satisfaction and happiness, after correcting for enduring well-being, and spillover effects of psychological need satisfaction and happiness from the previous activity. As neither gender, weekly hours worked, nor number of days-worked related significantly to psychological need satisfaction and happiness on the task level, we decided not to include these background variables in the multilevel analyses.

Results

Descriptive Statistics

Means, standard deviations, and correlations of the study variables are reported in Table 1. It should be noted that not all participants engaged in all activities on each day. Therefore, the time spent on activities cannot simply be summed to calculate the total time spent on all activities per day. Furthermore, note that most of the within-person correlations between time spent on activities on the one hand and momentary need satisfaction and happiness one the other are relatively weak, indicating that there is room for moderators to qualify these relationships. For psychological need satisfaction during work activities, the intercept-only model showed that 34% of the variance was explained on the between-person level, 5% on the day level, and 61% on the work activity level. For happiness during work activities, 25% of the variance was explained on the between-person level, 6% on the day level, and 69% on the work activity level. As all three levels hold a reasonable amount of variance, we tested our hypotheses using a three-level HLM model. The bivariate correlation between enduring work engagement and enduring burnout was high in the current sample ($r = -.72$, $p < .01$). To avoid problems associated with multicollinearity, we estimated separate multilevel models for enduring burnout and enduring work engagement.

Testing the Hypothesis for Burnout

Table 2 shows results of three nested multi-level models used to test Hypothesis 1. Enduring burnout was entered in Model 1, together with variables to correct for enduring psychological need satisfaction, hour of the day, and the lagged effect of psychological need satisfaction experienced during the previous activity. Results in Model 1 show a negative relationship between enduring burnout and psychological need satisfaction on the work activity level. Time of the day, enduring psychological need satisfaction, and the lagged effect of psychological need satisfaction during the previous activity were all positively associated with psychological need satisfaction on the work activity level. In a second, nested model, the five

Table 1. Means, standard deviations, and correlations of the between-person ($N = 136$ employees) and momentary ($N = 1{,}619$) study variables.

	Variables	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Enduring Burnout	2.07	0.37	—												
2	Enduring Engagement	4.78	0.91	−0.73	—											
3	Enduring Psychological Need Satisfaction	5.32	0.65	−0.72	0.73	—										
4	Enduring Happiness	8.97	0.99	−0.23	0.34	0.36	—									
5	Time of day (hour)	14:02	2.17	0.05	−0.06	−0.41	0.01	—	−0.17	−0.08	−0.10	−0.07	−0.04	−0.05	0.12	0.22
6	Time spent on core tasks	8:10	6:31	−0.03	−0.01	0.50	0.01	−0.15	—	−0.04	−0.06	−0.05	−0.04	−0.04	0.12	0.04
7	Time spent on administration	0:57	1:52	0.14	−0.02	−0.13	−0.03	−0.04	−0.19	—	−0.03	−0.02	−0.02	−0.02	−0.02	−0.05
8	Time spent on client interactions	1:20	1:43	−0.02	0.08	0.52	−0.06	0.05	−0.17	−0.07	—	−0.03	−0.03	−0.03	0.12	0.07
9	Time spent on meetings	1:20	1:43	−0.03	0.04	0.10	−0.01	−0.04	−0.13	−0.04	0.02	—	−0.02	−0.02	0.11	0.04
10	Time spent with colleagues	0:39	0:57	−0.10	0.05	0.09	0.02	−0.03	−0.18	0.02	0.11	0.19	—	−0.02	0.10	0.07
11	Time spent on a break	0:26	0:37	0.10	−0.19	−0.11	−0.01	−0.02	0.11	0.07	0.00	0.06	0.08	—	0.03	0.05
12	Psychological Need Satisfaction	6.21	1.32	−0.18	0.37	0.26	0.13	−0.11	−0.06	0.07	−0.02	0.02	0.05	0.05	—	0.61
13	Happiness during Work Activities	6.97	0.91	−0.31	0.46	0.37	0.27	0.01	0.03	0.04	−0.15	−0.04	0.02	0.03	0.59	—

Correlations below the diagonal are grand-mean centered correlations ($N = 136$ employees) with correlations $r \geq |.16|$ being significant at $p < .05$ and $r \geq |.26|$ being significant at $p < .01$. Correlations above the diagonal are person-centered correlations ($N = 1{,}619$ activities) with correlations $r \geq |.03|$ being significant at $p < .05$ and $r \geq |.04|$ being significant at $p < .01$. Means and standard deviations for activities are reported in an hour:minute format, and are based on individuals who spent at least five or more minutes on a specific activity.

Table 2. Multi-level estimates of burnout and work activities predicting psychological need satisfaction on the work activity level.

	Model 1			Model 2			Model 3		
	Estimate	*SE*	*t*	Estimate	*SE*	*t*	Estimate	*SE*	*t*
Constant	6.37	0.10	65.63***	6.40	0.10	65.30***	6.34	0.10	64.67***
Time of day (hour)	0.01	0.00	3.50***	0.04	0.00	9.75***	0.04	0.00	10.00***
Enduring Burnout (BO)	−0.61	0.26	−2.32*	−0.61	0.26	−2.31*	−0.59	0.26	−2.23*
Enduring Psychological Need Satisfaction	0.55	0.21	2.61**	0.54	0.21	2.57**	0.54	0.21	2.55**
Psychological need satisfaction previous activity (lag)	0.32	0.01	22.79***	0.28	0.01	21.46***	0.27	0.01	21.08***
Time spent on core tasks				0.33	0.02	15.14***	0.34	0.02	15.55***
Time spent on administration				−0.15	0.09	−1.74	−0.05	0.10	−0.48
Time spent on client interactions				0.69	0.05	14.74***	0.71	0.05	15.06***
Time spent on meetings with colleagues				0.86	0.07	12.48***	0.86	0.07	12.69***
Time spent with colleagues				0.76	0.07	11.33***	0.75	0.07	11.38***
Time spent on a break				0.69	0.22	3.12***	0.66	0.23	2.92**
BO x time spent on core tasks							−0.41	0.06	−6.82***
BO x time spent on administration							−0.63	0.30	−2.14*
BO x time spent on client interactions							−0.67	0.12	−5.75***
BO x time spent on meetings with colleagues							−0.38	0.19	−1.96*
BO x time spent with colleagues							−0.66	0.18	−3.62***
−2*log (lh)	15817.21			15226.72			15138.63		
Diff-2*log	1358.54***			590.49***			88.09***		
Df	3			6			5		
Level 3 intercept variance (person)	1.18	0.16	2%	1.18	0.16	2%	1.18	0.16	2%
Level 2 intercept variance (day)	0.05	0.02	72%	0.05	0.02	72%	0.05	0.02	72%
Level 1 intercept variance (activity)	2.02	0.05	8%	1.74	0.04	21%	1.70	0.04	22%

Note. Model 1 was compared to a Null Model with the intercept and time of the day as the only predictors ($\gamma = 6.37$; $SE = 0.09$; $t = 69.21$; $-2^*\log = 17175.75$ (Level 3 variance = 1.20; $SE = 0.15$; Level 2 variance = 0.18; $SE = 0.04$; Level 3 variance = 2.19; $SE = 0.05$).$^*p < .05$.$^{**}p < .01$.$^{***}p < .001$.

work activities (core tasks, administration, client interactions, colleague interactions, and meetings) were entered. Results showed that time spent on all of the work activities related positively to psychological need satisfaction, except for administration, which was unrelated.

In Model 3, all of the cross level interaction terms for enduring burnout and the five work activities were entered to test hypothesis 1. Results for Model 3 showed that each of the five cross-level interactions was significant. To ease interpretation of the interaction effects, we conducted simple slope tests as suggested by Preacher, Curran, and Bauer (2006) and performed slope difference tests as suggested by Dawson and Richter (2006). Results of the simple slope tests are displayed in Table 3. The tests revealed that under conditions of 'high' enduring burnout (one standard deviation above the sample mean), time spent on core tasks, administration, client interactions, and colleague interactions was negatively related to psychological need satisfaction on the work task level. However, time spent on meetings was not significantly related to psychological need satisfaction under conditions of high burnout. In addition, results showed that under conditions of 'low' enduring burnout (one standard deviation below the sample mean), time spent on core tasks, administrative duties, client interactions, and colleague interactions was unrelated to psychological need satisfaction. Time spent on meetings was positively related to psychological need satisfaction on the work task level under conditions of low enduring burnout. Slope difference tests revealed that the nature of the slopes under conditions of high (vs. low) enduring burnout were

Table 3. Simple slope estimates of cross-level interactions between enduring burnout and work activities.

	Psychological Need Satisfaction		
Activity type	Low Burnout *z-value*	High Burnout *z-value*	Slope difference *t-value*
Time spent on core tasks	0.71	−4.32***	−2.13*
Time spent on administrative tasks	−1.58	−2.17*	−1.73n.s.
Time spent on client interactions	0.20	−3.19***	−3.49***
Time spent on meetings	2.49**	−0.52n.s.	−0.79n.s.
Time spent with colleagues	0.76	−2.26*	−2.38**

Note. n.s. = not significant. Low Burnout = one standard deviation below the mean.
High burnout is one standard deviation above the mean.*$p < .05$.**$p < .01$.***$p < .001$.

significantly different for time spent on core work tasks, client interactions, and colleague interactions, but not for administrative tasks or attending meetings (Table 3). In sum, Hypothesis 1 is confirmed for three out of five work activities.

Testing the Hypothesis for Engagement

To test Hypothesis 2, we continued our multi-level analyses with work engagement as the moderator. Table 4 shows results of three nested multi-level models. Enduring work

Table 4. Multi-level estimates of work engagement and work activities predicting psychological need satisfaction on the work activity level.

	Model 1			Model 2			Model 3		
	Estimate	*SE*	*t*	Estimate	*SE*	*t*	Estimate	*SE*	*t*
Constant	6.35	0.09	69.03***	6.32	0.09	67.99***	6.32	0.09	67.99***
Time of day (hour)	0.02	0.00	3.75***	0.04	0.00	10.00***	0.04	0.00	10.00***
Enduring Work engagement (WE)	0.47	0.10	4.68***	0.47	0.10	4.66***	0.46	0.10	4.59***
Enduring Psychological Need Satisfaction	0.04	0.21	0.19	0.03	0.21	0.14	0.03	0.21	0.13
Psychological need satisfaction previous activity (lag)	0.32	0.01	22.86***	0.28	0.01	19.93***	0.28	0.01	19.71***
Time spent on core tasks				0.34	0.02	15.27***	0.35	0.02	15.86***
Time spent on administration				−0.17	0.09	−1.93	−0.17	0.09	−2.00*
Time spent on client interactions				0.70	0.05	14.52***	0.69	0.05	14.38***
Time spent on meetings				0.86	0.07	12.49***	0.85	0.07	12.56***
Time spent with colleagues				0.76	0.07	11.28***	0.75	0.07	11.15***
Time spent on a break				0.69	0.22	3.11***	0.63	0.24	2.62**
WE x time spent on core tasks							0.11	0.02	4.91***
WE x time spent on administration							0.21	0.09	2.30*
WE x time spent on client interactions							0.25	0.05	4.70***
WE x time spent on meetings							0.16	0.07	2.45**
WE x time spent with colleagues							0.24	0.08	3.20***
−2*log (lh)	15551.98			14959.63			14901.57		
Diff−2*log	1623.77***			592.35***			58.06***		
Df	3			6			5		
Level 3 intercept variance (person)	1.04	0.14	14%	1.04	0.14	14%	1.04	0.14	14%
Level 2 intercept variance (day)	0.04	0.02	76%	0.04	0.02	76%	0.04	0.02	76%
Level 1 intercept variance (activity)	2.03	0.05	7%	1.74	0.04	20%	1.72	0.04	22%

Note. Model 1 was compared to a Null Model with the intercept and time of the day as the only predictor ($\gamma = 6.37$; $SE = 0.09$; $t = 69.21$; −2*log = 17175.75 (Level 3 variance = 1.20; $SE = 0.15$; Level 2 variance = 0.18; $SE = 0.04$; Level 3 variance = 2.19; $SE = 0.05$).*$p < .05$.**$p < .01$.***$p < .001$.

Table 5. Simple slope estimates of cross-level interactions between enduring engagement and work activities.

	Psychological Need Satisfaction		
Activity type	Low Engagement *z-value*	High Engagement *z-value*	Slope difference *t-value*
Time spent on core tasks	2.67**	3.17***	5.58***
Time spent on administrative tasks	−0.09n.s.	0.61n.s.	1.85n.s.
Time spent on client interactions	2.26*	2.85**	6.75***
Time spent on meetings	2.40**	3.02**	5.83***
Time spent with colleagues	1.42n.s.	2.19*	4.98***

Note. n.s. = not significant. Low Engagement = one standard deviation below the mean.
High Engagement is one standard deviation above the mean.*$p < .05$.**$p < .01$.***$p < .001$.

engagement was entered in Model 1, together with variables to correct for enduring psychological need satisfaction, hour of the day, and the lagged effect of psychological need satisfaction experienced during the previous activity. In a second, nested, model, the five work activities (core tasks, administration, client interactions, colleague interactions, and meetings) were entered. Enduring work engagement was positively associated with psychological need satisfaction on the task level. All of the other effects are quite similar to those reported in the multi-level analyses for burnout.

In Model 3, all of the cross-level interaction terms for enduring work engagement and the five work activities were entered to test hypothesis 2. Results in Table 4, Model 3 show that each of the five cross-level interactions was significant. Again, we conducted simple slope tests and slope difference tests to interpret the interaction effects. The results can be found in Table 5. The tests revealed that under conditions of 'high' enduring work engagement (one standard deviation above the sample mean), time spent on core tasks, client interactions, colleague interactions, and meetings, were all positively associated with psychological need satisfaction on the work task level. However, time spent on administrative tasks was not significantly related to psychological need satisfaction under conditions of high work engagement. In addition, results showed that, under conditions of 'low' enduring work engagement (one standard deviation below the mean), time spent on core tasks, client interactions, and meetings still related positively to psychological need satisfaction, whereas time spent on administrative tasks and colleague interactions were unrelated. Nevertheless, slope difference tests revealed that the nature of the slopes under conditions of high (vs. low) enduring engagement were significantly different for time spent on core tasks, client interactions, colleague interactions, and meetings, with a stronger relationship between activities and psychological need satisfaction on the work task level for those high (vs. low) in enduring work engagement (Table 5). In sum, Hypothesis 2 is confirmed for four out of five work activities, with the exception of administrative tasks.

Indirect Effects on the Task level

In line with Hypothesis 3, we tested whether psychological need satisfaction on the task level would mediate the relationships between time spent on specific work tasks and happiness on the task level. We specified a simplified multilevel model containing predictor, mediator, and outcome variables on the within (activity) level. Analogous to our multi-level analyses,

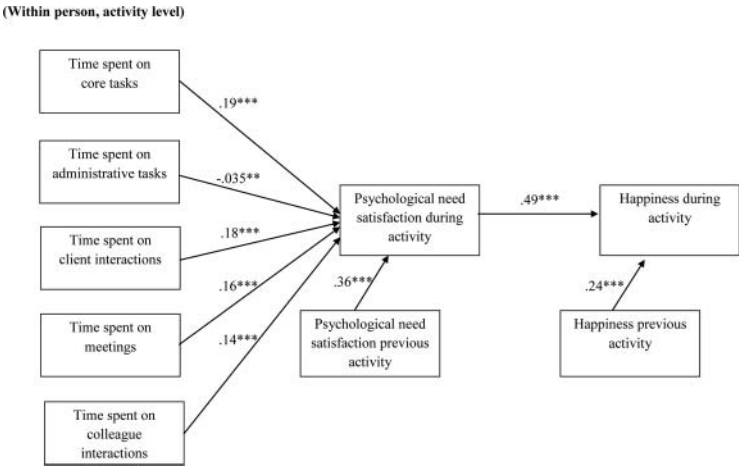

Figure 1. Results of the multilevel structural equation model, modeling relations between time spent on work activities, psychological need satisfaction, and happiness on the work task level. *Note.* $\chi^2 = 107.61$, $df = 17$, $p < .001$, RMSEA = .03, RMR = .02, CFI = .97, TLI = .94; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

predictor variables were centered on the respective person mean. As the between-person variance was thereby removed, these variables were modeled on Level 1. We specified paths from time spent on (a) core work tasks; (b) administrative work tasks; (c) client interactions; (d) colleague interactions; and (e) meetings to psychological need satisfaction on the task level (mediator), and from psychological need satisfaction to happiness on the task level (outcome). Moreover, we corrected for the lagged effects of psychological need satisfaction and happiness experienced during the previous work task.

Figure 1 shows the path model in detail. Our model showed a good fit to the data, $\chi^2 = 107.61$, $df = 17$, $p < .001$, RMSEA = .03, RMR = .02, CFI = .97, TLI = .94. Please note that we report standardized path coefficients in the model. All of the estimated paths were significant, and in a similar direction as reported in Tables 2 and 4. We calculated indirect effects using the Model Indirect command in Mplus. Specifically, we estimated that each of the five work activities would exert their influence on happiness on the work task level, through psychological need satisfaction (using the VIA command). The standardized results on the within level showed significant effects for core work tasks (*estimate* = .090, *se* = .007, $z = 13.597$, $p < .001$), administrative work tasks (*estimate* = −.017, *se* = .006, $z = -2.655$, $p < .001$), client interactions (*estimate* = .086, *se* = .007, $z = 13.031$, $p < .001$), colleague interactions (*estimate* = .067, *se* = .006, $z = 10.323$, $p < .001$), and meetings (*estimate* = .075, *se* = .007, $z = 11.475$, $p < .001$). Please note that all of the indirect paths were positive, except for administrative tasks. In sum, Hypothesis 3 is confirmed.

Discussion

The central goal of this study was to examine how enduring burnout and work engagement influence the impact of everyday work activities on momentary need satisfaction and happiness. Our findings offer clear support for the hypothesis that highly engaged employees are better able to satisfy their basic psychological needs through their work activities than

employees low in engagement or high in burnout. Whereas Ryan and Deci (2000) argued that all people can be proactive and engaged or, conversely, passive and alienated as a function of the social conditions in which they develop, the present study goes one step further. Specifically, we argued and showed that people who are generally engaged in their work satisfy their psychological needs throughout most of the workday, and as a consequence experience higher levels of happiness. They seem truly self-determined. In contrast, employees high in enduring burnout seem to frustrate their psychological needs, and therefore experience lower levels of happiness when spending more time on roughly the same work activities. These findings have important theoretical implications, which will be discussed next.

Theoretical Contributions

This study makes three important contributions to the literature. First, while several researchers have called for organizational research on a momentary level as opposed to a more attitudinal level (Daniels & Harris, 2005; Kanfer, 2009; Weiss, Ashkanasy, & Beal, 2005), the present study is one of the first using the day reconstruction method (DRM) in an organizational context. Analyzing a sample of employees from a variety of white-collar jobs, we investigated within-person, moment-to-moment fluctuations in need satisfaction and happiness during specific work activities within the workday as a function of enduring burnout and engagement. Our findings provide clear support for self-determination theory's (SDT; Deci & Ryan, 2000) core prediction that individuals' work tasks may provide the stimuli that satisfy their basic needs, which, in turn, fosters task enjoyment. Demonstrating links between moment-to-moment need satisfaction and happiness complements research that tends to focus on enduring determinants of well-being (see also Reis et al., 2000). The latter research conceptualizes well-being as a relatively stable characteristic of the individual, whereas moment-to-moment fluctuations informs us about the reasons why individuals feel better or worse than their baseline.

One reason for the positive relationships between the social activities (client and colleague interactions, meetings) and psychological need satisfaction may be that employees feel more related to one another, as the need for relatedness implies the universal propensity to interact with, be connected to, and experience caring for other people (Baumeister & Leary, 1995). Moreover, the positive association between time spent on core tasks and psychological need satisfaction can be explained by the fact that employees feel most autonomous and competent when working on the tasks that are central to their job. Thus, core tasks may fulfill the need for autonomy, as people have a universal urge to be causal agents and to experience volition (deCharms, 1968) which is stimulated by core tasks. Moreover, core tasks may fulfill the need for competence, which concerns people's desire to be effective in dealing with their environment (White, 1959).

Our research showed that no less than 61% of the variance in need satisfaction could be attributed to the within-day, work activity level. Thus, there was considerable variation in the type of tasks that satisfied the three basic needs within the day. For example, work-related activities during which participants met colleagues or clients were better able to satisfy the three basic psychological needs compared to a relatively simple task like doing one's administration. During conversations with clients, employees need to manage their own and others' emotions, and need to show expertise by adequately explaining products or services. General or even daily assessments of psychological need satisfaction take experiences during

all the various activities together and are indicative of the overall level of need satisfaction, across activities. By showing within-day effects of psychological need satisfaction, we illustrate that SDT also works at the micro, task-level. This is a novel contribution of the present study.

Although Deci and Ryan (1985, 2000) posit psychological needs as universal, the present study clearly shows that some persons are more responsive to moment-to-moment variations in (causes of) need satisfaction than are others. Individuals scoring high on burnout differed from those scoring low on burnout in their moment-to-moment reactions to work activities. A second contribution of the present study to the literature is, therefore, the finding that time spent on several work activities (core tasks, interactions with clients, interactions with colleagues) was negatively related to momentary need satisfaction for employees high in burnout and unrelated (or inconsistently related) to momentary need satisfaction for those low in burnout. This suggests that those high in burnout were unable to satisfy their basic needs at work, and most likely frustrated their psychological needs. Particularly time spent on core tasks and client interactions had a negative impact on need satisfaction for individuals high in burnout. These findings are consistent with the notion that individuals who are burned-out by their work have lost their work motivation and depleted their energetic resources (Bakker, Demerouti, & Sanz-Vergel, 2014). Moreover, individuals high in burnout often experience physical and psychological health problems, which make it difficult for them to derive satisfaction from core tasks and interactions with clients. Taken together, the results are consistent with more static, between-person studies showing that burnout is often the result of exposure to high demands and low resources (Alarcon, 2011; Bakker et al., 2005; Demerouti et al., 2001), and consistent with previous research suggesting a negative spiral of burnout (Bakker et al., 2000; Demerouti et al., 2009). In addition, our findings offer evidence for the multi-level model proposed by Bakker and colleagues (Bakker, 2015; Bakker & Costa, 2014), in which enduring burnout exacerbates the stressful process of dealing with daily job demands.

Whereas previous research has shown how burnout can be the result of an unfavorable work environment, the present study is unique in showing how those with relatively high levels of burnout do not manage to satisfy their basic needs through their work. The needs of individuals scoring high on burnout are to recover from their work-related exhaustion outside the work context (De Croon, Sluiter, & Frings-Dresen, 2003), or to find meaning again in their work (Wrzesniewski, 2003). There seem two solutions for this problem, a top-down and a bottom-up solution. The top-down solution is that management optimizes the work environment by making it more resourceful, with adequate feedback, social support, skill variety, and opportunities for development, such that stressed employees can start to experience their job demands as challenges (LePine, Podsakoff, & LePine, 2005). The bottom-up solution is that employees are allowed and encouraged to optimize their work environment themselves so that their work activities better fit with their personal abilities and preferences; this is known as "job crafting" (Wrzesniewski & Dutton, 2001; Tims et al., 2012).

The third contribution of this study pertains to the moderating impact of work engagement. Consistent with the findings for low vs. high burnout, individuals scoring high in enduring work engagement differed from those low in engagement in their moment-to-moment reactions to work activities. Specifically, we found that time spent on four out of five types of work activities (core tasks, client interactions, interactions with colleagues,

meetings) was positively related to momentary need satisfaction. This suggests that those high in enduring work engagement were able to satisfy their basic needs at work. Interestingly, the opposite patterns found in the present study clearly support the proposition that burnout and engagement are unique constructs with differing effects (cf. Demerouti et al., 2010; Gonzalez-Roma et al., 2006; Leon et al., 2015). Importantly, whereas employees high in engagement could satisfy their needs at work, this was clearly not true for employees low in burnout. In a similar vein, whereas employees high in burnout reported lower need satisfaction after spending time on work tasks, employees low in engagement were still able to satisfy their needs with all work activities, except administrative tasks. Taken together, these findings clearly contradict Cole et al. (2012), who argued that employee work engagement is a redundant concept, and that researchers would only need to measure burnout in order to find out how engaged employees are.

Bakker and Oerlemans (2011) have argued that whereas engagement is the combination of high activation and high pleasure (i.e. vigor and enthusiasm), burnout is the combination of low activation and displeasure (i.e., exhaustion and cynicism). Although burnout and engagement are negatively related (the correlation in the present study was −.73, whereas the meta-analytic correlation is −.36; Crawford et al., 2010), they do not completely overlap. Moreover, our findings clearly indicate that a low score on burnout does not imply that one is engaged—it does indicate that one is not exhausted and not cynical; perhaps one is in a neutral state. In a similar vein, a low score on engagement does not imply that one is burned-out; it indicates that one is not full of energy and not dedicated to work, perhaps satisfied.

Although the pattern of the interaction effects was similar for all work activities, time spent on interactions with colleagues and clients, and time spent on core tasks were best able to satisfy the needs of engaged employees. Engaged employees were also able to satisfy their needs for relatedness, autonomy and competence by working on administrative tasks, but the effect was less pronounced as for the other activities. These findings contribute to self-determination theory by showing how the propositions of the theory hold even from moment to moment. Taken together, our findings support a situational congruence model (see also, Reis et al. (2000) who present evidence at the day-level). This model proposes that psychological needs can only be met if there is congruence between activities and enduring well-being. Momentary psychological needs, in turn, are predictive of momentary happiness. Until now, this model had not been tested using *momentary* states of well-being. In the present study, we argued and showed that spending time on work activities is more congruent with the work experience of engaged workers than those scoring high on burnout. Whereas engaged workers seem truly self-determined, because they satisfy their psychological needs and as a consequence enjoy their work, burned-out workers do not manage to satisfy their needs—they need help. Our findings are also consistent with Coté and Moskowitz' (1998) behavioral concordance model. These scholars found that individuals high in agreeableness and neuroticism experienced more positive affect when engaging in behaviors consonant with those traits.

Limitations and Directions for Future Research

This study has certain limitations that should be considered when interpreting the findings. First, a unique feature of the present research was that social media was used as a research

tool. This procedure is not uncommon in diary research (Ohly, Sonnentag, Niessen, & Zapf, 2010), and can be considered as strength and weakness of this study. In general, one problem with this type of research is that social media users or those who respond to Web surveys are more likely to be younger than a typical employee or someone contacted through a mail or telephone survey (Schmidt, 1997). Indeed, a comparison of the present sample with the general Dutch population showed that our sample was relatively young and highly educated. In addition, only half of the sample completed the diary on each of the three consecutive workdays, as requested. This raises questions regarding the external validity of the findings. Since the pattern of the findings was the same across a range of activities, we believe that the results are meaningful and important. In addition, we focused on extreme groups (of employees scoring low vs. high on burnout and work engagement), as well as with-person effects of daily work activities on happiness, which alleviated sampling concerns. Also, on the positive side, whereas many burnout and engagement studies are biased towards a specific group or occupation, the present research included employees from a range of different occupations and organizations. Thus, we followed Cook and Campbell's (1979) advice, who argued that "the researcher should seek convenience samples which differ considerably on attributes that he or she especially wants to generalize across" (p. 77). Nevertheless, future studies should try to replicate and expand the present study by testing the hypotheses with other samples and in other countries.

A second limitation of the present study is that even though we applied the DRM to the work domain and distinguished various work activities, the activities remained necessarily broad, like "working on core tasks," and "having meetings with colleagues." Although this limitation most likely pertains to most DRM studies, it is a limitation because the richness of work activities is not fully captured. Nevertheless, our approach is more specific than most previous studies. Future research could perhaps use a computer interface in which participants first indicate what their specific and unique (qualitatively different) activities are. Subsequently, these activities can be used to set up the DRM questions.

Third, we used a new measure to assess momentary psychological needs, because there was no measure available in the literature. This means that the validity of the measure is unknown. However, the momentary need satisfaction measure correlated significantly with the trait version of need satisfaction, as developed in previous research. This relationship was necessarily weak, because traits cannot explain daily fluctuations. Nevertheless, it does indicate that the variables assessed what they intended to assess. Finally, some of our constructs were measured with a one-item scale, for example the enduring happiness construct. Although previous research has indicated that this scale has good psychometric properties (good stability and concurrent, convergent, and divergent validity), a limitation is that its internal consistency is unknown. It would therefore be beneficial to use multi-item scales in future studies in this area.

Practical Implications

The practical implications of this study are twofold. First, the findings suggest that individuals high in burnout do not manage to satisfy their basic psychological needs in their work. This means that it is crucial to monitor employees' levels of burnout, and to intervene with the right organizational and personal measures. Engaged individuals, in contrast, seem to manage very well to satisfy their own basic psychological needs in their work. However, it

should be noted that leaders should give their followers sufficient levels of autonomy or decision latitude to be able to stay engaged. Second, our findings clearly indicate how levels of need satisfaction and happiness fluctuate from work activity to activity. Organizations could provide their employees with an interactive tool for smartphones (e.g., a smartphone App) with which they can monitor their own peaks and lows on momentary need satisfaction and happiness. On the basis of such information, employees may learn which work activities are most motivating for them, and which work activities undermine their happiness. This knowledge may enable employees to optimize their moment-to-moment happiness while at work.

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