

# Work-Life Boundaries and Well-Being: Does Work-to-Life Integration Impair Well-Being through Lack of Recovery?

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**Abstract** Against the backdrop of increasingly blurred boundaries between work and nonwork, the purpose of this study was to investigate the implications of employees' work-to-life boundary enactment for well-being. Using border/boundary theory (as reported by Ashforth, Kreiner, & Fugate (Academy of Management Review 25(3):472–491, 2000) and Clark (Human Relations 54(6):747–770, 2000)) and the effort-recovery model (as reported by Meijman & Mulder (Handbook of work and organizational psychology vol. 2 55–53, 1998)), we developed a research model that links work-to-life integration enactment to exhaustion and impaired work-life balance via lack of recovery activities (as reported by Sonnentag, Journal of Applied Psychology 88(3):518–528, 2003). The model was tested using structural equation modeling. Our sample consisted of  $N = 1916$  employees who were recruited via an online panel service. Results showed that employees who scored high on work-to-life integration enactment reported less recovery activities and in turn were more exhausted and experienced less work-life balance. Our study contributes to the existing literature on boundary management by investigating the well-being implications of work-to-life boundary enactment and by suggesting and testing recovery as an underlying mechanism. In doing so, we link boundary enactment with existing theory of the work-life interface. Based on our review of existent research on

boundary management and well-being, we disentangle previous contradictory findings. Understanding of the well-being implications of boundary enactment and underlying mechanisms can help human resource professionals and practitioners to devise and implement organizational policies and interventions that enable employees to develop boundary management strategies that are sustainable in that they do not impair employees' well-being.

**Keywords** Boundary management · Boundary enactment · Recovery · Well-being · Exhaustion · Work-life balance

Over the past two decades, the boundaries between work and nonwork life have become increasingly blurred. Laptops, smart phones, and other forms of mobile communication technology have changed the way we work. For many, work has become more flexible with regard to when and where it can be done (Kossek & Michel, 2010). At the same time, studies show that employees work more hours than they used to and that work has become more intense (Green & McIntosh, 2001; Kelliher & Anderson, 2009). These twin forces have resulted in the need to be “always on” (Park, Fritz, & Jex, 2011). Employees work late, they take work home, and they check work-related communications during their time off. Some welcome this flexibility because it gives them the freedom to integrate work and nonwork life in a way that suits their needs and lets them craft the work-life balance they want. Others feel overwhelmed, overtaxed, and exhausted due to expectations for constant availability (Derks, Duin, Tims, & Bakker, 2015). In the current study, we raise the question of how blurred boundaries affect well-being.

The formulation of border theory and boundary theory (Ashforth, Kreiner, & Fugate, 2000; Clark, 2000) has set the stage for research that focuses on individuals' strategies to

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reconcile work and nonwork life (Kreiner, Hollensbe, & Sheep, 2009). Work-life scholars have begun to address the question of how individuals manage the boundaries between the work and the nonwork domain and have found that boundary management strategies fall along a segmentation/integration continuum. Segmentation of work and nonwork means that the work and nonwork domains are kept separate with fixed and impermeable boundaries in between while integration means that the boundaries between work and nonwork are flexible and permeable (Ashforth et al., 2000; Clark, 2000). Multiple boundary management constructs, built around the idea of a segmentation/integration continuum, have been developed out of border and boundary theory and research has begun to relate these constructs to existent work-family concepts as well as to personal level outcomes (for an overview, see Allen, Cho, & Meier, 2014). Few studies have related segmentation/integration strategies to well-being outcomes and in the few that have, mixed results are reported (overview below, Edwards & Rothbard, 1999; Kreiner, 2006).

Against the backdrop of these findings and the ongoing public and scholarly debate on burnout, constant availability, telecommuting, and the reconcilability of work and nonwork life, it is important to understand how boundary management strategies relate to well-being. The current study seeks to investigate the well-being implications of boundary management strategies that either shield the nonwork domain from intrusions from the work domain or integrate the work domain into the nonwork domain. Using boundary/border theory and the effort-recovery model, we develop a model that links work-to-life boundary enactment to two aspects of general well-being, namely exhaustion and work-life balance.

Our model proposes that recovery activities mediate the link between work-to-life boundary enactment and well-being. Our research contributes to the existing literature in several ways. First, our review and discussion of existing research on boundary management and well-being shows that boundary management is associated both positively and negatively with well-being indicators. By distinguishing between work-related and general well-being indicators, we help to disentangle these contradictory findings. Integration seems to relate positively to work-related well-being (Edwards & Rothbard, 1999; Carlson, Ferguson, Kacmar, & Crawford, 2013; Kossek, Ruderman, Braddy, & Hannum, 2012; Kreiner, 2006) and negatively to general well-being (Edwards & Rothbard, 1999; Kreiner, 2006). Based on this distinction, we develop and test a model that suggests an underlying mechanism that links boundary management to general well-being. We thereby contribute to the theoretical understanding of the link between boundary management and general well-being. We focused on general well-being rather than work or nonwork-related well-being, because we were interested in the relationship between work-to-life integration enactment and psychological health. General well-being is more global and

therefore a better indicator of psychological health than any single domain-specific well-being measure. Second, we theoretically link work-to-life boundary enactment to well-being by proposing recovery activities as an underlying mechanism. Many scholars have lamented a lack of theoretical integration in the work-family field (Grzywacz & Marks, 2000). By integrating boundary management with existing theory of the work-nonwork interface (Sonnetag, 2003), we contribute to more theoretical integration. Third, by linking boundary enactment to well-being, we raise the question of what is successful boundary management. Boundary management strategies that harm employee well-being are not sustainable. Knowledge on how and why boundary enactment relates to well-being can guide organizational policy and interventions targeted at employees' healthy boundary management.

## Theoretical Background

### Boundary Theory and Border Theory

Work-family scholars have taken a keen interest in boundary management in recent years (Allen et al., 2014). Nippert-Eng's (1996) seminal scholarship on boundary work and the articulation of border theory by Clark (2000) and boundary theory by Ashforth, Kreiner, and Fugate (2000) have spurred a host of qualitative and quantitative research.

Boundary theory (Ashforth et al., 2000) and border theory (Clark, 2000) both conceptualize the work-nonwork interface in terms of boundaries/borders that surround the different life domains. Individuals create, maintain, and transition across these boundaries/borders in an attempt to balance the demands of the work and nonwork domains (Clark, 2000). The strategies that individuals use to manage their work-nonwork boundaries fall along a segmentation/integration continuum (Allen, Cho, & Meier, 2014; Bulger, Matthews, & Hoffman, 2007). A segmentation strategy is characterized by inflexible and impermeable boundaries that do not allow for activities, objects, persons, thoughts, and feelings of one domain to enter the other domain. Individuals who segment work from nonwork would not, for example, respond to work-related calls or to e-mails after hours. At the other end of the continuum, an integration strategy is characterized by flexible and permeable boundaries that allow for activities, objects, persons, thoughts, and feelings of one domain to enter the other domain. Individuals who integrate nonwork into work might, for example, bring friends and family members to their workplace. The boundary management approach adds to the existing work-nonwork literature by focusing on individual-level strategies to reconcile the work and nonwork domains. Individual-level strategies are a relatively under-researched area when compared to family and organizational level determinants of work-life interaction (Kreiner, Hollensbe, & Sheep, 2009).

But in today's fast changing, highly flexible work environments, individuals' strategies for reconciling work and non-work life are of growing importance (Kossek, Baltes, & Matthews, 2011).

### Boundary Management: Segmentation and Integration

So far, boundary management research has focused primarily on segmentation vs. integration of the work and nonwork domains. Empirical research has shown that directionality matters (Hecht & Allen, 2009). Studies have found that individuals who integrate work into nonwork do not necessarily integrate nonwork into work and vice versa. Therefore, few people can be categorized as either a “segmenter” or an “integrator” (Ammons, 2013; Bulger et al., 2007; Kossek, Ruderman, Braddy, & Hannum, 2012). This suggests that the two boundaries around work and nonwork are conceptually distinct (Matthews & Barnes-Farrell, 2010). Segmentation and integration have been discussed in terms of personal preference, actual boundary enactment or in terms of environmental conditions that encourage or enable one or the other (e.g., boundary supplies). Nippert-Eng (1996) distinguished between “desired and actual” boundaries. Kreiner (2006), for example, investigated boundary “preferences and supplies.” Following a person-environment fit approach, he investigated the interactive effects on workplace outcomes of personal preference for work-to-home integration or segmentation and the degree to which the workplace promotes integration or segmentation (boundary supplies). In his study, preference and supplies correlated at  $r = .25$ . Ammons (2013) argued for a boundary-fit approach and examined the alignment of boundary preferences and boundary enactment, “the actual demarcations that individuals create or have between core life domains” (p. 50). Powell and Greenhaus (2010), found that “preferred and actual segmentation of work from family” were only moderately associated  $r = .31$ .

In their recent review article, Allen et al. (2014) proposed a boundary management map that builds on the idea of a segmentation/integration continuum and that distinguishes between boundary preferences and boundary enactment. *Boundary preference* refers to the desired degree of segmentation or integration (Ammons, 2013; Kreiner, 2006). *Boundary enactment* refers to an individual's actual degree of segmentation or integration, which he or she established in order to fulfill work and nonwork roles (Allen et al., 2014). That is, boundary enactment is the degree of integration or segmentation individuals establish in their lives in order to reconcile work and nonwork role demands, taking their personal preferences and environmental conditions into account. Further, work-to-life boundary enactment might differ from life-to-work boundary enactment concerning the degree of segmentation or integration. In the remainder of the article, we use the term “boundary enactment” when we discuss the concept on a general level and we use

“segmentation” or “integration enactment” when we discuss the relation of boundary enactment with other constructs to indicate the directionality of the relation. Allen et al. (2014) suggested that both boundary preferences and enactment are concerned with physical, psychological, and behavioral aspects of boundaries between work and nonwork life. *Physical* aspects of boundaries are concerned with the place where tasks belonging to one domain are performed, (e.g., working at home vs. making a private phone call at work), and with the timing of tasks belonging to one domain (e.g., staying late to finish a job vs. leaving work early to attend to family needs). *Psychological* aspects of boundaries are concerned with the contingency of cognitive content (thoughts and emotions) and current domain involvement (e.g., pondering work problems while spending time with family vs. thinking about family problems while at work). Finally, *behavioral* aspects of boundaries are concerned with the contingency of social behavioral patterns and current domain involvement (e.g., bringing ones professional identity into non-work life vs. bringing ones private identity into the workplace). In addition, the authors argued that boundary preferences and enactment can differ according to direction (work-to-nonwork and nonwork-to-work) (Allen et al., 2014).

Some scholars have focused on the characteristics of boundaries such as boundary permeability and flexibility in order to understand work-nonwork dynamics (Bulger et al., 2007; Clark, 2002; Matthews & Barnes-Farrell, 2010; Matthews, Barnes-Farrell, & Bulger, 2010). Matthews and Barnes-Farrell (2010) distinguish between flexibility-ability, the evaluation of one's control over timing and location of domain relevant behavior, and flexibility-willingness, which is concerned with the willingness to flex domain boundaries in order to attend to needs arising from the other domain. They further investigated boundary permeability, which they describe as “the degree to which an individual allows elements from one domain to enter the other domain” (Matthews & Barnes-Farrell, 2010, p. 331). While their flexibility measures focus on control and willingness to flex domain boundaries, they do not assess the actual degree to which individuals flex domain boundaries. Their permeability measure assesses the actual degree of permeability. Moreover, it does not include the element of control or intentionality (neither on item level nor in the instruction for participants) that their conceptualization suggests. Matthews et al. (2010) critically discuss the different existing definitions of boundary permeability and their lack of clarity concerning “whether elements from other domains can enter and the frequency with which they do enter” (p. 448). They conclude by suggesting that, “focusing on the actions individuals engage in to manage the work–family interface will facilitate the development of constructs with clearer conceptual definitions”, (p. 448). Our approach to boundary management differs from this line of research in that boundary enactment captures the extent of segmentation/integration individuals establish on a global level,

encompassing aspects of flexibility and permeability. Our research focuses on boundary management as an individual-level work-nonwork strategy and less on the more granular level of single boundary characteristics. We believe that our approach to boundary management is an improvement over the boundary characteristics approach because our conceptualization of boundary enactment focuses on what people actually do instead of mixing what people could do and how often/whether they actually do it, as is the case with the permeability construct. In their boundary management map, Allen et al. (2014) integrated flexibility-availability/supplies as a condition for volitionally aligning one's enacted with one's preferred boundary management strategy.

### Boundary Management and Well-being

Both boundary and border theory argue that individuals are motivated to balance work and nonwork life by creating and maintaining boundaries around both domains (Ashforth et al., 2000; Clark, 2000). Theoretically, balance can be achieved through segmentation or through integration; boundary and border theory do not posit an advantage of one strategy over the other (Ashforth et al., 2000; Clark, 2000). For example, separation can foster balance when both domains provide for essential but very different needs (e.g., the work domain might meet an individual's need for competence, and the nonwork domain might meet the need for relatedness) while integration can foster balance by reducing the cost of role transitions (Ashforth et al., 2000).

In line with this theoretical position, empirical research shows that both strategies are associated with positive and negative outcomes (for a review, see Allen et al., 2014). In general, integration is associated with more work-family conflict but also with more work-family enrichment (e.g., Chen, Powell, & Greenhaus, 2009; Powell & Greenhaus, 2010). Existent research on boundary management and well-being suggests that integration is associated with impaired *general well-being* such as anxiety, depression, etc. and with enhanced *work related well-being* such as job satisfaction and work engagement.

**General Well-being** Edwards and Rothbard (1999) found segmentation supplies (organization level factors that support segmentation or integration) to be associated with lower anxiety, depression, irritation, and somatic symptoms. Furthermore, they found that having and preferring more segmentation was more beneficial for well-being than having and preferring low segmentation between work and nonwork life. Kreiner (2006) found that participants whose preference and supplies of segmentation were in the mid-range reported the lowest levels of stress.

**Work-Related Well-being** Edwards and Rothbard (1999) found segmentation supplies to be associated with less work

satisfaction. Kreiner (2006) found that job satisfaction was highest for participants who did not have and did not prefer segmentation between work and nonwork life. A study by Kossek, Ruderman, Braddy, and Hannum (2012) found that higher numbers of work-to-nonwork interruption behaviors (integration) were associated with higher work engagement. In a study on work-family boundary tactics, Carlson et al. (2013) found a positive effect of physical and temporal work-to-family and family-to-work integration tactics on work and family engagement respectively.

Taken together, these previous results suggest that segmentation and integration strategies are not inherently good or bad but depend on the outcomes considered. However, the convergence of results from studies using a multitude of boundary concepts related to segmentation/integration suggests that integration is associated with impaired general well-being and positive work-related well-being. To our knowledge, no prior study has investigated the link between boundary *enactment* and work-related and general well-being, but it seems reasonable to assume a similar pattern of results.

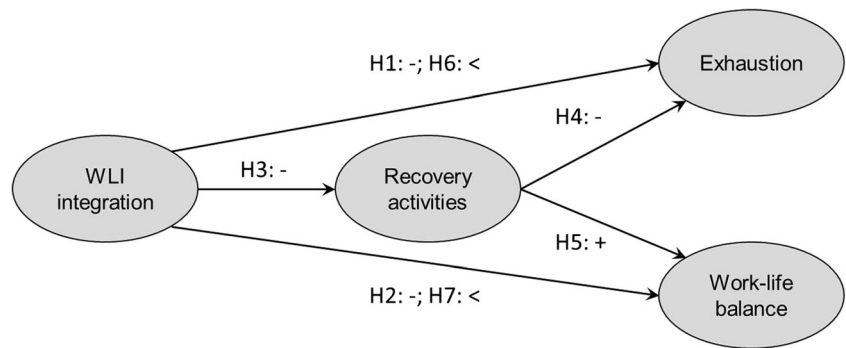
## Model Development and Hypotheses

### Boundary Enactment and General Well-being

The current study investigates the link between boundary enactment and well-being. We focus on the work-to-life direction because it has been shown that the work domain has a stronger tendency to encroach on the nonwork domain than vice versa (Frone, 2003). Consequently, we propose a model that links work-to-life boundary enactment to general well-being via recovery activities. Figure 1 shows our research model and the suggested associations. Before we develop our hypotheses, we introduce our indicators of general well-being.

General well-being has been conceptualized as consisting of *affective* and *cognitive* evaluations of people's lives (Diener, 2000). In this study, exhaustion was chosen as an indicator of affective well-being and work-life balance as a cognitive indicator of well-being. Work-life balance has often been equated with low work-life conflict and high work-life enrichment (Frone, 2003). In recent years though, researchers have begun to view work-life balance as a unique construct and studies have shown that it is indeed distinct from other work-life constructs such as work-life conflict and enrichment (Allen, 2013; Carlson, Grzywacz, & Zivnuska, 2009; Greenhaus & Allen, 2010). Unlike work-life conflict and enrichment, work-life balance is not about the causal influence of one domain or role on the other (Allen, 2013), but captures the reconcilability of the work and the nonwork domains and can be described as "an overall interrole assessment of compatibility between work and family roles" (Allen, 2013; p. 703). Greenhaus and Allen (2010) conceptualized work-life

**Fig. 1** Research model. WLI integration = work-to-life integration enactment; – negative relationship; + positive relationship; < = H6 & H7 postulate full or partial mediation of the effect of WLI integration on exhaustion and work-life balance via recovery activities respectively



balance as an assessment of satisfaction with and effectiveness in different life roles in accordance with one’s life values. As such, work-life balance is one indicator of satisfaction with life and therefore captures an aspect of cognitive well-being.

Evidence from studies on boundary management and work-life balance suggests that integration is associated with less work-life balance. Li, Miao, Zhao, and Lehto (2013) found that innkeepers with high work-life integration levels also reported low levels of work-life balance. A study on boundary preferences and boundary control found that male employees of a Swedish telecom company with high segmentation preference and high boundary control reported good work-life balance (Mellner, Aronsson, & Kecklund, 2015).

At this point, we remind readers of our discussion of boundary management and well-being. We stated earlier that the existing empirical findings suggest that integration constructs are associated with impaired general well-being and that we therefore expect integration enactment to be associated with impaired general well-being. In line with this expectation and the above introduction of exhaustion and work-life balance as indicators of general well-being, we hypothesize that work-to-life integration enactment (WLI enactment) is positively associated with exhaustion and negatively associated with work-life balance.

- H1: Work-to-life integration enactment is positively associated with exhaustion.
- H2: Work-to-life integration enactment is negatively associated with work-life balance.

**Boundary Enactment, Recovery Activities and Well-being**

We posit that recovery activities are an important process via which boundary enactment relates to well-being outcomes. The effort-recovery model (Meijman & Mulder, 1998) suggests that resources used at work need to be replenished during time away from work in order to prevent an ongoing deterioration of performance and well-being (Sonnetag, 2003). Research has shown that strain reactions, due to energy expenditure at work, can be reversed by recovery and unwinding

during leisure time (Sonnetag, 2003). Sonnetag and Fritz (2007) have argued that for recovery to occur, individuals must be physically and mentally away from work. By completely disengaging from work and work-related tasks, the functional systems that have been taxed during work can return to their pre-stressor level (Meijman & Mulder, 1998). Building on COR theory (Hobfoll, 1989, 2001), Sonnetag and Fritz (2007) further argue that individuals are not only motivated to restore lost resources but also to gain new ones, both of which can be achieved by recovery experiences.

We argue that work-to-life integration enactment leaves less (continuous) time and opportunity for recovery activities. Uninterrupted recovery activities are important though, in order to disengage physically and mentally from work (Geurts et al., 2005; Meijman & Mulder, 1998). A lack of opportunities to disengage from work during recovery activities has negative well-being implications. Lost resources cannot be replenished nor can new resources be acquired. This in turn will lead to strain reactions. To our knowledge, there is no prior research on boundary enactment and recovery. However, two studies have related boundary preferences to recovery, finding that segmentation preferences is associated with detachment (Hahn & Dormann, 2013; Park, Fritz, & Jex, 2011). In addition, the results of a daily diary study on smart phone use (what could be considered as a specific form of integration enactment) indicated that when confronted with high levels of work-home interference, smart phone users were less successful at engaging in recovery activities than were non-users (Derks, ten Brummelhuis, Zecic, & Bakker, 2014). Taken together, these studies suggest that segmentation is associated with recovery activities and detachment. Based on existing theory and the research described, we hypothesize that work-to-life integration enactment leaves less opportunity to engage in recovery activities.

- H3: Work-to-life integration enactment is negatively associated with recovery activities.

According to the effort-recovery model, insufficient recovery in turn will lead to strain reactions and impaired well-being, because lost resources cannot be replenished

(Meijman & Mulder, 1998; Sonnentag & Fritz, 2007). The link between recovery and well-being has been extensively researched. For an excellent review of the relevant literature, see Sonnentag and Fritz (2014). Based on theory and empirical findings, we hypothesize that insufficient recovery activities relate to exhaustion and impaired work-life balance.

- H4: Recovery activities are negatively associated with exhaustion.  
 H5: Recovery activities are positively associated with work-life balance.

Finally, we hypothesize that work-to-life integration enactment's negative relationship with well-being is explained by its association with recovery activities. One previous study lends support to this assumption. Barber and Jenkins (2014) found that work-to-home boundary crossing using information and communication technology (ICT) had a negative indirect effect on sleep quality via lack of psychological detachment. However, this effect only occurred for employees with low boundaries around ICT use. While this study only investigated work-to-life integration enactment in the form of ICT use, our study uses a broader conceptualization of integration enactment.

- H6: Work-to-life integration enactment has an indirect effect on exhaustion via recovery activities.  
 H7: Work-to-life integration enactment has an indirect effect on work-life balance via recovery activities.

## Method

### Participants and Procedure

The sample consisted of 1916 employees. Participants came from German-speaking countries, 51.6% of the final sample lived in Germany, 16.9% in Switzerland, 31.4% in Austria, and 0.2% in an unspecified "other country." A total of 55.8% of the study population was male and the average age was 42.31 years ( $SD = 10.95$ ). With regard to work hours, 12.2% worked 20 to 29 h per week, 37.7% 30 to 39 h, and 50.1% worked 40 h or more. A supervisory position was held by 25.1% and another 6.2% belonged to the top management of their organization. On average, participants had worked 10.7 years ( $SD = 10.01$ ) for their organization. Most were married or in a relationship (70.3%) and 34.7% had children who lived at home. Participants were employed in a broad range of economic sectors and occupations: 11.7% worked in the health and social sector, 11% in the public administration/defense/social security sector, 10.2% in trading, 7.8% in the production of goods, 6.3% in information/communication,

6.6% in finance/insurances, 6.5% in technology/science, and 6.1% in education. The remaining participants were employed in other sectors, such as the real estate market, the hotel and restaurant industry, and the transport and construction industry. Table 1 compares the study population to the general workforce of Austria, Germany, and Switzerland in terms of gender and age composition, education, and occupational sector. For the most part, the study sample is representative. Employees from the production and trading sector are somewhat underrepresented while the public/defense/social security sector is somewhat overrepresented.

Data came from a cross-sectional online survey study on work and personal characteristics and employee health and well-being. Self-report methodology was deemed appropriate because all study constructs represent individual behaviors and subjective appraisals (Spector, 1994). Participants were contacted via the ISO-certified panel provider Respondi. Respondi provides a minimal incentive for participation (points, which can be redeemed towards a given service after participation in several surveys). For completion of a survey that takes about 10 min, Respondi assigns 50 points which equals 50 Euro cents. The completion of our survey took approximately 20 min. Participants were told that this was a study on work and personal characteristics and employee health and well-being. Altogether, 2571 people clicked on the link of which 2032 filled in the questionnaire. We excluded 116 participants from further analysis because they took less than 3 s per item, which we considered highly implausible, given our pretests of the questionnaire. This left us with a sample of  $N = 1916$ . Participation was voluntary and the anonymity and confidentiality of participation was stressed. Employees had to be between 18 and 65 years old and work at least 20 h per week to be eligible for study participation.

### Measures

**Work-Life Boundary Enactment Scale** To date, there is no established measure of boundary enactment (Allen et al., 2014). Thus, following the call by Allen et al. for such a measure, we developed items that covered physical, psychological, and behavioral aspects of boundary enactment for both directions (work-to-life and life-to-work). Although the focus of the present study is on work-to-life boundary enactment, we control for possible effects of life-to-work boundary enactment and thus developed a measure that captured both directions. Item content was based on qualitative studies on boundary management (Ammons, 2013; Kreiner et al., 2009; Nippert-Eng, 1996) and on existent scales that were developed to measure similar constructs (Hecht & Allen, 2009; Kossek & Lautsch, 2012). Every item consisted of two polar statements, one representing the segmentation end of the continuum and the other representing the integration end of the continuum. In accordance with our definition of boundary enactment as the degree

**Table 1** Comparison of study sample with the working population of Austria, Germany and Switzerland

Variable	Present study	A <sup>a</sup>	D <sup>b</sup>	CH <sup>c</sup>
% Males	55.8	53.8	53.5	53.7
Mean age	42.3	40.4	42.7	41.1
Mean organizational tenure (years)	10.7	9.6	10.8	–
Education: % apprenticeship	42.1	38.1	53.5	33.4
Education: % higher education degree	32.2	35.3	29.3	38.1
Sector: % health and social	11.7	10.3	11.4	13.8
Sector: % public/defense/social security	11	7.7	7.4	5.1
Sector: % trading	10.2	15.1	13.1	12.7
Sector: % production of goods	7.8	17.3	18.8	14.3
Sector: % information/communication	6.3	2.9	3.6	3.6
Sector: % finance/insurances	6.6	3.6	3.2	5.7
Sector: % technology/science	6.5	4.8	5.8	8.5
Sector: % education	6.1	7.6	5.5	7.8

A Austria, D Germany, CH Switzerland, – information not available

<sup>a</sup> Statistik Austria (Statistics Austria, 2015)

<sup>b</sup> Statistisches Bundesamt (Destatis Statistisches Bundesamt, 2015)

<sup>c</sup> Statistik Schweiz (Federal Statistical Office, 2015)

of segmentation/integration individuals establish to meet the demands of the work and nonwork domains, we instructed participants to indicate how they “currently manage the boundaries between work and non-work life.” They were asked to describe their own behavior on a 7-point Likert scale between the polar statements of each item (see Appendix for full scale and instructions). Two sample items for the work-to-life direction are “I always leave my workplace on time – I often leave my workplace late” and “I never take work home – I often take work home.” Two sample items for the life-to-work direction are: “I never take care of nonwork matters while physically at my workplace – I often take care of nonwork matters while physically at my workplace.” and “I never communicate with friends and family while I am at work – I often communicate with friends and family while I am at work.”

For scale validation, we randomly split our sample in two subsamples by assigning a random number between 0 and 1 to each participant using the random number function in Microsoft Excel. We then grouped participants with random numbers between 0 and 0.5 and participants with random numbers between 0.5 and 1 together. Based on the findings of earlier studies (Hecht & Allen, 2009), we expected to find two relatively uncorrelated factors, one for work-to-life boundary enactment and one for life-to-work boundary enactment. We first conducted principal component analysis with Varimax rotation on the first subsample  $n_1 = 927$ . An initial 4-factor model was extracted. The four components explained 23.68, 20.19, 11.43, and 7.25% of variance, respectively. This solution was not interpretable. Specifically, several items showed cross-loadings and two components had items from the work-to-life and the life-to-work dimension loading on

them. Upon examining the Scree plot and the variance explained by each component, we decided for a more parsimonious two-component solution. The first two components explained more than 20% of variance each while the amount of variance explained by components three and four dropped dramatically (11.43 and 7.25%). Based on this observation, together with our evaluation of the Scree plot, we decided that a two-factor solution would be appropriate. In the two-factor solution, items 1 to 7 loaded on the first component making up the work-to-life boundary enactment dimension, and items 8 to 16 loaded on the second component, the life-to-work boundary enactment dimension. There were no cross-loadings. Items 8 and 16, however, had to be excluded from further analysis due to unsatisfactory factor loadings (below 0.4). We then went on to cross-validate the scale on the second subsample  $n_2 = 989$  using confirmatory factor analysis. The initial model, with items 1 to 7 loading onto the work-to-life boundary enactment latent variable and items 9 to 15 loading onto the life-to-work boundary enactment variable showed unsatisfactory model fit ( $\chi^2 = 892.50$ ,  $df = 76$ ,  $p = .00$ ,  $\chi^2/df = 11.74$ ; normed fit index (NFI) = .85; Tucker-Lewis index (TLI) = .83; comparative fit index (CFI) = .86; RMSEA = .10,  $p = .00$ , CI = .10–.11) (Hu & Bentler, 1999; Schermelleh-Engel, Moosbrugger, & Müller, 2003). Because the factor loadings of items 7, 10, and 15 were below 0.4 (.37, .37, and .29, respectively), we excluded them from the model. The fit of the resulting model was better but not optimal ( $\chi^2 = 395.43$ ,  $df = 43$ ,  $p = .00$ ,  $\chi^2/df = 9.20$ ; NFI = .92; TLI = .91; CFI = .93; RMSEA = .09,  $p = .00$ , CI = .08–.10). Further inspection of the model revealed that items 1 and 2 were highly correlated ( $r = .78$ ) and that their error terms correlated at  $r = .52$ . A look

at the wording revealed that the two items read rather similarly and participants might have had difficulties in keeping them apart (see the complete scale in the [appendix](#)). We therefore decided to exclude item 1. This final model showed satisfactory fit ( $\chi^2 = 201.96$ ,  $df = 34$ ,  $p = .00$ ,  $\chi^2/df = 5.94$ ; NFI = .95; TLI = .94; CFI = .96; RMSEA = .07,  $p = .00$ , CI = .06–.08) (Hu & Bentler, 1999; Schermelleh-Engel et al., 2003). Items 2 to 6 were included in the final work-to-life scale and items 9, 11, 12, 13, and 14 in the final life-to-work boundary enactment scale. It is of note that the two dimensions were uncorrelated ( $r = -.04$ ,  $p = .29$ ).

**Recovery Activities** Recovery activities were measured with the recovery management subscale of the work-life crafting scale (Peeters, & Demerouti, 2014). The original scale is in Dutch and we obtained a German translation from a professional translation service. The subscale consists of three items: “I make sure that I can relax during my time off (e.g., me-time, hobbies, sports)”, “I make sure that I do things that I enjoy during my time off (e.g., social activities, sports)”, “I take care that the amount of work time and private time are balanced.” Participants answered on a 5-point Likert-scale with the following response categories, 1 (never), 2 (rarely), 3 (sometimes), 4 (often), and 5 (always). Due to conceptual overlap of the third item with work-life balance, we only used the first two items. Item scores were averaged to obtain a scale value.

**Exhaustion** Exhaustion was measured with the German version of the burnout subscale from the second edition of the Copenhagen Psychosocial Questionnaire (COPSOQ), which asks participants about feelings of exhaustion during the past 4 weeks (Pejtersen, Kristensen, Borg, & Bjorner, 2010; German version: Nübling, Stössel, & Michaelis, 2010). The items read, “How often have you felt worn out?”, “How often have you been physically exhausted?”, “How often have you been emotionally exhausted?” and “How often have you felt tired?” The response categories were 1 (never), 2 (rarely), 3 (sometimes), 4 (often) and 5 (always). We computed mean scores to obtain scale values.

**Work-Life Balance** Work-life balance was measured using the 5-item work-family balance scale (Allen & Kiburz, 2012; Greenhaus et al., 2012). The items were translated to German by the first author and then back translated to English by a native speaker of English. The word “family” was exchanged for nonwork life to make the scale applicable for a broader range of participants and to account for cultural and language differences. A sample item is, “I am satisfied with the balance I have achieved between my work life and my nonwork life.” Participants are asked to indicate how much they agree with the items on a 5-point Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree). Item scores were averaged.

**Control Variables** Based on previous work-family research we considered gender, age, hours worked per week, and job status as demographic control variables (e.g., Allen & Finkelstein, 2014; Moen, 2011; Powell & Greenhaus, 2010b; Schieman, Glavin, & Milkie, 2009). Male was coded as 0 and female as 1. Participants were asked to indicate their age. They had to be between 18 and 65 years old in order to be eligible for study participation. They were asked how many hours they work per week according to their contract. Response categories were “20 to 29 h,” “30 to 39 h,” “40 to 44 h,” and “more than 44 h.” Participants who worked less than 20 h were not eligible for study participation. To assess job status, participants were asked if they belonged to the top management (4), held a supervisory position (3), were employees without supervisory function (2) or were a trainee/an intern (1). We also included the life-to-work integration enactment dimension of our boundary enactment scale as a control variable to account for possible well-being enhancing effects of this strategy.

## Analyses

In order to test our model, we employed structural equation modeling using the AMOS 21 software package by IBM. We included life-to-work integration, sex, age, work hours per week, and job status as control variables. Furthermore, we calculated 95% bias-corrected confidence intervals based on 5000 bootstrap samples to assess the indirect and total effects (Cheung & Lau, 2007).

## Results

Table 2 presents the means, standard deviations, alphas, and correlations among study variables. Note that WLI enactment significantly correlates with exhaustion ( $r = .23$ ) and work-life balance ( $r = -.35$ ), lending initial support to Hypotheses 1 and 2.<sup>1</sup>

To assess the distinctiveness of our study variables, we conducted a CFA for the four variables in our model (WLI enactment, recovery activities, exhaustion and work-life balance) and compared this model to a one-factor model. The four-factor measurement model ( $\chi^2 = 652.13$ ,  $df = 98$ ,  $p < .001$ ,  $\chi^2/df = 6.70$ , NFI = .97, TLI = .97, CFI = .97,

<sup>1</sup> To rule out the possibility that our WLI enactment scale simply measures work-centrality, we included a work-centrality scale in our study. The correlation between WLI enactment and work centrality was  $r = .33$ . Multiple regression analyses that included WLI enactment and work centrality as predictors of our well-being indicators showed that WLI enactment was still highly significantly associated with exhaustion and work-life balance after controlling for work centrality. This rules out the alternative explanation that work centrality explains the association between WLI enactment and our well-being indicators.

**Table 2** Correlations and descriptives of study variables ( $N = 1916$ )

	1	2	3	4	5
Study variables					
1 Work-to-life integration enactment	(.80)				
2 Life-to-work integration enactment	-.00	(.81)			
3 Recovery activities	-.32***	.06**	(.84)		
4 Exhaustion	.23***	-.02	-.42***	(.89)	
5 Work-life balance	-.35***	.06**	.57***	-.53***	(.90)
Means	3.34	3.76	3.68	3.47	3.02
Standard Deviations	1.32	1.19	.89	.89	.84
Demographics					
Sex	.01	-.13***	.03	.14***	-.02
Age	-.03	-.18***	-.00	-.12***	-.06**
Hours worked per week	.10***	.07**	-.07**	-.00	-.08***
Job status	.17***	.01	-.03	-.05*	-.02

Sex is coded as 0 = male and 1 = female  
 \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

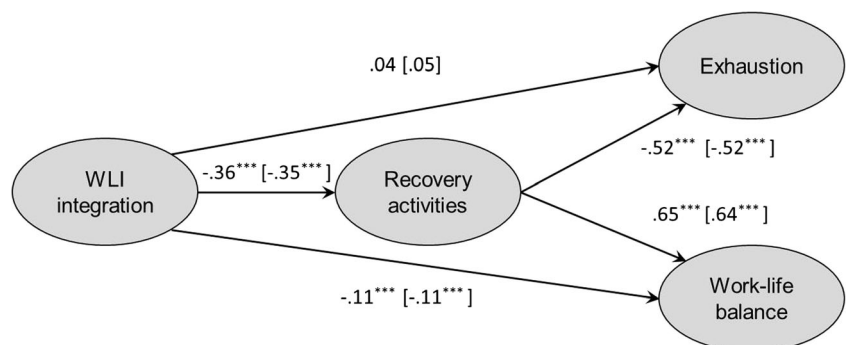
RMSEA = .05,  $p = .035$ , CI = .05 to .06) fit the data better than did the one-factor model ( $X^2 = 7094.63$ ,  $df = 104$ ,  $p < .001$ ,  $X^2/df = 68.22$ , NFI = .63, TLI = .58, CFI = .64, RMSEA = .19,  $p < .001$ , CI = .18 to .19) according to the chi-square difference test ( $\Delta X^2 = 6442.50$ ,  $df = 6$ ,  $p < .001$ ). Furthermore, each item loaded significantly ( $p < .001$ ) on the appropriate latent construct. We therefore conclude that the four-factor model adequately represents our data and that our study variables are distinct constructs.

We next added paths and tested our structural model (see Fig. 2). Model fit was satisfactory ( $X^2 = 858.50$ ,  $df = 99$ ,  $p < .001$ ,  $X^2/df = 8.67$ ; NFI = .96; TLI = .95; CFI = .96; RMSEA = .06,  $p < .001$ , CI = .06 to .07). Hypothesis 1 stated that WLI enactment was positively associated with exhaustion. This hypothesis was supported by the significant correlational finding reported above and the significant indirect effect of WLI enactment on exhaustion via recovery activities. However, the direct path between WLI enactment and exhaustion was not significant ( $\beta = .04$ ,  $p = .13$ ). Hypothesis 2 predicted that higher levels of WLI enactment would be associated with less work-life balance and our findings supported this claim. The path between WLI enactment and work-life balance

was negative and significant ( $\beta = -.11$ ,  $p < .001$ ). In accordance with hypothesis 3, which predicated a negative association between work-to-life integration enactment and recovery activities, WLI enactment was negatively associated with recovery activities ( $\beta = -.36$ ,  $p < .001$ ). Recovery activities in turn were negatively associated with exhaustion ( $\beta = -.52$ ,  $p < .001$ ), lending support to hypothesis 4, which stated that more recovery activities would be associated with less exhaustion. Hypothesis 5 predicted that more recovery activities would be associated with more work-life balance. Our results supported this assumption. The coefficient for the path between recovery activities and work-life balance was positive and significant ( $\beta = .65$ ,  $p < .001$ ).

To assess the indirect effects, we examined 95% bias-corrected confidence intervals based on 5000 bootstrap samples (Cheung & Lau, 2007). Hypothesis 6 predicted an indirect effect of WLI enactment on exhaustion via recovery activities. Our data supported this assumption (standardized coefficient = .19,  $p < .001$ ,  $CI_{95\%} = .15-.23$ ). We also found evidence for an indirect effect of WLI enactment on work-life balance via recovery activities (standardized coefficient =  $-.23$ ,  $p < .001$ ,  $CI_{95\%} = -.27$  to  $-.19$ ), lending support to hypothesis 7.

**Fig. 2** Results for structural model. WLI integration = work-to-life integration enactment; [] = path coefficients when accounting for control variables; \*\*\* $p < .001$



We next fitted a model that included the control variables to see if the results would hold. For every significant zero-order correlation between control and study variables, we included a path in the model (compare Table 2). We further allowed correlations among control variables. The model fit was satisfactory ( $X^2 = 1446.03$ ,  $df = 256$ ,  $p < .001$ ,  $X^2/df = 5.65$ ; NFI = .94; TLI = .94; CFI = .95; RMSEA = .05,  $p = .68$ , CI = .05–.05). All our previous findings held even when accounting for the effects of life-to-work integration enactment, sex, age, hours worked per week, and job status. The path coefficients for our structural model, when accounting for control variables are given in squared brackets in Fig. 2.

## Discussion

In this study, we investigated relationships between work-to-life integration enactment and general well-being. A model was developed that links boundary enactment to affective and cognitive aspects of well-being via recovery activities. Our data confirmed our hypotheses. Employees with high WLI enactment reported being more exhausted and having less work-life balance. Employees who reported that they integrate work into nonwork life also pursued less recovery activities. Less recovery activities in turn were associated with more exhaustion and less work-life balance. As predicted, we found that WLI enactment had an indirect effect on exhaustion via recovery activities, meaning that employees who integrate work more into their nonwork life reported being more exhausted because they recover less. This indirect effect rendered the direct effect of WLI enactment on exhaustion insignificant. WLI enactment also had an indirect effect on work-life balance via recovery activities in the sense that employees who integrate work more into their nonwork life reported less work-life balance because they recover less. The direct effect of WLI enactment on work-life balance was still significant when taking the indirect effect via recovery activities into account.

Our finding that WLI enactment is associated with impaired well-being is in line with previous research that has linked integration to general well-being indicators such as depression, somatic symptoms, and stress (Edwards & Rothbard, 1999; Kreiner, 2006). Previous studies have found that the preference for integration strategies is associated with lack of recovery experiences (Hahn & Dormann, 2013; Park et al., 2011). Our study extends this evidence by taking it from the level of preferences to a behavioral level and showing that employees who actually integrate work into their nonwork life take less care to engage sufficiently in activities that provide recovery experiences. Furthermore, we were able to demonstrate that the lack of recovery activities explains the association between WLI enactment and general well-being.

## Strengths, Limitations, and Future Research

Due to our cross-sectional study design, causality cannot be established. In this study, we focused on one proposed causal direction underpinned with theoretical considerations. Now that the plausibility of these relationships has been demonstrated, further research is needed to replicate our findings with longitudinal data and to test for reciprocal effects.

Our study sample is diverse and representative of the general working population in Germany, Austria, and Switzerland. Therefore, we feel reasonably confident that our data represents the relation of WLI enactment with well-being in the general working population of those countries. On the other hand, jobs and occupational groups differ by how much flexibility can be granted to employees and therefore, if and how much integration between work and nonwork life is possible. Future studies need to investigate if the associations we found differ by occupational groups and if there are moderators. For example, schedule and workplace flexibility could moderate the associations of work-to-life integration enactment with general well-being. Furthermore, boundary preferences (Chen et al., 2009; Edwards & Rothbard, 1999; Kreiner, 2006) and boundary control (Kossek et al., 2012) could have a moderating influence on the association between WLI enactment and well-being. Some previous studies, which investigated the influence of congruence between boundary preferences and boundary enactment/supplies, have found evidence for a conducive effect of congruence on work-life and well-being variables (Chen et al., 2009; Edwards & Rothbard, 1999; Kreiner, 2006). Moreover, there is evidence that integration strategies are positively associated with work-life enrichment/positive spillover (McNall, Scott, & Nicklin, 2015; Powell & Greenhaus, 2010) and enrichment/positive spillover in turn are predictive of well-being (Crain & Hammer, 2013). Future research should therefore investigate if there is an indirect effect of boundary enactment on well-being via work-life enrichment/positive spillover.

Following Allen et al.'s (2014) call for a more comprehensive work-life boundary enactment measure, we developed a new scale for this study, which was psychometrically sound, but only after we excluded all items that were designed to measure behavioral aspects of boundary enactment and two items designed to capture physical aspects. It is not clear if these exclusions were necessary due to the specific items we developed or if behavioral aspects of boundary enactment are simply uncorrelated to other aspects of boundary enactment and should therefore be considered separately. More work is needed to develop a more psychometrically robust measure of boundary enactment and to better understand the dimensionality of this construct. It is important to keep in mind that the well-being impairing effect of WLI enactment we found in this study can thus far only be attributed to physical (local and temporal) and psychological aspects of boundary enactment.

Furthermore, the content of our items shows considerable overlap with Clark's (2002; Matthews & Barnes-Farrell, 2010) measure of boundary permeability while the form of the items differs as well as the instructions. In this article, we have argued on a theoretical level why our boundary enactment approach to boundary management is an improvement over the boundary characteristics approach. In future research, when further developing our boundary enactment measure, we suggest testing the construct's incremental validity compared to boundary permeability and other related work-nonwork constructs.

In contrast to the brief general recovery management scale chosen for the current research, in future research, we recommend that recovery be measured with Sonnentag and Fritz's measure of recovery experiences that distinguishes between the experiences of psychological detachment, relaxation, mastery, and control (Sonnentag & Fritz, 2007), or with Derks et al.'s (2014) adaptation of this scale which measures recovery activities aimed at detachment, relaxation, mastery, and control. This would allow researchers to gain insights as to what is missing qualitatively in terms of recovery experiences for employees who integrate work into nonwork life.

We consider it a strength of our study that it shows the well-being impairing potential of WLI enactment for two such diverse well-being indicators as exhaustion and work-life balance, capturing affective and cognitive aspects of well-being. Future studies should include other indicators of general well-being such as life satisfaction and positive affectivity to see if our findings are specific to the well-being indicators we chose or if the effect holds across a variety of indicators, such as somatic symptoms, quality of sleep, positive and negative affectivity, and life satisfaction. Given that previous studies found a positive association of integration strategies with work-related well-being indicators such as job satisfaction and engagement, future research should try to incorporate these effects in a more comprehensive model that includes work and nonwork satisfaction/well-being indicators as predictors of general well-being (Michel, Mitchelson, Kotrba, LeBreton, & Baltes, 2009).

Returning to the question of directionality, it is conceivable that WLI enactment is a regulatory reaction to impaired well-being or to lack of recovery experiences. Employees who feel exhausted and out of balance might start to segment both domains to prevent a further decrease in well-being. A qualitative study by Ammons (2013) on boundary strategies over the course of 9 months found evidence that boundary preferences and enactment can change over time and that boundaries are a work in progress. Longitudinal data with several measurement points or diary data is needed to test the notion of boundary enactment as a regulatory reaction to strain. Lastly, future studies should address the role of working conditions in shaping people's boundary enactment. It is conceivable that high workloads and organizational climate variables (e.g., expectations for constant availability) influence employees' work-to-life boundary enactment.

## Implications

In this study, we bring attention to the relationship between WLI enactment and general well-being. Our results suggest that integrating work into nonwork life relates to exhaustion and to impaired work-life balance. While previous studies have found evidence for a relation between work-life integration and impaired general well-being (Chen et al., 2009; Edwards & Rothbard, 1999; Kreiner, 2006), our study contributes to the existing knowledge by focusing on actual boundary enactment instead of boundary preferences and supplies and by suggesting and testing possible mechanisms behind this association.

The finding that recovery activities mediate the association of WLI enactment with impaired general well-being can be the starting point for developing interventions. For example, employees could be coached to integrate work into their nonwork life in such a way that leaves them with enough time to pursue recovery activities.

While previous studies approached boundary management from a person-environment fit perspective (Chen et al., 2009; Edwards & Rothbard, 1999; Kreiner, 2006), our approach to boundary management as an individual-level strategy emphasizes the aspect of personal agency. We believe that in today's increasingly flexible and changing work environment, individual-level strategies for reconciling work and nonwork life are becoming more important (Kossek et al., 2011; Kreiner et al., 2009). Our conceptualization of boundary enactment can help to understand how individuals manage the boundaries between work and nonwork life.

We also developed a new approach to measuring work-life boundary enactment. By developing polar items with segmentation and integration endpoints, we let participants directly rate their boundary enactment strategies on the segmentation/integration continuum instead of asking their agreement to items that either represent segmentation or integration behaviors. Future research can build on this approach and further develop and validate a comprehensive measure of work-life boundary enactment that takes physical, psychological, and behavioral aspects of boundary enactment into account.

Finally, we would like to emphasize that we believe that greater flexibility in when and where work can be done thanks to telecommuting and mobile technology can be a double-edged sword. While it can grant people the freedom to craft the "work-life fit" (Moen, 2011; Moen, Kelly, & Huang, 2008) that suits their needs, it can also facilitate the encroachment of work onto the nonwork domain with negative consequences for employees' well-being as well as that of their families. Evidence suggests that the latter is often the case due to work being a "greedy institution" (Coser, 1974; Frone, 2003; Glavin & Schieman, 2011). Much work needs to be done in order to understand the conditions that enable employees to craft boundaries between work and nonwork life that are in line with their preferences and needs and do not impair their health and well-being.

## Conclusion

The results of our study suggest that work-to-life boundary enactment has implications for employees' well-being. From an occupational health perspective, it is important to understand these implications, the mechanisms behind them, and to identify determinants of work-life boundary enactment. Based on this knowledge, practitioners and policy makers can adjust organizational policy and culture and help employees manage their work-nonwork boundaries in a way that does not impair their well-being. We believe that by investigating the effect of work-life integration enactment on exhaustion and work-life balance and by identifying a mechanism behind this association, we add to the existing knowledge of boundary dynamics and their impact on well-being. Future research should replicate and extend our results.

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## Appendix

The first four items of each direction, items 1–4 and 9–12, are concerned with physical aspects of boundaries—2 for local aspects and 2 for temporal aspects. Items 5 and 6 and 13 and 14 are concerned with psychological boundaries and items 7 and 8 and 15 and 16 with behavioral aspects of boundaries.

### Instructions

The following questions are concerned with how you currently manage the boundaries between work and nonwork life. The items below consist of two opposing statements. Please indicate for each item, what matches your own behavior. The closer to a statement you put your mark, the more this statement reflects your own behavior. There is no right or wrong.

Please indicate where you place yourself between both ends of the scale.

### Work-to-life segmentation/integration

01	I never work from home.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often work from home.
02*	I never take work home.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often take work home.
03*	I always leave my workplace on time.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often leave my workplace late.
04*	I never work after hours or on weekends.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often work after hours or on weekends.
05*	I never think about work matters during my time off.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often think about work matters during my time off.
06*	I never communicate with people from work during my time off.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often communicate with people from work during my time off.
07	I never talk about work with people from outside of work.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often talk about work with people from outside of work.
08	Outside of work, I am a different person than I am at work.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	Outside of work I am the same person as I am at work.

### Life-to-work segmentation/integration

09*	I never take care of nonwork matters while physically at my workplace.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often take care of nonwork matters while physically at my workplace.
10	I have no personal items at my workplace.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I have many personal items at my workplace.
11*	I never get to work late or leave early, in order to take care of nonwork matters.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often get to work late or leave early, in order to take care of nonwork matters.
12*	I never take care of nonwork matters during scheduled work hours.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often take care of nonwork matters during scheduled work hours.
13*	I never think about nonwork issues while I am at work.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often think about nonwork issues while I am at work.
14*	I never communicate with family and friends while I am at work.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I often communicate with family and friends while I am at work.
15	I never talk about my nonwork life at work.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	I talk a lot about my nonwork life at work.
16	At work I behave completely different than at home.	○ <sub>1</sub>	○ <sub>2</sub>	○ <sub>3</sub>	○ <sub>4</sub>	○ <sub>5</sub>	○ <sub>6</sub>	○ <sub>7</sub>	At work I behave the same way as at home.

\*Items that were kept in the scale

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