Objective work–nonwork conflict: From incompatible demands to decreased work role performance☆

Sascha Haua,⁎, Holger Steinmetzb, Christian Dormanna

a Department of Work and Organizational Psychology, University of Mainz, Germany
b Department of Work and Organizational Psychology, University of Giessen, Germany

ABSTRACT

Research on work–nonwork conflict (WNC) is based on the assumption that incompatible demands from the work and the nonwork domain hamper role performance. This assumption implies that role demands from both domains interact in predicting role performance, but research has been largely limited to main effects. In this multi-source study, we analyze the incompatibility of demands by testing the interaction of work and nonwork demands on task performance and organizational citizenship behavior (OCB). The sample consisted of 61 employees of a German hospital and we used three independent sources of data: self-ratings of work demands, partner-ratings of nonwork demands, and colleague-ratings of performance. Results from hierarchical regression analyses revealed an interaction effect of work and nonwork demands on OCB, but not on task performance. We conclude that people maintain their effort invested in task-related aspects of the job even when conflicts between work and nonwork demands exist, but that they reduce their investment in activities that are perceived as more marginal and extra-role.

© 2011 Elsevier Inc. All rights reserved.

Keywords:
Work–nonwork conflict
Performance
OCB
Demands
Interaction

One of the most difficult challenges for working people today is to combine work and nonwork life in a satisfying way. Research investigating difficulties to combine work and nonwork (Amstad, Meier, Fasel, Elfering, & Semmer, 2011; Rice, Frone, & McFarlin, 1992) has revealed negative consequences such as psychological strain or turnover intentions, and has also stressed the importance of understanding and preventing the conflict between work and nonwork (work–nonwork conflict; WNC). Scholars have focused on the conflict between work and family roles (Fisher, Bulger, & Smith, 2009) and have identified two directions of conflict (i.e., work-to-nonwork vs. nonwork-to-work conflict; cf. Mesmer-Magnus & Viswesvaran, 2005). The prominent view on the emergence of WNC is that the incompatibility of demands from different life domains (e.g., work and nonwork) creates a conflict resulting in the impairment of role performance in one or both domains (Edwards & Rothbard, 2000). Consequently, research examined the effects of role demands in the work and nonwork domains on perceived WNC and found that high demands were associated with more conflict (Michel et al., 2011).

Whereas previous studies showed relations between role demands and other work and nonwork characteristics on one hand and WNC on the other hand, little is known about the interaction of work and nonwork demands. This is surprising given that WNC is defined as resulting from mutually incompatible demands of both domains (Edwards & Rothbard, 2000; Greenhaus & Beutell, 1985). Similarly, theoretical models of WNC do not propose interaction effects of demands (e.g., Frone, Russell, & Cooper, 1992; Frone, Yardley, & Markel, 1997; Kopelman, Greenhaus, & Connolly, 1983; Michel, Mitchelson, Kotrba, LeBreton, & Baltes, 2009). Likewise, empirical studies have not considered that only interactions of demands that compete for scarce resources will induce a conflict (Moen, Kelly, & Huang, 2008; Shamir, 1983; Voyer, 1988).
A related issue is that most of the studies examined perceived WNC—that is, the amount of experienced conflict or interference between the work and the nonwork domain. Perceived WNC contains the perception of an impairment of performance attributed to causes emerging in the other domain. For instance, a person may perceive difficulties to attend to work and may then attribute these difficulties to nonwork demands (e.g., child care, household chores). This attribution represents a constituting part of the concept of perceived WNC. In contrast, objective WNC as we understand it is given when the combination of high incompatible work and nonwork demands leads to a decrease in role performance. The objective side of WNC, however, has rarely been investigated.

In this multi-source study we address these gaps and test the interaction between incompatible work and nonwork demands on different facets of work performance. We thereby contribute to the literature in several ways. First, we add to the few studies on WNC that have examined interaction effects of demands. We will go beyond previous studies and test the interaction of work and nonwork demands that compete for scarce resources by measuring demands on time and energy in terms of workrole. Second, we follow the call for a more objective conceptualization of WNC (e.g., Allen, Herst, Bruck, & Sutton, 2000). That is, we conceptualize WNC as incompatible demands resulting in decreased role performance. Using a multi-source design, we measure demands and work role performance by reports of relevant others in the work and in the nonwork domain (spouse, colleague) to reduce the potential impact of omitted common sources of demands and performance (e.g., negative affectivity, social desirability). Third, we focus on the nonwork-to-work direction of WNC and investigate the effects of incompatible work and nonwork demands on task performance and organizational citizenship behavior (OCB; Organ, 1997), that is, performance going beyond task performance as the fulfillment of tasks central to a job. Therefore, to our knowledge we provide the first study that reports effects of conflicting work and nonwork demands on both task performance and OCB.

1. Interaction effects of work and nonwork demands

Most definitions of conflict between work and nonwork refer to the incompatibility of demands that occur in the work and nonwork domain. The main rationale of this view is that conflict is based on limited resources such as time or energy that are needed to meet demands in both domains (Carlson & Grzywacz, 2008). By definition, WNC exists when mutually incompatible demands arising from one’s work and nonwork roles make it more difficult to meet those demands (Edwards & Rothbard, 2000; Greenhaus & Beutell, 1985). We understand mutually incompatible demands as a set of work and nonwork demands that draw on the same resources. That is, meeting the demands in one domain reduces the amount of the resources left to meet the demands of the other domain. For example, when a conflict with the partner at home has drained emotional resources, emotion regulation in service interactions with difficult customers at work becomes more difficult. As a result of resources drained by nonwork demands, role performance in the work domain should be hampered. This reasoning is in line with a scarcity approach (Marks, 1977).

However, it is crucial that demands are mutually incompatible for scarcity mechanisms to take effect. Greenhaus and Beutell (1985), for example, proposed that demands from work and family have to be in temporal proximity to arouse WNC. This proposition implies that mutually incompatible demands either draw on scarce time as common resource, or—because of their simultaneity or immediate succession—draw on the same psychological or physical resources like attention or energy that need time for recovery to be replenished (e.g., Sonnentag & Nieslen, 2008).

When both work demands and nonwork demands are low, there is no conflict. Furthermore, when work demands are high and nonwork demands are low, there is no conflict either because without nonwork demands there cannot be conflicting demands. This also applies for the reversed case that nonwork demands are high and work demands are low. Only if demands in both domains are high, conflict could emerge (cf. Greenhaus & Beutell, 1985). Hence, work demands and nonwork demands do not simply add when it comes to a conflict; rather the effect of nonwork demands on conflict is conditional upon the amount of work demands (and vice versa). Statistically, this reflects an interaction effect.

To theorize about how mutually incompatible work and nonwork demands interactively impair role performance, WNC should be regarded as a process, containing two components. First, there is the conflict between mutually incompatible demands; second there is the interference as a consequence of this conflict, namely hampered role performance in at least one of the domains (Carlson & Grzywacz, 2008). This process, leading from mutually incompatible demands to hampered role performance implies an interaction effect between incompatible demands on performance. For example, nonwork demands draw on abstract resources like time or on psychological resources like attention or energy which are all needed for meeting work demands (Kanfer & Ackerman, 1989). Given that resources are limited, attempts to meet demands in one domain should deplete and, thus, reduce the availability of these resources in the other domain. As a result, performance is decreased either quantitatively (e.g., increased duration of task fulfillment) or qualitatively (e.g., more errors).

There are only a few studies which examined interaction effects between work and nonwork (Moen et al., 2008; Shamir, 1983; Vovdanoff, 1988). However, none of these studies considered incompatible demands. Rather, these studies were interested in interaction effects between various work and family characteristics. For example, the interaction effects of variables like role ambiguity at work on the one hand and age of the youngest child on the other hand were analyzed (Vovdanoff, 1988). However, work and family characteristics do not necessarily compete for the same scarce resources. This might explain why these studies found either no interactions or not as many interactions as initially expected. Time-based incompatibility was, however, examined by Fox and Dwyer (1999). These authors tested interaction effects of time and involvement in one domain and stressors in the same or in the other domain on perceived conflict between work and family and found several interactions. These findings support the notion that the effect of stressors in one domain on perceived conflict between work and family is aggravated by the amount of time and involvement spent on the other domain. Because the authors asked for the actual spent time, not for demands on time, it
is still to be answered if the demands on time alone can cause conflict. In addition, Fox and Dwyer (1999) used perceived conflict between work and family as the dependent variable and not actual role performance.

### 2. Subjective versus objective conflict

In addition to examining interactions between work and nonwork demands, a second goal of our study is to examine the consequences of objective WNC instead of perceived WNC. Therefore, we analyze if incompatible demands are associated with actual role performance. This adds to extant research on WNC, which has conceptualized and measured WNC as the perceived conflict of an individual between work and nonwork. (e.g., Carlson, Kacmar, & Williams, 2000; Fisher et al., 2009). Research following this approach has produced valuable insights into what factors cause people to perceive their work and nonwork domains as conflicting. Several meta-analyses focused in detail on the antecedents and outcomes of perceived work-to-family conflict and family-to-work conflict (e.g., Allen et al., 2000; Amstad et al., 2011; Byron, 2005; Ford, Heininen, & Langkamer, 2007; Mesmer-Magnus & Viswasvaram, 2005). Michel et al. (2011) further showed that the two conflict directions are differentially predicted by various work and family domain variables. However, they acknowledged the subjectivity of the WNC concept.

As we examine role performance at work as outcome of conflict, our approach may be seen as the objective version of WNC. Because there is a lack of knowledge regarding the objective link from conflict (incompatible demands) to interference (hampered role performance), considering the objective side of WNC will lead to a more comprehensive picture of WNC beyond the perception of the individual (see Frese & Zapf, 1999, for the importance of investigating objective conditions). We have already described that conflict is an antecedent of interference in the WNC process. In our study we will examine the objective association of incompatible demands (i.e., work–nonwork conflict) with actual work role performance (i.e., work–nonwork interference). To our knowledge, this objective association has not been examined before.

### 3. The effect of incompatible demands on performance outcomes at work

Role performance is the most central outcome of WNC, because both, perceived as well as objective WNC, focus on the possibilities or restrictions to fulfill role demands. Hence, when considering the work domain, task performance as a person’s required in-role performance has been the primary focus of possible interferences. In this regard, research shows a negative relation between perceived WNC and task performance (Allen et al., 2000; Dorio, Bryant, & Allen, 2008).

According to our reasoning regarding the interaction of demands, nonwork demands should only hamper performance at work if there is an immanent conflict about the resources between the two roles. The higher the performance expectations at work (i.e. work demands), the more can nonwork demands affect task performance at work by drawing on the energy needed to meet the expectations. Research delivers some hints that a potentially demanding nonwork responsibility like having young children is not detrimental to work performance (e.g., Campbell, Campbell, & Kennard, 1994). However, research in this area is limited as most studies that examined the effects of nonwork demands on the role work used perceived nonwork-to-work conflict as an outcome instead of an objective measure of job performance. Nonwork demands can take up time and other resources like energy—which Hockey (1997) conceptualizes as effort—or attention (Kanfer & Ackerman, 1989) needed to perform at work tasks. This may also take place during work time when people get mentally distracted by thoughts about nonwork demands (Carlson & Frone, 2003). Nonwork demands may also indirectly restrict resources for meeting work demands by hampering effective recovery during nonwork time (Fritz, Sonnentag, Spector, & McInroe, 2010). According to Hockey (1997) people use different strategies to compensate for scarce resources. This explains why nonwork demands do not necessarily have main effects on task performance at work. Compensation for resources spent on nonwork demands, or compensation for insufficient recovery will get increasingly difficult with higher work demands. If people come to work, feeling tired and exhausted because of household chores they had to do until late at night, they can compensate if their work tasks do not demand much energy or attention. However, with higher work demands, compensation for deprived resources should be less successful (cf. Hockey, 1997). In our study we will thus test the following hypothesis:

**Hypothesis 1.** Work and nonwork demands interact in their effect on task performance in such a way that with increasing work demands the relation between nonwork demands and task performance turns more negative.

Scholars have incorporated a broader conceptualization of work performance, including all kinds of citizenship performance (Purvanova, Bono, & Dziewczynski, 2006) which we subsume under the term OCB (Organ, 1997). Whereas task performance is defined as the proficiency with which core tasks of one’s job are performed, OCB encompasses behaviors that help to provide the context in which core tasks can be fulfilled (Borman, 2004). There are only a few studies that have examined the relation between perceived WNC and OCB. This relation has generally turned out as negative (Amstad et al., 2011; Dorio et al., 2008). Analogous to research on the WNC-task performance relation, however, there are no results regarding the effect of mutually incompatible demands on OCB. To our knowledge, there are also no studies that examined the direct influence of nonwork demands on OCB at work. Thus, in addition to extant research, our study explicitly investigates OCB as a further outcome of objective WNC. We follow Purvanova et al. (2006) and examine the OCB component **organization role performance** (i.e., citizenship behaviors that promote the effectiveness of the organization). In addition, we examine **team role performance** (i.e., behaviors that promote team effectiveness), and **innovator role performance** (i.e., being creative in favor of the organization) as further important OCB components (Welbourne, Johnson, & Erez, 1998).
OCB components should depend on mechanisms similar to those we proposed for task performance: when nonwork demands are high, they can take up time, energy, and attention needed to do more than just fulfill the necessary duties at work. However, as long as work demands are low, people might still have enough resources to concentrate on OCB performance despite their nonwork demands. Thus, it is the combination of high work and high nonwork demands that hinders people to put effort into additional work activities like OCB. Thus, analogous to Hypothesis 1, we propose the following:

**Hypothesis 2.** Work and nonwork demands interact in their effect on OCB in such a way that with increasing work demands the relation between nonwork demands and OCB turns more negative.

### 4. Method

#### 4.1. Sample

In this multi-source study, we collected self-reports from employees of a German hospital as well as peer ratings by their partners and colleagues. Our sample consisted of 61 employees. 44 of our participants were female and mean age was 42.93 years ($SD = 10.73$), ranging between 19 and 60 years. Participants worked in all kinds of medical professions comprising nurses, different kinds of therapists, psychologists and medical doctors with nurses being the largest group. Originally, self-report questionnaires were administered to 375 employees of the hospital. Along with the self-report questionnaires all participants received a questionnaire, which they should hand to their partner and a questionnaire which they should hand to a colleague who is familiar with the working situation of the focal person. Self-report questionnaires were returned by 124 persons. For 61 of them we had full data sets with questionnaires from both a partner and a colleague and without missing data. The participants of our final sample did not differ significantly from the excluded participants in any of the examined variables.

#### 4.2. Measures

##### 4.2.1. Work demands

We used three items from the Quantitative Workload Inventory (Spector & Jex, 1998) that were measured via self-ratings of the focal employees. A sample item is “How often is there a great deal to be done?”. Answers were made using a five-point rating scale ranging from 1 (less than once per month) to 5 (several times per day). Cronbach’s alpha was .88.

##### 4.2.2. Nonwork demands

Nonwork demands were measured with 11 items from the Family Daily Hassles Inventory (Rollins, Garrison, & Pierce, 2002). The partners of the focal persons were asked to indicate how much time and energy are demanded from the focal persons per day for specific duties. Despite its name, the measure is not confined to demands arising in the traditional nuclear family. Only two items refer to demands related to children and only one item refers to demands associated with the partner. Example items are “relationship with friends”, “household chores” or “transportation and traffic”. Answers were given on a five-point rating scale ranging from 1 (none) to 5 (a great deal). Cronbach’s alpha was .85.

##### 4.2.3. Work role performance

Task performance and OCB were measured with scales by Welbourne et al. (1998). All work role performance ratings were provided by a colleague of the focal employee on a five-point rating scale ranging from 1 (needs much improvement) to 5 (excellent). *Task performance* was measured with four-items. A sample item is “Quality of work output”. Cronbach’s alpha for this scale was .92. *OCB* was measured with three scales that concern the employee’s (1) organization role performance (e.g., “Working for the overall good of the hospital”), (2) team role performance (e.g., “Working as part of a team or work group”), and (3) innovator role performance (e.g., “Creating better processes and routines”). Cronbach’s alpha coefficients were .89 for the organization role performance sub-scale, .94 for the team role sub-scale, and .92 for the innovator role sub-scale.

##### 4.2.4. Control variables

We used age and gender as control variables because both variables have been related to performance ratings before and demands might differ for different age groups or men and women. Gender was coded as 0 for men and 1 for women; age was reported as age in years.

### 5. Results

We used hierarchical regression analyses to test our hypotheses. In Step 1, we entered the control variables age and gender; in Step 2 we entered the mean-centered predictors nonwork demands and work demands (Aiken & West, 1991). In Step 3, we entered the product term of the predictor variables. In case of significant interaction effects we conducted simple slope analyses to test for the significance of the work demands–performance relation at specific levels of nonwork demands ($ \pm 1 SD$). The simple slope analyses were conducted by employing the IRSE tool (Meier, 2008).
Table 1 displays the means, standard deviations, and zero-order correlations of all study variables. The table shows that only the performance scales correlated significantly. Neither the work and nonwork demands nor the control variables were significantly correlated with each other or the performance scales.

Results of the hierarchical regression analyses are presented in Table 2. In support of Hypothesis 2, we found interaction effects between work and nonwork demands on all three OCB components. Figs. 1 to 3 show the plots of the significant interaction effects on these OCB components (Aiken & West, 1991). Contrary to Hypothesis 1 that proposed an interaction of demands on task performance, we found no significant interaction effect.

In addition to analyses of interaction effects, we conducted simple slope analyses (cf. Aiken & West, 1991). The analyses revealed that the slope of nonwork demands at a high level of work demands (+1 SD) was significant for organization role performance as outcome ($\beta = -.02$, $t = 1.90$, $p < .05$) and for team role performance as outcome ($\beta = -.03$, $t = 1.76$, $p < .05$), whereas it was not significant for innovator role performance as outcome. However, for innovator role performance, the slope for nonwork demands at a low level of work demands ($-1$ SD) was significantly positive ($\beta = .15$, $t = 2.07$, $p < .05$), whereas for all other performance outcomes the respective slopes were not significant.

### 6. Discussion

This study examined the effects of incompatible work and nonwork demands on task performance and OCB. Research on main effects of demands on the perceived conflict between work and nonwork domains has dominated the field for a long time. In contrast, we added to existing research by examining interaction effects of self-reported work demands and partner-reported nonwork demands at a low level of work demands ($-1$ SD) was significantly positive ($\beta = .05$, $t = 2.07$, $p < .05$), whereas for all other performance outcomes the respective slopes were not significant.

### Table 2

Results of hierarchical regression analyses.

<table>
<thead>
<tr>
<th>Step and measure</th>
<th>Task performance</th>
<th>Organization role performance</th>
<th>Innovator role performance</th>
<th>Team role performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>SE B</td>
<td>B</td>
<td>SE B</td>
<td>B</td>
</tr>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.01</td>
<td>.01</td>
<td>-.19</td>
<td>.01</td>
</tr>
<tr>
<td>Gender</td>
<td>.21</td>
<td>.01</td>
<td>.15</td>
<td>.01</td>
</tr>
<tr>
<td>ΔR² = 5.95%</td>
<td>ΔF = 1.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.01</td>
<td>.01</td>
<td>-.17</td>
<td>.01</td>
</tr>
<tr>
<td>Gender</td>
<td>.25</td>
<td>.01</td>
<td>.17</td>
<td>.01</td>
</tr>
<tr>
<td>Nonwork demands</td>
<td>.03</td>
<td>.13</td>
<td>.03</td>
<td>.15</td>
</tr>
<tr>
<td>Work demands</td>
<td>.07</td>
<td>.08</td>
<td>.11</td>
<td>.12</td>
</tr>
<tr>
<td>ΔR² = 1.19%</td>
<td>ΔF = .36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.01</td>
<td>.01</td>
<td>-.14</td>
<td>.01</td>
</tr>
<tr>
<td>Gender</td>
<td>.21</td>
<td>.01</td>
<td>.15</td>
<td>.01</td>
</tr>
<tr>
<td>Nonwork demands</td>
<td>.01</td>
<td>.13</td>
<td>.01</td>
<td>.10</td>
</tr>
<tr>
<td>Work demands</td>
<td>.07</td>
<td>.08</td>
<td>.11</td>
<td>.11</td>
</tr>
<tr>
<td>Nonwork demands × work demands</td>
<td>-.12</td>
<td>.13</td>
<td>-.13</td>
<td>-.41</td>
</tr>
<tr>
<td>ΔR² = 1.14%</td>
<td>ΔF = .08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>R² = 8.55%</td>
<td>F = 1.03</td>
<td>R² = 20.48%</td>
<td>F = 2.83</td>
</tr>
</tbody>
</table>

Note. For Step 1, df = 2, 15; Step 2, df = 2, 14; Step 3, df = 1, 15; Overall, df = 5, 15.
* $p < .05$.
** $p < .01$ (two-tailed).
nonwork demands on performance at work as reported by a colleague. The results showed interaction effects between work and nonwork demands on the OCB facets organization role performance, innovator role performance, and team role performance, but not on task performance. Furthermore, simple slope analyses revealed that nonwork demands were negatively associated with the OCB components organization role performance and team role performance only when work demands were high. Beyond the statistical significance, the interaction effect was substantial and explained more than 10% additional variance in colleague-reported OCB performance.

Task performance was not affected by incompatible demands. The fact that there were only interaction effects on OCB supports the assumption that people under multiple role pressures tend to cut back on more discretionary behavior (i.e., OCB) to save scarce time and energy for activities more central to a role (e.g., Allen et al., 2000). It has already been shown that people under high workload tend to fulfill their central tasks, but at the cost of a cutback of effort in subsidiary or secondary tasks (Hockey, 1997). Allen et al. (2000) proposed that people facing conflicting demands and thus having to decide for which activities they should spend their scarce resources should tend to fulfill their core task requirements and rather save their resources on more discretionary activities like OCBs. Although OCB may not be entirely discretionary (Vey & Campbell, 2004), OCB behaviors should generally have lower priority than meeting core task demands. Jex and Thomas (2003) reasoned that role overload makes people concentrate on reducing this role overload, resulting in less time and fewer possibilities to engage in OCB behaviors like altruism towards one's group members. As task performance represents the core aspects of one's job (Borman, 2004), people under high demands from both work and nonwork cut back their efforts in more discretionary behaviors like OCB in order to save time and energy to fulfill their core duties. This reasoning is also in line with role balance theory (Carlson, Witt, Zivnuska, Kacmar, & Grzywacz, 2008). According to this theory, people will limit their activities in more discretionary tasks and give priority to core tasks if they feel that their role balance is threatened. By this strategy of narrowing the focus on central role activities people can still maintain a reasonable engagement in the work domain, even if incompatible demands suggest the decision for one domain.

**Fig. 1.** Interaction effect of work demands and nonwork demands on organization role performance.

**Fig. 2.** Interaction effect of work demands and nonwork demands on innovator role performance.
Our finding that task performance was not affected by incompatible demands might also be related to the validity of colleague-ratings of task performance. Such ratings might be deficient because colleagues may not be aware of the goals a supervisor has set for the focal person. Therefore, what a colleague regards as the focal person’s assigned task may be more affected by what the colleague perceives what the focal person did rather than by what the focal person should have done. If WNC interferes with performing an assigned task, the focal person might engage in carrying out other, but less important tasks; colleagues would then not necessarily perceive that the performance in tasks more important to the supervisor was hampered. By this, an effect of WNC on task performance could have been obscured by our use of colleague ratings. Colleague-ratings of task performance might also be contaminated by nuisance, for example, by how much the rater likes the focal person. However, such effects were probably even stronger in OCB ratings.

Recently, subjective measures of WNC have been criticized for their potential overlap with antecedents like demands or outcomes like role performance (Boyar, Carr, Mosley, & Carson, 2007; MacDermid, 2005). As far as we know, our study is the first to examine the direct link between the interaction of work and nonwork demands and performance components as an objective approach to WNC. Edwards, Guppy, and Cockerton (2007) examined both the impact of work and nonwork stressors on job performance, but they did not test for interactions. Our study thus contributes to the knowledge about the objective side of WNC.

Our study further provides an add-on to the results by Fox and Dwyer (1999). Whereas these authors found interactions for the actual time spent for the work or the nonwork domain, we found interactions for mere demands (which may then cause the actual time spent). According to our results, it is not only important how much time actually is consumed by actions to meet demands, but the mere demands on time, attention, or energy are enough to elicit a conflict process.

The function of innovative behavior at work might help to explain why the result was not as clear as for the other OCB components: innovative behavior can be directed at coming up with solutions to reduce the overall workload. This result has been found for the concept of personal initiative at work which is conceptually similar to the concept of innovator role performance (Fay & Sonnentag, 2002; Ohly, Sonnentag, & Pluntke, 2006). Hence, people might not reduce their innovative efforts under pressure from both work and nonwork demands as much as they reduce other sorts of OCB. We also conducted additional simple slope analyses for innovator role performance. These analyses revealed that nonwork demands were positively associated with innovator role performance when work demands were low. This result might indicate a spillover of nonwork skills into the work domain (cf. Edwards & Rothbard, 2000). People facing high nonwork demands could have developed skills in their attempts to meet these demands. If work provides the opportunity, they use those skills under the condition of low work demands at work.

6.1. Limitations

Our study was subject to several limitations. First, our sample consisted of people in medical professions only, which might restrict generalizability. Fox and Dwyer (1999) also found their interaction effects in a medical sample, namely nurses. We believe that the importance of interactions between work and family is a common phenomenon which does not depend on certain work environments. However, future studies dealing with interactions between work and nonwork domains should try to empirically expand the validity of our results to other professions.

Second, our participants came from a single organization, which is definitely a problem for the generalization of our results. The small number of participants could be regarded as a limitation, too. However, against the background of problems to find interaction effects in the field (McClelland & Judd, 1993), we succeeded, and we did so despite using three different data sources, which avoided common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Hence, these results provide evidence for the substantiability of our interaction effects on OCB. The small sample size could have been the reason why we did not find evidence for an interaction effect on task performance. Future studies should use larger sample sizes to clarify this question.
Third, despite a high level of objectivity due to our use of multiple data sources, the cross-sectional design of the study does not allow for causal conclusions. Reverse causation, however, is less probable because we did not find any bivariate relations between performance components and demands. Nevertheless, only longitudinal studies or field experiments can finally answer the question of causality.

6.2. Implications

Our study results contribute to both theory and practice. On the one hand, the consideration of mutually incompatible effects advances theory towards a better understanding of the process underlying WNC. On the other hand, our results show how role demands from both work and nonwork jointly affect different performance outcomes. Our results might thus be helpful in designing work–life policies.

Future studies should extend our approach to more specific incompatible demands. In this article, we examined the role of incompatible demands mainly in terms of workload. Both demand measures tapped the question of how much time and energy was demanded. Our aim was not to establish a special case of incompatibility; we rather tried to examine a prototypical work–nonwork conflict. In future studies, it might be valuable to examine the interaction of demands that tap a specific resource. In the case of emotional demands from the work and the nonwork domain people need to employ emotional self-regulation. As we know that self-regulatory tasks tap self-regulation strength as a common, limited resource, the joint occurrence of these demands might elicit a conflict (e.g., Muraven & Baumeister, 2000). A basic argument of the scarcity approach to WNC is the scarcity of resources needed for meeting both work and nonwork demands. In our study we operationalized scarce resources indirectly by the joint occurrence of high work and high nonwork demands. To gain more direct evidence, future studies have to explicitly measure the resources in question.

Our approach to objective work–nonwork conflict is not only adequate for the testing of time-based or strain-based conflict in the vein of Greenhaus and Beutell (1985) where incompatibilities arise from the scarceness of resources such as time, attention, or self-regulation strength. Rather, future research should also investigate objective behavior-based conflict: behavioral expectations from different work and nonwork stakeholders can interactively cause a decrease in role performance if these expectations are not compatible. For example, the spouse’s wish for a warm-hearted and nurturing behavioral style might only be a problem for work role performance if the supervisor demands a directive leadership style, which poses the daily challenge to switch gears.

We have examined components of role performance at work as outcome variables. However, it might be possible that people under a conflict of demands are still able to compensate for scarce resources (Hockey, 1997). Therefore, future studies should also consider compensatory effort as an indicator for the costs associated with role performance. People who deal with incompatible and high work and nonwork demands, and who are still able to perform effectively should nevertheless show higher compensatory effort (Binnewies, Sonnentag, & Mojza, 2009). This might buffer detrimental interaction effects in the short run, but might lead to unwanted effects on health and performance in the long run. Because of this likely difference between short-term and long-term effects, we would like to encourage the use of different time frames in future studies.

We focussed on the influence of incompatible demands on work role performance. Thus, we have not measured role performance in the nonwork domain. Future studies might expand our approach to work-to-nonwork conflict by determining the impact of incompatible work and nonwork demands on nonwork role performance.

Future research should also try to answer the question under which conditions an objective conflict takes place. We know from research on subjective work–nonwork conflict that resources such as a family-friendly organizational culture (e.g., Grandey, Cordeiro, & Michael, 2007; Lapierre et al., 2008) as well as social support from supervisors or family members (Burke & Greenglass, 1999; Michel et al., 2011) can prevent the occurrence of such conflicts. Thus, three-way interactions are possible. For example empirical research should analyze if the combination of high work and nonwork demands is only detrimental for role performance under the condition of low supervisor support.

Our study also has important practical implications. The integration of interactions between work and nonwork demands into models of the work–nonwork interface can have important implications for the design of programs to reduce WNC and to improve work–life balance. HR managers should consider that high nonwork demands alone do not necessarily lead to decreased job performance, nor do high work demands alone. Thus, people under pressure from both work and nonwork are the ones to benefit most from such programs.

Further, our study results indicate that the implementation of work–life balance programs should not depend on the level of task performance. We have shown that OCB is the performance component to suffer the most from an objective WNC. Hence, HR managers should be aware that reduced OCB is a much better indicator than reduced task performance for problems to combine work and nonwork. When a reduction in task performance can be observed, this is probably due to a longer history of really severe incompatible demands which in the meantime might have eroded job morale and health.

References


