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**Keeping Work and Private Life Apart:
Age-Related Differences in Managing the Work-Nonwork Interface**

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Abstract

Initial evidence suggests that older workers enjoy higher work-life balance than young workers. Yet little is known about the mechanisms of this effect or the robustness of age differences when accounting for differences in life context. We introduce and test the boundary management account of aging and work-life balance, which suggests that older workers maintain stronger work-nonwork boundaries as a pathway towards work-life balance. Both in Study 1 (cross-sectional; $N = 298$ bank employees) and in Study 2 (aggregated diary entries; $N = 608$ workers), older workers reported better work-life balance and stronger boundaries at work than young workers; and stronger boundaries at home (Study 1). In both studies, stronger boundaries were related to better work-life balance, and boundary strength mediated the relationship between age and work-life balance. Study 2 additionally suggests that the use of boundary management strategies is responsible for stronger boundaries at higher age. Analyses accounted for differences in family and work context characteristics (both studies), and boundary preferences (Study 1). The findings corroborate evidence of older workers' enhanced work-life balance and suggest that it results from more successful boundary management with age rather than merely from changes in contextual factors or boundary preferences.

Keywords: Work-family conflict, work-family spillover, boundary management strategies, life domain borders, work-family enrichment

The concept of *work-life balance* refers to the perception that role-related expectations, which are negotiated between individuals and their role-related partners in work and nonwork domains, are accomplished (Grzywacz & Carlson, 2007). Work-life balance is vital for working adults' long-term well-being (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). Meta-analytic evidence suggests, for instance, that interference between work and nonwork life domains is associated with lower work and career satisfaction, job performance, and marital and family satisfaction. Further, such interference is associated with higher psychological strain, somatic symptoms, and substance abuse (Allen, Herst, Bruck, & Sutton, 2000; Amstad, Meier, Fasel, Elfering, & Semmer, 2011). Consequently, work-life balance has become a concern beyond the individual company level; it appears on the agendas of policy makers who seek to develop policies for various target groups such as young families, (single) mothers, or low-skilled workers (The Council of Economic Advisers, 2014).

One of those target groups are older workers whose numbers have been increasing considerably in recent years. Many people need to work later in life to support themselves during a longer retirement (Toossi, 2012). At the same time, older workers face increasing demands in the nonwork domain. Delayed childbearing and longer life expectancy lead to 'sandwiching' adults in later middle age between the competing demands of caring for children as well as aging parents (Population Reference Bureau, 2016). In fact, almost two-thirds of adults providing eldercare are in paid employment (The Council of Economic Advisers, 2014). In sum, later working life has begun to change from a period of slowly 'phasing out' to a rather active career stage that places multiple demands on older workers.

The multiple demands from work and non-work life in later phases of people's careers co-occur with noticeable decline in workers' cognitive and physical resources (see Ng & Feldman,

2013). Accordingly, one may assume that older workers experience particular challenges in navigating between work and nonwork domains. Yet, existing evidence suggests otherwise. Although few studies have directly addressed work-family dynamics across the lifespan (for a review, see Thrasher, Zabel, Wynne, & Baltes, 2015), several recent studies found older workers to report higher work-life balance than their younger colleagues (Hill, Erickson, Fellows, Martinengo, & Allen, 2014; Richert-Kazmierska & Stankiewicz, 2016; Tausig & Fenwick, 2001), as well as lower work-nonwork interference (Allen & Finkelstein, 2014; Hill et al., 2014).

Although these prior studies reported positive relationships between worker age and work-life balance, in most of these studies age was not a focal variable. Consequently, little is known about the underlying mechanisms. Research on work-family dynamics suggest that work-life balance is strongly influenced by the strengths of boundaries employees set up to separate work from nonwork domains of life. In general, drawing a clear line between work and private life facilitates work-life balance and prevents interference (Allen, Cho, & Meier, 2014). In search of explanations for positive age trends in work-nonwork dynamics, we draw on this literature to introduce and test the *active boundary management* account of aging and work-life balance. Integrating both lifespan and work-family literatures, our hypothesis is that compared to young workers, older workers achieve higher work-life balance and less interference by *actively managing work-nonwork boundaries* to keep life domains more separated. We suggest that keeping stronger boundaries between life domains reflects older adults' regulatory responses to declining cognitive resources and their enhanced motivation and expertise to maintain well-being.

The current study makes three primary contributions to the literature. First, we report findings from two studies of workers from the banking sector (Study 1) and from multiple occupational sectors (Study 2) that corroborate evidence of a positive association between worker

age and indicators of work-life balance. Given the scarcity of work-family research from a lifespan perspective, these findings increase confidence that older workers may indeed experience the interplay of work and nonwork lives more favorably than younger workers do. Second, we present and test a hitherto unexplored mechanism underlying higher work-life balance with age. Specifically, we show that older workers draw a clearer line between work and nonwork life domains than young workers do, which subsequently benefits their work-life balance. Therefore, our findings provide new insight into how the aging of the workforce affects employees' occupational health and long-term well-being. Finally, extending prior research that is limited to examining the interference between life domains in older workers (Ng & Feldman, 2012), we explored whether and how age differences in boundary strength would affect work-nonwork *enhancement*, referring to synergies emerging from the engagement in multiple life domains, as a form of positive work-nonwork interactions (Graves, Ohlott, & Ruderman, 2007).¹

Boundary Management and Work-Life Balance

According to work-family boundary theory (Ashforth, Kreiner, & Fugate, 2000), work and nonwork are separate life domains demarcated by cognitive, physical, and behavioral boundaries (Clark, 2000; Kreiner, 2006). A life domain is associated with distinct roles, for example, being a manager or craftsman in the work domain and a parent or friend in the nonwork domain (Ashforth et al., 2000). Yet, work and nonwork domains interact as workers transition their boundaries at work and at home (e.g., when workers answer work-related calls or e-mails in the restaurant during dinner time, or write an email to a friend during a work meeting; Matthews, Barnes-Farrell, & Bulger, 2010). Workers have been shown to manage their work-nonwork boundaries using various strategies such as refraining from talking about private matters at work, or refraining from synchronizing work emails on their private computers (e.g., Kreiner, Hollensbe, & Sheep, 2009).

Using such strategies enhances the strength of boundaries between life domains. Importantly, earlier research suggests that boundaries can be asymmetrical: Some workers' private issues may regularly infiltrate work life (weak boundaries at work) but their work-related issues may rarely creep into their private life (strong boundaries at home; Ashforth et al., 2000; Clark, 2000; Spieler, Scheibe, Stamov-Roßnagel, & Kappas, 2016).

Whether strong work-nonwork boundaries benefit workers and organizations partly depends on individual preferences for boundary strength, or the fit of preferences with actual boundary strength (Edwards & Rothbard, 1999; Kreiner, 2006). Nevertheless, work-family research suggests that *overall*, strong work-nonwork boundaries are associated with *favorable* individual and organizational outcomes (for reviews see Allen, Cho, & Meier, 2014; Grzywacz & Demerouti, 2013). For example, workers with strong boundaries reported less stress and burnout (Etzion, Eden, & Lapidot, 1998), better psychological well-being (Desrochers, Hilton, & Larwood, 2005; A. Michel, Bosch, & Rexroth, 2014; Spieler et al., 2016), less interference of work and nonwork (e.g., Desrochers et al., 2005; Olson-Buchanan & Boswell, 2006; Park & Jex, 2011), and better work-life balance (Li, Miao, Zhao, & Lehto, 2013). Given the link between boundaries and work-life balance, we reasoned that a differential management of work-nonwork boundaries may constitute one possible mechanism underlying age differences in work-life balance and interference.

Age Differences in Boundary Management

From a lifespan developmental perspective, older workers are likely to actively create stronger work-nonwork boundaries than young workers do. This may reflect older workers' response to three major age-related changes. First, age-related *decline in fluid cognitive resources* may increase the importance of maintaining strong boundaries. Executive control, selective

attention, and task switching ability all decline nearly monotonically between 20 and 75 years of age (Kray & Lindenberger, 2000; Schaie, 2005; Verhaeghen & Cerella, 2002). Cognitive decline is not restricted to a certain segment of the population, but is robust for groups with different levels of cognitive functioning and socioeconomic status, among workers at different levels of job complexity, and for different generations (Salthouse, 2012).

To remain effective both at work and at home despite cognitive decline, aging workers tend to invest their resources more selectively (Baltes & Dickson, 2001; Hess, 2014). Weak boundaries require high levels of cognitive resources as they are associated with many transitions between life domains, the simultaneous activation of multiple goals from different life domains (Rothbard & Ramarajan, 2009), and the potential for goal conflict (Emmons, King, & Sheldon, 1993). In contrast, strong boundaries help save cognitive resources as they entail few transitions between life domains and reduce goal conflict. Maintaining strong boundaries might be one way to selectively invest cognitive resources.

Second, age-related *motivational changes* may add to a higher priority of boundary management. Socioemotional selectivity theory (Carstensen, Isaacowitz, & Charles, 1999) suggests that as they grow older, people are more motivated to maintain well-being. Age-related reductions in future time perspective lead people to prioritize well-being over future-oriented and instrumental goals, which manifests in the engagement of strategies that benefit well-being (Scheibe & Carstensen, 2010). In line with these predictions, older compared to younger adults were found to be more strongly motivated to maintain positive affect and reduce negative affect in daily life (Riediger, Schmiedek, Wagner, & Lindenberger, 2009), prioritize positive over negative information in attention, memory, and decision-making tasks (Reed & Carstensen, 2012), and avoid interpersonal conflicts (Birditt, Fingerman, & Almeida, 2005).

Third, aging often leads to the accumulation of *experience* that helps people regulate their well-being more effectively (Charles, 2010; Morgan & Scheibe, 2014). Over the years, older people likely have been exposed to many situations challenging their well-being, and this would have given them the chance to learn which strategies work and do not work to successfully navigate these situations in a way to maintain or quickly regain well-being. A recent study in the work context showed that older healthcare workers report using adaptive affect regulation strategies (such as positive reappraisal or savoring) more, and maladaptive strategies (such as rumination and emotion suppression) less than young healthcare workers, which in turn predicted affective well-being in the evening after work (Scheibe, Spieler, & Kuba, 2016). Relatedly, older workers may have learned which psychological or behavioral strategies are more or less successful in creating strong boundaries (Kreiner et al., 2009; Nippert-Eng, 1996), and/or they may have learned to implement the same strategies more effectively (Morgan & Scheibe, 2014).

In sum, the active boundary management account of aging and work-life balance suggests that older workers build stronger boundaries between work and nonwork life domains as a way to remain effective at work despite cognitive decline, and to effectively pursue their enhanced emotional well-being goals. Consequently, stronger boundaries between life domains may constitute a major pathway toward better work-life balance and less interference at higher ages.

Hypothesis 1: Age is associated with stronger work-nonwork boundaries.

Hypothesis 2: Work-nonwork boundary strength mediates the relationships of age with better (a) work-life balance and (b) less interference.

Study 1

In Study 1, we used data from one organization in the banking sector to investigate age differences in work-life balance and the mediating role of work-nonwork boundary strength

(Hypotheses 1 and 2a). We test Hypothesis 2b in Study 2. Whereas we focus on boundary strength in Study 1, we additionally consider *strategies* of boundary management in Study 2, in order to more directly examine the active role of older workers in creating stronger boundaries.

Method

Sample and procedure. We collected data from 298 employees (68% female) of a medium-sized German bank. Participants worked in various occupations (e.g., cashiers, customer consultants, service advisors, HR department). They received a study results report and participated in a raffle of ten restaurant vouchers worth 50€ each. As part of a larger study, participants completed a general questionnaire online, followed by a series of daily surveys. Here, we report data from the general questionnaire (results from the diary part are reported in Spieler et al., 2016).² Of the sample, 68% were female and 19% were in supervisor positions. On average, participants worked 35.9 hours ($SD = 10.3$) per week, their organizational tenure was 17.1 years ($SD = 10.4$), and mean age was 39.5 years ($SD = 10.8$; range 19 to 60 years).

Measures. Unless otherwise stated, all measures were translated to German and back-translated to English by two research assistants. Table 1 provides descriptives, intercorrelations, and internal consistencies of the scales, which were all satisfactory.

Work-life balance. This was assessed using a German 5-item scale by Syrek et al. (2011). A sample item is “I am satisfied with the balance between my work and my private life“. Items were rated on a 6-point Likert scale (1 = *strongly disagree*; 6 = *strongly agree*).

Work-nonwork boundary strength. We assessed boundary strength with six items adapted from Powell and Greenhaus (2010) on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Three items each assessed boundary strength at work (BSW; e.g., “I forget about private matters when at work”) and boundary strength at home (BSH; e.g., “I forget about work

while at home”). The intercorrelation between the two types of boundaries was .27, indicating that these are distinct (though related) and should be assessed separately.

Control variables. When obtaining age differences in boundary strength and indicators of work-life balance, it is important to establish that they do not merely reflect changes in people’s life or work contexts that allow for stronger boundaries and higher work-life balance. Contextual changes may arise from workers’ advancement to later life and career stages. For example, younger workers might have young children to care for while older workers might have caretaking tasks for elderly relatives (Hill et al., 2014). Both have been shown to predict lower work-life balance and more interference (see Byron, 2005, for a meta-analysis). Later career stages also often come with changes in work characteristics. According to meta-analytic evidence, older workers tend to report higher job control and lower job demands (Ng & Feldman, 2010). Older workers also tend to have greater job responsibility and flexibility (Hill et al., 2014; Thompson & Prottas, 2006). Although responsibility may increase work complexity and make work-life balance more difficult (e.g., Schieman, Milkie, & Glavin, 2009), the benefits of job control may counterbalance such effects (e.g., Allen, Johnson, Kiburz, & Shockley, 2013; Thomas & Ganster, 1995).

As a rigorous test of our boundary management proposition, we therefore assessed the robustness of links between age, boundary strength, and work-life balance by accounting for family and work characteristics, as well as demographic background. Accounting for context factors helps establish the proposition that older workers’ active boundary management plays a major role in positive age differences in work-nonwork interactions (i.e., work-life balance; interference; enhancement) over and above changes in life contexts. In our analyses, we therefore control for three sets of variables: (1) family characteristics, including responsibility for children

under 14 (0 = no; 1 = yes) or children aged 14-18 (0 = no; 1 = yes), and elderly relatives (0 = no; 1 = yes); (2) work characteristics, including number of working hours, supervisory responsibility (0 = no; 1 = yes), and job autonomy using the aggregated scores of three scales (work scheduling, decision-making, work methods) with three items each from the German Work Design Questionnaire (Stegmann et al., 2010); and (3) demographics, including gender (0 = male; 1 = female) and organizational tenure (years in the organization).

We further controlled for *preferred* boundary strength. Age differences in boundary preferences may arise from enhanced technology use in younger generations, which blur boundaries between life domains (Park et al., 2011; Park & Jex, 2011), or from shifting values to balance work and nonwork domains (Twenge et al., 2010). We assessed boundary preferences with six items adapted from Kreiner (2006) on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Three items each assessed preferred boundary strength at work (BSW; e.g., “I prefer to keep private life at home”) and preferred boundary strength at home (BSH; e.g., “I prefer to keep work life at work”).

Data-analytic strategy. Using Mplus 7 (Muthén & Muthén, 1998-2012), we tested the hypotheses in a path model. We modeled age as predictor of work-life balance mediated through the two types of work-nonwork boundaries (BSH and BSW). We explored the possibility of quadratic age effects on work-life balance, but dropped the quadratic age term because it was non-significant ($p > .05$).³ We tested for total and indirect effects using bias-corrected and bootstrapped confidence intervals (N = 5000, Preacher, Rucker, & Hayes, 2007). Below we report unstandardized coefficients (labeled *b*) for all analyses.

Results

Preliminary analyses. In a first step we tested for age differences in caretaking

responsibilities, work demands, and job resources in regression analyses. Earlier research points at the possibility of curvilinear age trends, for example in leadership effectiveness (Simonton, 1988), job performance (Sturman, 2003), or work-nonwork interference (Huffman et al., 2013). To account for this possibility, we always tested for both linear and quadratic age effects; we z-standardized age before computing the quadratic term. In case of significant linear or quadratic age effects, we illustrate age differences by reporting scores for three age groups: young (18-28 years; 20% of the sample), middle-aged (29-45 years; 42%), and older (over 46 years old; 33%), consistent with Matthews et al. (2010).

For care for younger children (aged 0-13 years), there was a quadratic ($b = -.24, p < .001$), but no linear age effect ($b = .02, p > .05$), indicating higher caretaking demands in middle-aged (57%) as compared to young (2%) and older participants (15%). For care for older children (aged 14-18 years), there was no quadratic ($b = -.05, p > .05$) but a linear age effect ($b = .08, p < .01$), suggesting successively higher caretaking demands from young (0%) to middle-aged (14%) to older participants (17%). For eldercare, there was both a quadratic ($b = .13, p < .001$) and a linear age effect ($b = .09, p < .05$), indicating higher eldercare demands in older (37%) relative to young (10%) and middle-aged participants (17%).

For working hours, there was a quadratic ($b = 2.94, p < .001$), but no linear age effect ($b = -1.30, p > .05$), indicating longer weekly work hours for young ($M = 40.7, SD = 4.34$) and older ($M = 35.6, SD = 11.04$), relative to middle-aged participants ($M = 33.8, SD = 11.06$). For supervisory responsibility, there was no quadratic ($b = .04, p > .05$) but a linear age effect ($b = .10, p < .001$). Among young participants, only 9% were in supervisory positions, compared to 15% among middle-aged and 29% among the older participants. For autonomy, there was neither a quadratic ($b = -.01, p > .05$) nor a linear age effect ($b = -.03, p > .05$). Work characteristics were,

in turn, related to work-life balance. Specifically, job autonomy was positively related to work-life balance, whereas working hours and supervisory responsibility were negatively related to work-life balance. Family characteristics were unrelated to work-life balance in our sample, i.e., neither childcare responsibilities for 0-13 year-olds or for 14-18 year-olds nor eldercare show significant associations with work-life balance (see Table 1). Overall, these results support the notion of changing family and work characteristics across work life and justify their inclusion as covariates.

The analyses did not yield consistent age differences in boundary preferences. Although preferred boundaries at work were positively related to age (there was a linear age effect ($b = .20$, $p < .01$) with no quadratic age effect ($b = .06$, $p > .05$)), preferred boundaries at home were unrelated to age (there was neither a quadratic ($b = .07$, $p > .05$) nor a linear age effect ($b = -.08$, $p > .05$)).

Predicting work-life balance: Total and indirect effects. In our initial model, which included all covariates, the total effect of age on work-life balance, the path from age to BSW and BSH, and the two indirect effects of age on work-life balance via BSW and BSH were all non-significant. Further exploration revealed that the non-significant coefficients were due to inclusion of organizational tenure in the model. Note, however, that tenure was unrelated to work-life balance, but was highly correlated with age ($r = .78$). The high levels of shared variance between age and organizational tenure may preclude disentangling the effects of organizational tenure and chronological age (Spector, Zapf, Chen, & Frese, 2000). An explanation for the high correlation of age and tenure in this sample is that all participants worked in an organization with low turnover rates. The average tenure was 17.1 years, compared to only 10.8 years in Germany in 2008 (Rhein, 2010).

We therefore reran our model accounting for family and work characteristics as well as

gender and boundary preferences, but not for organizational tenure. All parameter estimates and their 95% confidence intervals can be found in Table 2. Figure 1 gives an overview of the results. Confirming Hypothesis 1, we found age to be positively related to BSW ($b_2 = .02, p < .01$) and to BSH ($b_3 = .02, p < .01$), indicating that older (compared to young) employees report stronger work-nonwork boundaries both at work and at home. Supporting Hypothesis 2a, we found a significant indirect effect for age \rightarrow BSW \rightarrow work-life balance ($b_6 = .003, 95\% \text{ CI } .001, .006$) and for age \rightarrow BSH \rightarrow work-life balance ($b_7 = .004, 95\% \text{ CI } .001, .008$). The direct effect age \rightarrow work-life balance was not significant ($b_1 = .01, p > .05$). The total effect age \rightarrow work-life balance was .014 (95% CI .005, .023). The model overall explained 17.1% and 14.9% of the variance in BSW and BSH, respectively. It further explained 40.9% of the variance in work-life balance.

Supplemental analysis: Age as a moderator. In the introduction, we elaborated why we expect employee age to be an antecedent of boundary strength and work-nonwork interactions. However, other studies have suggested that age may be a moderator of relationships at the work-nonwork interface such as the relationship between work-to-family interference and family-to-work interference, or the relationship between work social support and both work-to-family and family-to-work interference (Matthews et al., 2010). Older workers may find inter-domain transitions more aversive than young workers because competing work and nonwork demands are associated with cognitive costs (Kossek, Ruderman, Braddy, & Hannum, 2012). Moreover, a lack of balance between work and nonwork may be more detrimental to older than young workers' mental and physical health due to a stronger sensitivity to role conflicts (Mayes, Barton, & Ganster, 1991). We therefore estimated another model adding interactions of standardized age and boundary strength (BSW and BSH). The interaction terms were not significant (both $ps > .05$), indicating that strong boundaries are beneficial to work-life balance regardless of age.

Discussion

Study 1 investigated age differences in work-life balance and the mediating role of work-nonwork boundary strength with 298 employees from one organization in the banking sector. Replicating prior studies (Hill et al., 2014; Richert-Kazmierska & Stankiewicz, 2016; Tausig & Fenwick, 2001), age was indeed positively associated with work-life balance. More importantly, our hypothesis that boundary strength underlies the positive relationship between age and work-life balance was supported. Older workers reported stronger boundaries both at work and at home, which mediated the positive association between age and work-life balance. Supplementary moderation analyses did not indicate that strong boundaries were differently beneficial at different ages.

Relationships were robust when accounting for various family and work characteristics, preferred boundary strength, and gender. Yet, significance dropped when accounting for organizational tenure, which we attribute to the unusually high correlation of organizational tenure with age in this sample ($r = .78$). Accordingly, the effects of chronological age and organizational tenure on work-life balance were intertwined, sharing a high proportion of variance (Spector et al., 2000). Tenure was unrelated to work-life balance in Study 1, consistent with meta-analytic findings by Michel et al. (2011). Control variables generally serve to provide more accurate estimates for relationships and rule out alternative explanations, yet sometimes their inclusion can lead to uninterpretable parameter estimates and nonreplicable results: As correlations between the independent variable (age) and the covariates (tenure) increase, the meaning of the independent variable departs from how it was originally defined and measured (Becker et al., 2016). For this reason, the present study was ill-suited to disentangle the effects of age and organizational tenure. The sample of Study 2 had more representative levels of

organizational tenure.

Overall, results suggest that strong boundaries benefit older workers' work-life balance. We argued that older workers might enact stronger boundaries to compensate for declining cognitive resources and to realize their strong well-being goals. However, while stronger boundaries with age may be plausible to result from active use of boundary management strategies, this assumption has yet to be tested. We do so in Study 2, introducing age-related differences in boundary management *strategy use* as a further explanatory mechanism.

Study 2

In an attempt to generalize age differences in the work-nonwork interface beyond the banking sector, we conducted a second study including an independent sample with a broader occupational background and using refined measures. While the outcome of work-life balance in Study 1 constituted a general satisfaction rating of work-life balance, we used work-nonwork interference and enhancement as more specific judgments that contribute to perceptions of work-life balance. Extending Study 1, we investigated the mediating role of boundary management strategy use in the relationship between age and boundary strength.

We also supplemented the cross-sectional data in Study 1 with diary data and thus modeled relationships between aggregated day-level assessments. Aggregated daily ratings constitute very precise measurements because ratings from multiple days are combined and retrospective bias is reduced relative to traditional memory-based assessments (Robinson & Clore, 2002). This is particularly relevant when studying age differences as older adults have been found to show a systematic positivity effect in attention and memory (Reed & Carstensen, 2012). For example, a study by Ready et al. (2007) compared momentary ratings of affect across two weeks with people's recall of their affect during the same period. Whereas younger adults tended to

overestimate negative affect in the retrospective assessment, older adults tended to overestimate positive affect. Another study compared well-being assessments across a month, a week, and throughout the day and found age differences to vary by temporal distance, such that age differences favoring older adults were greatest for monthly ratings and smallest for (aggregates of) daily ratings (Charles et al., 2016). Such systematic biases in recall are thought to reflect motivational changes as described above, and point at the utility of replicating our findings from one-time cross-sectional data (Study 1) with aggregates of daily ratings (Study 2).

Boundary Management in Older Workers

Boundary management strategies are defined as workers' regulatory strategies to integrate or separate role demands and expectations into work and nonwork (Kossek, Noe, & DeMarr, 1999). Workers actively manage their work-nonwork boundaries using psychological or behavioral strategies (Kreiner et al., 2009; Nippert-Eng, 1996). For example, to strengthen the boundary at work, workers would refrain from opening private emails on the office computer. To strengthen the boundary at home, workers would refrain from answering work-related calls at home. Although the use of boundary management strategies is generally linked with stronger boundaries (e.g., Bulger, Matthews, & Hoffman, 2007), this link is by no means guaranteed. For instance, some workers may deal with clients who frequently call during nonwork time which would weaken work-nonwork boundaries even if workers use boundary management strategies. Vice versa, some workers' boundaries may be strong without workers actively managing them, perhaps due to company policies to shut down work-related emails during nonwork time. In Study 2, we therefore assessed boundary management strategy use separately from boundary strength, and established their empirical distinctness via confirmatory factor analysis.

As elaborated in Study 1, older workers may be especially motivated to maintain strong

boundaries because age-related changes in cognitive resources and motivation or experience increase the need and desire to keep work and nonwork apart. This should reflect in stronger use of boundary management strategies as underlying mechanism linking age with boundary strength. That assumption would be in line with the key tenet of lifespan theory that older adults use selection strategies to remain effective and well despite losses in diverse domains of functioning (Baltes & Dickson, 2001; Hess, 2014).

Hypothesis 3: Age is positively related to boundary management strategy use.

Hypothesis 4: Boundary management strategy use mediates the positive relationship between age and work-nonwork boundary strength.

Age Differences in Enhancement

In addition to testing the above hypotheses, we explored age differences in work-nonwork enhancement as a positive indicator of work-life balance. *Enhancement* refers to positive experiences from the engagement in multiple roles which allows to build up personal, energy, and affective resources (Graves et al., 2007); related constructs are enrichment, positive spillover, and facilitation (see Wayne, 2009). Like interference, enhancement can occur from work to nonwork and vice versa (Grzywacz & Marks, 2000; Hanson, Hammer, & Colton, 2006).

We could not formulate clear predictions for age differences in enhancement. On the one hand, just like interference, enhancement is a strong indicator of work-life balance (Carlson, Grzywacz, & Zivnuska, 2009). Since in Study 1 older workers had stronger work-nonwork boundaries, and stronger boundaries were in turn related to better work-life balance, one could infer that they would experience more enhancement. On the other hand, as an unintended side effect, strong boundaries may limit the transmission of positive affect or energy across life domains ('positive spillover', Hanson et al., 2006). Bulger et al. (2007) found strong boundaries to

be associated both with less interference and less enhancement. We therefore explored whether age is positively, negatively or unrelated to enhancement.

Method

Sample and procedure. A sample of 608 workers from various organizations in Germany were contacted through a professional survey company. Participants received monetary incentives (2.00€ to 44.50€) that increased with the number of diary entries completed. Of the 608 participants, 63% were female and none were in supervisory positions. Average organizational tenure was 10.9 years ($SD = 10.2$), compared to 17.1 years in Study 1. The average working time per week was 32.5 hours ($SD = 13.1$). Participants' mean age was 44.3 years ($SD = 11.2$), ranging from 19 to 67 years.

After a general questionnaire, participants completed up to eight daily surveys over the following two work weeks (Tuesdays to Fridays) during nonwork time. They received email reminders at 3:00 p.m. and could fill out the daily survey until 3:00 a.m. the next morning. The average participant filled out the surveys at 5:58 p.m. ($SD = 4:05$ hours). Participants rated the prior day's boundary strength at home. We skipped Mondays as Monday surveys would have generated such ratings on Sunday and thus a nonwork day. On average, participants completed 5.2 out of 8 possible diary entries, amounting to a total of 3,164 out of 4,840 possible entries (compliance rate 65%). All demographic variables were assessed in the general questionnaire. Indicators of the work-nonwork interface and working hours were assessed in the daily surveys. Apart from boundary strength at home which was assessed for the prior evening, all focal variables were reported for the current day. Results for this sample concerning the impact of day-specific flextime use on affective well-being were previously reported (Spieler et al., 2016).⁴

Measures. All scales were translated to German and back-translated to English by two research assistants. Table 3 provides descriptives, correlations, and internal consistencies of the scales, which were satisfactory. The focal scales' items are provided in the Appendix.

Work-nonwork interference and enhancement. These were assessed using 12 items from Fisher, Bulger, and Smith's (2009) scale on work-nonwork interference and enhancement, rated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The scale has four subscales with three items each distinguishing domain interactions by direction and valence: personal life interference with work (PLIW), personal life enhancement of work (PLEW), work interference with personal life (WIPL), and work enhancement of personal life (WEPL).⁵

Work-nonwork boundary strength. BSW and BSH were assessed with three items each, using the same scale as in Study 1, adjusted to the day-level. Results of a multilevel confirmatory factor analysis (MCFA) supporting the two-factor structure differentiating between BSW and BSH are reported in Spieler et al. (2016). The distinctness of boundary strength and interference has been demonstrated in Hecht and Allen (2009).

Use of boundary management strategies. We included 3 items adapted from Kossek et al. (2006), rated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "Today, I actively strived to keep my family and work life separate" (for further items, see Appendix). We conducted a series of MCFAs to confirm that use of boundary management strategies is not only theoretically but also empirically distinct from work-nonwork boundary strength. The model differentiating three factors (boundary management strategy use vs. BSW vs. BSH) ($\chi^2 = 186.925$; $df = 52$; CFI = .972; RMSEA = .040) fit the data better than (a) a model differentiating two factors (boundary management strategies vs. boundary strength) ($\chi^2 = 1641.245$; $df = 53$; CFI = .666; RMSEA = .138; Satorra-Bentler scaled $\chi^2 = 132.46$; $df = 1$; $p <$

.001), (b) a model differentiating two factors based on focal time point (BSH rated for yesterday vs. BSW and boundary management strategy use rated for today) ($\chi^2 = 773.125$; $df = 53$; CFI = .848; RMSEA = .093; $\chi^2 = 360.285$; $df = 1$; $p < .001$), or (c) the one-factor solution suggesting all items load on the same factor ($\chi^2 = 2015.078$; $df = 54$; CFI = .587; RMSEA = .152; Satorra-Bentler scaled $\chi^2 = 57.884$; $df = 1$; $p < .001$).

Bivariate correlations between the use of boundary management strategies and BSW and BSH were .45 ($p < .001$) and .27 ($p < .001$) (Table 3). These results confirm that assessing the use of boundary management strategies (actively seeking to keep life domains apart) separately from actual boundary strength (which can be due to boundary management strategies, but can also result from external circumstances) is appropriate.

Control variables. Like in Study 1, we accounted for family and work characteristics, and demographic variables. In contrast to Study 1, we did not account for supervisory responsibility because the current sample did not include supervisors; nor for boundary preferences because these were not assessed. Further, we controlled for daily working hours, which is more accurate than the one-time estimate of working hours assessed in Study 1.

Data-analytic strategy. Given the hierarchical data with day-level data nested within persons, we tested the hypotheses via multilevel structural equation modeling (MSEM), using Mplus 7. We simultaneously modeled Level 1 and Level 2 relationships and hereby partitioned the variances and covariances into separate latent components, in order to obtain more accurate estimates for the hypothesized relationships (Preacher, Zyphur, & Zhang, 2010). Given our interest in person-level effects, we focus here on the person-level results; variables at the person-level can be interpreted as aggregated day-level ratings.

We successively tested two models. In Model 1 (Hypotheses 1, 2b), we modeled age as

predictor of work-nonwork interference and enhancement mediated through the two types of work-nonwork boundaries (BSH and BSW). In Model 2 (Hypotheses 3-4), we added boundary management strategy use. Specifically, we estimated age and boundary management strategy use as predictors of work-nonwork boundary strength and work-nonwork interference and enhancement. We estimated the models using full information likelihood estimation to account for missing data. We used bias-corrected and bootstrapped confidence intervals ($N = 5000$) to test for total and indirect effects. Below we report unstandardized coefficients (labeled b) for all analyses.

We accounted for child- and eldercare commitments (person-level), day-specific number of working hours as indicator of workload (person- and day-level), job autonomy, gender, and organizational tenure (person-level), and possible time effects (day-level, Bolger & Laurenceau, 2013). Following Enders and Tofighi (2007), we grand-mean centered age and the continuous person-level control variables, job autonomy and organizational tenure. We explored the possibility of quadratic age effects on interference and enhancement, but dropped the quadratic age term for PLIW, PLEW, and WIPL because they were non-significant (all $ps > .05$).⁶ For WEPL, the quadratic age term was $.08$ ($p < .05$), indicating lower WEPL for middle-aged as compared to young or older employees.

Results

Preliminary analyses. The MCFA of the whole measurement model showed a satisfactory model fit ($\chi^2 = 975.083$; $df = 337$; $CFI = .969$; $RMSEA = .024$), indicating that all variables were empirically distinct. All items loaded on their respective latent factors at $.70$ or above at the person-level (see Appendix). No item loaded more strongly on any factor other than the intended one.

As in Study 1, we first tested for both linear and quadratic age differences in caretaking responsibilities and work demands and resources in regression analyses. Again, we *z*-standardized age before computing the quadratic term and illustrate age differences by reporting scores for three age groups: young (18-28 years; 10% of the sample), middle-aged (29-45 years; 42%), and older (over 46 years old; 48%).

For care for younger children (aged 0-13 years), there was both a quadratic ($b = -.06, p < .001$) and a linear age effect ($b = -.12, p < .001$), indicating higher caretaking demands in young (20%) and middle-aged (43%) relative to older participants (11%). For care for older children (aged 14-18 years), there was a quadratic ($b = -.05, p < .001$) but no linear age effect ($b = -.01, p > .05$), indicating higher caretaking demands in middle-aged (14%) as compared to young (6%) and older participants (12%). For eldercare, there was neither a quadratic ($b = -.00, p > .05$) nor a linear age effect ($b = .02, p > .05$). For working hours, there was also neither a quadratic ($b = .05, p > .05$) nor a linear age effect ($b = -.15, p < .05$). Finally, for autonomy, there was a quadratic ($b = .20, p < .01$) but no linear age effect ($b = .02, p > .05$), indicating higher autonomy in young and older participants, relative to middle-aged participants.

Work characteristics were, in turn, related to interference and enhancement (Table 3). Job autonomy was unrelated to PLIW, but negatively related to WIPL and positively related to PLEW and WEPL. Working hours were positively associated with both types of interference, but unrelated to enhancement. Further, there were significant associations of family characteristics with interference and enhancement. Care for young children (aged 0-13 years) was associated with more interference (both PLIW and WIPL) but not with enhancement. Neither care for older children (aged 14-18 years) nor for elderly relatives was associated with interference or enhancement.

Predicting work-nonwork interference and enhancement: Total and indirect effects.

Parameter estimates from the MSEM can be found in Table 4. The model fit was satisfactory ($\chi^2 = 238.824$, $df = 15$, $CFI = .91$, $TLI = .25$, $RMSEA = .07$)⁷. In the following, we focus on the person-level results. Regarding Hypothesis 1, age was positively related to BSW across days ($b_5 = .01$, $p < .05$), but unrelated to BSH ($b_6 = .00$, $p > .05$) when accounting for context and demographic variables. The results thus partly replicate the finding from Study 1 and provide partial support for Hypothesis 1, indicating that older (compared to younger) workers report a stronger BSW, but a comparable BSH.

We next tested whether BSW mediated the relationship between age and PLIW (Hypothesis 2b) and PLEW, again accounting for context variables. We did not test the hypothesized mediation effects on WIPL and WEPL because the relationship between age and BSH was not significant (Baron & Kenny, 1986). The analyses revealed a significant indirect effect for age \rightarrow BSW \rightarrow PLIW ($b_{11} = -.002$, 95% CI $-.004$, $-.000$) and \rightarrow PLEW ($b_{13} = .001$, 95% CI $+.000$, $.003$). This suggests that older workers experience less interference and more enhancement of work through their nonwork life domain than their young colleagues via higher BSW. The direct effects age \rightarrow interference were $b_1 = -.01$ ($p < .001$; PLIW) and $b_2 = -.01$ ($p > .05$; WIPL). Replicating previous studies (Ng & Feldman, 2012), the total effects age \rightarrow interference were $-.013$ (95% CI $-.020$, $-.007$; PLIW) and $-.005$ (95% CI $-.012$, $.001$; WIPL). The direct effects age \rightarrow enhancement were $b_3 = .01$ ($p < .05$; PLEW) and $b_4 = .01$ ($p < .05$; WEPL). Further, the total effects age \rightarrow enhancement were $.009$ (95% CI $.002$, $.016$; PLEW) and $.008$ (95% CI $.001$, $.015$; WEPL). In sum, results support Hypothesis 2b for BSW but not for BSH.

Age and work-nonwork boundary strength: Boundary management strategy use as an underlying mechanism. We tested Hypotheses 3 and 4 with Model 2, again modeling

relationships both at the person-level and at the day-level, and accounting for context and demographic variables. The model fit was satisfactory ($\chi^2 = 280.596$, $df = 21$, CFI = .90, TLI = .35, RMSEA = .06)⁷. Parameter estimates can be found in Table 5. Figure 2 gives an overview of the results. Regarding Hypothesis 3, age was positively related to boundary management strategy use ($b_3 = .01$, $p < .001$). Hypothesis 4 suggested that use of boundary management strategies would mediate the relationship between age and boundary strength. To test this assumption, we first estimated the indirect effect of age \rightarrow boundary management strategy use \rightarrow BSW, which was significant ($b_{14} = .007$, 95% CI .003, .011). The direct effect of age \rightarrow BSW was not significant ($b_1 = .00$, $p > .05$). We then estimated the indirect effect of age \rightarrow boundary management strategies \rightarrow BSH, which was significant as well ($b_{15} = .005$, 95% CI .002, .008). Again, the direct effect of age \rightarrow BSH was not significant ($b_2 = -.00$, $p > .05$), suggesting that boundary management strategies mediate the relationship. Further, the total effects age \rightarrow boundary strength were .009 (95% CI .001, .017; BSW) and .002 (95% CI -.006, .010; BSH). Thus, Hypotheses 3 and 4 found full support in our data. The model overall explained 25.1% and 13.6% of the person-level variance in BSW and BSH; 7.4% of the person-level variance in boundary management strategy use; and between 9.1% and 22.3% of the person-level variance in WIPL, PLIW, WEPL, and PLEW.

Discussion

Study 2 aimed to replicate positive age differences in work-nonwork interactions and to directly test the mediating role of active boundary management in a sample of 608 workers with diverse occupational backgrounds. Supporting hypotheses, older workers reported less interference when accounting for various family and work characteristics, and demographics (including organizational tenure), providing additional evidence that this age advantage is not

merely driven by age-related changes in contextual factors. Older workers reported using more boundary management strategies, which in turn predicted stronger boundaries at work and at home. Across all ages, stronger boundaries were related to positive outcomes for work-nonwork interactions. Further, exploratory analyses revealed positive age differences in experiencing enhancing effects from fulfilling multiple roles.

While the data from Study 2 were collected in multiple organizations, unlike Study 1, they did not include supervisors. This may limit the generalizability of the results. Further, it may be argued that work-nonwork boundary preferences should have been included into the model tested. We unfortunately did not assess boundary preferences in Study 2. However, in Study 1, age was not consistently related to boundary preferences (as older workers reported a stronger preference for boundaries at work, but a comparable preference to younger workers for boundaries at home), and the effects tested held when including boundary preferences in Study 1. We are therefore confident that the Study 2 findings would also hold when controlling for boundary preferences.

General Discussion

Given their declining cognitive resources and increased prevalence of caretaking demands in nonwork life, it is plausible to assume that older workers experience the balancing of work and non-work life domains as challenging. Yet, recent studies revealed a positive association between age and work-life balance. To explain this contradiction, we introduced and tested the active boundary management account of aging and work-life balance. Specifically, we tested the active role of older workers in maintaining stronger boundaries at the work-nonwork interface as a pathway to enhanced work-life balance, over and above age differences in life context and boundary preferences. We found older workers to report stronger boundaries at work than young workers, but age differences in boundary strength at home emerged only in Study 1. Strong

boundaries were generally related to more favorable work-nonwork interactions. We furthermore found boundary strength to mediate the relationships of age with work-nonwork interactions. The results of Study 2 also showed that the use of boundary management strategies mediated the positive association between age and boundary strength. Using two independent samples with cross-sectional (Study 1) and aggregated diary data across two working weeks (Study 2), our research corroborates and extends prior findings of positive age differences in work-life balance.

Theoretical Contributions

Despite the vast literature on the work-nonwork interface (Allen et al., 2014; Amstad et al., 2011; Eby et al., 2005), little is known about age differences in managing work and nonwork life domains. Such knowledge is vital given the questions the aging of the workforce raises for organizations that seek to secure older workers' well-being and effectiveness. Age effects have rarely been tested and often can only be inferred from descriptive tables (for exceptions see Allen & Finkelstein, 2014; Hill et al., 2014; Tausig & Fenwick, 2001). To date, age advantages in work-life balance and the underlying mechanisms are still awaiting a rigorous test.

The finding that age was associated with more favorable work-nonwork interactions in two independent samples supports prior research suggesting age-related advantages in work-life balance (e.g., Hill et al., 2014; Tausig & Fenwick, 2001) and interference (Ng & Feldman, 2012). Importantly, our data suggest that the favorable relationships between age and indicators of work-life balance are transmitted through boundary strength. We explicitly investigated worker age as an antecedent of work-nonwork boundary strength. Note however that results were more robust for boundary strength at work than for boundary strength at home. This might reflect higher cognitive demands at work than at home, making it especially important for older workers to shield their work life from competing nonwork influences. Additionally, Study 2 provided

evidence that older workers' stronger boundaries may result from active boundary management. This is fully consistent with our boundary management account of aging and work-life balance and dovetails with prior findings of older adults engaging in selection strategies (e.g., identification and selection of goals, alternative contexts, and outcomes) to optimize their well-being and functioning (Baltes & Dickson, 2001; Hess, 2014).

Furthermore, our study demonstrates beneficial associations of age with work-nonwork interactions when simultaneously accounting for variables co-occurring with age; namely, child- and eldercare commitments, working hours, job autonomy, and gender (both studies), supervisory responsibility and boundary preferences (Study 1), and organizational tenure (Study 2). In sum, our results establish that age-related advantages in boundary strength and work-life balance, interference, and enhancement are not merely driven by context and demographic variables. They are not just a by-product of age-related changes in life contexts. Instead, older workers appear to actively manage their work-nonwork boundaries to keep life domains more separated than young workers, thereby ensuring high levels of work-life balance.

By virtue of the diary design, Study 2 also represents an important step toward ruling out older adults' positive memory bias in reporting indicators of work-life balance. A positivity effect in older adults' memory is well-documented (Reed, Chan, & Mikels, 2014) that may lead to inflated work-life balance ratings. The fact that positive age differences are replicated in aggregated daily ratings increases confidence that they represent 'true' age differences in daily experiences of work-life balance, rather than biased recollections of past experiences or identity construals (Robinson & Clore, 2002).

Practical Implications

Our study reveals that older workers use boundary management strategies more than

young workers and thus maintain a better work-life balance – an important ingredient of long-term well-being and effectiveness of workers (Eby et al., 2005). These findings contrast and question the predominantly negative view on older workers (Ng & Feldman, 2012) that neglects positive aspects of aging. Negative age stereotypes prevail in the workplace (Posthuma & Campion, 2009); they impact managerial decisions (Van Dalen, Henkens, & Schippers, 2010), lead to age discrimination, and via stereotype threat may become self-fulfilling prophecies for older workers (Levy, 2009; von Hippel, Kalokerinos, & Henry, 2013). Therefore, as an important practical implication, our study helps correct a one-sided negative perspective on aging in management practice.

A second implication is that older workers may be well suited to act as role models or mentors for younger workers who struggle with managing their work-nonwork boundaries. Our findings suggest that better work-life balance with age is not only due to contextual changes in family and work characteristics, but that active boundary management is an important contributing factor. Older workers have much to pass on to younger colleagues. As boundaries can be managed actively, they might be a starting point for interventions aimed at maintaining and improving well-being and performance, especially for young workers who need more support establishing strong boundaries than older workers who do so more naturally. Prior to this, an assessment of the organization's culture is needed (e.g., negative age stereotypes; supportive work-life culture): Mentoring in boundary management can only work in those organizations or teams that accept or even promote boundaries around work and nonwork life.

A third practical implication is that granting autonomy may be especially important for older workers to manage their work-nonwork interface. Many organizations have introduced policies for balancing work and home demands (see Brough & O'Driscoll, 2010, for an overview),

such as flextime. A recent study demonstrated that flextime use facilitates stronger work-nonwork boundaries (Spieler et al., 2016). More generally, job autonomy may facilitate the use of coping strategies that involve selection (Weigl, Mueller, Hornung, Zacher, & Angerer, 2013), and therefore granting autonomy may be especially important for older workers' performance (Ng & Feldman, 2015). Autonomy may allow older workers to enact their preferred strategies to manage the work-nonwork interface, and it furthermore fulfills autonomy motives that increase with age (Kooij, de Lange, Jansen, Kanfer, & Dikkers, 2011).

Limitations and Future Research

As a first limitation, we did not distinguish between boundary management strategy use for work vs. nonwork domains. Workers may use different strategies to manage the boundaries at work and at home. Not only might successful "boundary managers" adapt their strategies, they might also tailor strategies to different life domains. The role of fit between strategy and situation, and possible age differences therein, should be addressed in future studies.

Second, we only accounted for a selected set of life context and demographic variables when testing for age differences at the work-nonwork interface. Potentially relevant factors that should be addressed in future research include social support (Matthews et al., 2010) and organizational climate for acceptability of boundary management strategies (Kossek & Lautsch, 2012). A meta-analysis by Ng and Feldman (2010) revealed that age is positively related to perceived organizational support (though unrelated to coworker support), and a meta-analysis by Kossek and colleagues (2011), in turn, revealed social support to be negatively associated with interference. Further, we did not account for spouses' employment status, but research suggests that younger workers are more likely to have a working spouse (Hill et al., 2014), which has been shown to contribute to work-nonwork interference (Nomaguchi, 2009). Other relevant factors

when investigating age differences at the work-nonwork interface could be role salience (Sanz-Vergel, Demerouti, Bakker, & Moreno-Jimenez, 2011) or motives for working (Kooij et al., 2011). Although research suggests that workers ascribe importance to family rather than to work as they grow older (see Baltes & Young, 2007, for an overview), it is possible that especially those older workers with a high work role salience remain in the labor market despite possible health problems or lack of financial pressure. This would, in turn, explain why older workers have a stronger boundary at work. Importantly, we assume but do not directly test the aging-related mechanisms (cognition, motivation, experience) that we deemed responsible for changes in boundary management.

Finally, while our data are consistent with the life-span developmental perspective we adopted, they do not allow for assessing the contribution of other major explanations of age differences. According to the *generational identities* approach⁸ (e.g., Dencker, Joshi, & Martocchio, 2008; Joshi, Dencker, Franz, & Martocchio, 2010), for instance, each generation (e.g., Millennials, Generation X, Baby boomers) has access to particular sets of skills, knowledge, experiences, and resources that differ between generations as a function of both the generations' different formative experiences and their different positions on the continuum of organizational socialization. Therefore, the psychological contracts of the generations with their organizations differ. From this perspective, the finding that older workers' boundaries were stronger at work, but not at home may reflect a different level of *maturity*, rather than merely a 'shielding' against high cognitive demands. In other words, older workers might have acquired the skills and routine of maintaining stronger boundaries at work, but they might at the same time be expected to do so given their longer experience and perhaps higher levels of responsibility. At home, these same expectations do not hold, which might account for the lack of age differences in boundary strength

at home. Age differences in boundary management are thus likely to reflect a combination of the effects of chronological age as well as ‘organizational age’. To disentangle these different mechanisms, future studies could include measures of generational identity (Lyons & Schweitzer, 2017) and of organizational norms and expectations of, for instance, workers’ availability and flextime use.

Conclusion

The two studies reported here provide a strong replication of prior initial findings that older workers enjoy better work-nonwork interactions than young workers, and link such age differences to active boundary management. Older workers reported better work-life balance (Study 1) as well as less interference and more enhancement of life domains (Study 2). Boundary strength emerged as a mediator in the link between age and these favorable work-nonwork interactions, and use of boundary management strategies in turn mediated the positive link between age and boundary strength. Importantly, we provide evidence of the robustness of such associations when accounting for relevant family and work characteristics, as well as demographics and boundary preferences. The findings suggest that the age advantage in work-nonwork interactions might not merely be a by-product of age differences in life contexts, but the result of older workers’ stronger recruitment of boundary management strategies that help keep work and nonwork life domains apart. Such findings highlight an important strength of older workers.

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Notes

¹ Note that in keeping with current standards in work and aging research, we do not adopt a specific age cut-off for defining older workers, which would necessarily be arbitrary (Hertel & Zacher, 2015). Instead, we treat age as a continuous variable and use the labels “younger”, “middle-aged”, and “older worker” in a merely descriptive manner.

² The previous report of the diary data concerned the impact of day-specific flextime use on affective well-being. This previous study did not have age as a focal variable, and did not include analyses of work-life balance as dependent variable.

³ A study by Huffman, Culbertson, Henning, and Goh (2013) found a curvilinear relationship between age and work-nonwork interference, with middle-aged employees reporting most interference. We tested whether age had a curvilinear effect on work-life balance, which was not the case ($b = .03, p > .05$). This is in line with a meta-analysis by Ng and Feldman (2012) who also did not find a curvilinear effect of age on indicators of work-life balance.

⁴ This previous study did not have age as a focal variable, and did not include analyses of boundary management strategies as a mediator, or work-nonwork interference and enhancement as dependent variables.

⁵ Since the four-factor structure of the scale has only been confirmed for the person-level (Fisher et al., 2009), we conducted multilevel confirmatory factor analyses (MCFA) to test the factor structure of the scale while taking into account the multilevel structure of the data. The four-factor model (PLIW; PLEW; WIPL; WEPL) ($\chi^2 = 429.673; df = 96; CFI = .967; RMSEA = .033$) fit the data better than one two-factor model (life domain interference vs. life domain enhancement) ($\chi^2 = 2774.884; df = 106; CFI = .738; RMSEA = .089$; Satorra-Bentler scaled $\chi^2 = 2345.210; df = 10; p < .001$), another two-factor model (personal life spillover into work life vs. work life spillover into

personal life) ($\chi^2 = 5405.68$; $df = 107$; CFI = .480; RMSEA = .150; Satorra-Bentler scaled $\chi^2 = 4456.260$; $df = 11$; $p < .001$), and a one-factor model ($\chi^2 = 7641.016$; $df = 108$; CFI = .261; RMSEA = .148; Satorra-Bentler scaled $\chi^2 = 12475.076$; $df = 12$; $p < .001$). Thus, it is appropriate to treat PLIW, PLEW, WIPL, and WEPL as separate outcomes.

⁶ As in Study 1, we tested whether age had a curvilinear effect on interference or enhancement, which was not the case for PLIW ($b = .02$, $p > .05$), WIPL ($b = .04$, $p > .05$), and PLEW ($b = .06$, $p < .10$) but for WEPL ($b = .08$, $p < .05$).

⁷ Note that the TLI is relatively low. The TLI is an incremental fit index which compares the fit of our final model to the fit of the baseline model, which assumes all variables to be uncorrelated with one another. The TLI can therefore underestimate the model's fit in cases where correlations between some of the variables are low, and thus the baseline model's fit is already good. This is the case in Study 2 and can be explained by the inclusion of multiple control variables, not all of which were correlated with the central variables. Although the TLI is relatively low, it does not threaten the validity of our model as the remaining fit indices are all acceptable.

⁸ We thank one of the reviewers for suggesting this perspective.

Table 1

Means, Standard Deviations, and Intercorrelations between Variables in Study 1

Note. $N = 298$. Reliability estimates (α), where available, are shown in parentheses along the diagonal.

^a 0 = no, 1 = yes; ^b 0 = male, 1 = female.

* $p < .05$. ** $p < .01$.

Table 2

Unstandardized Coefficients of the Path Model for Testing Main and Mediation Effects on Work-Life Balance (Study 1)

Effect type	Coefficient	SE	95% CI
Slopes			
b_1 : Age → Work-life balance	0.007	0.004	[-0.001, 0.016]
b_2 : Age → Boundary strength at work	0.015**	0.004	[0.006, 0.023]
b_3 : Age → Boundary strength at home	0.017**	0.006	[0.004, 0.029]
b_4 : Boundary strength at work → Work-life balance	0.195**	0.062	[0.069, 0.315]
b_5 : Boundary strength at home → Work-life balance	0.233***	0.049	[0.140, 0.327]
Indirect effects (mediation paths)			
b_6 : Age → Boundary strength at work → Work-life balance	0.003*	0.001	[0.001, 0.006]
b_7 : Age → Boundary strength at home → Work-life balance	0.004*	0.002	[0.001, 0.008]
Residual variances			
Work-life balance	0.417***	0.038	[0.364, 0.520]
Boundary strength at work	0.530***	0.048	[0.459, 0.659]
Boundary strength at home	0.898***	0.062	[0.808, 1.065]

Note. $N = 298$. *SE* = Standard error; *CI* = Confidence interval. Child- and eldercare commitments, working hours, supervisory responsibility, job autonomy, gender, and boundary preferences are controlled for in the analyses but not listed for clarity of presentation.

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

Table 3

Means, Standard Deviations, ICCs, Reliabilities, and Correlations between the Day-Level Variables (Below Diagonals) and Correlations between Aggregated Person-Level Variables (Above Diagonal) in Study 2

Variable	<i>M</i>	<i>SD</i>	ICC (1)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Day-level																		
1 PLIW	1.92	0.80	64.6	(.69/.96)	.73***	-.09	.23***	-.40***	-.31***	.05	.15***	-.25***	.15***	.05	.05	-.05	.00	-.12**
2 WIPL	2.17	0.94	61.4	.43***	(.84/.99)	-.01	.01	-.27***	-.39***	.13**	.26***	-.16***	.16***	.05	.04	-.13**	.04	-.09*
3 PLEW	3.01	0.87	56.9	-.01	.05	(.79/.96)	.64***	.23***	.26***	.23***	.04	.08	.00	-.06	.04	.19***	-.08	-.08
4 WEPL	2.47	0.91	65.4	.11**	.00	.47***	(.73/.97)	.10	.17***	.09	-.05	.05	.01	-.01	.05	.19***	-.13**	-.08
5 BSW	3.17	0.98	55.5	-.16***	-.03	.11***	.09**	(.83/.98)	.40***	.45***	-.05	.16***	-.09*	-.05	-.04	.07	-.07	.13**
6 BSH	3.70	0.99	67.5	-.06*	-.08*	.11***	.09**	.13***	(.83/.99)	.27***	-.14*	.07	-.01	-.07	-.06	.09	-.09	.07
7 Boundary management strategies	3.03	0.84	55.5	.05	.12***	.20***	.15***	.17***	.07*	(.70/.89)	.04	.13**	.05	-.05	.05	-.06	.07	.02
8 Working hours	7.89	2.18	60.7	.03	.17***	.04	-.01	.00	-.04	.04	--	-.11*	-.02	-.02	.05	.08	-.27***	.09*
Person-level																		
9 Age	44.25	11.17	--	--	--	--	--	--	--	--	--	--	-.28***	-.01	.05	-.00	-.07	.44***
10 Childcare (0-13) ^a	0.26	0.44	--	--	--	--	--	--	--	--	--	--	--	.11*	.05	-.05	.07	-.11**
11 Childcare (14-18) ^a	0.12	0.33	--	--	--	--	--	--	--	--	--	--	--	--	.04	-.04	.07	-.00
12 Eldercare ^a	0.13	0.34	--	--	--	--	--	--	--	--	--	--	--	--	--	.02	.03	.06
13 Job autonomy	3.11	1.00	--	--	--	--	--	--	--	--	--	--	--	--	--	(.87)	-.09*	.03
14 Gender ^b	0.63	0.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-.07
15 Organizational tenure	10.91	10.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Note. Level 1 *N* = 3,164; Level 2 *N* = 608. PLIW = Personal life interference with work. WIPL = Work interference with personal life. PLEW = Personal life enhancement of work. WEPL = Work enhancement of personal life. BSW = Boundary strength at work. BSH = Boundary strength at home. ICC(1) = Percentage of variance at the person-level. Reliability estimates (α), where available, are shown in parentheses along the diagonal; when two values are presented, the first value refers to the day-level (Level 1), the second refers to the person-level (Level 2). When estimating day-level correlations (Level 1), stable between-person differences were controlled for at Level 2.

^a 0 = no, 1 = yes; ^b 0 = male, 1 = female.

* *p* < .05. ** *p* < .01. *** *p* < .001.

Table 4

Unstandardized Coefficients of the MSEM Model 1 for Testing Main and Mediation Effects on Interference and Enhancement (Study 2)

Effect type	Coefficient	SE	95% CI
Between-person effects			
Slopes			
b_1 : Age → PLIW	-0.011***	0.003	[-0.017, -0.005]
b_2 : Age → WIPL	-0.005	0.003	[-0.012, 0.002]
b_3 : Age → PLEW	0.007*	0.004	[0.001, 0.014]
b_4 : Age → WEPL	0.008*	0.004	[+0.000, 0.015]
b_5 : Age → Boundary strength at work	0.008*	0.004	[+0.000, 0.010]
b_6 : Age → Boundary strength at home	0.002	0.004	[-0.006, 0.010]
b_7 : Boundary strength at work → PLIW	-0.262***	0.036	[-0.332, -0.192]
b_8 : Boundary strength at home → WIPL	-0.232***	0.039	[-0.309, -0.155]
b_9 : Boundary strength at work → PLEW	0.193***	0.044	[0.106, 0.280]
b_{10} : Boundary strength at home → WEPL	0.089*	0.037	[0.017, 0.161]
Indirect effects (mediation paths)			
b_{11} : Age → Boundary strength at work → PLIW	-0.002*	0.001	[-0.004, -0.000]
b_{12} : Age → Boundary strength at home → WIPL	_a	_a	_a
b_{13} : Age → Boundary strength at work → PLEW	0.002*	0.001	[+0.000, 0.003]
b_{14} : Age → Boundary strength at home → WEPL	_a	_a	_a
Variances			
Age	124.603***	5.058	[114.689, 134.517]
Residual variances			
PLIW	0.436***	0.037	[0.363, 0.508]
WIPL	0.562***	0.043	[0.479, 0.646]
PLEW	0.568***	0.039	[0.491, 0.645]
WEPL	0.654***	0.038	[0.579, 0.728]
Boundary strength at work	0.727***	0.047	[0.634, 0.819]
Boundary strength at home	0.795***	0.052	[0.694, 0.897]

Within-person effects

Slopes

b_{15} : Boundary strength at work → PLIW	-0.110***	0.019	[-0.146, -0.073]
b_{16} : Boundary strength at home → WIPL	-0.062*	0.025	[-0.111, -0.012]
b_{17} : Boundary strength at work → PLEW	0.052***	0.021	[0.011, 0.094]
b_{18} : Boundary strength at home → WEPL	0.039	0.022	[-0.004, 0.083]
Residual variances			
PLIW	0.296***	0.018	[0.261, 0.331]
WIPL	0.439***	0.025	[0.390, 0.488]
PLEW	0.479***	0.026	[0.427, 0.530]
WEPL	0.378***	0.020	[0.339, 0.417]
Boundary strength at work	0.603***	0.032	[0.541, 0.666]
Boundary strength at home	0.400***	0.024	[0.354, 0.446]

Note. Level 1 $N = 3,164$; Level 2 $N = 608$. *SE* = Standard error; *CI* = Confidence interval. PLIW = Personal life interference with work. WIPL = Work interference with personal life. PLEW = Personal life enhancement of work. WEPL = Work enhancement of personal life. MSEM = multilevel structural equation modeling. Child- and eldercare commitments (person-level), working hours (person- and day-level), job autonomy, gender, and organizational tenure (person-level), and measurement point (day-level) are controlled for in the analyses but not listed for clarity of presentation.

^a Indirect path was not estimated because the effect age → boundary strength at home was not significant.

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

Table 5

Unstandardized Coefficients of the MSEM Model 2 for Testing Main and Mediation Effects on Work-Nonwork Boundary Strength and Work-Nonwork Interference and Enhancement via Boundary Management Strategies (Study 2)

Effect type	Coefficient	SE	95% CI
Between-person effects			
Slopes			
b_1 : Age → Boundary strength at work	0.002	0.004	[-0.005, 0.010]
b_2 : Age → Boundary strength at home	-0.003	0.004	[-0.010, 0.005]
b_3 : Age → Boundary management strategies	0.013***	0.004	[0.006, 0.021]
b_4 : Boundary management strategies → Boundary strength at work	0.526***	0.060	[0.409, 0.643]
b_5 : Boundary management strategies → Boundary strength at home	0.347***	0.062	[0.226, 0.469]
b_6 : Boundary management strategies → PLIW	0.172***	0.047	[0.080, 0.264]
b_7 : Boundary management strategies → WIPL	0.187***	0.056	[0.078, 0.297]
b_8 : Boundary management strategies → PLEW	0.182***	0.065	[0.055, 0.309]
b_9 : Boundary management strategies → WEPL	0.103	0.059	[-0.012, 0.218]
b_{10} : Boundary strength at work → PLIW	-0.299***	0.044	[-0.386, -0.212]
b_{11} : Boundary strength at home → WIPL	-0.257***	0.043	[-0.341, -0.173]
b_{12} : Boundary strength at work → PLEW	0.141**	0.052	[0.040, 0.243]
b_{13} : Boundary strength at home → WEPL	0.091*	0.037	[0.018, 0.164]
Indirect effects (mediation paths)			
b_{14} : Age → Boundary management strategies → Boundary strength at work	0.007**	0.002	[0.003, 0.011]
b_{15} : Age → Boundary management strategies → Boundary strength at home	0.005**	0.002	[0.002, 0.008]
Variances			
Age	124.603***	5.058	[114.689, 134.517]
Residual variances			
Boundary strength at work	0.562***	0.045	[0.474, 0.650]
Boundary strength at home	0.725***	0.050	[0.627, 0.823]
Boundary management strategies	0.581***	0.041	[0.500, 0.662]
PLIW	0.430***	0.035	[0.361, 0.499]
WIPL	0.540***	0.039	[0.463, 0.617]
PLEW	0.557***	0.039	[0.481, 0.633]
WEPL	0.652***	0.038	[0.577, 0.726]

Within-person effects			
Slopes			
b_{16} : Boundary management strategies → Boundary strength at work	0.193***	0.032	[0.131, 0.254]
b_{17} : Boundary management strategies → Boundary strength at home	0.059*	0.026	[0.007, 0.110]
b_{18} : Boundary management strategies → PLIW	0.060**	0.019	[0.017, 0.102]
b_{20} : Boundary management strategies → WIPL	0.119***	0.029	[0.061, 0.176]
b_{19} : Boundary management strategies → PLEW	0.185***	0.028	[0.130, 0.240]
b_{21} : Boundary management strategies → WEPL	0.127***	0.026	[0.077, 0.177]
b_{22} : Boundary strength at work → PLIW	-0.109***	0.022	[-0.145, -0.072]
b_{23} : Boundary strength at home → WIPL	-0.064*	0.025	[-0.112, -0.015]
b_{24} : Boundary strength at work → PLEW	0.049*	0.021	[0.008, 0.089]
b_{25} : Boundary strength at home → WEPL	0.037	0.022	[-0.006, 0.080]
Variances			
Boundary management strategies	0.491***	0.029	[0.435, 0.547]
Residual variances			
Boundary strength at work	0.589***	0.031	[0.528, 0.649]
Boundary strength at home	0.398***	0.023	[0.352, 0.444]
PLIW	0.295***	0.018	[0.260, 0.330]
WIPL	0.433***	0.024	[0.385, 0.481]
PLEW	0.461***	0.025	[0.413, 0.649]
WEPL	0.370***	0.019	[0.332, 0.407]

Note. Level 1 $N = 3,164$; Level 2 $N = 608$. *SE* = Standard error; *CI* = Confidence interval. PLIW = Personal life interference with work. WIPL = Work interference with personal life. PLEW = Personal life enhancement of work. WEPL = Work enhancement of personal life. MSEM = multilevel structural equation modeling. Child- and eldercare commitments (person-level), working hours (person- and day-level), job autonomy, gender, and organizational tenure (person-level), and measurement point (day-level) are controlled for in the analyses but not listed for clarity of presentation.

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

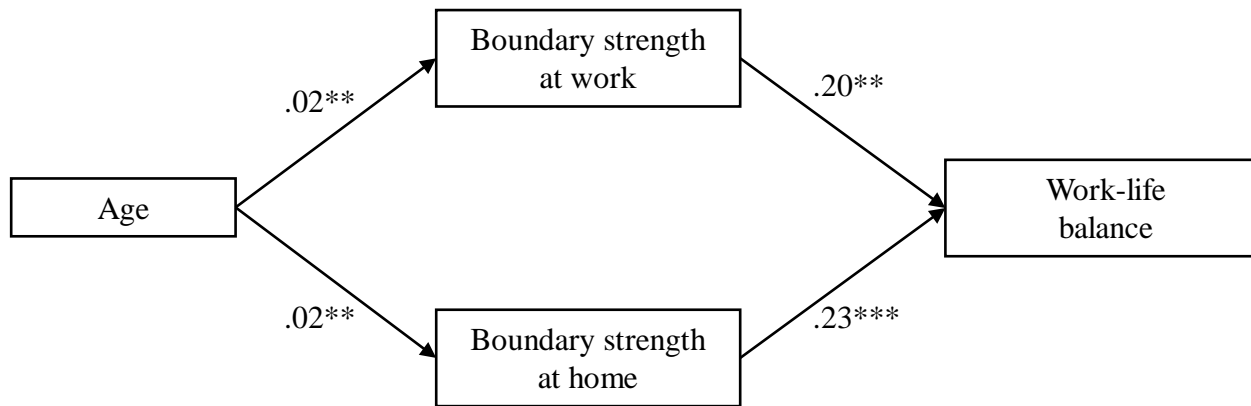


Figure 1. Final path model (Study 1) with unstandardized coefficient estimates. Direct effects were estimated, but they are not shown for clarity of presentation. $** p < .01$. $*** p < .001$.

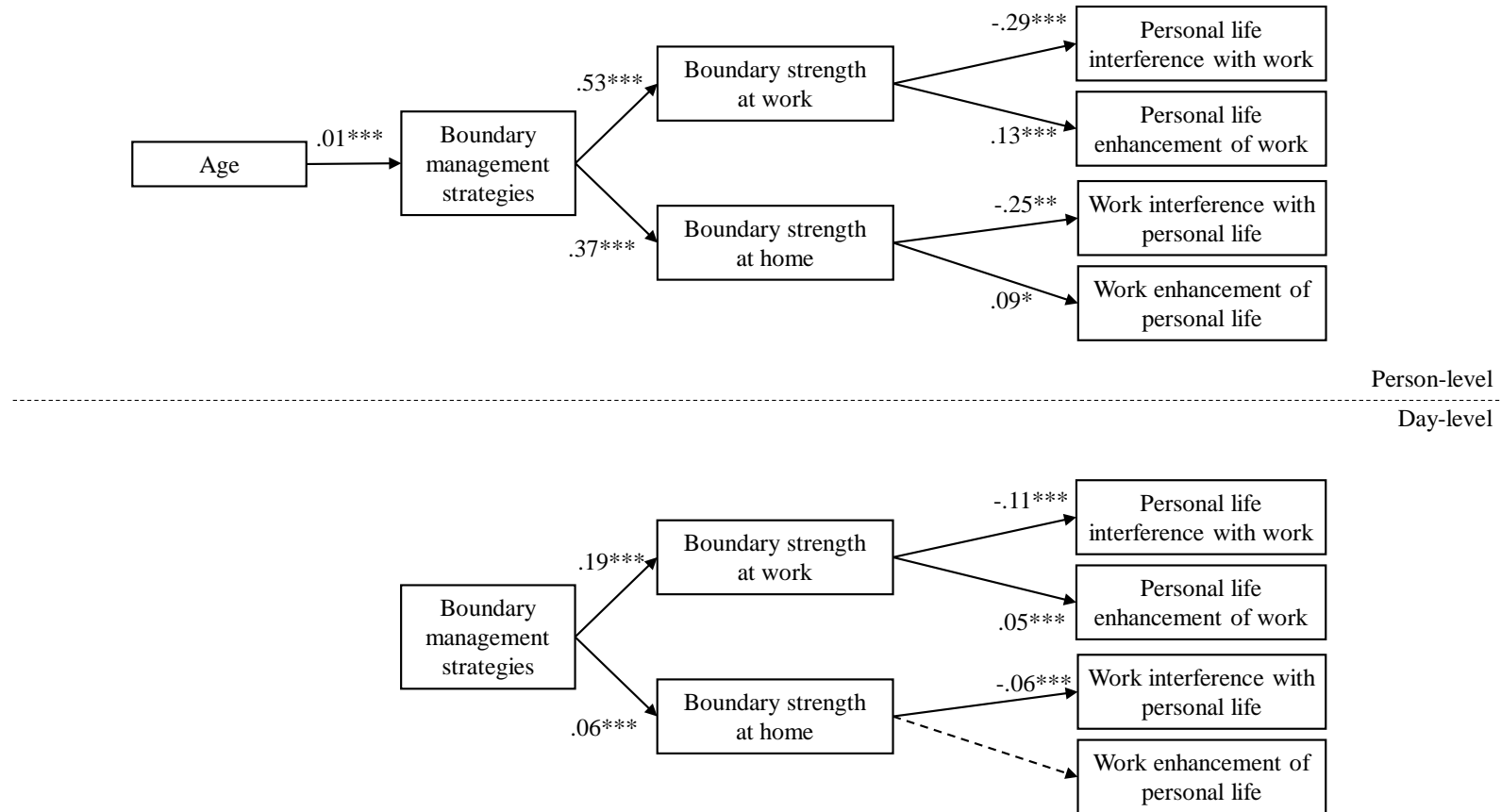


Figure 2. Final multilevel structural equation model (Study 2) with unstandardized coefficient estimates. Both day-level and person-level relationships were estimated simultaneously. The dotted line represents a non-significant relationship. Direct effects were estimated, but they are not shown for clarity of presentation. * $p < .05$. ** $p < .01$. *** $p < .001$.

Appendix

Multilevel Confirmatory Factor Analysis Results: Items and Loadings on their Respective Latent Factors (Study 2)

Item	Person- Level	Day- Level
Boundary management strategies		
Today, I tried to not think about my family or friends when at work, so I can focus.	.715	.536
I tended not to talk about work issues with my family today.	.761	.620
Today, I actively strived to keep my family and work life separate.	.731	.604
Strength of boundary at work (BSW)		
I forgot about private matters while I was at work today.	.841	.697
Private issues did not pop up for me while I was at work today.	.833	.821
I left private issues behind when I went to work today.	.891	.782
Strength of boundary at home (BSH)		
I forgot about work while I was at home last night.	.916	.526
Work matters stayed at work last night.	.905	.621
I left work behind when I went home last night.	.902	.580
Personal life interference with work (PLIW)		
Today, my personal life drained me off the energy I would have needed to do my job.	.751	.471
Today, I would have devoted more time to work if it weren't for everything I have going on in my personal life.	.749	.482
When I was at work today, I worried about things I needed to do outside work.	.693	.428
Personal life enhancement of work (PLEW)		
I was in a better mood at work today because of everything I have going for me in my personal life.	.736	.572
Today, my personal life gave me the energy to do my job.	.831	.679
My personal life helped me relax and feel ready for today's work.	.789	.611
Work interference with personal life (WIPL)		
Today, my job made it difficult to maintain the kind of personal life I would have liked.	.834	.636
I neglected my personal needs because of the demands of my work today.	.846	.637
Today, my personal life suffered because of my work.	.871	.585
Work enhancement of personal life (WEPL)		
Today, my job gave the energy to pursue activities outside of work that are important to me.	.828	.517
Because of my job, I was in a better mood at home today.	.859	.554
The things I do at work helped me deal with personal and practical issues at home today.	.823	.505