
COMBINING WORK AND HOME LIFE
SUCCESSFULLY:
An Investigation of
Antecedents, Processes, and Outcomes

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ABSTRACT

The challenge of completing an urgent task at work but being at home for dinner is a daily situation for many working adults. They search for an answer to the question how to combine work and home life successfully. This question is highly relevant as a successful integration of several life domains positively affects the well-being and behavior and has important consequences for family members as well as employers. This dissertation aimed to refine the theoretical understanding of the work-home interface and to provide extensive and detailed insights that can help to facilitate a healthy combination of work and home life. For this purpose, several assumptions derived from ten Brummelhuis and Bakker's work-home resources model were tested. A number of these assumptions could be confirmed drawing upon data from a meta-analysis and two ecological momentary assessment studies. The meta-analysis (Study I) showed that demands are related to mutual negative influences of the two domains (i.e., work-home conflict), whereas resources are associated with mutual positive influences (i.e., work-home enrichment). Consistently, positive interactions at work were correlated with more positive and less negative parenting behavior in Study III. This relationship was mediated by positive mood. Besides the confirmation of several assumptions, the analyses revealed result patterns that complement the underlying model. Contextual resources such as autonomy at work or social support at home were found to be related to less work-home conflict in Study I. The combination of Study II and Study III proposes that parents might be able to selectively prevent negative and enable positive effects of the work domain on the home domain. The integration of these results leads to the proposition of an extended work-home resources model that refines the existing theoretical knowledge. The dissertation furthermore provides a comprehensive view on the work-home interface by shedding light on antecedents, processes and outcomes and offers a basis for practical measures. The integrated findings suggest for instance that strengthening contextual as well as personal resources is promising for a successful combination of work and home life.

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LIST OF ABBREVIATIONS

COR theory	conservation of resources theory
EST	ecological system theory
H-t-W	home-to-work
JD-R theory	job demands–resources theory
WHC	work-home conflict
WHE	work-home enrichment
W-H R model	work-home resources model
W-t-H	work-to-home

1 INTRODUCTION

“How [may] individuals [...] simultaneously minimize negative and maximize positive outcomes of engaging in both work and family roles?” (Chen, Powell, & Greenhaus, 2009, p. 82). When we think of our own life, we will admit that there is no easy answer to this question. A range of diverse reasons makes the successful combination of work and home life to one of the greatest challenges that individuals, families, and organizations face in today's society (Kossek & Lambert, 2005): Family structures are changing (e.g., increasing number of double-income couples), work-home boundaries blur more and more (e.g., permanent availability due to new communication technologies), demographic changes lead to additional obligations (e.g., working individuals who have eldercare responsibilities; Allen & Eby, 2016b). At the same time, a successful combination of work and home life is crucial not only for our own well-being (e.g., Frone, 2000; Grant-Vallone & Donaldson, 2001; Zhang, Xu, Jin, & Ford, 2018), but also for the well-being of our family members (Bakker & Demerouti, 2013; Cho & Ciancetta, 2016; Westman, 2001) as well as for organizational stakeholders (e.g., Carlson, Ferguson, Kacmar, Grzywacz, & Whitten, 2011; ten Brummelhuis, Haar, & Roche, 2014; ten Brummelhuis, Van Der Lippe, & Kluwer, 2010). Due to these profound effects of a successful combination of work and home life, this topic has become an important "kitchen table subject" (Allen, 2012, p. 1163) discussed not only by families as well as decision-makers in organizations and politics, but also by researchers. All parties involved try to find an answer to the question raised by Chen et al. (2009) how individuals may reduce negative and foster positive effects of the integration of work and home life simultaneously.

This dissertation aims to provide new insights which contribute to answer this question. To do so, three components are indispensable. First, a solid theoretical understanding of the work-home interface should be further developed (Allen & Eby, 2016a). Theoretical models provide an informative view on how work and home life mutually influence each other, on the factors that trigger and shape these processes, and on the outcomes that arise from the mutual influence of the two life domains. These theoretically derived assumptions are necessary to systemize existing knowledge as well as to trigger targeted empirical studies and therefore to move forward the knowledge of the combination of work and home life.

Second, negative and positive effects of the integration of work and home life should be investigated simultaneously; only an integral understanding of both facets enables researchers to discern the common and distinct features of positive and negative processes.

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For instance, social support seems to influence both processes (French, Dumani, Allen, & Shockley, 2018; Lapierre et al., 2017). A deeper understanding of those similarities, but also of the differences allows individuals, families, and organizations to take appropriate measures that simultaneously reduce negative and foster positive effects.

Third, an approach should be taken that integrates antecedents, processes, and outcomes of the work-home interface. *Antecedents* describe characteristics of the work and home domains or characteristics of the individual that hinder or foster a successful combination of work and home life (e.g., long working hours or supportive supervisors; Byron, 2005). A deeper knowledge of these factors is helpful for organizations and politicians to provide structures that support individuals to minimize negative and maximize positive effects. Furthermore, individuals and families can use this knowledge to search for as well as to create these environments. *Processes* designate the mechanisms linking the work and home domains (e.g., the spillover of negative or positive mood from one domain in the other; Repetti & Wang, 2009). Knowledge of these processes allows to define and change boundary conditions that shape the processes and therefore can reduce the negative and foster the positive effects. *Outcomes* describe the consequences of the combination of work and home life for an individual as well as for important stakeholders (e.g., reduced or enhanced well-being; Frone, 2000; Zhang et al., 2018). Knowing various outcomes of a more or less successful combination of work and home life stresses the relevance of this topic. It is pertinent, for instance, for HR practitioners who are interested in improving the well-being of employees.

The work-home resources model (W-H R model; ten Brummelhuis & Bakker, 2012) brings together these three components on a theoretical level. By combining the conservation of resources theory (COR theory; Hobfoll, 1989) and the research on the work-home interface, it provides new theoretical insights into how the two domains influence each other (ten Brummelhuis & Bakker, 2012). Additionally, it focuses not only on either negative or positive effects of the combination of work and home life but describes both integrally. Lastly, it is conceptualized as an input-process-output model, and therefore makes assumptions about antecedents, processes, as well as outcomes of the integration of work and home life.

In order to provide new insights into a successful combination of work and home life, the three components described above are integrated in this dissertation, which leads to three specific aims. The first aim is to empirically test the W-H R model (ten Brummelhuis & Bakker, 2012). Based on three studies with different methodological approaches, this dissertation strives for a refinement of the theoretical basis of the work-home interface by

confirming assumptions of the model as well as by integrating inconsistent and complementary results. The resulting theoretical insights can provide explanations for existing results; they furthermore can trigger future research and move forward the understanding of the work-home interface. The second aim is to take an integrative approach investigating simultaneously negative and positive effects of the combination of work and home life. Comparing a range of various characteristics of the work and home domains in terms of their potential to reduce negative and increase positive effects provides promising avenues for a successful combination of work and home life. The third aim is to investigate antecedents, processes, as well as outcomes of the combination of work and home life. Considering all three aspects provides a comprehensive picture of the work-home interface and helps to understand the interrelationship between specific features of the both domains and respective consequences. By pursuing these aims, this dissertation helps to answer the question how individuals may simultaneously minimize negative and maximize positive effects of the engagement in the work and home domains.

2 THE WORK-HOME INTERFACE

In this chapter, I firstly describe the basic constructs of the work-home interface to clarify the meaning of negative and positive effects and outline different approaches to measure the constructs (Chapter 2.1). Then I introduce the W-H R model of ten Brummelhuis and Bakker (2012) which is the theoretical framework of this dissertation, describe the state of knowledge concerning antecedents, processes, and outcomes of the work-home interface, and derive the research questions addressed in this dissertation (Chapter 2.2).

2.1 DESCRIBING THE WORK-HOME INTERFACE: TERMS, CONSTRUCTS, AND MEASUREMENT APPROACHES

Work and home life are characterized by specific roles, for instance, the role as an employee, coworker, or supervisor, the role as a parent, spouse, or friend, the role of a member of a soccer team or an orchestra. Consistently, “the life of the individual can [...] be seen as an array of roles which he [she] plays in the particular set of organizations and groups to which he belongs” (Kahn, Wolfe, Quinn, & Snoek, 1964, p. 11). It is widely accepted that these various roles are not independent of each other but rather intertwined with each other (e.g., Allen, Cho, & Meier, 2014; Frone, 2003). Not only researchers, but also individuals, families, organizations, and politicians are very interested in how different roles influence each other (Allen, 2012). The main focus thereby lies on the combination of work and family roles (Fisher, Bulger, & Smith, 2009).

Focusing only on the interrelation of work and family roles, however, is narrow in scope as the interrelation of two or more roles is an important aspect for all employees regardless of their family life status (Fisher et al., 2009). Hence, a more inclusive approach is necessary (Kreiner, 2006). In the last years, several other concepts than *family* have been proposed in order to investigate roles outside the work setting more broadly, such as *personal life* (Fisher et al., 2009), *leisure* (Knecht, Wiese, & Freund, 2016), and *self* (Demerouti, 2012). Other concepts are *nonwork* (e.g., Kirchmeyer, 1992; Kreiner, 2006) and *home* (e.g., Greenhaus & Kossek, 2014; ten Brummelhuis & Bakker, 2012). In this dissertation, the focus of the two primary studies (Studies II and III) lies on the influence of work on the family life. A broader approach is taken in the first study, including other nonwork roles. Therefore, and to be consistent with the underlying W-H R model (ten Brummelhuis & Bakker, 2012), the term *home* will be used.

2.1.1 NEGATIVE EFFECTS: WORK-HOME CONFLICT

The idea of negative effects that arise when combining work and home life has its roots in the role theory (Allen, 2012). The role theory proposes that every role is combined with specific *role expectations*, i.e., beliefs and attitudes held by other people about what the role incumbent should do or should not do as part of his/her role (Biddle, 1986; Kahn et al., 1964). In order to align the role incumbent's behavior with these expectations, the persons in the role's network try to influence the role incumbent. This influence is called *role pressure* (Kahn et al., 1964). Interferences between role pressures from the work and home domains lead to a *work-home conflict (WHC)*, defined as a “form of interrole conflict in which the role pressures from the work and family [home] domains are mutually incompatible in some respect” (Greenhaus & Beutell, 1985, p. 77). For instance, as an employee, one might feel pressure of the supervisor to stay at work until late to finish a task. At the same time, one might feel pressure of the spouse to pick up groceries on the way back and to be at home for dinner.

This example shows that the definition of WHC does not imply any directionality or causality but just mutual incompatibility (Greenhaus & Beutell, 1985). The directionality of the conflict only arises by the response to conflicting role pressures and the respective attribution. In the given example, the employee can decide to stay at work to finish the task and consequently will neither be able to shop groceries nor be at home in time to have dinner with the family. This might result in the perception that work is hindering the home life resulting in a *work-to-home conflict (W-t-H C)*. Contrary, the employee can decide to go home, knowing that he/she will not finish the task on time. In this case, home life is hindering work life resulting in a perceived *home-to-work conflict (H-t-W C)*. Empirical evidence proposes that W-t-H C and H-t-W C are related to each other, but are nevertheless distinct constructs (Mesmer-Magnus & Viswesvaran, 2005).

The example describes a *time-based conflict*. The incompatibility between the two roles arises as time devoted to one role cannot be devoted to the other role anymore, resulting in difficulties to meet the expectations in the second role (Greenhaus & Beutell, 1985). The authors describe two further types of WHC: strain-based conflict and behavior-based conflict. *Strain-based conflict* arises when energy invested in one role is no longer available to meet the expectations in the other role. For instance, a new project at work requires so much attention that—coming home—one cannot concentrate anymore on helping the child with the homework. *Behavior-based conflict* arises when the behavior required in one role is incompatible with the behavior required in the other role. For instance, the behavior that a policeman should show during an interrogation is not appropriate during a discussion with

the spouse in the evening. A forth proposed type is *psychological conflict* which describes that the psychological preoccupation by one role hinders the engagement in the other role (van Steenbergen, Ellemers, & Mooijart, 2007). For instance, a parent might keep thinking about work-related problems during dinner what might interfere with his/her capacity to pay attention to what the spouse or the children are telling. The idea of WHC is based on the assumption that energy is a finite and scarce resource. As every role requires the investment of energy, consequently, individuals are more prone to experience interrole conflicts with any additional role in which they might be engaged (scarcity hypothesis; Goode, 1960).

2.1.2 POSITIVE EFFECTS: WORK-HOME ENRICHMENT

This narrow perspective of energy as a finite resource was questioned and supplemented by the proposition that energy is not only limited, but abundant and expandable (e.g., Kirchmeyer, 1992): Engagement in one role can create energy that can be used in the same or in another role (Marks, 1977). Hence, beneficial effects of being engaged in several roles might outweigh the negative effects (i.e., role expansion approach; Marks, 1977; role accumulation; Sieber, 1974). The idea of role expansion was transferred to the investigation of the work-home interface; work and home life were no longer seen only as enemies but as allies (Friedman & Greenhaus, 2000). For instance, a successful day at work can make the employee leave work in a good mood which can have a positive influence on the behavior towards the spouse and the children at home.

Various construct names have been used to study this idea including positive spillover, enhancement, enrichment, and facilitation. *Spillover* is defined as “effects of work and family [home] on one another that generate similarities between the two domains” (Edwards & Rothbard, 2000, p. 180) in terms of affect, values, skills, and behaviors. *Enhancement* is conceptualized as experiences of gains through an engagement in a specific life domain (Wayne, 2009). Allen (2012)—in contrast—uses the term enhancement as a generic term to describe benefits of multiple role engagements. *Enrichment* is described as the “extent to which experiences in one role improve the quality of life in the other role” (Greenhaus & Powell, 2006, p. 72). *Facilitation* is defined similarly as the “extent to which participation at work (or home) is made easier by virtue of the experiences, skills, and opportunities gained or developed at home (or work)” (Frone, 2003, p. 145).

The distinction of the constructs is not well understood yet (Zimmerman & Hammer, 2010). Nevertheless, researchers emphasize that the constructs describe not the same phenomenon, but slightly different phenomena which has also been shown empirically (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Hanson, Hammer, & Colton, 2006; Masuda,

McNall, Allen, & Nicklin, 2012). Several attempts were made to distinguish the diverse constructs (e.g., Allen, 2012; Carlson et al., 2006; Hanson et al., 2006; Masuda et al., 2012; van Steenbergen et al., 2007; Wayne, 2009; Zimmerman & Hammer, 2010). Summarizing these differentiations, three main differences on which several authors seem to agree emerge between positive spillover, enrichment, and facilitation: (1) Positive spillover purely describes the process that aligns two life domains. The consequences of this process are not part of existing conceptualizations. Therefore, positive spillover is seen as an antecedent of enrichment and facilitation: It is a necessary process that positive consequences can occur (Carlson et al., 2006; van Steenbergen et al., 2007; Wayne, 2009). (2) The constructs of enrichment and facilitation refer to different levels of analysis: While enrichment includes the positive consequences of participating in different life domains for an individual, facilitation describes these consequences for the whole system in which the individual lives (e.g., the home system or the work system; Allen, 2012; Grzywacz, Carlson, Kacmar, & Wayne, 2007; Wayne, 2009; Wayne, Grzywacz, Carlson, & Kacmar, 2007). (3) The constructs include different types of resources that are important for the experienced gain: While the construct of positive spillover focuses on personal resources, enrichment and facilitation also include the transfer of capital resources from one domain to the other (Hanson et al., 2006; Zimmerman & Hammer, 2010). Despite these differences, the terms are sometimes still used interchangeably (Allen, 2012). In this dissertation, I follow the authors of the underlying W-H R model (ten Brummelhuis & Bakker, 2012) and use the term *enrichment*.

Contrary to the definition of WHC, the definition of *work-home enrichment* (WHE) includes directionality by proposing that the experiences in one role have a positive influence on outcomes in the other role. The example of a successful day at work that influences the mood and behavior at home describes how work influences the home domain in a positive way (*work-to-home enrichment*, *W-t-H E*). In a similar vein, it is possible that spending a nice evening with the family, looking TV or playing board games, helps to recover from work and gives new energy which improves the performance at work the next day (*home-to-work enrichment*, *H-t-W E*). The distinction of the two directions has been proposed theoretically (Greenhaus & Powell, 2006) and confirmed empirically (Shockley & Singla, 2011).

The example given above describes *energy-based enrichment*: The participation in one role can create energy that can be used in the other domain (van Steenbergen et al., 2007). A second type of WHE is *time-based enrichment*: Obligations in one role can help to use time available in the other domain more efficiently (van Steenbergen et al., 2007). For instance, having to stay at work longer than usual can lead to more efficient house cleaning. A third type of WHE is *behavioral enrichment*: Individuals can learn behaviors and skills in one role that

are useful in the other role (van Steenbergen et al., 2007). For instance, parents tend to become more patient when they have young children. This patience can be helpful when they interact with project partners. The last type described by van Steenbergen et al. (2007) is *psychological enrichment*: The participation in one role can broaden the perspective which can be beneficial for the other role. For instance, the birth of a child might relativize problems at work which helps the employee to take a less stressed and more productive perspective on the problems.

To conclude, the work-home interface can be described along two dimensions. The first dimension is the *direction of the effect* differentiating W-t-H and H-t-W effects. The second dimension is the *type of the effect*: WHC describes negative effects whereas WHE describes positive effects. The combination of these two dimensions results in a four-fold taxonomy of the work-home interface (Frone, 2003; see Figure 1).

		Type of Effect	
		Conflict	Enrichment
Direction of Influence	Work-to-Home	Work-to-Home Conflict	Work-to-Home Enrichment
	Home-to-Work	Home-to-Work Conflict	Home-to-Work Enrichment

Figure 1: Four-Fold Taxonomy of the Work-Home Interface
(Adapted from Frone, 2003)

2.1.3 MEASURING THE WORK-HOME INTERFACE

When investigating the work-home interface, participants are typically asked to which extent they experience the combination of work and home life as conflicting or enriching (Allen, 2012; Keeney & Ilies, 2012). This is done with items such as "Due to all the pressures at work, sometimes when I come home, I am too stressed to do the things I enjoy." (Carlson, Kacmar, & Williams, 2000) or "My involvement in my work puts me in a good mood and this helps me be a better family member." (Carlson et al., 2006). Meta-analyses in the field of work-home interface summarize studies that use this approach (e.g., Amstad, Meier, Fasel, Elfering, & Semmer, 2011; Lapierre et al., 2017; Nohe, Meier,

Sonntag, & Michel, 2015). The number of studies included in these meta-analyses illustrates that there exists a large body of primary studies that used the experience approach. This approach, however, comes with several disadvantages. First, causes and consequences are confounded as both are included in the items (Allen, 2012). This combination might inflate the relationships between WHC and WHE on the one hand and respective antecedents and consequences on the other hand. Second, participants are asked to report a complex process and not only to describe, for instance, a characteristic of their work environment. This can lead to biased assessments (Du, Derks, & Bakker, 2018).

To overcome these disadvantages, a second measurement approach has emerged: the process approach. This approach is applied by measuring work and home variables and by then analyzing to which extent the experiences in one domain have an impact on affective or behavioral responses in the other domain (Amstad & Semmer, 2013; ten Brummelhuis & Bakker, 2012). The link between the work and the home domain is therefore deduced by investigating the direct relationship between work and home constructs (Keeney & Ilies, 2012). The process approach has the advantage that the processes that link the work and home domains can be investigated in more detail (Keeney & Ilies, 2012). In this dissertation, both approaches are combined: The meta-analysis (Study I) takes the advantages of the large body of studies that have used the experience approach. As the Studies II and III focus on the processes that link the work and the home domains, a process approach is taken in these studies which directly relates work experiences to behavior at home.

It is possible to apply different study designs, irrespectively of the measurement approach. The large majority of studies in the work-home interface field are designed as cross-sectional survey studies (Casper, Eby, Bordeaux, Lockwood, & Lambert, 2007; Lapierre & McMullan, 2016). When focusing on processes that link the two domains, however, the field can profit greatly from ecological momentary studies (Butler, Song, & Ilies, 2013; Klumb, Elfering, & Herre, 2009), i.e., participants provide several short reports per day of specific events and their experiences (Bolger, Davis, & Rafaeli, 2003). Surprisingly, between 2004 and 2013, only 6% of studies that investigated the interplay of the work and home domains applied such a design (Lapierre & McMullan, 2016). Applying a process approach, the Studies II and III are designed as ecological momentary assessment studies. This study design allows to investigate intraindividual processes with a focus on individuals' daily life experiences.

2.2 EXPLAINING THE WORK-HOME INTERFACE: THE WORK-HOME RESOURCES MODEL

“A major challenge in the work-family research field is to identify clearly the causal process at work in the relationship between work and family” (ten Brummelhuis & Bakker, 2012, p. 545). This notion illustrates the need to gain knowledge of the underlying mechanisms of WHC and WHE. It is based on the observation that most theoretical models in the context of the work-home interface, especially models on WHC, do not provide assumptions about these mechanisms (ten Brummelhuis & Bakker, 2012). Out of this situation, ten Brummelhuis and Bakker (2012) developed the W-H R model providing a theoretical basis to explain the causal processes of both conflict and enrichment. Based on the assumptions about the underlying mechanisms, it is possible to derive propositions about antecedents and consequences of the conflicting and enriching processes. As a particularity, the W-H R model considers WHC and WHE simultaneously. Therefore, it is the only model that can be used to investigate antecedents, processes, and outcomes of WHC and WHE concurrently.

As the W-H R model (ten Brummelhuis & Bakker, 2012) is based on the conservation of resources theory (COR theory; Hobfoll, 1989; Hobfoll, Halbesleben, Neveu, & Westman, 2018), resources—defined as “anything perceived by the individual to help attain his or her goals” (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014, p. 1338)—are at the core of the model. One of the basic tenets of the COR theory is the proposition that individuals try to retain and protect their current resources and to gain new resources (Halbesleben et al., 2014; Hobfoll, 1989; Hobfoll et al., 2018). One way to reach this goal is the investment of resources. Two corollaries arise of this resource investment process: First, when individuals lose resources, for instance, due to high demands, it becomes more difficult to invest resources. This corollary describes a resource loss spiral (Hobfoll et al., 2018). Second, when individuals gain resources, it becomes easier to invest these resources to gain new resources. This corollary describes a resource gain spiral (Hobfoll et al., 2018).

Ten Brummelhuis and Bakker (2012) apply the idea of resource loss and gain spirals to the phenomena of WHC and WHE, respectively. WHC can be understood as a resource loss spiral: Facing demands in the work or home domain (designated as *contextual demands*; e.g., social conflict at work) requests the investment of resources (i.e., *personal resources*) to cope with these demands. Therefore, it becomes more difficult to invest resources in the respective other domain resulting in negative outcomes in the second domain (e.g., less

availability for family members). The process of lacking resources due to demands in the other domain corresponds to incompatible role pressures from the two domains described by Greenhaus and Beutell (1985). Similarly, WHE can be understood as a resource gain spiral: Resources available in one domain (designated as *contextual resources*; e.g., social support at work) can be used to generate new resources (i.e., *personal resources*) that can be invested in the other domain. Consequently, outcomes in the second domain are improved (e.g., more availability for family members) which correspond to the idea of enrichment described by Greenhaus and Powell (2006). The consumption and generation of personal resources are therefore described as the basic mechanism linking the work and home domains. The extent to which personal resources are reduced or generated varies as a function of characteristics of the individuals (i.e., *key resources*) and of the environment (i.e., *macro resources*). The W-H R model (ten Brummelhuis & Bakker, 2012) is depicted in Figure 2. In the following, I describe propositions of this model on antecedents, processes, and outcomes of WHC and WHE, combine them with empirical evidence, and derive the research questions that this dissertation addresses.

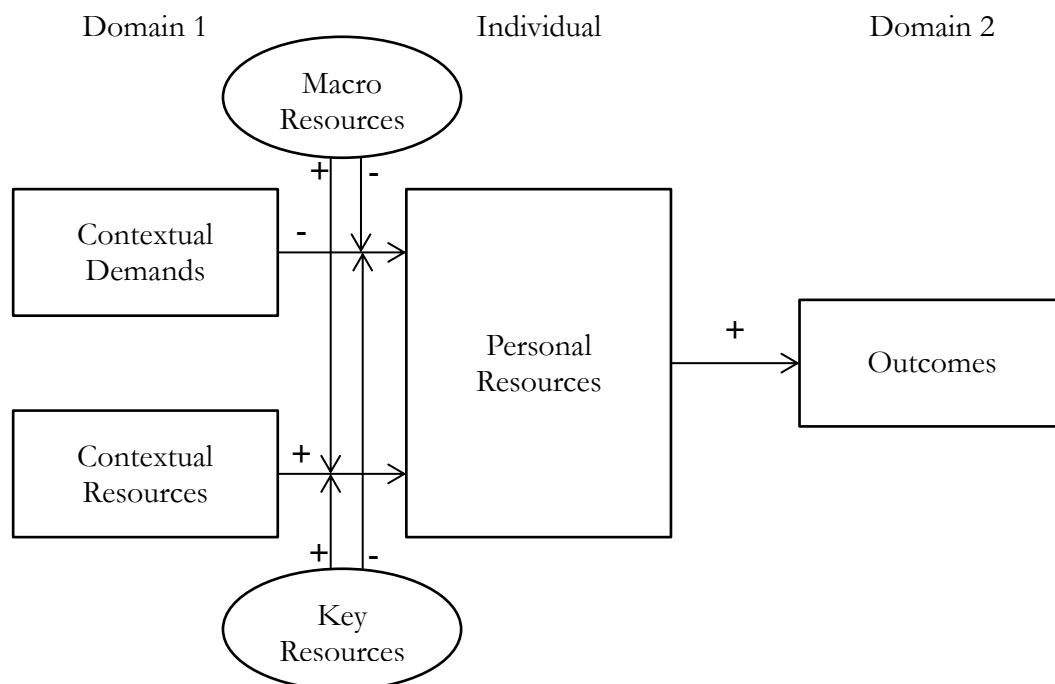


Figure 2: The Work-Home Resources Model (ten Brummelhuis & Bakker, 2012)

2.2.1 ANTECEDENTS OF WORK-HOME CONFLICT AND ENRICHMENT

The conceptualization of WHC and WHE as resource loss and gain spirals, respectively, leads to two important corollaries about the respective antecedents. The first corollary is that contextual demands constitute the main antecedents of WHC since they are seen to trigger the loss spiral. Similarly, contextual resources are seen to trigger the gain spiral and therefore constitute the main antecedents of WHE. Until today, a lot of primary studies have investigated the antecedents of WHC and WHE. Several reviews and meta-analyses summarize the knowledge of factors shaping the experience of WHC (e.g., Allen, Johnson, Kiburz, & Shockley, 2012; Byron, 2005; Michel, Kotrba, & Mitchelson, 2011) and WHE (Lapierre et al., 2017). These analyses show patterns that are consistent with the assumptions derived from the W-H R model (ten Brummelhuis & Bakker, 2012): Contextual demands such as work and family role overload are related to the experience of WHC whereas contextual resources such as family-friendly work culture or social support are related to the experience of WHE. Besides the expected patterns, however, the meta-analyses show patterns that propose a more complex picture: Contextual resources such as social support at work and home (French et al., 2018; Kossek, Pichler, Bodner, & Hammer, 2011) or family-friendly work arrangements (Allen et al., 2012) are significantly and negatively related to WHC. This suggests that contextual resources have the potential to be an antagonist to contextual demands. In a similar vein, Lapierre et al. (2017) found contextual demands (e.g., job insecurity) to be significantly negatively related to WHE suggesting that contextual demands can counteract the effect of contextual resources.

These propositions should be investigated further due to two reasons. None of the existing meta-analyses has investigated the pattern of relationships for all four components (contextual demands, contextual resources, WHC and WHE) simultaneously thus far. Only a simultaneous investigation, however, enables to draw conclusions on the differential effects of contextual demands and resources on WHC and WHE. Second, the results are not consistent for all contextual demands and resources: Some of the contextual resources investigated by Michel et al. (2011) were not related to WHC (e.g., autonomy). Similarly, some of the contextual demands investigated by Lapierre et al. (2017) had no significant relationship with WHE (e.g., work role overload and family role overload). This observation raises the question whether contextual resources and demands differ in their potential to trigger the experience of WHC and WHE, respectively.

The second corollary that results from the W-H R model (ten Brummelhuis & Bakker, 2012) is that work characteristics are the main antecedents of W-t-H processes

whereas home characteristics are the main antecedents of H-t-W processes. Yet, it is possible that characteristics of the receiving domain alter the need to invest resources. For instance, when the need to invest resources is low in the home domain due to support from the partner, the outcome of resource losses due to contextual demands at work should not be the same as when the need to invest resources is high. Consequently, characteristics of the receiving domain should also be considered as factors that shape the work-home interface. Byron (2005) explicitly tested the hypotheses that work variables are stronger related to W-t-H C and home variables are stronger related H-t-W C. The hypothesis was confirmed for W-t-H C but not for H-t-W C. No empirical results exist concerning this pattern for WHE. Knowing the influence of the receiving domain for the work-home processes, however, is important to gain a deeper understanding of which factors can be changed to achieve a successful combination of work and home life.

As mentioned in Chapter 1, one of the aims of this dissertation is to focus simultaneously on both negative as well as positive effects of the combination of work and home life. One aspect that is particularly interesting in this context are social interactions: Different to other work and home characteristics, they can vary considerably in their valence. On the one hand, social interactions at work can elicit negative emotions or be emotionally draining, e.g., when conflicts arise (Spector & Bruk-Lee, 2007), when people have to show emotions that they do not feel or to suppress felt emotions (i.e., experience of emotional dissonance; Zapf & Holz, 2006), or when people have to deal with difficult customers (Dormann & Zapf, 2004). On the other hand, social interactions at work can reduce strain or elicit positive emotions, e.g., when coworkers or supervisors provide support (Viswesvaran, Sanchez, & Fisher, 1999), when employees actually feel emotions that are appropriate and helpful in their job (i.e., deep acting; Kammeyer-Mueller et al., 2013), or when coworkers become friends (Colbert, Bono, & Purvanova, 2016).

Considering the dual valence of social interactions, it is no surprise that social aspects are the only element that arises in both categories contextual demands (i.e., emotional demands) and contextual resources (i.e., social support) in the W-H R model (ten Brummelhuis & Bakker, 2012). Concerning emotional demands, it is striking that meta-analyses on antecedents of WHC hardly take them into consideration: Byron (2005) included family conflicts (e.g., marital tensions, parental conflicts) as antecedents of WHC, but did not include emotional work demands in her meta-analysis. Michel et al. (2011) did not consider emotional demands at all. The lack of consideration in meta-analyses is an indication that only few studies investigated the relationship between emotional demands and WHC. This is surprising since social conflicts are one of the most important source of stress

at work (Spector & Bruk-Lee, 2007). The picture changes for studies on the daily level. Repetti and her colleagues were among the first who investigated the influence that negative social interactions at work can have on home life (Repetti, 1994; Repetti & Wood, 1997; Story & Repetti, 2006). More recently, additional studies investigated the influence of social work demands on home outcomes (e.g., Gassman-Pines, 2011; Klumb, Voelkle, & Siegler, 2017; Lim, Ilies, Koopman, Christoforou, & Arvey, 2016; Malinen, Rönkä, Sevón, & Schoebi, 2017; Martinez-Corts, Demerouti, & Boz, 2015; Meier, Gross, Spector, & Semmer, 2013; Pereira & Elfering, 2014; Sanz-Vergel, Rodríguez-Muñoz, Bakker, & Demerouti, 2012; Sanz-Vergel, Rodríguez-Muñoz, & Nielsen, 2015; Volmer, Binnewies, Sonnentag, & Niessen, 2012). Therefore, concerning social work demands, this dissertation focuses on processes as well as boundary conditions that shape these processes (see Chapter 2.2.2) and on parenting behavior as important behavioral outcome (see Chapter 2.2.3).

Concerning emotional aspects in terms of contextual resources, ten Brummelhuis and Bakker (2012) stress the importance of social support which is a construct with much attention in the work-home interface research. Results show consistently that social support is negatively related to WHC (French et al., 2018; Kossek et al., 2011) and positively related to WHE (Lapierre et al., 2017). Interactions at work do not need to have a supportive function in order to have the potential to generate resources (Bhave & Lefter, 2018; Colbert et al., 2016; Lilius, 2012). Social contextual resources other than social support, however, are not considered with regard to WHE (Lapierre et al., 2017) nor in daily diary studies (for one recent notable exception, see Bhave & Lefter, 2018).

Integration and own Studies

The considerations show that a large body of research has already investigated the antecedents of WHC and WHE. However, to advance the theoretical understanding of the influence that specific characteristics of the two domains have on the respective other domain and, consequently, to support individuals to combine work and home life successfully, further knowledge of antecedents of WHC and WHE is necessary. Study I of this dissertation aimed primarily at a meta-analytic investigation of antecedents of WHE. Very recently, Lapierre et al. (2017) published a comparable meta-analysis. Contrary to the study of Lapierre et al. (2017), Study I investigates WHC and WHE simultaneously. Therefore, Study I provides additional insights into the factors that shape the work-home interface by addressing the questions raised above: (1) Do WHC and WHE have only different or also common antecedents? (2) Which role do contextual demands play for WHE and which role do contextual resources play for WHC? (3) Which role do characteristics of the receiving domain play for the experience of WHC and WHE? Besides the meta-analytic

investigation of different antecedents, this dissertation aims to fill the gap concerning the investigation of social work characteristics in the context of work-home interface (Studies II and III) with a special focus on positive workplace interactions in Study III by addressing the following questions: (4) Which influence do positive workplace interactions have on well-being and behavior at home?

2.2.2 PROCESSES OF WORK-HOME CONFLICT AND ENRICHMENT

The W-H R model (ten Brummelhuis & Bakker, 2012) conceptualizes the work-home interface as resource loss and gain spirals. A basic tenet of this conceptualization is that “personal resources are the linking pins between the work and home domains” (ten Brummelhuis & Bakker, 2012, p. 549): Coping with contextual demands reduces personal resources which are no longer available in the other domain. Contrary, contextual resources help to generate personal resources that can be invested in the other domain (see Figure 2). *Personal resources* describe aspects of the self that are linked to resilience, and therefore helpful to cope with stressful situations (Hobfoll, Johnson, Ennis, & Jackson, 2003). Five categories of personal resources are proposed in the W-H R model (ten Brummelhuis & Bakker, 2012): (1) physical (e.g., physical energy), (2) psychological (e.g., self-efficacy), (3) affective (e.g., mood), (4) intellectual (e.g., experiences), and (5) capital (e.g., time). Affective mechanisms, for instance, negative mood spilling over from the work domain in the home domain, have been shown to play an important role in linking work and home life (Amstad & Semmer, 2013; Butler et al., 2013). In order to understand better how to form this mechanism and how to prevent negative spillover processes, it is important to focus on boundary conditions that influence these processes. The W-H R model (ten Brummelhuis & Bakker, 2012) describes two categories of boundary factors: key resources and macro resources.

Key resources describe dispositional resources that facilitate the management of other resources, i.e., the selection, alteration, and implementation of resources (Hobfoll, 2002; ten Brummelhuis & Bakker, 2012). Examples for key resources are optimism, self-esteem, or conscientiousness (Halbesleben et al., 2014; ten Brummelhuis & Bakker, 2012). The availability of those key resources is proposed to buffer the resource loss when facing contextual demands and to intensify the resource gain when contextual resources are available (see Figure 2). Focusing on affective mechanisms, emotion regulation competence can be seen as a key resource. Emotion regulation describes the process “by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (J. J. Gross, 1998, p. 275). Being able to apply

emotion regulation as a strategy means “to regulate stress or emotions when they are not appropriate to the context” (Brasseur, Grégoire, Bourdu, & Mikolajczak, 2013, p. 2). Applied to the work-home interface, emotion regulation competence is proposed to neutralize the negative effect of event-related negative mood influencing the other domain (Grandey & Krannitz, 2016). Integrating this proposition in the W-H R model (ten Brummelhuis & Bakker, 2012) leads to the assumption that emotion regulation competence is a key resource that impedes the loss of personal resources (i.e., the decrease in positive and the increase in negative mood) when facing demands. Researchers agree that the role of emotion regulation is not well understood in the context of work-home interface since only few studies investigate this resource (Allen, 2012; Grandey & Krannitz, 2016). Besides key resources, *macro resources*, that are defined as characteristics of the economic, social, and cultural system relevant for the work-home interface (ten Brummelhuis & Bakker, 2012), shape the mutual influence of the work and home domains. An example for macro resources is the existence of public day care facilities for children (ten Brummelhuis & Bakker, 2012). However, macro resources are not considered in detail due to this dissertation’s focus on individual processes.

When stating that the affective mechanism linking work and home life is well understood, researchers (e.g., Allen, 2012; Butler et al., 2013) mainly refer to studies investigating conflicting processes. On a theoretical level, the affective path linking the work and home domains plays an important role also for enriching processes: The affective path is proposed as the main linking mechanism besides an instrumental path (Greenhaus & Powell, 2006). Only few studies have investigated how positive affective reactions following experiences in one domain influence behaviors and attitudes in the other domain. As an exception, a study could show an indirect effect of helping behavior at work on supportive behavior towards the spouse in the evening, mediated by positive affect at home (Lin, Ilies, Pluut, & Pan, 2017). Contrary, a study with working mothers could not find a relationship between positive experiences at work and positive mood at home rated by their children (Lawson, Davis, McHale, Hammer, & Buxton, 2014). These disparate results show that the role of positive affect as a linking mechanism is not clear yet.

Integration and own Studies

Of the five proposed categories of personal resources, the role of affective resources has been studied most extensively and it has been shown, that this mechanism plays an important role (Amstad & Semmer, 2013; Butler et al., 2013). For a full understanding of this process, however, it is important to know boundary conditions that can influence the link between the work and home domains. This knowledge can be used to help individuals to combine work and home life successfully: Knowing key resources

(i.e., person characteristics) that impede the loss spiral can be a starting point for individual trainings about how to reduce negative influences of experiences in one domain on the other domain. As the affective mechanism has been shown to be an important linking mechanism, it is promising to investigate factors influencing this mechanism. Therefore, in Study II, the following question is addressed: (1) Which role does emotion regulation competence play for the resource drain process when facing demands at work?

Despite the extensive research on affective mechanisms linking the work and home domains, this mechanism is not well understood for enriching processes. For a successful combination of work and home life, however, it is equally important to understand negative as well as positive processes. Strengthening positive processes is also a way of improving the work-home interface. Hence, for a better understanding of the processes that link work and home life positively, Study III addresses the following question: (2) Which role does positive affect play in the enriching process of work experiences influencing behavior in the home domain?

2.2.3 OUTCOMES OF WORK-HOME CONFLICT AND ENRICHMENT

The conceptualization of WHC and WHE as resource loss and gain spirals, respectively, results in the notion, that all outcomes that require the investment of resources are affected by conflicting and enriching processes. Ten Brummelhuis & Bakker (2012) distinguish three different categories of outcomes that can be affected by losses or gains of personal resources: (a) productive outcomes (e.g., meeting deadlines is easier when enough resources are available), (b) behavioral outcomes (e.g., a lack of resources makes it more difficult to behave empathically and supportive), (c) attitudinal outcomes (e.g., available resources enhance the satisfaction of individuals with the work and home domains). An extensive body of research has shown the relationships between WHC and WHE and attitudinal outcomes such as satisfaction, well-being, and commitment (Allen, Herst, Bruck, & Sutton, 2000; Amstad et al., 2011; McNall, Nicklin, & Masuda, 2010; Shockley & Singla, 2011; Zhang et al., 2018). These attitudinal outcomes primarily affect the individual. The combination of the W-H R model (ten Brummelhuis & Bakker, 2012) with the ecological system theory (EST; Bronfenbrenner, 1977, 1979) and with crossover theories (e.g., Bakker & Demerouti, 2013), however, points out the importance to consider also productive and behavioral outcomes: The understanding of the influence of resource losses and gains on these outcomes shifts the focus from consequences for the individual to consequences for important stakeholders.

As a basic tenet, the EST (Bronfenbrenner, 1977, 1979) proposes that every role in

the life of an individual is embedded in a social context (i.e., microsystem) that includes specific interaction partners. Since work and home roles are important in the life of working adults (Frone, 2003), work and home constitute two important microsystems (Perry-Jenkins, Newkirk, & Ghunney, 2013; Voydanoff, 2002). As a second basic tenet, the EST suggests that not only the microsystem in which a person is directly embedded plays a role for the development of the individual, but also the microsystems in which the interaction partners are embedded. Hence, individuals' work-home interface has consequences for the stakeholders in the specific microsystems. For instance, the work environment of parents influences the development of their children (Cho & Ciancetta, 2016). Similarly, the employee's home microsystem influences coworkers at work (e.g., ten Brummelhuis et al., 2010).

Crossover theories explain how these effects come into existence. *Crossover* describes the "interindividual dyadic transmission process that operates when one person's experience affects the experience of another person in the same social environment" (Carlson et al., 2011, p. 771). Behavior is described as important mediating mechanism in this transmission process (Westman, 2001): A person's experiences shape the behavior towards the interaction partner and therefore influence the experiences of the other person. Crossover per se is a within-domain effect. Consistent with the EST, Bakker and Demerouti (2013) combine the crossover model with a spillover process: Experiences in one domain of life are transmitted to another domain of life (spillover) and then transmitted to the partner through social interactions.

Few studies have shown the relationship between experiences of the work-home interface and behavior at work. For instance, the leaders' experience of W-t-H C has been found to be related to leaders' burnout which reduced their supportive behavior towards their followers. The reduced support, in turn, was related to followers' increased burnout (ten Brummelhuis et al., 2014). On the positive side, the leaders' experience of W-t-H E was related to their followers' schedule control which resulted in the followers' increased levels of W-t-H E (Carlson et al., 2011). Furthermore, several family characteristics seem to be related to helping behavior at work: Having a partner was related to more helping behavior at work mediated by increased skills and fulfillment, whereas having conflicts with the partner was negatively related to helping behavior through reduced fulfillment (ten Brummelhuis et al., 2010). Much more research exists on spillover–crossover effects affecting the partner. These studies show consistently that the behavior towards the partner is an important transferring mechanism between work experiences and consequences for the partner: Experienced strain leads to more social undermining (e.g., Bakker, Demerouti, & Dollard, 2008; Westman &

Vinokur, 1998), to more angry and withdrawn marital behavior (Schulz, Cowan, Cowan, & Brennan, 2004), and to less social support from the partners (Bakker, Demerouti, & Burke, 2009).

Cho and Ciancetta (2016) take an EST perspective to illustrate the role that parents' work experiences play for the development of the child emphasizing parent-child interactions as key mediating mechanism. Several studies have shown the detrimental effect of diverse work experiences (e.g., high workload, less supportive work environments, negative interactions) on parent-child interactions (see Cho & Ciancetta, 2016, for a review); the potential beneficial effects of parents' work experiences on the interactions with their children has largely been ignored thus far (Cho & Ciancetta, 2016). As explained in Chapter 2.2.2, affect is an important linking mechanism between the work and home domains. This is assumed to be true also for the linkage of parents' work characteristics and the interactions with their children: "Implicit to these studies [investigating the direct link between parents' work experiences and parents' interaction with their child] is that stressful and demanding work produces negative affect that is transferred to the family domain" (Cho & Ciancetta, 2016, p. 156). Dix (1991) proposes parents' affect to shape their behavior towards the children in such a way that parents are prone to show more affect-congruent behavior (e.g., speaking more harshly when experiencing negative affect or showing more encouragement when experiencing positive affect) and less affect-incongruent behavior (e.g., giving less support when experiencing negative affect and showing less disciplinary behavior when experiencing positive affect). While these propositions focus on affective reactions arising from experiences with the child (Dix, 1991), affective reactions can also arise outside the home domain and then spill over to it (Larson & Almeida, 1999). The integration of these considerations in the W-H R model (ten Brummelhuis & Bakker, 2012) proposes that the loss and gain of resources in terms of increases in negative and positive affective experiences, respectively, which arise due to contextual work characteristics, should shape the parent-child interactions. However, especially for positive spillover effects, the consequences of work experiences for parent-child interactions are not well understood yet.

Integration and own Studies

The preceding chapter shows the importance to investigate behavioral outcomes of the work-home interface to understand one of the mechanisms linking the work-home experiences with outcomes of important stakeholders in the work and home domains. Besides coworkers and spouses, children are important stakeholders that influence parents' well-being and therefore also have an indirect influence on the work domain (Cho & Ciancetta, 2016). However, they are considered as "unseen stakeholders" of organizations

(Allen, 2012, p. 1174). To protect children from negative influences of their parents' work experiences as well as to enhance the positive effects, it is important to understand how parents' work experiences shape the interactions with their children. To this end, the relationship between parents' work experiences and their parenting behavior in the evening is investigated in the Studies II and III of this dissertation. The following questions should be answered: (1) Do negative affective reactions that arise from experiences at work have a detrimental effect on fathers' parenting behavior in the evening by increasing negative and decreasing positive behaviors (Study II)? (2) Do positive affective reactions after coming home have a comparable effect on parents' behavior towards their children by increasing positive and decreasing negative behavior (Study III)?

2.3 SUMMARIZING THE AIMS OF THIS DISSERTATION

With this dissertation, I seek for an empirical test of the W-H R model (ten Brummelhuis & Bakker, 2012) in order to refine the theoretical understanding of the work-home interface, and therefore to provide a theoretical and empirical basis for practical measures that improve the combination of work and home life. To this end, I take a broad approach by addressing research questions on antecedents, processes, and outcomes integrally for WHC and WHE. Concerning the antecedents, the question of the role of demands and resources of both the work and the home domains for WHC and WHE is addressed (Study I). Understanding common and distinct antecedents of WHC and WHE, as well as considering both domains integrally is important to design environments that are adjutant for a successful combination of work and home life. Furthermore, I examine the role of social work characteristics (Studies II and III). They can vary significantly in their valence (e.g., negative when conflicts arise or positive when coworkers are supportive); therefore, these work characteristics are particularly suitable to investigate negative and positive effects simultaneously. Moreover, nearly every job includes interactions with clients, coworkers, and supervisors. Hence, working life is characterized by social interactions and the understanding of consequences of this work characteristic is significant for nearly every employee.

Concerning the processes, I examine the role of affective spillover as mediating mechanism. This mechanism is already well understood for negative spillover. I go a step further and investigate boundary conditions that influence this process by examining the role of emotion regulation competence (Study II). Creating knowledge of personality characteristics that shape the process of work and home integration is an important starting point for individual measures that foster a successful combination of both life domains. The

role of positive affect as linking mechanism is not well understood yet. Thus, I focus on this process in Study III.

Concerning the outcomes, I take a closer look on the influence of parents' work characteristics on their parenting behavior (Studies II and III). Children are important stakeholders in the family system which is influenced by parents' work system. A more detailed understanding of this influence—in terms of negative as well as positive effects—can help parents to prevent negative and foster positive consequences for their children. Figure 3 illustrates the parts of the W-H R model (ten Brummelhuis & Bakker, 2012) investigated by the studies.

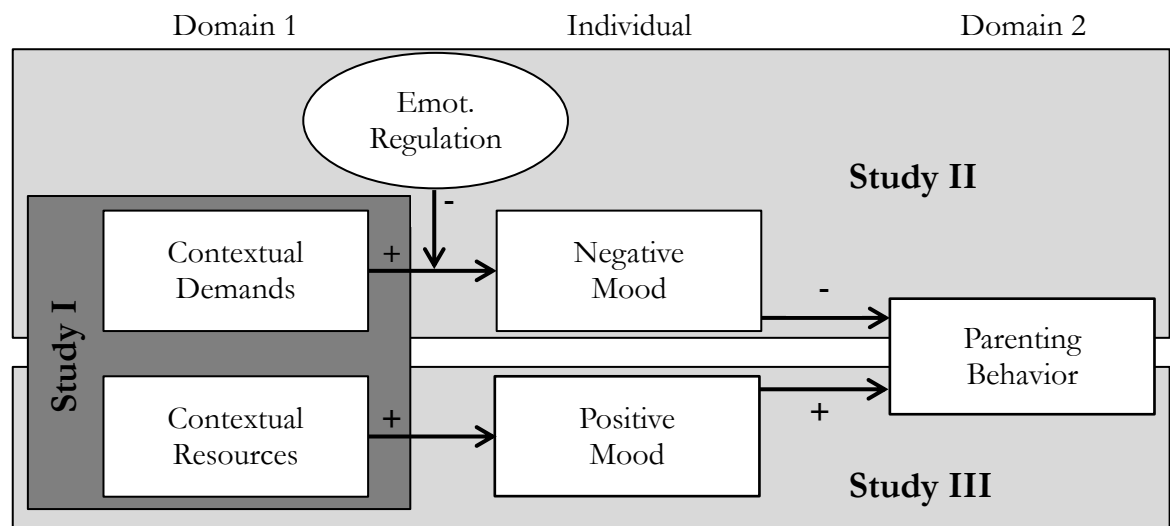


Figure 3: Illustration of the Aspects of the Work-Home Resources Model (ten Brummelhuis & Bakker, 2012) Investigated in the Three Studies

3 OVERVIEW OF STUDIES

The three studies included in this dissertation differ in terms of type (WHC and WHE) and direction (W-t-H and H-t-W) of effects as well as the components investigated (antecedents, processes, outcomes) in order to provide a broad and inclusive picture. Furthermore, two different methodological approaches (a meta-analytic approach and an ecological momentary assessment approach) were taken. An overview of the studies and the respective features is given in Table 1. The three studies are briefly summarized in the following, focusing on the study description and the results to allow the general discussion and conclusion. The full-length manuscripts with comprehensive theoretical parts and discussions can be found in Chapter 7.

3.1 STUDY I: A META-ANALYSIS ON THE ANTECEDENTS OF WORK-HOME ENRICHMENT AND A COMPARISON TO WORK-HOME CONFLICT

The first study is a meta-analytic investigation of antecedents of WHE. Until very recently, meta-analyses conducted thus far investigated either WHC (e.g., Amstad et al., 2011; Byron, 2005; Michel et al., 2011) or the consequences of WHE (McNall et al., 2010). Study I aims to complete the picture by providing a meta-analytic review of antecedents of WHE. Simultaneously, Lapierre et al. (2017) conducted a similar meta-analysis. Study I, however, still makes two important contributions to the existing literature. First, it tests several assumptions theoretically derived from the W-H R model (ten Brummelhuis & Bakker, 2012) and advances the theoretical understanding of WHE. Second, it empirically compares the relationship between several antecedents and WHE and WHC, respectively, and therefore provides an integrative picture to understand both processes.

To identify relevant primary studies, a literature search was conducted in several databases as well as in existing meta-analysis. Finally, a total of 131 samples were included in the meta-analysis. Effect sizes were calculated for 13 contextual resources (nine work resources and four home resources), five contextual demands (three work demands and two home demands), and seven personal resources following the methodological approach of Schmidt and Hunter (2015). All contextual resources were significantly and positively related to both directions of WHE (i.e., W-t-H E and H-t-W E), irrespectively of the origin domain (i.e., work and home). Generally, work resources correlated significantly stronger with W-t-H E than with H-t-W E and vice versa for home resources. No such differences in effect sizes were found between W-t-H E and H-t-W E in terms of resources that aim to facilitate the

Table 1. Overview of the Studies of this Dissertation

Study	Methodological Approach	Type of Effect		Direction of Effect		Components Investigated		
		Conflict	Enrichment	W-t-H	H-t-W	Antecedents	Processes	Outcomes
Study I	Jensen, R., Meier, L. L., Nohe, C., & Klumb, P. L. (in prep.). Work-Home Enrichment: A Meta-Analysis on its Antecedents and a Comparison to Work-Home Conflict.	Meta-Analysis	x	x	x	x		
Study II	Jensen, R., Siegler, S., Meier, L. L., & Klumb, P. L. (in prep.). The Influence of Daily Interpersonal Conflicts at Work on Parenting Behavior – Examining the Role of Negative Mood and Emotion Regulation Competence.	Ecological Momentary Assessment	x	x		x	x	x
Study III	Jensen, R., Schoebi, D., & Klumb, P. L. (in prep.). The Influence of Positive Workplace Interactions on Mood and Parenting Behavior at Home.	Ecological Momentary Assessment		x		x	x	x

Note. W-t-H = Work-to-Home; H-t-W = Home-to-Work

combination of work and home life (i.e., boundary spanning resources). All but two contextual resources (development opportunities at work and work-home related support at home) correlated significantly and negatively with W-t-H C, and all but two correlations (autonomy at work and availability of work-home benefits at work) were significantly negative for H-t-W C. As a general pattern, contextual resources were stronger related to WHE than to WHC, but the pattern changed again for boundary spanning resources: These work resources correlated equally strongly with W-t-H E and W-t-H C. Only some of the analyzed relationships between contextual demands and WHE were significantly negative and no clear differences were found for the two different directions of WHE. All contextual demands correlated significantly and positively with both directions of WHC and most effect sizes were significantly stronger for WHC than for WHE. All personal resources correlated significantly with all four facets of the work-home interface: Positive relationships were found for WHE and negative relationships for WHC. No clear differences were found concerning the directions or types of work-home effects in terms of personal resources.

The meta-analysis reveals interesting patterns concerning similarities and differences in antecedents of the four facets of the work-home interface. Boundary spanning resources seem to be promising to reduce WHC and to foster WHE. Personal resources are equally strongly related to all four facets, too. A reduction of contextual demands, however, seems most promising to reduce the experience of WHC. Surprisingly, social characteristics of the work and home domains (other than support) were found to be considered only scarcely. Furthermore, the meta-analysis did not shed light on the process of WHC and WHE. Both aspects are addressed in the Studies II and III.

3.2 STUDY II: THE INFLUENCE OF DAILY CONFLICTS AT WORK ON PARENTING BEHAVIOR

The second study focuses on the influence of daily interpersonal conflicts at work on parenting behavior in the evening. Based on the W-H R model (ten Brummelhuis & Bakker, 2012), it furthermore investigates the mediating role of negative mood at the end of the working day as well as the extent to which emotion regulation competence buffers the relationship between interpersonal conflicts and negative mood. Ten Brummelhuis & Bakker (2012) propose key resources as buffer against resource loss when facing demands. Focusing on emotion regulation competence, this study contributes to a deeper understanding of the role of person characteristics in the process of WHC, which remains still an open question (Allen, 2012).

In an ecological momentary assessment study, 75 fathers completed four

questionnaires per day (in the morning before going to work, at noon during the break, at the end of the working day, and before going to bed) during eight consecutive working days. Interpersonal conflicts, negative mood, and parenting behavior were measured in these daily questionnaires. Emotion regulation competence was assessed in a cross-sectional survey. In addition to the self-reports, spouses rated the paternal parenting behavior every evening. All participants were employed in a big Swiss retail company and lived with at least one child younger than 17 years during the week. Intraindividual effects were estimated conducting two-level random coefficient path analyses with cross-level interactions in Mplus, Version 7.31 (Muthén & Muthén, 1998-2015).

Results show that interpersonal conflicts with the supervisor but not with coworkers are related to increased negative mood at the end of the working day. Negative mood, however, was not related to parenting behavior in the evening. Neither the direct nor the indirect effects of interpersonal conflicts on parenting behavior mediated by negative mood were significant. Emotion regulation competence did not significantly buffer the relationship between interpersonal conflicts and negative mood.

Besides methodological reasons, one possible explanation for this result pattern is that fathers—irrespective of their emotion regulation competence—invested available resources in order to prevent negative mood to influence their behavior towards the children. The aim of this resources investment could be to protect the children from negative influences from the work domain and to maintain positive interactions within the family which are a basic need for humans. The relevance of positive interactions for the work-home interface is investigated in more detail in Study III.

3.3 STUDY III: THE INFLUENCE OF DAILY POSITIVE INTERACTIONS AT WORK ON PARENTING BEHAVIOR

To complement Study II and to advance the knowledge of positive spillover processes, Study III focuses on the influence that daily positive workplace interactions have on parenting behavior in the evening and on the mediating effect of positive mood. Building on the W-H R model (ten Brummelhuis & Bakker, 2012), it thus combines the research on the work-home interface and on positive workplace interactions and tests the resources generating potential of these interactions (e.g., Lilius, 2012).

The questions mentioned before were addressed by analyzing an existing data set that was collected during a project that investigated couple processes (Schoebi, Perrez, & Bradbury, 2012). In this ecological momentary assessment study, participants completed four questionnaires per day (in the morning before going to work, at the end of the working day,

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45 minutes after the reunion with the spouse, and before going to bed) during at least 10 and up to 14 consecutive days measuring positive workplace interactions, positive mood, and parenting behavior. Including only participants who spent at least two days at work during the study period resulted in a final sample of 198 participants (92 heterosexual couples and 14 individual participants). All participants had at least one child younger than 8 years. Intraindividual effects were estimated conducting three-level random coefficient path analyses in Mplus, Version 7.31 (Muthén & Muthén, 1998-2015).

The results show a significant positive spillover effect: Positive workplace interactions were related to positive mood after returning home. Positive mood, in turn, was significantly related to more positive and less negative parenting behavior in the evening. Positive workplace interactions were not directly related to parenting behavior, however, the indirect effects, mediated by positive mood, were significant for both positive and negative parenting behavior.

These results indicate that work experiences such as positive workplace interactions can have beneficial effects for the home domain. Furthermore, they demonstrate that positive mood seems to link the work and home domains.

4 GENERAL DISCUSSION

The main aims of this dissertation are (a) to shed light on antecedents, processes, and outcomes of the combination of work and home life (b) integrally for negative and positive effects (c) by testing several assumptions of the W-H R model (ten Brummelhuis & Bakker, 2012). In the following, I firstly discuss theoretical implications of the results as well as open questions that are related to these results and that should be addressed in future studies. Then I describe practical implications for the successful combination of work and home life and finally outline strengths and limitations of this dissertation.

4.1 THEORETICAL IMPLICATIONS AND FUTURE DIRECTIONS

This dissertation focuses on the investigation of antecedents, processes, and outcomes of the work-home interface. The theoretical implications and resulting open questions are discussed separately for these three aspects (Chapters 4.1.1 to 4.1.3), but integrally for WHC and WHE. The W-H R model (ten Brummelhuis & Bakker, 2012) provides the theoretical basis of all three studies that form part of this dissertation. At the end of this subchapter, I propose an extended version of this model (Chapter 4.1.4).

4.1.1 ANTECEDENTS

In Chapter 2.2.1, I deduced four questions concerning antecedents of WHC and WHE that are addressed in this dissertation: (1) Do WHC and WHE have only different or also common antecedents? (2) Which role do contextual demands play for WHE and which role do contextual resources play for WHC? (3) Which role do characteristics of the receiving domain play for the experience of WHE and WHC? (4) Which influence do positive workplace interactions have on well-being and behavior at home?

Concerning common and distinct antecedents of WHC and WHE, the results of Study I propose some similarities as well as differences between the two types of effects: Speaking of the similarities, personal resources generally seem to be equally strongly related to WHC and WHE. Although some significant differences were found, no clear pattern occurred from these differences: Some personal resources had stronger relationships with WHC (e.g., emotional stability) whereas other had stronger relationships with WHE (e.g., positive affect). Speaking of the differences, most of the investigated contextual demands had significantly stronger relationships with WHC compared to WHE. Similarly, several of the contextual resources had significantly stronger relationships with WHE than

with WHC. On a theoretical level, this pattern confirms the notion that WHC and WHE are distinct processes and not two ends of one continuum (Frone, 2003; Greenhaus & Powell, 2006; ten Brummelhuis & Bakker, 2012). Furthermore, the results are in line with the conclusion of Lapierre et al. (2017) that—overall—different variables trigger the experience of WHC and WHE.

Having a closer look on the results, however, reveals an interesting pattern: The effect sizes did not differ significantly for WHC and WHE in terms of those work resources that aim directly to improve the combination of work and home life, for instance, work-home related support or flexible work schedules (i.e., boundary spanning resources; Voydanoff, 2004). This result suggests that contextual work resources differ in their potential to minimize negative and maximize positive effects simultaneously: Resources which are specific to the work-home interface are particularly powerful in this respect. Yet, in order to understand the underlying mechanisms, it would be important to integrate this observation in the W-H R model (ten Brummelhuis & Bakker, 2012) and to examine whether this potential holds true when investigating the gain or loss of personal resources as outcomes and not the experience of WHC or WHE. Associated therewith, it is important to clarify which contextual resource has the potential to generate which personal resources. For instance, self-efficacy, describing the belief of ability to execute required behavior (Bandura, 1977), is considered as personal resource (ten Brummelhuis & Bakker, 2012). This proposes that contextual resources can help to strengthen self-efficacy. In the field of work-home interface research, several authors (e.g., Cinamon, 2006; Hennessy & Lent, 2008; Lapierre, van Steenbergen, Peeters, & Kluwer, 2016) propose the more specific concept of self-efficacy to manage the work-home interface. It is possible that work-home related contextual resources are more effective in generating this specific type of self-efficacy whereas general contextual resources are more effective in creating general self-efficacy. Understanding specific contextual resources–personal resources relationships helps to provide the right and most efficient resources in specific environments and for specific individuals.

Concerning the second question that addresses the role of resources for WHC and of demands for WHE, the results of the meta-analysis (Study I) show that most of the resources correlated significantly and negatively with the experience of WHC (13 out of 17 relationships were significant). In line with theoretical propositions (Greenhaus & Beutell, 1985) and with empirical findings (French et al., 2018; e.g., Kossek et al., 2011), social support seems to be an important resource that helps to avoid the experience of WHC. The results of Study I, however, go beyond this notion and show that resources such as job security and autonomy at work are related to WHC. These relationships were similarly strong

as the relationships between support and WHC. Transferring the relationship between resources and WHC in a process view and integrating it in the W-H R model (ten Brummelhuis & Bakker, 2012) proposes that contextual resources can impede the loss spiral that is triggered by contextual demands. Consequently, contextual resources seem to have a buffering function in the process of WHC.

This consideration is consistent with the job demands–resources (JD-R) theory (Bakker & Demerouti, 2017). One important proposition of this theory is that resources serve as a buffer against the detrimental effect of demands on strain (Bakker & Demerouti, 2017). Several studies provide empirical evidence for this proposition (e.g., Bakker, ten Brummelhuis, Prins, & van der Heijden, 2011; S. Gross et al., 2011). The first study has shown that job resources (e.g., job autonomy, participation in decision making) buffer the negative effect of job demands (e.g., workload) on WHC (Bakker et al., 2011). In a different context, but with the same underlying logic, the second study has shown that positive work events buffer the resource-draining effect of negative work events (S. Gross et al., 2011). This effect is called "buffer hypothesis" (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007, p. 276).

The picture is much less clear for the relationship between contextual demands and the experience of WHE: Only half of the investigated relationships were significant (four out of eight). The significant relationships were negative, meaning that facing demands reduces the experience of WHE. Contrary to Lapierre et al. (2017), it cannot be concluded that demands do not play a role as antecedents of WHE, but some demands seem to hamper positive effects of the combination of work and home life. Transferring this notion to the W-H R model (ten Brummelhuis & Bakker, 2012) would propose that contextual demands hinder the gain spiral that is triggered by contextual resources: When facing demands, individuals must employ resources that are depleted (Hobfoll, 1989). The depleted resources are no longer available to generate new resources. This consideration suggests a negative moderation effect of demands on the positive relationship between contextual resources and personal resources as it was recently found: Family hassles attenuated the relationship between job resources and flourishing (Du et al., 2018).

Surprisingly, the proposition of a negative moderating effect of demands on the relationship between contextual and personal resources contradicts the proposition of the JD-R theory that the beneficial effect of resources is particularly strong when demands are high (Bakker & Demerouti, 2017). Stated otherwise, the JD-R theory proposes that resources are particularly useful when they are needed (Bakker & Demerouti, 2017), thus suggesting a positive moderation effect as, for instance, found by Bakker et al. (2007). Their study showed

that resources, such as appreciation, were most beneficial for work engagement when demands were high. To summarize, the integration of the results of Study I in the W-H R model (ten Brummelhuis & Bakker, 2012) and the propositions of the JD-R theory (Bakker & Demerouti, 2017) lead to contradictory assumptions concerning the moderation effect of demands on the resource gain spiral. A study, in which 40 interaction effects of different contextual demands and contextual resources and their influence on work engagement were investigated, revealed that only half of the interaction effects were significant and only four out of 20 interaction effects could be cross-validated in a second sample (Hakanen, Bakker, & Demerouti, 2005). It is possible that only a part of the interaction effects was significant as the different mechanisms described above (i.e., positive and negative moderation effect of demands) are at work at the same time and eliminate each other.

Another possible explanation of the contradictory propositions could be that different kinds of demands interact differently with resources. One promising avenue to investigate this explanation could be the differentiation of challenge and hindrance demands. Challenge demands describe work characteristics that are related to potential gains, whereas hindrance demands describe work characteristics that hinder goal attainment and therefore are related to potential losses (Searle & Auton, 2014). It is possible that challenge demands boost the positive effect of contextual resources whereas hindrance demands attenuate it: Contrary to challenge demands, facing hindrance demands requires resources, so that the gain spiral is impeded. First empirical support for this proposition is given by a study that revealed different directions of interactions between challenge and hindrance demands and job resources, respectively, on positive affect and work engagement (Tadić, Bakker, & Oerlemans, 2014).

Another promising avenue to pursue the explanation of differential effects for different demands–resources combination could be the consideration of the qualitative match between demands, resources, and outcomes. The triple-match principle (de Jonge & Dormann, 2006) proposes that resources are most likely to buffer the depleting effect of demands when demands, resources, and strains refer to qualitatively identical dimensions (de Jonge & Dormann, 2006). Additionally, it proposes that individuals primarily use matching resources to deal with demands. Following this idea would suggest that the positive relationship between contextual resources (e.g., emotional resources) and personal resources (e.g., affective well-being) is attenuated when matching demands (e.g., emotional demands) are faced. In this case, the contextual resources are used to cope with the demands and cannot be invested anymore to generate respective personal resources. This effect should be less strong or even not existent when non-matching demands (e.g., cognitive demands) are

faced; in this case other than emotional resources are needed to cope with these demands. Future studies should enlighten the contradiction between the W-H R model (ten Brummelhuis & Bakker, 2012) and the JD-R theory (Bakker & Demerouti, 2017) concerning the moderation effect of demands by investigating the different potential explanations.

The third research question concerning the antecedents deals with the importance of characteristics of the receiving domain. In Study I, work resources tended to have a stronger correlation with W-t-H C and W-t-H E than with H-t-W processes and vice versa for home resources. However, H-t-W C and H-t-W E correlated significantly with nearly all work resources and W-t-H C and W-t-H E correlated significantly with nearly all home resources. Integrating this result in the W-H R model (ten Brummelhuis & Bakker, 2012) proposes that contextual resources of the receiving domain enhance the positive effect of personal resources on outcomes which suggests a positive moderating effect. The COR theory (Hobfoll, 1989; Hobfoll et al., 2018) describes that individuals react to resources loss by a defensive resource investment to protect their remaining resources (Halbesleben et al., 2014). Contextual resources of the receiving domain can help the individual to compensate for the resources loss and therefore lead to a less defensive resource investment. For instance, a supportive partner at home who takes care of the household tasks allows an employee—despite limited energy after a stressful day at work—to spend quality time with the children. The idea can also be transferred to the process of resources gain: Individuals who gained resources can invest them more generously. Contextual resources of the domain, in which the resource investment takes place can reinforce this process; individuals have even more resources available on which they can rely. For instance, a supportive partner at home enables an employee who comes home full of energy to invest this energy to spend quality time with the children.

In general, a similar pattern was found in Study I in terms of the demands, although—as described above—the relationship between demands and enrichment is not clear yet. Work demands had a significant positive relationship with H-t-W C. In contrast, a significant relationship with H-t-W E could not be found. Home demands correlated positively with W-t-H C and the relationships were mainly negative and significant for W-t-H E. Integrating this result in the W-H R model (ten Brummelhuis & Bakker, 2012) leads to the same discrepancy as described for the consideration of demands as antecedents of WHE: The results of Study I propose that contextual demands in the receiving domain requires the investment of resources and therefore mitigate the positive relationship between personal resources and outcomes. The JD-R theory (Bakker & Demerouti, 2017), in contrast, proposes that this relationship is especially strong when demands are high and resources are

needed. Again, it is important to gain a deeper understanding of the role of demands of the receiving domain as moderator on the relationship between personal resources and favorable outcomes.

The fourth research question concerning the antecedents of WHC and WHE tackles the role of social work characteristics for the home domain. Contrary to the expectation and to other studies (e.g., Lim et al., 2016; Story & Repetti, 2006), Study II did not provide evidence that social conflicts at work and the resulting negative mood influence the behavior at home. Reasons for this result are discussed in the Chapters 4.1.2 and 4.1.3, as well as in the discussion section of Study II. However, the focus lies on the role of positive workplace interactions as antecedents of positive effects on the home domain. As expected, Study III revealed a resource generating function of positive workplace interactions. Combined with the result that interaction requirements at work have a positive effect on the home domain (Bhave & Lefter, 2018), the result of Study III reveals the importance to consider social resources other than social support in the context of work-home interface. To understand this process in detail, future studies could investigate various types of positive workplace interactions (e.g., voluntary vs. required interactions) or various interaction partners (e.g., interaction partners with whom one interacts regularly vs. interaction partners with whom one interacts only once). Different effects could lead to different practical measures: While one-time interactions are more difficult to influence, supervisors can shape the interaction climate in their working group (e.g., Kuenzi & Schminke, 2009) such that the interactions between team members become more positive. This would be more important if regular interactions have a strong influence on employees' well-being.

4.1.2 PROCESSES

Concerning the processes of WHC and WHE, this dissertation addresses two questions (see Chapter 2.2.2 for a detailed deduction): (1) Which role does emotion regulation competence play for the resource drain process when facing demands at work? (2) Which role does positive affect play in the enriching process of work experiences influencing behavior in the home domain?

Considering the role of emotion regulation competence, Study II did not provide evidence that this competence shapes the relationship between interpersonal conflicts at work and negative mood: Irrespectively of the level of emotion regulation competence, the relationship was significant for supervisor conflicts and nonsignificant for coworker conflicts. In terms of the W-H R model (ten Brummelhuis & Bakker, 2012), Study II did therefore not support the proposition that emotion regulation competence is a key resource

that buffer the detrimental effect of contextual demands on personal resources when investigating this specific combination of variables. On the one hand, this result might have methodological reasons (i.e., a lack of statistical power; for a detailed discussion of methodological issues, see the discussion section of Study II). On the other hand, it is possible that all participants—irrespective of their emotion regulation competence—downregulated the negative affective reactions as these reactions are not appropriate in the work context, especially in occupations with customer contact (Zapf, Vogt, Seifert, Mertini, & Isic, 1999). An empirical indication for this explanation is the fact that all participants reported relatively low levels of negative mood.

One conclusion of the result pattern could be that emotion regulation competence might not be the most important key resource for this specific stressor–strain combination. In the context of the JD-R theory (Bakker & Demerouti, 2017), the necessity is stressed to gain knowledge of the efficiency of specific demands–resources combinations (Bakker et al., 2011). The same applies to the W-H R model (ten Brummelhuis & Bakker, 2012): It is a framework model that generally proposes a buffer effect of key resources but does not specify which key resources are helpful in which context. Hence, in future studies, more detailed knowledge should be gained about different combinations of contextual demands, key resources, and personal resources and their interactions. At the same time, theoretical considerations propose emotion regulation competence to buffer not only the resource drain following demands but also the spillover of affective reactions in the other domain (Grandey & Krannitz, 2016). Taking this into consideration, emotion regulation competence could be proposed as moderator between personal resources and outcomes in the other domain instead of moderating the resource drain process (see Chapters 4.1.3 and 4.1.4 for a detailed description of this proposition).

The second question concerning the underlying processes relates to the role of positive affect for the enriching process. The results of Study III provided evidence that the affective mechanism that has been found to be important in the process of WHC (Amstad & Semmer, 2013; Butler et al., 2013) is also involved in the WHE process: In Study III, a significant indirect effect of positive workplace interactions on parenting behavior mediated by positive mood was found. This result is consistent with the theoretical model of WHE in which the affective path is proposed as an important mechanism (Greenhaus & Powell, 2006). However, empirical support for this notion that is provided by this dissertation has been scarce thus far (e.g., Allen, 2012; Butler et al., 2013).

Study III provided an interesting additional result: Contrary to a study that used the same data set as Study III (Malinen et al., 2017), no direct effect of parents' work

characteristics on parent-child interactions was found when including the indirect effect in the model. This result supports the notion that studies about the direct link between parents' work characteristics and parent-child interactions implicitly assume the indirect affective mechanism (Cho & Ciancetta, 2016). The W-H R model (ten Brummelhuis & Bakker, 2012), however, proposes that a wide range of personal resources can function as a link between the work and home domains (i.e., physical, psychological, affective, intellectual, and capital resources). Other than affective personal resources should be investigated as linking mechanisms between work and home life in future studies. As a first promising avenue, some studies investigated psychological detachment as a mediator between work experiences and home outcomes (e.g., Debrot, Siegler, Klumb, & Schoebi, 2017; Meier & Cho, in press). In the first of two included studies, Debrot et al. (2017) found an indirect effect of work stress on relationship quality that was mediated by detachment: Work stress reduced detachment in the evening. As a consequence, participants reported lower relationship quality (Debrot et al., 2017). Meier and Cho (in press) investigated the mediating effect of affect and detachment simultaneously and compared the strength of the two mechanisms. Both negative affect and detachment were examined as mediators of the relationship between work stressors (workload and incivility) and social undermining at home. The results suggest both indirect effects to be equally strong. In the future, it would be interesting to transfer this idea to WHE and to investigate whether contextual resources facilitate detachment.

4.1.3 OUTCOMES

As mentioned in Chapter 2.2.3, two questions concerning the outcomes of the work-home interface are addressed in this dissertation, both focusing on parenting behavior: (1) Do negative affective reactions that arise from experiences at work have detrimental effects on fathers' parenting behavior in the evening by increasing negative and decreasing positive behaviors? (2) Do positive affective reactions after coming home have a comparable effect on parents' behavior towards their children by increasing positive and decreasing negative behavior?

Concerning the negative spillover effect, the results of Study II did not provide evidence for parenting behavior to be related to negative mood at the end of the working day. These results are surprising as they contradict other studies which have shown a relationship between negative mood at work and behavior at home (e.g., marital behavior; Schulz et al., 2004; Story & Repetti, 2006). Like for the nonsignificant indirect effect (see Chapter 4.1.2) it is possible that methodological reasons (i.e., low statistical power) account for these results (see the discussion section of Study II). At the same time, it is possible that a

theoretical explanation underlies these results: Individuals might actively try to prevent negative spillover effects from the work domain into the home domain in order to protect family members against their work stress. This active prevention has been described as *segmentation* process (Edwards & Rothbard, 2000). The participants of Study II reported relatively low levels of negative mood; it is thus possible that they had enough resources for such a segmentation process.

Segmentation describes not only the process of inhibiting negative spillover effects but—more generally—the process of "maintaining a preferred degree of connection between work and family" (Edwards & Rothbard, 2000, p. 181) which implies a differential permeability of the work-home interface for negative and positive experiences. Consequently, the segmentation process might also be operating when positive mood resulting from positive workplace interactions have a beneficial effect on parenting behavior in the evening (Study III). The combination of the results of the Studies II and III proposes that parents try to hinder negative mood to spill over in the home domain whereas they let positive mood spilling over in the home domain. However, we should be careful with this conclusion as it has been drawn based on the results of two different studies with different samples, different operationalization of parenting behavior, and different statistical power. As a next step, it would be interesting to take advantage of the particularity of the W-H R model (ten Brummelhuis & Bakker, 2012) that it explains WHC and WHE processes simultaneously and to investigate the two processes and their potential interactions in the same sample.

Segmentation is described as an active coping process (Edwards & Rothbard, 2000) that requires the investment of resources (Hobfoll, 1989). Key resources are defined as management resources that facilitate the selection and implementation of resources (ten Brummelhuis & Bakker, 2012). This definition proposes that key resources can alter the process of segmentation. For instance, emotion regulation competence could be helpful when individuals try to selectively impede and enable affective spillover processes for negative and positive affect, respectively. This consideration is consistent with the assumption that the more emotional competent an individual is, the more it experiences positive and the less it experiences negative spillover (Grandey & Krannitz, 2016). In terms of the W-H R model (ten Brummelhuis & Bakker, 2012), this would mean that key resources do not only alter the process of resource loss and gain due to contextual demands and resources but do also alter the relationship between personal resources and outcomes in the other domain. To be more precise, after a loss of personal resources, key resources help to select and to invest the remaining resources efficiently and therefore attenuate the

detrimental effect of resources loss on important outcomes. Similarly, after a gain of personal resources, key resources alter the investment process of the resources in such a way that they can be used most efficiently to be beneficial in the other domain. This proposition should be investigated in future studies.

4.1.4 PROPOSAL OF AN EXTENDED WORK-HOME RESOURCES MODEL

As a theoretical contribution, one aim of this dissertation is to empirically test several assumptions of the W-H R model (ten Brummelhuis & Bakker, 2012) with different methodological approaches and in different samples. Some of the assumptions were confirmed. Contextual demands were found to be important antecedents of WHC (Study I), whereas contextual resources were found to be important antecedents of WHE (Studies I and III). Furthermore, a resource depleting effect of contextual work demands (interpersonal conflicts) was found (Study II). This effect, however, did not spill over in the home domain. A third result that confirms an important assumption of the W-H R model (ten Brummelhuis & Bakker, 2012) concerns the process of WHE: Contextual work resources (positive workplace interactions) were shown to generate personal resources (positive mood) which, in turn, improved home outcomes (parenting behavior; Study III).

Beyond the confirmation of these central model assumptions, the results of the three studies included in this dissertation propose several extensions of the W-H R model of ten Brummelhuis and Bakker (2012). The additional relationships, theoretically derived from the results of the three studies, are depicted in Figure 4. A detailed discussion of the results leading to the newly proposed relationship can be found in the Subchapters 4.1.1 to 4.1.3; the aim of this subchapter is to summarize the proposed extensions of the model.

Proposition 1: Contextual resources buffer the negative relationship between contextual demands and personal resources (Path a).

Proposition 2: Contextual demands moderate the positive relationship between contextual resources and personal resources (Path b).

Since contextual resources were significantly related to the experience of WHC (Study I), I propose contextual resources to impede the resource loss spiral that is initiated when facing contextual demands. Similarly, I propose that contextual demands influence the resource gain spiral that is initiated when having contextual resources available. The direction of this second proposition, however is not specified as different theoretical approaches propose different directions: The integration of the results of Study I (i.e., the negative relationships between contextual demands and WHE) in the W-H R model (ten

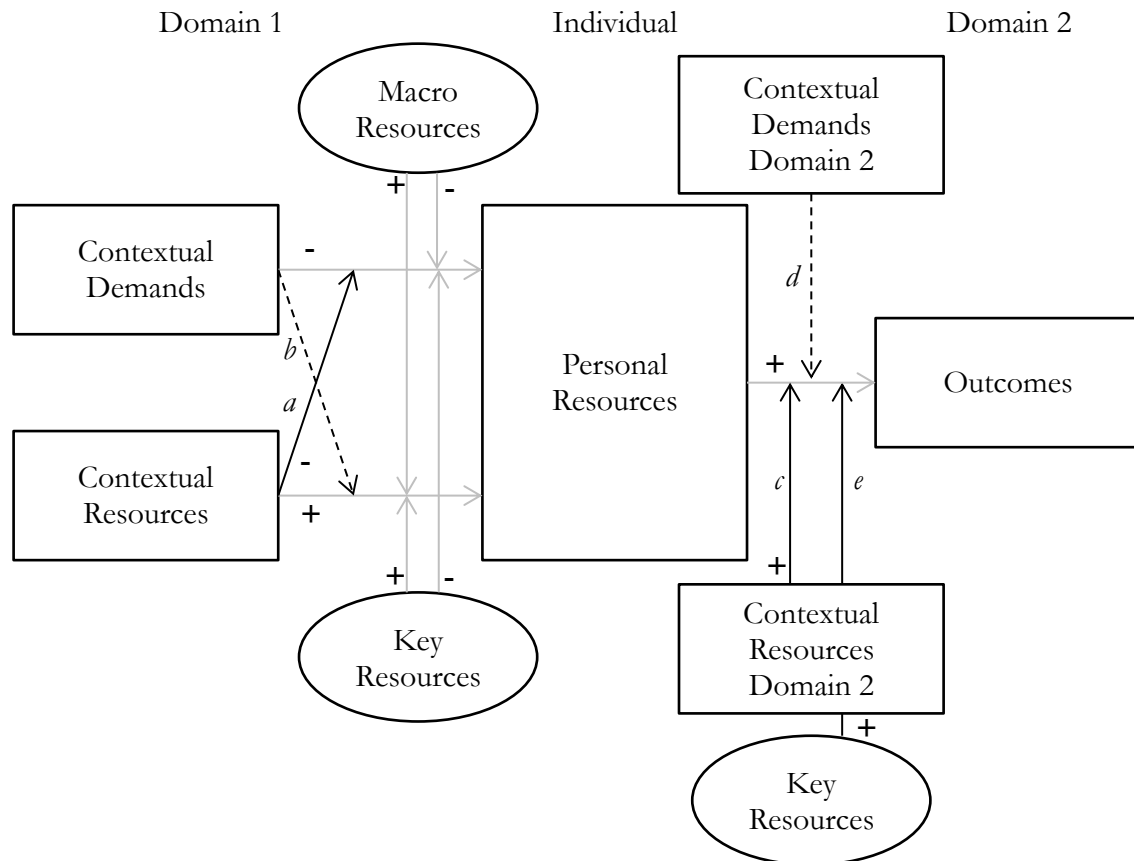


Figure 4: Extended Work-Home Resources Model (ten Brummelhuis & Bakker, 2012; Adapted by the Author)

This model includes hypothetically proposed, additional relationships; arrows in gray (→) represent relationships proposed in the original model; arrows in black (→) represent potentially additional relationships; dashed arrows (--->) represent potentially additional relationships for which different theories propose different directions

Brummelhuis & Bakker, 2012) leads to the proposition that contextual demands impede the gain spiral resulting in a negative moderating effect. Contrary, the JD-R theory (Bakker & Demerouti, 2017) proposes the opposite effect. Future studies should investigate the direction of the moderation effect.

Proposition 3: Contextual resources of the receiving domain (i.e., Domain 2) enhance the beneficial effect of personal resources on outcomes in Domain 2 (Path c).

Proposition 4: Contextual demands moderate the positive relationship between personal resources and outcomes in Domain 2 (Path d).

The results of Study I propose that characteristics of the receiving domain influence the processes of WHC and WHE. Contextual resources of the receiving domain correlated significantly and positively with the respective direction of WHE. This result is an indication that contextual resources of the receiving domain amplify the beneficial effect of personal

resources on outcomes and therefore strengthen the gain spiral. Similarly, I propose contextual demands of the receiving domain to influence the resource gain spiral and the respective outcomes. Like for Path b, however, it is not clear whether the relationship between personal resources and outcomes (Path d) is attenuated or intensified by contextual demands: Integrating the results of Study I in the W-H R model (ten Brummelhuis & Bakker, 2012) proposes an attenuating effect of contextual demands of the receiving domain whereas the JD-R theory (Bakker & Demerouti, 2017) proposes an intensifying effect. Again, the direction of the moderation effect should be clarified in future studies.

Proposition 5: Key resources enhance the beneficial effect of personal resources on outcomes in Domain 2 (Path e).

Combining the results of the Studies II and III leads to a first indication that individuals can shape the spillover effect of positive and negative affective experiences. This would mean that personal resources are utilized differentially in the receiving domain. Key resources are proposed to influence the selection and alteration of personal resources since they can be an important factor that influences the specific and efficient use of resources.

It is important to note that these five propositions are conclusions of the interpretation of empirical results, but that they have not yet been investigated empirically. Hence, the extended model should be tested in future studies.

4.2 PRACTICAL IMPLICATIONS

The central question of this dissertation is how individuals may simultaneously minimize negative and maximize positive effects of the combination of work and home life. The results provide some insights into practical measures that might support individuals to combine work and home life successfully. First, the present research showed that a promising avenue to attain this goal is to strengthen boundary spanning resources, i.e., resources that aim directly at a successful combination of work and home life. These resources showed similarly strong relationships with both WHC and WHE and therefore have the potential to reduce negative and foster positive effects simultaneously. To be more precise, the results show that organizations should, for instance, implement flexible work arrangements such as giving their employees flexibility when they complete their work (i.e., flextime arrangements). A more detailed investigation of different flexible work arrangements (Allen et al., 2012) showed that for flextime, the possibility to use it is already sufficient for a reduction of WHC; it is not necessary that employees actually use it. Another important boundary spanning resource is a family friendly work climate. This includes, for instance, being accommodating in terms of home needs (e.g., to allow employees to leave

early in cases of a sick child at home). Furthermore, supervisors and coworkers should be understanding and supportive concerning the home life (e.g., support an employee/coworker with the completion of a work task when he/she has difficulties at home; listen to and discuss problems with juggling work and home life). Complementary to Study I, other studies propose that also boundary spanning resources such as enabling employees to decide where they complete their work (i.e., flexplace arrangements; Allen et al., 2012) or the possibility of parental leave (Voydanoff, 2004) are helpful for a successful combination of work and home life. As Study I has shown, however, not only boundary spanning resources at work are important, but also a supportive partner at home is beneficial for the combination of work and home life.

Second, the results of the present research suggest that it might be more promising to focus on how to strengthen resources (contextual as well as personal resources) than to focus on how demands hinder the combination of work and home life as it has been done for several years: Contextual and personal resources are not only related to stronger experiences of WHE, but also to reduced experiences of WHC. For instance, providing autonomy at work (e.g., the freedom to decide on his own how to complete one's tasks) is beneficial for the combination of work and home life. This finding is consistent with the very early notion that control at work buffers the negative effect of work demands (Karasek, 1979). Besides work-home related support, a generally supportive work environment (e.g., appreciation of coworkers and supervisors; the help of coworkers to deal with disappointments), as well as work environments that are characterized by positive interactions are beneficial for the work-home interface. In terms of personal resources, different person characteristics such as conscientiousness and emotional stability seem to be related to less WHC as well as more WHE. Consequently, besides strengthening contextual resources, organizations should offer trainings to strengthen personal resources.

Third, although the results suggest the importance of strengthening resources, this should not lead to a disregard of demands: Not only are stressful demands generally harmful for the well-being of employees (Kahn & Byosiére, 1992) and for the functioning of society by reducing productivity and generating costs (Hassard, Teoh, Visockaite, Dewe, & Cox, 2018), but demands are strongly related to WHC. Hence, reducing the workload at work as well as at home is beneficial for a successful combination of work and home life. Summarizing, the results propose that strengthening resources in both domains work and home especially boundary spanning resources is a fruitful ground for a successful combination of work and home life. Additionally, it is most important to reduce demands for those who suffer from incompatibilities between the two domains.

As a fourth practical implication, the results point out that practitioners who discuss questions related to the work-home interface with employees should stress positive mechanisms and outcomes. Focusing on positive aspects of the interplay of work and home life can have two beneficial consequences. First, strengthening positive expectations change a person's behavior: Believing in positive outcomes leads to both striving for these outcomes as well as coping more efficient with stressful situations (Scheier & Carver, 1993). Second, it can result in a reduction of guilt: Studies have shown that employment can lead to the feeling of guilt, for instance, when an employee has the feeling of not spending enough time with the partner or with the children (Borelli, Nelson, River, Birken, & Moss-Racusin, 2017; Hochwarter, Perrewé, Meurs, & Kacmar, 2007; Korabik, 2015). Work-induced guilt, in turn, is related to reduced life satisfaction (Hochwarter et al., 2007) and psychological distress (Korabik, 2015). Focusing on positive aspects that work can have on home life and, more concretely, on parenting behavior can help to reduce work-induced guilt and therefore be beneficial for the well-being of employees.

4.3 STRENGTHS AND LIMITATIONS

This dissertation has some strengths and limitations alike which are discussed in the following section. The focus thus lies on general strengths and limitations, the limitations of the single studies are considered in the respective discussion sections of the three studies.

The first strength of this dissertation is the strong theoretical foundation as well as the resulting theoretical advancements. Several authors have called for a further development of theories in the field of work-home research: The theoretical development has not advanced at the same pace as empirical research (Allen & Eby, 2016a). More specifically, a lack of theories that explain intraindividual processes has been identified (Allen & Eby, 2016a). The W-H R model of ten Brummelhuis and Bakker (2012) has this potential. Taking this model as theoretical basis for all three studies leads to a stable theoretical anchorage of the conducted research. On this basis, the integration of the results advances the underlying theoretical considerations.

A second strength is the combination of two common approaches taken when measuring the work-home interface. Participants are usually asked directly to which extent they experience the combination of work and home life as conflicting or enriching (Allen, 2012; Keeney & Ilies, 2012). As many studies have taken this approach, the large research body could serve as a basis for the meta-analytic investigation of the antecedents of experienced WHC and WHE (Study I). This approach, however, comes with some methodological disadvantages since causes and consequences are confounded (Allen, 2012)

and it is difficult to investigate the processes linking the work and home domains (Du et al., 2018). As the understanding of the processes was one of the aims of the Studies II and III, a different approach was taken in these studies investigating the direct relationship between work characteristics and home life considering also the mediating mechanism.

The third strength is the reduction of common method bias. Common method bias occurs when the same source and the same method is used to assess all constructs of interest at the same measurement occasion (Podsakoff, MacKenzie, & Podsakoff, 2012). In these cases, the estimation of the relationship between two variables might be biased. In the two primary studies (Studies II and III), common method bias is reduced due to two methodological features. The first is the investigation of intraindividual processes and, related thereto, the centering of variables at the individuals' mean. Comparing the patterns of effects of one day to the patterns of effects of the same person on other days eliminates the bias of interindividual differences in response patterns (Ilies, Johnson, Judge, & Keeney, 2011; Ilies, Scott, & Judge, 2006). Although it does not eliminate all sources of common method bias, it rescinds one important source of common method bias. To further reduce the risk of biased relationship, different sources were used to assess the outcome variable in Study II (self-report as well as the report of the spouse). Therefore, especially in Study II, but also in Study III, the risk of common method bias is lowered.

A first limitation of this dissertation is the investigation of negative and positive interactions in two different studies. As proposed by the W-H R model (ten Brummelhuis & Bakker, 2012), this dissertation sought for an integral understanding of both negative and positive processes. To reach this, WHC and WHE were investigated integrally in the meta-analysis. Furthermore, stressful as well as flourishing social interactions at work were examined. This second aspect, however, was studied in two separate samples. To gain a more integrative understanding of negative and positive processes, both should be investigated in the same sample in future studies. Drawing on one single sample enables, for instance, to compare differential sizes of negative and positive effects, to investigate when positive and when negative effects occur, whether parents can prevent negative spillover while allowing positive spillover effects, as well as potential interaction effects of negative and positive processes.

Second, there is an asymmetry in the investigated directions of the work-home interface: The W-t-H direction was considered more in-depth than the H-t-W direction. While in Study I, both directions were investigated, the Studies II and III focused on the W-t-H direction. In order to gain a more complete picture of the work-home interface, the questions that were asked for the W-t-H direction should be investigated in more detail for

the H-t-W direction in future studies.

A third limitation is the correlational approach of all analyses conducted. Although different designs than cross-sectional survey studies were applied, the analyses conducted do not allow causal conclusions on associations between the work and home domains. To gain knowledge of causal relationships, longitudinal or experimental and quasi-experimental studies are necessary (see Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011; Kelly et al., 2014 for examples of experimental and quasi-experimental studies). These studies are still scarce in the context of work-home interface research (Lapierre & McMullan, 2016), but as they can provide important insights, they could shape the future of this research field.

5 GENERAL CONCLUSION

The main question of this dissertation was how individuals may simultaneously minimize negative and maximize positive effects of the combination of work and home life. This question is highly relevant in today's society since many individuals are engaged in several life domains in which they face increasing responsibilities. Therefore, many of them struggle with a successful combination of these life domains; at the same time, they also experience mutual positive influences of the different life domains. To answer this complex question, an integral understanding of WHC and WHE was needed.

This dissertation aimed to provide new insights that can help to answer the question of how work and home life can be combined successfully. To do so, it strived for a refinement of the theoretical understanding of the work-home interface. Several assumptions derived from ten Brummelhuis and Bakker's (2012) W-H R model were tested by using diverse methodological approaches. An integral interpretation of the results was used to extend the model with additional propositions. First suggestions were made on which aspects of the newly proposed mechanisms should be tested in future studies in order to broaden the theoretical knowledge about the work-home interface. Concerning practical measures, the results indicated that—besides reducing demands—it is promising to strengthen and to strive for additional contextual in the work and home domains as well as for personal resources. Such resources have the potential to minimize negative as well as to maximize positive effects and therefore to facilitate a successful combination of work and home life.

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7 FULL-LENGTH MANUSCRIPTS

This dissertation includes three studies that are presented in their full length in this chapter. As the studies are in preparation for submission, they are presented as manuscripts formatted according to the APA guidelines (American Psychological Association, 2010).

7.1 STUDY I

Work-Home Enrichment:

A Meta-Analysis on its Antecedents and a Comparison to Work-Home Conflict

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Abstract

Many individuals strive to combine work and home life such that the two domains enrich each other. A thorough knowledge of the factors that enhance the experience of work-home enrichment is important for individuals, managers, and researchers. Following the propositions of ten Brummelhuis and Bakker's work-home resources model we meta-analytically investigated the relationship, based on 131 independent samples, between 13 contextual resources, 5 contextual demands, and 7 personal resources with respect to the two directions of work-home enrichment (work-to-home and home-to-work). Furthermore, we compared patterns for work-home enrichment and work-home conflict. In general, we found the expected pattern of contextual resources and personal resources being positively and contextual demands being negatively related to work-home enrichment. Moreover, work-home enrichment was more strongly related to general work resources than to work-home related work resources. Work-home related resources, however, showed similar relationships with all four facets of the work-home interface (work-to-home and home-to-work enrichment and conflict, respectively). Strengthening resources in the work and home domains is promising for an improvement of the work-home interface. The role of demands has not yet been considered in detail in the context of work-home enrichment. The result that demands are related to work-home enrichment provides an important starting point for future research. In conclusion, our meta-analysis provides important insights that foster an understanding of work-home enrichment for researchers and practitioners.

Keywords: work-home enrichment, antecedents, meta-analysis

Work-Home Enrichment: A Meta-Analysis on its Antecedents and a Comparison to Work-Home Conflict.

Work and home life are often considered to be enemies, but they can also be allies that enrich each other (Friedman & Greenhaus, 2000; Greenhaus & Powell, 2006). For instance, having an important paper accepted can create a high level of energy. Bringing this energy home, we might be much more motivated to go out and spend the evening with friends than after a day on which we had to deal with difficult students. Similarly, spending a relaxing evening with our family or friends might put us in a positive mood that can be transferred to the work domain the next day, positively affecting our performance and interactions with supervisors and coworkers. These examples illustrate the process of work-home enrichment (WHE; Greenhaus & Powell, 2006) which has increasingly been studied since the early 2000s (Allen, 2012; McNall, Nicklin, & Masuda, 2010).

The aim of this meta-analysis is to systematize existing knowledge of antecedents of WHE by testing several propositions of the work-home resources model (W-H R model; ten Brummelhuis & Bakker, 2012). As such, the contribution of this study to the existing literature is twofold. First, we provide a systematic analysis of the relationship between antecedent variables and WHE. Prior meta-analyses have shown that the experience of WHE has beneficial consequences on work- and home-related outcomes, as well as on individuals' well-being (McNall et al., 2010; Shockley & Singla, 2011; Zhang, Xu, Jin, & Ford, 2018). Much less is known about the antecedents of WHE, however. To fully understand the phenomenon and to deduce practical measures that are beneficial for the combination of work and home life it is important to gain knowledge of factors that can foster the experience of WHE.

Second, we compare the antecedents of WHE and work-home conflict (WHC; Greenhaus & Beutell, 1985). Researchers conceptualize WHE and WHC as distinct,

independent constructs with different antecedent variables (Frone, 2003; Greenhaus & Powell, 2006; van Steenbergen, Ellemers, & Mooijaart, 2007). At the same time, the W-H R model (ten Brummelhuis & Bakker, 2012) proposes not only distinct, but also common antecedents of WHE and WHC. A comparison of the antecedents of WHE and WHC can therefore help to clarify the relationship between the two constructs. Furthermore, such a comparison is helpful in terms of practical measures. Knowing the common and distinct antecedents of WHE and WHC helps employees, managers, and organizations not only to foster the positive or to reduce the negative effects, but also to answer the question “how individuals may simultaneously minimize negative and maximize positive outcomes of engaging in both work and family roles” (Chen, Powell, & Greenhaus, 2009, p. 82).

The Work-Home Interface: From Conflict to Enrichment

Life can be seen as an array of various roles that we have in specific life domains (Kahn, Wolfe, Quinn, & Snoek, 1964), for instance, the role as an employee in the work domain or the role of a parent or partner in the home domain. Work and home domains are important contexts in the life of working adults (Frone, 2003) which have an influence on each other (e.g., Allen, Cho, & Meier, 2014; Frone, 2003). Two different perspectives have been taken to describe the interrelation of the two domains: the scarcity hypothesis and the energy-expansion hypothesis.

The scarcity hypothesis states that various activities throughout the day consume energy until, at the end of the day, the energy resources are exhausted (Goode, 1960). Applied to the combination of work and home life, it proposes that the engagement in multiple domains leads to increased energy consumption, which leads to strain (Marks, 1977). The scarcity hypothesis builds the basis of the observation that different roles can be “mutually incompatible in some respect” (Greenhaus & Beutell, 1985, p. 77). This phenomenon has been described as WHC (Greenhaus & Beutell, 1985).

Conversely, the energy-expansion hypothesis proposes that the engagement in multiple roles and domains can not only consume but can also create energy (Marks, 1977; Sieber, 1974). This assumption is the basis for later conceptualizations of WHE (Greenhaus & Powell, 2006). WHE describes the phenomenon that “experiences in one role improve the quality of life in the other role” (Greenhaus & Powell, 2006, p. 72). The scarcity hypothesis and therefore the focus on WHC has dominated research on the combination of work and home life for many years although the energy-expansion hypothesis was expressed early on (Allen, 2012). It is only since the early 2000s that the focus has shifted and that researchers have become increasingly interested in WHE (Allen, 2012; McNall et al., 2010).

Various labels have been used to describe positive effects that arise when combining work and home life, such as *positive spillover* (e.g., Edwards & Rothbard, 2000; Kirchmeyer, 1992), *enhancement* (Allen, 2012; Wayne, 2009), *enrichment* (e.g., Carlson, Kacmar, Wayne, & Grzywacz, 2006; Greenhaus & Powell, 2006), and *facilitation* (e.g., Frone, 2003; van Steenbergen et al., 2007). Although researchers attempt to differentiate these constructs theoretically (Wayne, 2009; Zimmerman & Hammer, 2010) and empirically (Carlson et al., 2006; Hanson, Hammer, & Colton, 2006; Masuda, McNall, Allen, & Nicklin, 2012), the terms are often used interchangeably (Allen, 2012). In this paper, we follow the terminology of the underlying W-H R model (ten Brummelhuis & Bakker, 2012) and use the term *enrichment*.

Various labels also have been used to describe the nonwork domain. When investigating the interplay of different domains, the focus lies on work and family. Employees without a family, however, can also experience conflicting or enriching processes when combining different domains (Fisher, Bulger, & Smith, 2009). Hence, several authors started to broaden the scope and to investigate intersections of *work-home* (Greenhaus & Kossek, 2014; Kreiner, 2006), *work-life* (e.g., Fisher et al., 2009),

work-nonwork (e.g., Kirchmeyer, 1992; Kreiner, 2006), *work-self* (Demerouti, 2012), or *work-leisure* (e.g., Knecht, Wiese, & Freund, 2016). Examining the use of these terms reveals that they are used interchangeably and not clearly differentiated (Amstad, Meier, Fasel, Elfering, & Semmer, 2011; Geurts & Demerouti, 2003). In this paper, we again follow the W-H R model (ten Brummelhuis & Bakker, 2012) using the term *home* to describe the nonwork life domain.

Theoretical Foundation: The Work-Home Resources Model

Since the focus on the positive side of the work-home interface emerged, several models have been introduced to explain the underlying processes of WHE (e.g., Greenhaus & Powell, 2006; ten Brummelhuis & Bakker, 2012; Wayne, Grzywacz, Carlson, & Kacmar, 2007). Comparing these models reveals one important advantage of the W-H R model (ten Brummelhuis & Bakker, 2012; see Figure 1): It is the only model that theoretically integrates the negative and positive processes of the work-home interface. This advantage offers the possibility of simultaneously investigating both processes. As this is one of the aims of this research, the W-H R model (ten Brummelhuis & Bakker, 2012) provides an appropriate theoretical basis of our study.

The W-H R model (ten Brummelhuis & Bakker, 2012) is based on the conservation of resources theory (COR theory; Hobfoll, 1989; Hobfoll, Halbesleben, Neveu, & Westman, 2018). As a basic tenet, this theory postulates that people are motivated to retain, protect, and build resources. The investment of other resources is proposed as a means to reach this need. Resources are defined as “anything perceived by the individual to help attain his or her goals” (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014, p. 1338). The W-H R model (ten Brummelhuis & Bakker, 2012) applies this idea to the context of the work-home interface and conceptualizes WHE as a resource gain spiral: Engagement in one domain provides a person with specific *contextual resources*, such as social support or development opportunities, which can be invested to

generate new *personal resources*, such as self-efficacy or skills. These personal resources enhance individuals' well-being and facilitate their performance in the other domain, which leads to the experience of WHE. Similarly, WHC is conceptualized as a resource loss spiral: Engagement in one domain can lead to specific *contextual demands*, such as workload or interpersonal conflicts. Dealing with these demands consumes resources. As a result, these resources are no longer available in the other domain, which reduces individuals' well-being and performance in this domain leading to the experience of WHC.

Both WHE and WHC are suggested to be bidirectional: The process of resource loss or gain and the resulting influence on the other domain can occur from work to home as well as from home to work (Frone, 2003). This differentiation is also reflected empirically: Weighted mean correlations of $r = .47$ and $r = .41$ were found for the two directions of WHE and WHC respectively (Shockley & Singla, 2011). In the present research, we follow the practice of several other authors and use the term *work-home* as a generic term encompassing both directions. The terms *work-to-home* (W-t-H) and *home-to-work* (H-t-W) are used to describe a specific direction.

Resources and Demands as Antecedents of Work-Home Enrichment

Following the conceptualization of WHE in the W-H R model (ten Brummelhuis & Bakker, 2012), contextual resources (social support, autonomy, opportunities for development, performance feedback) are the main antecedents of WHE as they can trigger the resource gain spiral. Additionally, theories (e.g., Greenhaus & Powell, 2006) as well as empirical findings (e.g., Zimmerman & Hammer, 2010) point out the importance of personal resources as antecedents of WHE. Resources thus seem to be antecedents of WHE.

Combining the ideas of gain and loss spirals implies that demands could be additional, negative antecedents of WHE. Facing demands consumes resources. This

consumption reduces resources that could be invested to generate new resources.

Demands therefore impede the gain spiral proposed to underlie the process of WHE, and the experience of WHE is reduced. Surprisingly, there exists no systematic consideration of demands as antecedents of WHE thus far. The idea of a combination of the gain and loss spirals, has been applied to the role of contextual resources for the experience of WHC, however. For instance, social support has been proposed (Greenhaus & Beutell, 1985) and empirically shown (French, Dumani, Allen, & Shockley, 2018) to be negatively related to the experience of WHC. Based on the considerations above, we consider not only resources, but also demands as antecedents of WHE and propose the following hypotheses:

Hypothesis 1a: Contextual resources are positively related to WHE.

Hypothesis 1b: Personal resources are positively related to WHE.

Hypothesis 1c: Contextual demands are negatively related to WHE.

Although we propose both resources and demands to be related to WHE, the differential salience approach (Voydanoff, 2004) leads to the assumption that resources are more strongly associated with WHE than are demands. This approach proposes that the experiences of WHE and WHC depend on the cognitive appraisal of available resources and faced demands. Individuals experience WHE when they appraise resources from one domain to enhance the performance of the other domain. WHC is perceived when demands from one domain are assessed as hindering for the other domain. Resources are therefore more salient than demands when perceiving WHE. Due to this differential salience, resources should be more strongly related to WHE than demands. Although empirical findings are not entirely consistent in this respect, several studies provide support for this assumption (e.g., Lu & Chang, 2014; Tement & Korunka, 2015; Voydanoff, 2004, 2005). Hence, we propose the following hypothesis:

Hypothesis 2: The relationship between contextual resources and WHE is stronger than the relationship between contextual demands and WHE.

Patterns of Antecedents for Work-to-Home and Home-to-Work Enrichment

Concerning the two directions of WHE, there exists a consensus among researchers that antecedents of the W-t-H process mainly reside in the work domain whereas antecedents of the H-t-W process mainly reside in the home domain (Allen, 2012; Grzywacz & Marks, 2000; Zimmerman & Hammer, 2010). This tenet is consistent with the W-H R model (ten Brummelhuis & Bakker, 2012): Contextual resources that are available in one domain (e.g., schedule flexibility at work) can be used to enhance performance and well-being in the other domain (e.g., availability at home). In the given example, work would be perceived to enrich the home domain. The pattern of differential relationships between contextual resources and the two directions of WHE has been shown empirically (e.g., Carlson et al., 2006; Kacmar, Crawford, Carlson, Ferguson, & Whitten, 2014). In contrast, personal resources such as self-efficacy are neither theoretically conceptualized as having different effects on the two directions of WHE (ten Brummelhuis & Bakker, 2012; Wayne et al., 2007) nor do empirical studies show differential effects of these resources on the two directions (Grzywacz & Butler, 2005; Grzywacz & Marks, 2000; Wayne, Musisca, & Fleeson, 2004). We therefore propose the following three hypotheses:

Hypothesis 3a: Work variables are more strongly related to W-t-H E than to H-t-W E.

Hypothesis 3b: Home variables are more strongly related to H-t-W E than to W-t-H E.

Hypothesis 3c: Personal resources are equally strongly related to W-t-H E and H-t-W E.

Comparison of Antecedents of Work-Home Enrichment and Work-Home Conflict

Like resources as main antecedents of WHE, demands are thought to trigger the loss spiral and therefore to be main antecedents of WHC. At the same time, contextual resources such as social support can impede the loss spiral (Byron, 2005; Michel, Kotrba, & Mitchelson, 2011). Combined with the considerations outlined above that demands can impede the gain spiral, one would assume both resources and demands to be related to WHE and WHC, respectively. Several theoretical considerations and empirical results, however, propose differential patterns of effects for resources and demands on WHE and WHC.

The differential salience approach (Voydanoff, 2004) not only proposes that resources are more salient when experiencing WHE, but also that demands are more salient when experiencing WHC due to the underlying cognitive appraisal process. Consistently, the relationship between contextual demands and WHC should be stronger than the relationship between contextual demands and WHE, whereas the opposite should be true for contextual resources.

First empirical support for the proposed pattern is provided based on the dual-process model (Bakker & Geurts, 2004). According to this model, the relationship between demands and WHC is mediated by exhaustion while flow mediates the relationship between resources and WHE. An empirical investigation of the model (Bakker & Geurts, 2004) has shown that demands are not only related to increased exhaustion but also to decreased flow. Similarly, resources are positively related to flow, but negatively related to exhaustion. The relationships between demands and flow and resources and exhaustion, however, were less strong than the relationships between demands and exhaustion and resources and flow, respectively (Bakker & Geurts, 2004).

The W-H R model (ten Brummelhuis & Bakker, 2012) proposes that contextual demands reduce personal resources whereas contextual resources help to build personal

resources and therefore lead to WHC and WHE respectively. Personal resources thus play a central role for both processes; there are no indications of differential effects of personal resources on WHC and WHE. Taking together, we propose the following:

Hypothesis 4a: Contextual resources are more strongly related to WHE than to WHC.

Hypothesis 4b: Contextual demands are more strongly related to WHC than to WHE.

Hypothesis 4c: Personal resources are equally strongly related to WHE and WHC.

Additional Analyses

The Role of Gender for the Work-Home Interface

The question of gender is implicitly included in many discussions on the work-home interface—not only in the lay perspective but also in the perspective of researchers (Shockley, Shen, DeNunzio, Arvan, & Knudsen, 2017). A recent meta-analysis found women to experience slightly more WHC, but the correlations were of such small magnitude ($\rho = -.012$ for W-t-H C and $\rho = -.017$ for H-t-W C) that the results do not provide evidence for substantial gender differences in the experience of WHC (Shockley et al., 2017). With regard to WHE, it has been proposed that women and men differ in their experience of WHE as they use available resources differently (Wayne et al., 2007). To our knowledge, however, this proposition has not yet been investigated systematically. We therefore examine potential gender differences regarding the experience of WHE in our study.

The Relationship between the Four Facets of the Work-Home Interface

The work-home interface can be described in terms of *type of effect* (i.e., enrichment and conflict) and *direction of effect* (i.e., W-t-H and H-t-W; Frone, 2003) as illustrated above. Both the two types as well as the two directions are thought to be

distinct, independent constructs (Allen, 2012; Frone, 2003; Greenhaus & Powell, 2006; van Steenbergen et al., 2007). A deeper knowledge of the relationships between the four facets helps to test this assumption and to fully understand the work-home interface. To provide this knowledge, we include the meta-analytic calculation of effect sizes for the relationships between the four facets in our study.

Present Study

Although a large body of research exists in the field of WHE, we do not yet have any systematic knowledge of the antecedents of WHE. Hence, the main goal of this study is to broaden the understanding of this phenomenon by providing a meta-analytic review of its antecedents and by testing several propositions of the W-H- R model (ten Brummelhuis & Bakker, 2012). For instance, we assume different patterns for the two directions of WHE: Work variables are the main antecedents of W-t-H E, whereas home variables are the main antecedents of H-t-W E. Personal resources are proposed to be antecedents of both directions. A second goal is to compare the antecedents of WHE with the antecedents of WHC, again based on the W-H R model (ten Brummelhuis & Bakker, 2012). We assume contextual resources to be the main antecedents of WHE and contextual demands to be the main antecedents of WHC. Personal resources are thought to be related equally to both phenomena. To reach our goals and to test the hypotheses we conducted an extensive literature search for studies measuring WHE or related constructs (such as facilitation or enhancement). The effect sizes of the studies found were aggregated using the approach proposed by Schmidt and Hunter (2015).

Method

Literature Search

The search strategy to identify relevant studies was threefold. First, we conducted a computer-based literature search in the databases PsycINFO, Web of Science, and Medline. Used search terms included all possible combinations of *work-family*, *work-life*,

work-nonwork, *work-home* and *enrichment*, *facilitation*, *enhancement*, *balance*, *gains*, *fit*, and *positive spillover*. Additionally, the term *work-self* was combined with *balance*. We searched for these combinations in titles, keywords, and abstracts. The literature search was conducted from October 2015 to March 2016. Second, we searched the reference lists of previous meta-analyses on WHE (McNall et al., 2010; Shockley & Singla, 2011). After the exclusion of duplicates, these two search strategies yielded a total of 912 results. Third, we contacted researchers in the field of work-home interface via several mailing lists and requested data sets of unpublished studies to reduce publication biases; three data sets were received.

Inclusion Criteria

We applied the following five inclusion criteria. First, studies had to assess WHE in a quantitative and direction-specific way (W-t-H or H-t-W). Qualitative studies as well as studies in which the direction was not clearly specified, in which both directions were aggregated to one variable, or in which the measure referred to a mixture of both directions were excluded. Second, studies had to measure at least one antecedent variable of WHE. Third, studies had to be field studies. Intervention studies were only included if they measured both WHE and the antecedent variable before the intervention took place. Fourth, papers had to be written in English. Fifth, studies measuring only WHC were excluded. After applying these inclusion criteria, a total of 191 studies and two unpublished data sets emerged as relevant.

If the full text was not available, or if no correlations (or statistics that could be converted to a correlation) were reported, we contacted the authors. If they did not provide the necessary information, we excluded the study. Fifty-seven studies were excluded due to this reason. If two or more studies that were included in the same antecedent category referred to the same sample or to overlapping subsamples, we included only the effect size of the study with the largest sample in the specific category.

For nine samples, only correlations with variables were reported that were also reported in a larger sample; these samples were excluded from further analyses. Finally, a total of 131 independent samples built the basis for the meta-analysis.

Coding Process

All correlations between WHE and any antecedent variable were coded. Furthermore, we coded the correlations between WHE and gender if available. If the studies also measured WHC, we coded the correlations between WHC and any antecedent variable and gender, as well as the correlations between WHE and WHC. The reliability was coded for all work-home measures as well as all antecedent variables. Note that the reliabilities of gender as well as of the variable “use of work-home benefits” were considered as perfect as these are objectively measurable variables.

Moreover, we coded the following study characteristics: sample size, gender composition of the sample, mean age of the sample, percentage of participants with children, minimum of job percentage as criterion to participate in the study, type of design, year of the publication, as well as the questionnaire used to measure WHE. All studies were coded by the first author. A random sample of 40 studies was coded additionally and independently by the third author. The coding scheme as well as the coding of one study were discussed in detail to get a mutual understanding of the coding process. The interrater agreement was 92% for all coded variables. All discrepancies in coding were discussed and solved by reexamining the studies together.

Features of Analyzed Samples

The mean sample size of the 131 samples was $N = 599$ ($SD = 882$) with a large range from $N = 49$ to $N = 8,409$ (median: $N = 316$) with slightly more women in the samples (57%, $SD = 21\%$, range: 0% to 100%, $k = 129$). The average mean age of the participants was 39.33 years ($SD = 5.56$, range: 22 to 56 years; $k = 104$). On average, the majority of the study participants were parents (64%, $SD = 26\%$, range: 4% to 100%,

$k = 97$). Some of the studies applied a minimum of working hours per week as participation requirement: This criterion was 20 hours in 10 studies (8%); the participants had to work full time in 32 studies (25%). In all other studies, the participants had to work, but no specific minimum of working hours per week was required.

Most of the studies (80%) had a cross-sectional design. A lagged design (i.e., several points of measurement, but not assessing the same variables several times) was used in 11% of the studies. Only very few studies were longitudinal (7%) or micro-longitudinal (2%) studies. Of the included studies, the first studies were published in 1995 ($k = 2$). Between 1997 and 2008, only 21% of the studies ($k = 28$) were published. Nearly half of the studies (49%, $k = 64$) appeared between 2009 and 2013. The peak of publications on WHE was 2014 with 19 studies (15%). Another 16 studies (12%) were published in 2015. The large increase in publications on WHE might be linked to the development and publication of questionnaires measuring WHE since 2006. The questionnaire of Carlson et al. (2006) was used most often (48 studies). The items of the MIDUS study were used in 34 studies, mostly referring to Grzywacz and Marks (2000). Three other questionnaires were used in more than five studies: the questionnaire of Hanson et al. (2006; eight studies), the items of Geurts et al. (2005; seven studies), and the questionnaire of Kirchmeyer (1992; five studies). Of the remaining studies, 11 studies used self-developed items.

Analytic Strategy

We followed the approach of Schmidt and Hunter (2015) to aggregate the correlations. Sample correlations were weighted for sample size and corrected for unreliability of measures to estimate the effect size in the population (ρ). The reliability coefficients were available in the majority of the primary studies; we therefore used individual correction for unreliability as recommended by Schmidt and Hunter (2015). The following indicators were calculated using the Hunter & Schmidt Meta-Analysis

Program V 2.0 (Schmidt & Le, 2014): the sample-size weighted mean correlation (\bar{r}), the sample-size weighted correlation corrected for unreliability (ρ), the standard deviation of the sample-size weighted and corrected correlation (SD_ρ), the 95% confidence interval of ρ (95% CI), and the 80% credibility interval of ρ (80% CrI). The credibility interval is based on SD_ρ and provides information on the heterogeneity of the aggregated correlations (Whitener, 1990). The confidence interval is based on the standard error of ρ and reflects the accuracy of the estimated coefficient (Whitener, 1990). The confidence interval can be used for significance testing. If the confidence interval does not include zero, it can be concluded on a 5% error level that the relationship is significant. Furthermore, if the confidence intervals of two effect sizes do not overlap, it can be concluded on a 5% error level that the relationships considered are significantly different.

The calculations are based on the assumption that the correlations included are independent of each other (Schmidt & Hunter, 2015). This assumption was not fulfilled in two cases: First, correlations were reported separately for the subdimensions of the work-home interface constructs (e.g., time, energy, and behavior WHE). Second, several correlations were reported that were classified into the same antecedent category (e.g., general support from coworkers as well as general support from the supervisor both classified into the category "general support at work"). In both cases, we aggregated the correlations using the formula provided by Schmidt and Hunter (2015) that accounts for the interdependence of the values and entered only one aggregated correlation in the database to ensure the independence of the included correlations.

Results

In the 131 samples included in the meta-analysis, we identified 25 categories of antecedent variables that were measured in three or more studies and that fit in the W-H R model (ten Brummelhuis & Bakker, 2012). Of these variables, 13 were classified as contextual resources, five as contextual demands, and seven as personal resources. A

description of the categories can be found in Table 1. The results of the meta-analytic aggregations are reported in Table 2 for WHE; in Table 3, we report the results for WHC. The presentation of the results follows the order of the hypotheses.

Resources versus Demands

In line with Hypotheses 1a and 1b, the association of contextual resources and personal resources with W-t-H E and H-t-W E, respectively, were positive (see Table 2). We found partial support for Hypothesis 1c: Half of the contextual demands were negatively related to WHE (workload at work–W-t-H E: $\rho = -.22$, 95% CI $[-.30, -.14]$, emotional demands at home–W-t-H E: $\rho = -.13$, 95% CI $[-.19, -.07]$, emotional demands at home–H-t-W E: $\rho = -.38$, 95% CI $[-.56, -.20]$, workload at home–H-t-W E: $\rho = -.12$, 95% CI $[-.20, -.04]$). In Hypothesis 2, we proposed WHE to be more strongly related to contextual resources than to contextual demands. The results for Hypothesis 2 are shown in Figure 2. Absolute values are displayed to compare the effect sizes of contextual resources and contextual demands. In terms of W-t-H E, the confidence intervals of the two contextual resources with the largest effect sizes (i.e., development opportunities at work and general support at work) did not overlap with any confidence interval of contextual demands. Hence, these two effect sizes can be considered as significantly bigger than the effects of contextual demands. The confidence intervals of three additional contextual resources (i.e., autonomy at work, meaningfulness of work, and work-home related support at work) overlapped only with the confidence interval of one contextual demand (i.e., workload at work). These three effect sizes are therefore significantly bigger than the effect sizes of most contextual demands. The effect sizes of the eight other contextual resources, however, were not significantly larger than the effect sizes of contextual demands. In terms of H-t-W E, emotional demands at home had one of the largest effect sizes ($\rho = .38$) as well as one of the largest 95% CI $[.20, .56]$ which

overlapped with most confidence intervals of contextual resources. Overall, the results do not support Hypothesis 2.

Work-to-Home Enrichment versus Home-to-Work Enrichment

In Hypothesis 3a, we proposed work variables to be more strongly related to W-t-H E than to H-t-W E. As can be seen in Figure 3, this hypothesis is not supported. In terms of work resources, we found significantly different effect sizes between the two directions for autonomy at work and general support at work. Additionally, we found a significant difference between W-t-H E and H-t-W E for work demands (i.e., workload at work). The differences were in the expected direction. In terms of work resources that aim to facilitate the combination of the two domains (i.e., availability of work-home benefits, work-home related support at work, work schedule flexibility), as well as in terms of development opportunities at work no significant differences were found, however. For home resources (Hypothesis 3b), we found a similar pattern: The effect sizes of general home resources (i.e., emotional resources at home and general support at home) were significantly bigger in terms of H-t-W E than in terms of W-t-H E. Home resources that aim to facilitate the combination of work and home life (i.e., work-home related support) did not differ significantly in their relationships with W-t-H E and H-t-W E. For home demands (i.e., emotional demands at home, workload at home), the relationships with the two directions of WHE were significantly different; we found bigger effect sizes for H-t-W E in both cases. Overall, Hypothesis 3b is partially supported. Hypothesis 3c stated that personal resources are equally strongly related to W-t-H E and H-t-W E and this hypothesis is fully supported: The confidence intervals of all personal resources overlapped for the two directions of WHE.

Work-Home Enrichment versus Work-Home Conflict

All contextual resources, contextual demands, and personal resources were significantly related to WHC (see Table 3) with a few exceptions (for W-t-H C:

development opportunities at work and work-home related support at home; for H-t-W C: autonomy at work and availability of work-home benefits). The relationships were in the expected direction. To compare WHE and WHC, the absolute values are displayed in Figure 4.

Consistent with Hypothesis 4a, most general work resources (i.e., autonomy at work, development opportunities at work, meaningfulness at work) were more strongly related to W-t-H E than to W-t-H C with two exceptions: No significant difference was found for general support at work and job security was more strongly related to W-t-H C than W-t-H E. The effects of those work resources that aim to facilitate the combination of work and home life (i.e., availability of work-home benefits, work-home related support at work, work-schedule flexibility) were not significantly different for WHE and WHC respectively. The opposite pattern was found for home variables: Work-home related resources (i.e., work-home related support at home) were more strongly related to W-t-H E than W-t-H C whereas the relationship did not differ significantly in terms of general home resources (i.e., general support at home). In terms of the H-t-W direction, the pattern was generally consistent with Hypothesis 4a for home resources: General as well as work-home related support correlated more strongly with H-t-W E than H-t-W C with an exception for emotional resources at home. The pattern is less clear for work resources. Only work-home related support at work had significantly different relationships with H-t-W E and H-t-W C. The effects of the other work resources (i.e., autonomy at work, general support at work, and availability of work-home benefits) were of comparable sizes for the two facets of the H-t-W direction. Hypothesis 4a is only partially supported.

In Hypothesis 4b, we proposed contextual demands to be more strongly related to WHC than to WHE. We found the expected pattern in terms of the W-t-H direction with only one exception: All contextual demands (i.e., workload at work, work-home barriers

at work, emotional demands at home, and workload at home) were more strongly related to W-t-H C than to W-t-H E, but for emotional demands at work, the confidence intervals overlapped. A similar pattern was found in terms of the H-t-W direction. The effect sizes did not differ for emotional demands at home; the other effect sizes were significantly larger for H-t-W C than for H-t-W E. Hypothesis 4b is therefore partially supported.

Hypothesis 4c stated that personal resources are equally strongly related to WHE and WHC. The pattern of results is ambiguous. On the one hand, the effect sizes of several personal resources (i.e., conscientiousness and positive affect for the H-t-W direction, and agreeableness and optimism for both directions) were not significantly different for WHE and WHC. On the other hand, there were some significant differences (i.e., conscientiousness and positive affect for the W-t-H direction; emotional stability and core self-evaluations for both directions). In cases of significant differences, the effects tended to be larger for WHC than for WHE; however, the opposite was the case for the relationship of positive affect with W-t-H E and W-t-H C. Overall, Hypothesis 4c is not supported.

Additional Analyses

Concerning the relationship between gender and WHE and WHC, we found only one significant relationship: Women reported more W-t-H E than men (see Table 2). The other relationships were not significant (see Table 2 for WHE and Table 3 for WHC).

In total, 60 studies reported correlations of the two directions of WHE. The corrected mean correlation was positive and significant ($\rho = .54$, 95% CI [.50, .58], 80% CrI [.34, .74], $N = 27820$). A similar result was found for the two directions of WHC ($\rho = .53$, 95% CI [.48, .58], 80% CrI [.33, .73], $N = 22668$, $k = 48$). The analysis of 71 correlations of W-t-H E and W-t-H C yielded a significant negative effect size ($\rho = -.24$, 95% CI [-.30, -.19], 80% CrI [-.52, .04], $N = 46589$). In terms of the H-t-W direction, the

corrected mean correlation of enrichment and conflict out of 54 studies was $\rho = -.09$ (95% CI [-.13, -.06], 80% CrI [-.25, .06], $N = 24922$).

Discussion

The purpose of this study was twofold. First, we wanted to provide a meta-analytic review of the antecedents of WHE and to quantify the strength of relationships between various work, home, and personal variables and WHE. Doing so, we tested several hypotheses derived from the W-H R model (ten Brummelhuis & Bakker, 2012). Second, we wanted to compare the antecedents of WHE and WHC, again based on propositions of the W-H R model (ten Brummelhuis & Bakker, 2012).

Summary of Key Results

The key results are first discussed for contextual resources, then for contextual demands and personal resources; finally, we discuss the results of the additional analyses looking at the relationships between the work-home interface and gender as well as at the relationships between the four dimensions of the work-home interface.

Contextual resources. The expected pattern derived from the W-H R model (ten Brummelhuis & Bakker, 2012) was generally confirmed in terms of contextual resources: We found positive relationships between all contextual resources investigated and the two directions of WHE with mainly small to medium and some large effect sizes (Bosco, Aguinis, Singh, Field, & Pierce, 2015). Surprisingly, the strongest effect sizes for W-t-H E were found for general work resources (e.g., development opportunities, general support); weaker relationships were found for resources that aim to facilitate the combination of the two domains (e.g., availability and use of work-home benefits). The dual-process model of work-home interface (Bakker & Geurts, 2004) provides an explanation of this pattern. Job resources such as autonomy and performance feedback are proposed to foster a state of being “happily engrossed” in one’s work (i.e., flow; Bakker & Geurts, 2004, p. 361) as they trigger the willingness to put effort in a task. Resources

that aim primarily to facilitate the combination of various domains are much narrower in scope and are not necessarily related to the work tasks. It is therefore possible that they possess less potential to foster the experience of flow and consequently are more weakly related to WHE. In a similar vein, general work resources (e.g., development opportunities) might be a stronger facilitator of the gain spiral that is thought to underlie the experience of WHE (ten Brummelhuis & Bakker, 2012). The assumption of the gain spiral proposes that resources can be invested to generate new resources. General contextual resources might enable individuals to generate broader resources that can be used and invested in a diverse range of situations. Work-home related contextual resources (e.g., availability and use of work-home benefits), in contrast, aim only to better manage the work-home boundaries (Voydanoff, 2004).

Differential patterns of relationships of general contextual resources and work-home related resources were found with regard to the two directions of WHE: While almost all general work and home resources differed in their relationships with W-t-H E and H-t-W E, respectively, no such differences were found for work-home related variables. One reason for this pattern might be that work-home related resources lead to more flexible work-home boundaries. Flexible boundaries are characterized by temporal and spatial pliability (Allen et al., 2014); these characteristics might enable a comparable spillover in both directions. Another reason might be that work-home related contextual resources create a climate in which positive effects transferred from the other life domain can prosper. For instance, sharing positive work events at home (i.e., work-home interpersonal capitalization) can have beneficial effects on individuals' well-being (Ilies, Keeney, & Scott, 2011). Sharing positive work events at home might be much easier when living in a surrounding that supports the combination of work and home life. Hence, it seems that the characteristics of the receiving domain play a role in the process of WHE.

Comparing the relationships between contextual resources and WHE and WHC, respectively, revealed a third interesting pattern: For the W-t-H direction, we found no significant difference between enrichment and conflict regarding work-home related work resources. The effect sizes of general work resources, however, were significantly bigger for W-t-H E (with an exception for general support). This pattern is consistent with the differential salience–comparable salience model (Voydanoff, 2004): Work-home related work resources (i.e., boundary-spanning variables, Voydanoff, 2004) have a comparable salience for W-t-H E and W-t-H C as they enhance the perceived control over managing the boundary between the work and home domains (Voydanoff, 2004). This assumption, however, is not clearly supported for home resources.

Contextual demands. Demands are not described as antecedents in WHE models. Although the pattern is not entirely clear, we found significant relationships between several demands and the two directions of WHE; emotional demands at home were even one of the strongest antecedents of H-t-W E. It seems that demands play a role in the process of WHE. Integrating this result in the W-H R model (ten Brummelhuis & Bakker, 2012) proposes that contextual demands can impede the resource gain spiral that underlies WHE. Consistent with the W-H R model (ten Brummelhuis & Bakker, 2012), the relationships between demands and WHC were stronger than the relationships with WHE in almost all cases. Despite the relationships with WHE, demands seem to primarily trigger the perceived incompatibility between the work and home domains.

Personal resources. In accordance with the W-H R model (ten Brummelhuis & Bakker, 2012) and our hypotheses, all personal resources investigated in this study are significantly related to all four facets of the work-home interface in the expected direction. For example, a person who describes him-/herself as more agreeable experiences more W-t-H E and H-t-W E and less W-t-H C and H-t-W C. We found no significant differences between any personal resource and the two directions of WHE and

WHC respectively. This finding is consistent with the notion of the W-H R model (ten Brummelhuis & Bakker, 2012) that personal resources are the linking pin between the two domains. We thus expected comparable effect sizes in terms of the two directions. This result is also consistent with findings of a meta-analysis investigating the relationships between various dispositional variables and WHC: Comparable patterns of relationships were found for the two directions of WHC (Allen et al., 2012).

Comparing WHE and WHC, however, we found significant differences of some effect sizes. Emotional stability and core self-evaluations had a stronger relationship with WHC than with WHE. They seem to be a stronger protective factor against negative experiences than an enhancing factor of positive experiences. Individuals high on emotional stability tend to experience less guilt and more self-esteem than individuals low on emotional stability (McCrae & John, 1992). The experience of WHC describes the feeling that one life domain makes it difficult to fulfill the role demands of the other life domain satisfactorily (Greenhaus & Beutell, 1985). Individuals who are prone to feelings of guilt and to low self-esteem might be more prone to experience WHC than to experience WHE which describes the feeling that experiences in one life domain make it easier to fulfill the role demands of the other life domain. The reasoning is similar regarding core self-evaluations. It is a latent trait indicated by the four traits neuroticism, self-esteem, generalized self-efficacy and locus of control (Judge, Erez, Bono, & Thoresen, 2006). Additionally to neuroticism and self-esteem, the extent to which causes are perceived as self-controllable (i.e., locus of control) is related to feelings of guilt (Ilies, De Pater, Lim, & Binnewies, 2012). Hence, individuals with low scores on core self-evaluations might perceive more incompatibilities between the two domains than they perceive positive effects.

Furthermore, we found significant differences between W-t-H E and W-t-H C for conscientiousness (stronger relationship with W-t-H C) and positive affect (stronger

relationship with W-t-H E). McCrae and John (1992) describe individuals high on conscientiousness with adjectives such as organized and efficient. In this sense, conscientiousness might act as a tool to avoid problems with the combination of work and home life, especially in terms of time-based WHC. Positive affect is associated with states of full concentration and engagement (Watson, Clark, & Tellegen, 1988). This state is closely related to what is defined as flow in the dual-process model of work-home interface (Bakker & Geurts, 2004) and what is seen as important experience in the process of WHE. Interpreting the differences, however, it is important to keep in mind that the significant differences were found only for the W-t-H direction, but not for the H-t-W direction.

Additional analyses. No evidence was found for relationships between gender and WHE and WHC. The effect size of gender and W-t-H E was statistically significant, but the effect was so small, that it cannot be considered as practically significant. For H-t-W E and WHC, the effect sizes were not significant. Although the effects found in our meta-analysis for WHC are not exactly of the same size as those effects found by Shockley et al. (2017), the overall conclusion is the same: Men and women do not seem to differ in the experience of WHE or WHC. It might be worth, however, investigating moderators such as parenthood or living in a dual-earner couple not only for WHC (Shockley et al., 2017), but also for WHE in future studies. Furthermore, as the effects are so small, it should be carefully thought about using gender as control variable in future studies: Researchers should provide specific theoretical justifications when they control for the gender of participants.

We found large effect sizes for the relationships between the respective directions of WHE and WHC which are comparable to other meta-analytic results (Shockley & Singla, 2011). The effect sizes are surprisingly strong considering the fact that the two directions are seen as distinct constructs with unique antecedents and consequences

(Allen, 2012): The experiences of W-t-H and H-t-W enrichment and conflict, respectively, seem to be interrelated more strongly than theoretically assumed. This pattern might be explained by the proposition of Greenhaus and Beutell (1985), that, first, the individuals perceive a mutual incompatibility (or enrichment) of the two domains. Only the attribution of the reasons leads to the directionality of the effect. It is possible that—perceiving an incompatibility or enrichment—the reasons are attributed to both domains simultaneously, and therefore the two directions are interrelated. Another explanation for this pattern is provided by the W-H R model (ten Brummelhuis & Bakker, 2012). In this model, key resources (i.e., characteristics of the individual) and macro resources (i.e., characteristics of the environment) are proposed to protect against resource depletion when facing demands as well as to intensify the process of resource gain based on contextual resources. Individuals who have key and macro resources available may use them for both directions of WHE and WHC. This might lead to a stronger experience of both directions of WHE and a weaker experience of both directions of WHC compared to individuals who have no such resources.

Negative small to medium effect sizes were found for the relationships between W-t-H E and W-t-H C and H-t-W E and H-t-W C. These correlations are larger than the mean correlations found in a previous study (Greenhaus & Powell, 2006). In the earlier study, however, the correlations of the two directions of WHE and WHC were aggregated. Furthermore, this study included only 21 correlations and did not weight for the sample sizes. We included 71 correlations for the W-t-H direction and 54 correlations for the H-t-W direction. The differences in sample size as well as in the statistical procedure can explain the differences in the results. In summary, both results support the notion that enrichment and conflict are distinct constructs (Frone, 2003; Greenhaus & Powell, 2006; van Steenbergen et al., 2007).

Theoretical Implications and Directions for Future Research

In general, the propositions of the W-H R model (ten Brummelhuis & Bakker, 2012) were supported. The results of our meta-analysis, however, reveal some complements to the model that provide interesting starting points for further research. First, it seems that different contextual resources have differential potentials. General work resources have a stronger relationship with the experience of W-t-H E than have work-home related resources. Work-home related resources, in contrast, have similarly strong relationships with all four facets of the work-home interface. It is possible that different underlying mechanisms are the reason for this pattern. General work resources such as general support, development opportunities, and autonomy help to satisfy the basic needs identified by Ryan and Deci (2000) of relatedness, competence, and autonomy, respectively. The satisfaction of these three basic needs leads to the generation of important personal resources such as motivation and well-being and can therefore be a starting point of the gain spiral (ten Brummelhuis & Bakker, 2012). Work-home related contextual resources, in contrast, are specifically helpful for the combination of work and home life. The different underlying processes should be investigated in future research.

Second, ten Brummelhuis and Bakker (2012) do not consider the influence of the receiving domain on the perception of WHE. Nevertheless, we found significant relationships between work variables and H-t-W E and home variables and W-t-H E. Knowledge of these processes is very important for organizations as they can benefit from positive influences that the home domain might have on the work domain. Characteristics of the receiving domain should thus be considered in future research. It is important to mention that, thus far, only few studies investigated home variables. For instance, only one work-home related home resource could be included in this meta-analysis. For a better understanding of the whole process, it is important to focus on home variables as well as on the H-t-W process.

Third, demands have not yet been considered explicitly in WHE models; however, they seem to play a role for the experience of WHE. The gain spiral is thought as underlying mechanism of WHE (ten Brummelhuis & Bakker, 2012). Demands seem to impede this gain spiral and therefore to hinder the experience of WHE. Further studies, especially longitudinal studies, are needed that focus on demands other than workload to fully understand the mechanisms. In this context, it can also be enlightening to differentiate between challenge and hindrance demands. Although both types of demands are related to strain (Lepine, Podsakoff, & Lepine, 2005), challenge demands additionally have the potential to generate gains (e.g., enhanced motivation; Lepine et al., 2005; Searle & Auton, 2014). It is thus possible that they enhance the gain spiral. Hindrance demands, however, tend to interfere with individuals' goals (Searle & Auton, 2014) and therefore are prone to hinder the generation of personal resources.

Last, it is not only important to better understand the gain spiral, but also to better understand the loss spiral. Although the results indicate that some variables have a comparable influence on the gain and loss spirals (i.e., boundary spanning resources) whereas other variables show differential patterns (e.g., general resources and demands), it is not clear yet under which circumstances specific variables influence more strongly the gain or loss process. The processes of all four facets of the work-home interface should be investigated in parallel to fully understand the underlying mechanisms.

Limitations

Although this meta-analysis provides important information for the understanding of the work-home interface, it does not come without limitations. First, we did not test the indirect effects of one domain on the other domain mediated by personal resources as it is proposed by the W-H R model (ten Brummelhuis & Bakker, 2012). The primary goal of this study was to provide a meta-analytic review of the antecedents of WHE; the test of the mediation was beyond the scope of this paper. Nonetheless, mediating mechanisms

should be considered in future research, especially when investigating the differences between general and work-home related resources.

Second, most included studies have a cross-sectional design. Although we focused on variables that are proposed as antecedent variables of WHE by theoretical models (Greenhaus & Powell, 2006; ten Brummelhuis & Bakker, 2012), it is not possible to provide evidence for directionality. To understand the direction of influence and the underlying mechanisms, longitudinal and micro-longitudinal studies should be conducted in the future.

Third, this meta-analysis is based only on studies in which participants were asked directly to indicate the extent to which specific experiences in one domain influence the other domain. This measurement approach comes along with the disadvantage that causes and consequences are confounded (Allen, 2012) which might lead to an inflation of the investigated relationships. This potential inflation might even be more serious as most studies used only self-reports to assess the variables of interest (Podsakoff, MacKenzie, & Podsakoff, 2012). To overcome the problem of potentially inflated relationships, future studies should apply a measurement approach in which the mutual influence of the work and home domains is deduced indirectly by investigating the relationship between experiences in one domain and outcomes in the other domain (Keeney & Ilies, 2012). Additionally, the assessment of the variables should be obtained from various sources (Podsakoff et al., 2012).

Fourth, as most meta-analyses, we faced the problem of publication bias. We tried to include unpublished datasets and to reduce the publication bias by contacting researchers in the field of work-home interface. As we received only little return, it cannot be ruled out that the relationships are smaller in the population than in our study. Research has shown, however, that the file drawer problem is unlikely to produce an

inflation bias in meta-analyses in organizational sciences (Dalton, Aguinis, Dalton, Bosco, & Pierce, 2012).

Fifth, the analyses of several categories are based on only three to five independent samples. We even had to exclude several variables due to a number of available samples smaller than three. Furthermore, the small number of studies in several categories did not allow to conduct moderator analyses despite the considerable between-study variance we observed. It is worthy to consider potential moderators as soon as more studies are available for single constructs. One potential moderator could be the different constructs of the positive work-home interface, such as enrichment, facilitation, or positive spillover. McNall et al. (2010) found significant differences in effect sizes for the outcomes of WHE depending on which construct was used in the primary study.

Sixth, the effect sizes reported for WHC are based only on studies measuring also WHE. We did so, as the focus of our meta-analysis was on WHE. We acknowledge, however, that there exist far more studies measuring WHC. Hence, the results for WHC should not be considered as stand-alone meta-analytic results, but as complement to the analyses in terms of WHE.

Practical Implications

It has been shown by this meta-analysis that strengthening resources as well as reducing demands at work and at home is beneficial for the combination of these two domains. Hence, a lot can be done by organizations to help their employees to improve their work-home interface. The focus should be on strengthening general contextual resources when the goal is primarily to foster WHE. Contextual demands should be reduced when the goal is to reduce WHC. When the goal is to enhance WHE and to reduce WHC simultaneously, the focus should be on strengthening work-home related contextual resources. These resources have comparable influences on WHE and WHC as

well as on the two directions of WHE. Moreover, in terms of the W-t-H direction, general work resources such as job security, general support, and autonomy have a stronger relationship with W-t-H C than most work demands have with W-t-H E. Hence, strengthening general as well as work-home related resources at work is a promising approach for organizations to facilitate the combination of various life domains for their employees.

Conclusion

In today's society the question of a successful combination of work and home life is often raised. Based on existing meta-analyses we already know that the experience of a positive mutual influence of the two domains has beneficial effects on the well-being and behavior of individuals. This study provides the first meta-analysis on the antecedent variables of WHE as well as a comparison with the antecedents of WHC. We found small to medium relationships of contextual resources, contextual demands, and personal resources with WHE of which most were significant. Most investigated variables also correlated with WHC. We found, however, some notable differences between WHE and WHC. With these results, our study yields important insights into the question how to foster WHE and simultaneously reduce WHC. Based on the results of our study, the models describing the work-home interface can be refined concerning potential antecedents and underlying mechanisms. Furthermore, we provide important starting points for future research as well as an informative basis for organizations and individuals on how to combine work and home life more successfully.

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Supplemental Material: Primary Study References

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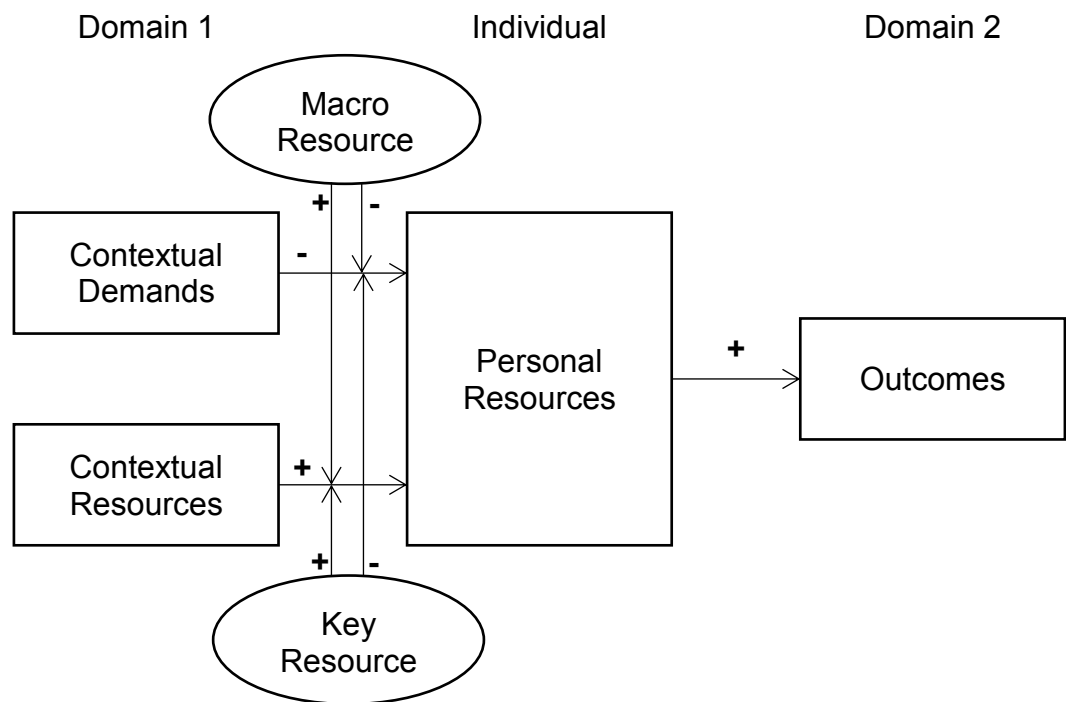


Figure 1. The Work-Home Resources Model (ten Brummelhuis & Bakker, 2012).

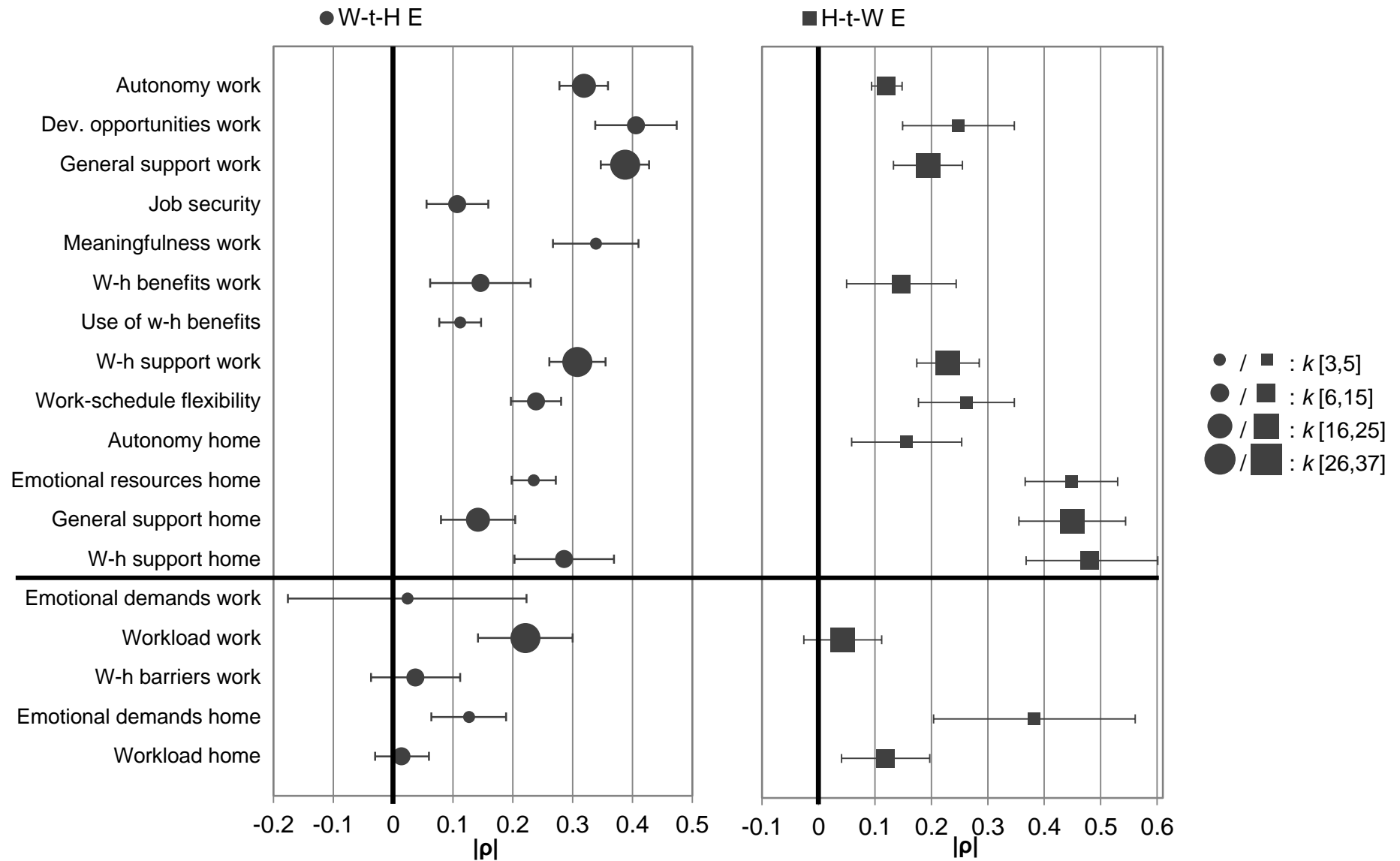


Figure 2. Comparison of contextual resources and demands for WHE. Absolute values of ρ are displayed.

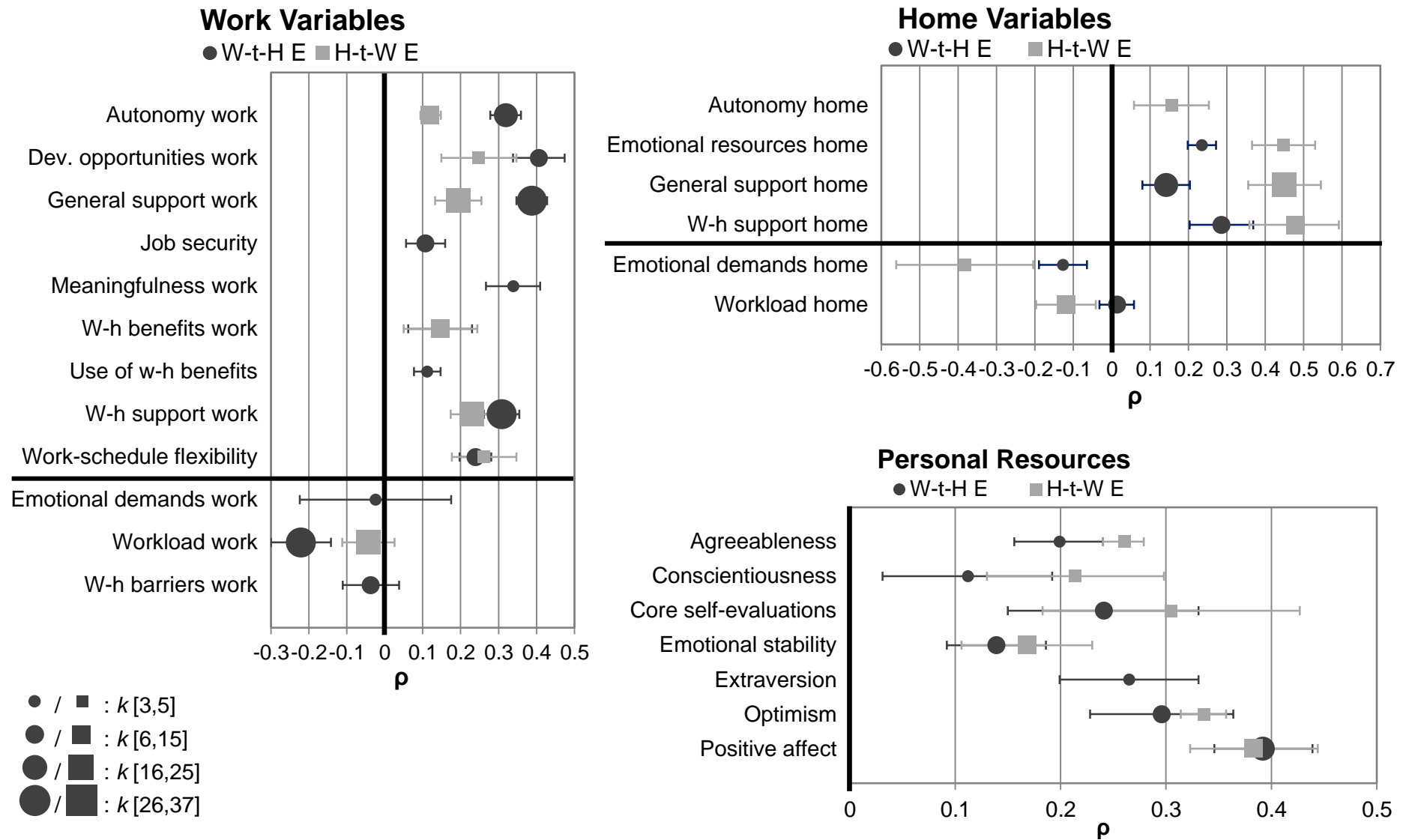


Figure 3. Comparison of work-to-home (W-t-H E) and home-to-work enrichment (H-t-W E).

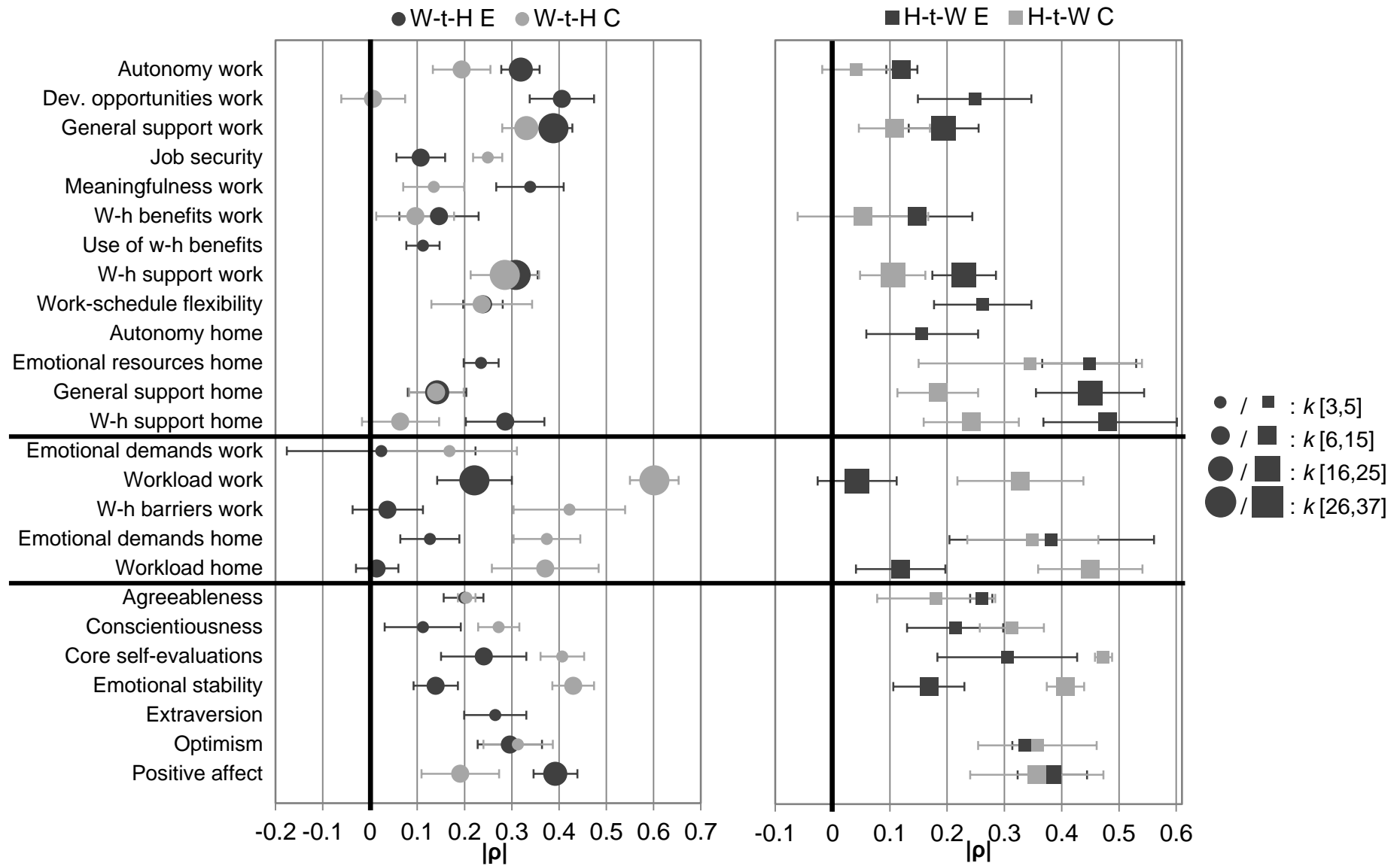


Figure 4. Comparison of work-home enrichment (W-t-H E and H-t-W E) and conflict (W-t-H C and H-t-W C). Absolute values of ρ are displayed.

Table 1

Description of all Antecedent Categories Included in the Analysis

Contextual resources	
Work	
Autonomy	Constructs reflecting control in the work domain with respect to various areas, (e.g., execution of a task, work pace, decision freedom); not including control over work schedule / work hours (→ category “work-schedule flexibility”) ¹
Development opportunities	Constructs reflecting the possibility to acquire new skills due to job design/job requirements (e.g., job variety, required skill level)
General support	Constructs reflecting social support in the work domain, irrespectively of the source of support (i.e., supervisor, colleagues, management); not including support for the successful combination of the work and home domains (→ category “w-h related support”)
Job security	Constructs reflecting perception of job (in)security
Meaningfulness of work	Constructs reflecting the perceived meaningfulness of one's job (e.g., pride in one's job, perceived importance of one's job)
Availability of w-h benefits	Constructs reflecting the availability of a diverse range of work-home benefits (e.g., on-site child care, paid time of); not including scales that focus only on flexible work arrangements (→ category “work-Schedule flexibility”) or the actual use of work-home benefits offers (→ category “use of w-h benefits”)
Use of w-h benefits	Constructs reflecting the use of work-home benefits
W-h related support	Constructs reflecting social support in the work domain with respect to the compatibility of the work and home domains (e.g., support for reducing working hours for private reasons, readiness to listen to family related problems), irrespectively of the source of support (i.e., supervisor, colleagues, management); also including supportive work-home culture as long as the construct does not refer to the availability of work-home benefits such as organizational child care (→ category “availability of w-h benefits”)
Work-schedule flexibility	Constructs reflecting the possibility to adapt the working hours to personal needs (i.e., provided flexibility and perceived control; e.g., flexible starting time)
Home	
Autonomy	Constructs reflecting various kinds of control in the home domain (e.g., control over use of free time)
Emotional resources at home	Constructs reflecting emotionally positive family/couple characteristics (e.g., feelings of closeness and acceptance)
General support	Constructs reflecting social support in the home domain (e.g., help in the household, help dealing with disappointments), irrespectively of the source of support (i.e., partner, children, friends); not including support for the compatibility of the work and home domains (→ category “W-h related support”)
W-h related support	Constructs reflecting social support in the home domain with respect to the compatibility of the work and home domains (e.g., family members' interest in one's work), irrespectively of the source of support (i.e., partner, children, friends)

Note. W-h = work-home

¹ not including the “decision latitude” scale of Karasek et al. (1998) as this scale is a combination of decision authority (= autonomy) and skill discretion (= development opportunities)

Table 1 (continued)

Description of all Antecedent Categories Included in the Analysis

Contextual demands	
Work	
Emotional demands	Constructs reflecting negatively emotionally charged interpersonal situations in the work domain (e.g., interpersonal conflicts, emotion work)
Workload	Constructs reflecting the perception of quantitative overload in the work domain (demands of things that are difficult to combine, having to work fast); not including measures of working hours
W-h barriers	Constructs reflecting cultural characteristics as well as time demands of the organization that hinder a successful combination of work and home life (e.g., expected overtime on short notice)
Home	
Emotional demands	Constructs reflecting negatively emotionally charged interpersonal situations in the home domain (e.g., marital conflicts, relationship tension)
Workload	Constructs reflecting the perception of quantitative overload in the home domain (e.g., to high family demands); not including measures of hours spending with household task
Personal resources	
Agreeableness	Constructs measuring the personality trait agreeableness
Conscientiousness	Constructs measuring the personality trait conscientiousness
Core self-evaluations	Constructs measuring the second-order factor core self-evaluations (not including first-order factor measures)
Extraversion	Constructs measuring the personality trait extraversion
Emotional stability	Constructs measuring the personality trait emotional stability (including recoded measures of neuroticism)
Optimism	Constructs measuring the personality trait optimism
Positive affect	Constructs reflecting positive affect, irrespectively of the frame of reference

Note. W-h = work-home

Table 2

Meta-Analytic Correlation for Work-Home Enrichment and all Antecedent Categories as well as Gender

	Work-to-home enrichment							Home-to-work enrichment						
	<i>k</i>	<i>N</i>	\bar{r}	ρ	<i>SD</i> _{ρ}	95% CI	80% CrI	<i>k</i>	<i>N</i>	\bar{r}	ρ	<i>SD</i> _{ρ}	95% CI	80% CrI
Contextual resources														
Work														
Autonomy	25	20457	.25	.32*	0.09	.28, .36	.20, .44	9	7776	.10	.12*	0.00	.09, .15	.12, .12
Development opportunities	14	8268	.30	.41*	0.12	.34, .47	.25, .56	3	604	.21	.25*	0.03	.15, .35	.21, .29
General support	37	24362	.33	.39*	0.12	.35, .43	.24, .54	16	5230	.17	.19*	0.11	.13, .26	.06, .33
Job security	6	5148	.08	.11*	0.05	.06, .16	.05, .17							
Meaningfulness	5	8298	.27	.34*	0.08	.27, .41	.24, .44							
Availability of w-h benefits	9	5071	.11	.15*	0.12	.06, .23	.00, .30	6	1916	.12	.15*	0.10	.05, .24	.02, .27
Use of w-h benefits	4	2203	.11	.11*	0.00	.08, .15	.11, .11							
W-h related support	34	17175	.25	.31*	0.13	.26, .36	.14, .47	20	8980	.20	.23*	0.12	.17, .29	.08, .38
Work-schedule flexibility	9	7761	.19	.24*	0.05	.20, .28	.18, .30	3	1348	.24	.26*	0.06	.18, .35	.19, .33
Home														
Autonomy								3	2643	.13	.16*	0.08	.06, .25	.06, .25
Emotional resources home	3	1407	.21	.24*	0.00	.20, .27	.24, .24	4	1723	.39	.45*	0.07	.37, .53	.36, .54
General support	17	10814	.12	.14*	0.12	.08, .20	-.01, .30	21	12009	.37	.45*	0.22	.36, .54	.17, .73
W-h related support	9	2691	.24	.29*	0.11	.20, .37	.14, .43	10	2949	.42	.48*	0.18	.37, .60	.25, .71

Note. Gender was coded such that positive correlations indicate greater work-home enrichment for women. W-h = work-home; CI = confidence interval; CrI = credibility interval.

* 95% confidence interval does not include zero.

Table 2 (continued)

Meta-Analytic Correlation for Work-Home Enrichment and all Antecedent Categories as well as Gender

	Work-to-home enrichment							Home-to-work enrichment						
	<i>k</i>	<i>N</i>	\bar{r}	ρ	<i>SD</i> _ρ	95% CI	80% CrI	<i>k</i>	<i>N</i>	\bar{r}	ρ	<i>SD</i> _ρ	95% CI	80% CrI
Contextual demands														
Work														
Emotional demands	4	1132	-.01	-.02	0.19	-.22, .18	-.27, .22							
Workload	31	28061	-.17	-.22*	0.22	-.30, -.14	-.50, .06	17	9350	-.04	-.04	0.13	-.11, .03	-.21, .13
W-h barriers	6	5341	-.03	-.04	0.08	-.11, .04	-.14, .07							
Home														
Emotional demands	5	4351	-.10	-.13*	0.06	-.19, -.07	-.20, -.05	5	2847	-.29	-.38*	0.20	-.56, -.20	-.63, -.13
Workload	9	6297	.01	.01	0.05	-.03, .06	-.05, .08	11	5873	-.09	-.12*	0.12	-.20, -.04	-.27, .04
Personal resources														
Agreeableness	3	2542	.16	.20*	0.00	.16, .24	.20, .20	3	2542	.20	.26*	0.00	.24, .28	.26, .26
Conscientiousness	4	2678	.08	.11*	0.06	.03, .19	.03, .19	4	2678	.15	.21*	0.07	.13, .30	.13, .30
Core self-evaluations	9	3187	.20	.24*	0.13	.15, .33	.08, .40	5	1083	.23	.31*	0.11	.18, .43	.16, .45
Emotional stability	7	4569	.11	.14*	0.04	.09, .19	.09, .19	7	4381	.12	.17*	0.06	.11, .23	.09, .25
Extraversion	3	3652	.21	.27*	0.05	.20, .33	.21, .33							
Optimism	6	3582	.24	.30*	0.07	.23, .36	.21, .39	3	602	.26	.34*	0.00	.31, .36	.34, .34
Positive affect	18	5619	.34	.39*	0.08	.35, .44	.29, .50	12	3482	.34	.38*	0.09	.32, .44	.27, .50
Demographics														
Gender	47	26123	.03	.04*	0.06	.02, .06	-.04, .12	26	12874	-.01	-.01	0.06	-.04, .03	-.09, .08

Note. Gender was coded such that positive correlations indicate greater work-home enrichment for women. W-h = work-home; CI = confidence interval; CrI = credibility interval.

* 95% confidence interval does not include zero.

Table 3

Meta-Analytic Correlation for Work-Home Conflict and all Antecedent Categories as well as Gender

	Work-to-home conflict								Home-to-work conflict						
	<i>k</i>	<i>N</i>	\bar{r}	ρ	<i>SD</i> _ρ	95% CI	80% CrI	<i>k</i>	<i>N</i>	\bar{r}	ρ	<i>SD</i> _ρ	95% CI	80% CrI	
Contextual resources															
Work															
Autonomy	14	14330	-.16	-.19*	0.11	-.26, -.13	-.33, -.05	5	6386	-.03	-.04	0.06	-.10, .02	-.11, .03	
Development opportunities	7	6249	.00	.01	0.08	-.06, .07	-.10, .11								
General support	21	16835	-.29	-.33*	0.11	-.38, -.28	-.48, -.19	11	3144	-.09	-.11*	0.08	-.17, -.05	-.21, -.01	
Job security	4	3869	-.21	-.25*	0.00	-.28, -.22	-.25, -.25								
Meaningfulness	3	4779	-.11	-.14*	0.05	-.20, -.07	-.20, -.07								
Availability of w-h benefits	7	4069	-.08	-.10*	0.10	-.18, -.01	-.23, .03	6	1187	.04	.05	0.11	-.06, .17	-.09, .20	
Use of w-h benefits															
W-h related support	26	14816	-.24	-.29*	0.18	-.36, -.21	-.52, -.05	17	8185	-.09	-.11*	0.11	-.16, -.05	-.24, .03	
Work-schedule flexibility	6	6883	-.20	-.24*	0.13	-.34, -.13	-.40, -.07								
Home															
Autonomy															
Emotional resources home								3	1500	-.30	-.35*	0.17	-.54, -.15	-.56, -.13	
General support	11	6728	-.12	-.14*	0.09	-.20, -.08	-.25, -.03	13	7770	-.15	-.18*	0.12	-.26, -.11	-.34, -.03	
W-h related support	6	2093	-.05	-.06	0.08	-.15, .02	-.17, .04	6	2093	-.21	-.24*	0.09	-.33, -.16	-.35, -.13	

Note. Gender was coded such that positive correlations indicate greater work-home enrichment for women. W-h = work-home; CI = confidence interval; CrI = credibility interval.

* 95% confidence interval does not include zero.

Table 3 (continued)

Meta-Analytic Correlation for Work-Home Conflict and all Antecedent Categories as well as Gender

	Work-to-home conflict								Home-to-work conflict					
	<i>k</i>	<i>N</i>	\bar{r}	ρ	<i>SD_ρ</i>	95% CI	80% CrI	<i>k</i>	<i>N</i>	\bar{r}	ρ	<i>SD_ρ</i>	95% CI	80% CrI
Contextual demands														
Work														
Emotional demands	3	844	.14	.17*	0.11	.03, .31	.03, .30							
Workload	30	26048	.50	.60*	0.14	.55, .65	.42, .78	15	8743	.25	.33*	0.21	.22, .44	.06, .60
W-h barriers	4	4727	.38	.42*	0.12	.30, .54	.27, .57							
Home														
Emotional demands	4	3629	.32	.37*	0.06	.30, .45	.29, .46	5	2847	.28	.35*	0.12	.24, .46	.19, .51
Workload	9	5891	.31	.37*	0.17	.26, .48	.16, .60	11	5590	.36	.45*	0.15	.36, .54	.26, .64
Personal resources														
Agreeableness	3	2542	-.17	-.20*	0.00	-.22, -.19	-.20, -.20	3	2542	-.15	-.18*	0.08	-.28, -.08	-.29, -.08
Conscientiousness	4	2678	-.20	-.27*	0.00	-.32, -.23	-.27, -.27	4	2678	-.23	-.31*	0.03	-.37, -.26	-.35, -.28
Core self-evaluations	3	627	-.37	-.41*	0.00	-.45, -.36	-.41, -.41	3	627	-.43	-.47*	0.00	-.49, -.46	-.47, -.47
Emotional stability	7	4569	-.35	-.43*	0.04	-.47, -.39	-.48, -.38	7	4381	-.32	-.41*	0.00	-.44, -.38	-.41, -.41
Extraversion														
Optimism	4	1767	-.26	-.31*	0.05	-.39, -.24	-.38, -.25	3	602	-.29	-.36*	0.04	-.46, -.41	-.41, -.30
Positive affect	11	3522	-.17	-.19*	0.12	-.27, -.11	-.35, -.03	8	2582	-.31	-.36*	0.16	-.47, -.56	-.56, -.15
Demographics														
Gender	29	20001	.00	.00	.08	-.04, .03	-.11, .10	15	9580	.02	.02	0.08	-.03, .06	-.08, .12

Note. Gender was coded such that positive correlations indicate greater work-home enrichment for women. W-h = work-home; CI = confidence interval; CrI = credibility interval.

* 95% confidence interval does not include zero.

7.2 STUDY II

The Influence of Daily Interpersonal Conflicts at Work on Parenting Behavior –
Examining the Role of Negative Mood and Emotion Regulation Competence

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Abstract

The stress we experience at work influences the well-being and behavior in the home domain, but little is known about the influence that parents' work experiences have on the interaction with their children. Based on the work-home resources model, we hypothesize that interpersonal conflicts at work increase negative mood at the end of the working day which, in turn, influences parenting behavior in the evening. We further propose that emotion regulation competence buffers the negative effect of interpersonal conflicts at work. On 8 consecutive working days, 75 fathers completed questionnaires on a daily basis: in the morning, at noon, at the end of the working day, and at bedtime. Paternal parenting behavior was also assessed by their spouses. Multilevel random coefficient path analyses revealed a relationship between supervisor interpersonal conflicts and angry and depressed mood. This result, however, could not be confirmed regarding coworker interpersonal conflicts. We did not find a moderating effect of emotion regulation competence or a spillover in the home domain. In general, the findings demonstrate the detrimental effects of supervisor interpersonal conflicts on employee's well-being. At the same time, the results suggest that fathers had enough resources to downregulate the resulting negative affective reactions and to protect their home life from detrimental spillover effects. Although one reason for these findings might be the low statistical power to detect the proposed relationships, it is important to identify the boundary conditions and resources that help to prevent negative spillover effects that might occur in future research.

Keywords: work-family conflict, negative spillover, interpersonal conflicts, parenting behavior, emotion regulation

The Influence of Daily Interpersonal Conflicts at Work on Parenting Behavior – Examining the Role of Negative Mood and Emotion Regulation Competence

Imagine you had a conflict at work. How do you feel when coming home? Does the conflict still affect you or does it even have an impact on your behavior and your family life? For most of us, it is difficult to leave events at work behind when returning home. If we leave work in a negative mood because of a conflict, this negative mood can spill over in the home domain (Larson & Almeida, 1999) and decrease our well-being in the evening (e.g., Allen & Martin, 2017; Butler, Song, & Ilies, 2013). Beyond our well-being, stress at work and the resulting affective responses can also influence our behavior at home and consequently may affect other family members (Westman, 2001).

Based on the work-home resources model (W-H R model; ten Brummelhuis & Bakker, 2012), we want to shed light on the process of how interpersonal conflicts at work influence the parenting behavior at home. We investigate the mediating role of negative mood, and whether the ability to regulate one's emotions modulates this process. As such, our study contributes in several ways to the existing literature.

First, we shift the focus from individual outcomes and outcomes concerning the couple to child-related outcomes. Only little attention has been paid to the influence of individuals' work experiences on their parenting behavior thus far (Allen, 2012). This is surprising as children are more and more considered as "unseen stakeholders at work" (Allen, 2012, p. 1174). The well-being and development of children affect parents' work life and indirectly also organizational outcomes (Cho & Ciancetta, 2016). For instance, a study has shown that children's problematic behavior (e.g., antisocial or hyperactive behavior) is related to mothers' organizational commitment (Greenberger & O'Neil, 1990). Understanding the influence of parents' work experiences on their interactions with their children is thus of high relevance not only for working parents but also for organizations (Repetti, 1994).

Second, focusing on interpersonal conflicts at work, we investigate one of the most frequent stressors at work (Bruk-Lee, Nixon, & Spector, 2013; Spector & Bruk-Lee, 2007). Today's jobs are increasingly socially embedded and social work characteristics play an important role for our daily work experiences (Bruk-Lee & Spector, 2012; Grant & Parker, 2009). Those few studies investigating the relationship between parents' work experiences and child-related outcomes, however, mainly focus on parents' employment status (Repetti & Wang, 2014), different types of work schedule (Li et al., 2014), or quantitative work demands such as workload or time pressure (Cho & Ciancetta, 2016). Although interpersonal conflicts are known to be harmful (Spector & Jex, 1998), they are only scarcely considered in the work-home interface research. Gaining insights into their influence on home life as well as into the underlying mechanisms helps organizations and employees to prevent work experiences from negatively influencing home life.

Third, we combine research on the work-home interface with research on personal characteristics in stress processes and extend the knowledge of resources that can potentially buffer the effect of work characteristics on home life. In the W-H R model, personal characteristics are proposed to shape the depleting effect of work demands on personal resources (ten Brummelhuis & Bakker, 2012). Although personal characteristics play an important role in stress research in general (Bolger & Zuckerman, 1995), the role of interindividual differences remains an open question in the field of the work-home interface (Allen, 2012; Repetti & Saxbe, 2009). With our study, we want to further connect these two lines of research. To do so, we investigate whether emotion regulation competence can help employees to reduce negative mood after experiencing a conflict at work and whether, in consequence, this competence can attenuate the influence of conflicts at work on the home domain. Knowledge of buffering resources enables organizations and employees to strengthen these resources and thus to reduce the detrimental effect of interpersonal conflicts.

The Work-Home Interface

In 90 percent of families with children under the age of 18, at least one parent was employed in 2016 (United States Department of Labor, 2017). The combination of work and family life is challenging and can result in negative influences between the two domains (Greenhaus & Beutell, 1985). This is known as work-home conflict, defined as “a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect” (Greenhaus & Beutell, 1985, p. 77). This incompatibility is bidirectional: Work can interfere with the home domain (work-to-home conflict, e.g., because of a conflict at work, a father is less patient than usual with his child and loses his temper), and home life can negatively influence the work domain (home-to-work conflict, e.g., because of a sick child, a father cannot concentrate at work and makes more mistakes).

The W-H R model (ten Brummelhuis & Bakker, 2012) provides an explanation for the influences of work characteristics on affective and behavioral outcomes in the home domain. Based on the conservation of resources theory of (Hobfoll, 1989), the authors propose that contextual demands such as interpersonal conflicts at work deplete personal resources such as mood. This depletion of personal resources influences the outcomes in the home domain, e.g., behavior towards the children (ten Brummelhuis & Bakker, 2012). Resources are defined as “anything perceived by the individual to help attain his or her goals” (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014, p. 1338). Personal resources are a special kind of resources that are anchored in and related to the self. The authors propose four categories of contextual demands that can lead to a depletion of personal resources: quantitative, physical, cognitive, and emotional demands. In the present study, we investigate the consequences of interpersonal conflicts at work as an emotional demand.

Interpersonal Conflicts at Work

Interpersonal conflicts at work belong to the group of social stressors at work (for a differentiation between several types of social stressors: Bruk-Lee & Spector, 2012; Dormann & Zapf, 2002). Interpersonal conflicts are interactions between two or more interdependent parties during which at least one of the parties perceives an incompatibility in such a way that the implementation of an aim is hindered by another party (Glasl, 2004). Several types of interpersonal conflicts are distinguished (see Barki & Hartwick, 2004; Bruk-Lee et al., 2013; Jehn & Bendersky, 2003). One of these types deals with relationship conflicts which are interpersonal conflicts that arise due to disagreements about personal issues such as values or preferences (de Wit, Greer, & Jehn, 2012). Due to this link to aspects of the self, relationship conflicts can be perceived as a potential threat to self-esteem which depends, in part, on the respect received from others (Semmer, Jacobshagen, Meier, & Elfering, 2007). Furthermore, relationship conflicts are perceived as a threat to the need to belong and may intensify the feeling of not belonging (Baumeister & Leary, 1995). Both the threat to self-esteem and the threat to one's fundamental need to belong evoke strong negative affective reactions (Lazarus, 1999; Leary & Baumeister, 2000).

The link between relationship conflicts and affective strain has been shown not only cross-sectionally (for a review, see Spector & Bruk-Lee, 2007), but also in ecological-momentary-assessment studies (e.g., Ilies, Johnson, Judge, & Keeney, 2011; Meier, Gross, Spector, & Semmer, 2013; Repetti, 1993; Volmer, Binnewies, Sonnentag, & Niessen, 2012). Conflicts at work thus have been shown to be among the strongest predictors of daily mood (Bolger, DeLongis, Kessler, & Schilling, 1989). Two of the most studied affective reactions in this context are angry mood and depressed mood (Bruk-Lee & Spector, 2012). Angry mood arises when someone suffers a harm or threat of loss while believing that the person responsible for this harm could have acted

differently (Lazarus, 1991). Experiencing depressed mood involves resignation and the feeling of uncontrollability (Lazarus, 1991). Both angry and depressed mood can be experienced when facing interpersonal conflicts at work. Although negative affective reactions are typical outcomes studied in the context of interpersonal conflicts at work, angry and depressed mood are scarcely investigated as separate constructs in one study. A more fine-grained view of different affective states in organizations is necessary to understand the distinctive underlying processes and behavioral outcomes (Lazarus & Cohen-Charash, 2001). In our study, we therefore differentiate between angry and depressed mood as consequences of relationship conflict at work.

Interpersonal conflicts at work can arise with different conflict partners, such as supervisors and coworkers. Studies differentiating the source of conflict are very scarce (Volmer, 2015). Mostly, interpersonal conflicts at work are operationalized in a general way, without considering the source (Bruk-Lee & Spector, 2006), or, in leadership research, with a focus on interpersonal conflicts with the supervisor. But also conflicts with coworkers can have detrimental effects (Bruk-Lee & Spector, 2006; Frone, 2000). Furthermore, these two studies have also shown that conflicts with the supervisor and with coworkers can have differential effects. Bruk-Lee and Spector (2006) investigated the relationship between supervisor and coworker conflicts and interpersonal and organizational counterproductive work behavior (CWB). While both conflict sources were related to organizational CWB, only coworker conflicts were related to interpersonal CWB. Frone (2000) differentiated between personal outcomes (e.g., self-esteem) and organizational outcomes (e.g., job satisfaction) and found coworker conflicts to be more strongly related to personal outcomes and supervisor conflicts to be more strongly related to organizational outcomes. Hence, it is important to consider the source of conflict. Both supervisor and coworker interpersonal conflicts, however, can be perceived as threatening

the need to belong as well as self-esteem. We assume thus interpersonal conflicts with the supervisor as well as with coworkers to be related to negative affective reactions.

Hypothesis 1: On days with more interpersonal conflicts at work, individuals experience more negative mood (angry mood and depressed mood) at the end of the working day.

The Buffering Role of Emotion Regulation Competence

Beyond the assumption that dealing with contextual demands depletes personal resources, the W-H R model proposes that key resources buffer this depletion process (ten Brummelhuis & Bakker, 2012). Key resources can be understood as personality traits that facilitate the management of other resources (Halbesleben et al., 2014) and therefore help to cope with contextual demands such as conflicts. For example, high core self-evaluations seem to act as a buffer against threats to self-esteem exerted by interpersonal conflicts and therefore reduce the detrimental effect of interpersonal conflicts (Volmer, 2015).

Another possible resource that might shape the affective reaction to interpersonal conflict is one's emotion regulation competence. De Jonge and Dormann (2006) propose that individuals use available internal resources to deal with demands. Consistent with their DISC model and the triple-match principle (de Jonge & Dormann, 2002, 2006), they further propose that the most powerful resources are emotional resources when facing emotional demands with the goal of avoiding emotional strain. Furthermore, theoretical considerations lead to the assumption that individuals with high emotion regulation competence use more effective self-regulatory strategies when facing interpersonal conflicts (Troth, Jordan, & Westerlaken, 2014). Emotional downregulating is proposed as one effective self-regulatory strategy when facing emotional demands such as interpersonal conflicts (de Jonge & Dormann, 2002; Koole, Kuhl, Jostmann, & Vohs,

2005). Emotion regulation competence facilitates emotional downregulating and thus helps to deal successfully with emotional demands. Hence, we propose:

Hypothesis 2: Emotion regulation competence moderates the effect of interpersonal conflicts at work on negative mood at the end of the working day such that the effect is weaker for individuals with high emotion regulation competence.

The Effect of Interpersonal Conflicts at Work on Home Life

Work experiences do not stay at work but can spill over into home life (Bakker & Demerouti, 2013). It is thus not only important to look at the effects that interpersonal conflicts at work have on work-related outcomes, but it is equally relevant to consider the effects on home outcomes. Studies looking at these effects have mainly focused on affective and cognitive individual outcomes such as affect (e.g., Klumb, Voelkle, & Siegler, 2017; Meier et al., 2013), psychological detachment (Volmer et al., 2012), and experienced work-family conflict (Martinez-Corts, Demerouti, & Boz, 2015). Only few studies have investigated the effects on parenting behavior, although it is seen as transferring mechanism between parental work experiences and child development (Cho & Ciancetta, 2016). As notable exceptions, Gassman-Pines (2011) found a relationship between supervisors' criticism during the day and harsher and more withdrawn maternal behavior in the evening and Repetti and colleagues found a link between negative social interactions at work and parents' behavior with their children in the evening (Repetti, 1994; Repetti & Wood, 1997). A recent study has shown that on days with more unpleasant interactions at work, parents show less positive parenting behavior (Malinen, Rönkä, Sevón, & Schoebi, 2017). Furthermore, for mothers, there was a positive relationship between unpleasant interactions at work and negative parenting behavior.

Concerning the spillover effects, the W-H R model (ten Brummelhuis & Bakker, 2012) proposes that the effect of contextual demands faced in one domain is transmitted to the other domain via the depletion of personal resources. In other words, “personal

resources are the linking pins between the work and home domain” (ten Brummelhuis & Bakker, 2012, p. 549). Consistent with this model, Cho and Ciancetta (2016) note that the studies investigating the direct link between parents’ work experiences and their parenting behavior implicitly assume a spillover effect of negative mood as underlying mechanism. Parents in a negative mood are less able to respond to children’s needs, may have more difficulties to show supportive behavior and are more prone to negative interaction behavior such as speaking harshly to the children (Dix, 1991; Larson & Almeida, 1999). Based on these considerations we propose the following hypothesis:

Hypothesis 3: Interpersonal conflicts at work have an indirect effect on parenting behavior mediated by negative mood at the end of the working day.

The Current Study

The present study focuses on the effect of interpersonal conflicts at work on affective reactions at work as well as on behavioral consequences in the home domain, namely positive and negative parenting in the evening. Furthermore, it investigates the role of emotion regulation competence as a buffering key resource. The conceptual model of this study (see Figure 1) follows the proposition of the W-H R Model: Interpersonal conflicts at work are thought to have an influence on negative mood at work (Hypothesis 1), but the strength of this effect depends on individual emotion regulation competence (Hypothesis 2). Moreover, we assume that the effects of interpersonal conflicts at work spill over into the home domain via negative mood (Hypothesis 3).

To test the model, we conducted an ecological momentary assessment study with working fathers. An ecological momentary assessment helps to investigate the short-term effects of interpersonal conflicts on mood outcomes. Furthermore, it allows to model within-person processes and, at the same time, to investigate interindividual differences in these processes (Bolger, Davis, & Rafaeli, 2003). It is thus an adequate design to test our research model (see Figure 1). To complement fathers’ self-reports, we asked their

spouses to provide information about paternal parenting behavior in the evening. Using only self-report, it might be that the relationship between mood and behavior is overestimated. Fathers in a bad mood might perceive their behavior as more negative than it actually is. To rule out this explanation of a potential relationship between negative mood and parenting behavior, i.e., to address potential problems of common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012), we used spouses' reports of parenting behavior as additional source of information.

Method

Procedure and Sample

The study was conducted in cooperation with a large Swiss retail company and data were collected in the French speaking part of Switzerland. Study information including details on the study procedure as well as participation requirements were distributed in the company via HR management. As part of a larger network on fatherhood research (Central European Network on Fatherhood, CENOF), we focused on employed fathers and participation requirements were the following: (a) being male, (b) working at least 50% of the Swiss weekly working time of 42 hours and (c) living in the same household with at least one child up to the age of 16 during the work week. In case of questions concerning the study, members of the research group could be contacted directly. Those fathers who were interested in participation registered on a paper list in the organization or contacted the research group directly via email. In total, 115 fathers stated their interest to participate in the study. As the total number of employees to whom the participation requirements were applicable is not known, participation rate cannot be calculated, but HR management judged this number to be a large percentage of that of eligible men in the company.

Of the 115 employees, 31 participants did not fulfill the eligibility criteria or could not be reached despite several contact attempts. Of the 84 remaining potential

participants, four fathers withdrew their agreement to participate before the study started. Another five participants terminated study participations before the end of the data collection due to various reasons (i.e., technical problems with the smartphone, insufficient language skills to understand the items and answer them and too high workload) resulting in a final sample of 75 employed fathers (retention rate of 94%).

Data collection consisted of three phases. First, participants signed informed consent forms and filled in an online or paper-pencil baseline questionnaire. Before the experience sampling period, a member of the research group met with each participant to hand over the smartphone on which the experience sampling was conducted (Huawei Ascend Y300; *movisensXS*, 2015). Furthermore, sample questionnaires were discussed with participants to clarify questions as well as to ensure a common understanding of the items.

The second phase was the experience sampling conducted during eight consecutive work days with four measurements per day (the first in the morning before going to work, the second at noon during the break, the third at the end of the working day, and the fourth at bedtime). As several participants worked in a shift system, the prompts for the questionnaires were adapted individually to the work schedule of each participant. A few participants finished work at noon at some days. On those days, the measurement at noon was skipped, resulting in a slightly smaller number of completed questionnaires at noon. Furthermore, some participants worked less than eight days during the two weeks of study participation, resulting in a total of 574 working days. On free days, participants only answered the first and the last questionnaire. In total, participants completed 536 questionnaires in the morning (response rate of 89%), 414 questionnaires at noon (response rate of 72%), 472 questionnaires at the end of the working day (response rate of 82%), and 536 bedtime questionnaires (response rate of 89%). Third, participants filled in a follow-up questionnaire. This questionnaire did not

contain the same measures as the baseline questionnaire but supplemented it to reduce the length of each questionnaire.

The 75 participants had a mean age of 40.24 years ($SD = 6.66$ years, median = 41 years, range: 27 to 54 years). Almost all (73; 97%) worked between 90% and 100% of a full-time equivalent (i.e., between 38 and 42 hours per week); the other two worked at least 70% (i.e., 29 hours per week). The working experience was high with 35 participants (46.67%) having worked for more than 20 years and 31 participants (41.33%) having worked for 11 to 20 years. The remaining nine participants (12%) have worked for at least five years. Most of the participants had completed an apprenticeship (24%) or a professional education and training (29%). Thirteen percent had a higher school certificate as the highest degree, 19% hold a professional or polytechnic school or a university degree. Most participants worked in supermarkets (55%), the others hold a diverse range of jobs working in the administration (8%), specialized markets (9%), or other branches of the company.

Concerning home life, participants lived on average with two children in the same household ($SD = 0.89$, median = 2, range: 1 to 6). The mean age of the youngest child at home was 6.31 years ($SD = 4.68$ years), ranging from younger than 1 to 16 years. Seventy (93%) participants lived with their partner/spouse, five participants were single fathers.

Of the 70 partners, 65 agreed to participate in the study (participation rate of 93%). Partners filled in a baseline paper-pencil questionnaire ahead of the experience sampling phase and one paper-pencil daily questionnaire at bedtime on each day of their partners' participation. They put each questionnaire into an envelope that was stamped with a time stamp to indicate the date and time of completion. All questionnaires were sent to the researchers using a postpaid envelope. In total, 491 completed daily questionnaires were returned (response rate of 94%). The participating partners had a mean age of 38.46 years ($SD = 6.86$ years, median = 39 years, range: 24 to 53 years).

Fifty-three spouses were employed. About a quarter of them (26 %) worked between 90% and 100%, another 20% less than 50%, and the rest between 50% and 90% of a full-time equivalent. Fathers received a compensation of 50 Swiss Francs (approximately \$50) for their participation irrespectively whether their partners participated or not. All participants could take part in a lottery winning one of five family games. In addition, they could ask for individual feedback. The procedure was reviewed and approved by the University's internal review board.

Measures

If not stated otherwise, all items were assessed on a five-point Likert scale ranging from 1 (*not at all*) to 5 (*totally*). Questionnaires that did not exist in French were translated using a translation–back translation approach (Brislin, 1970). Means, standard deviations, intraclass correlations, reliability coefficients, and zero-order correlations of all variables used in the analyses are displayed in Table 1.

Baseline measures. *Emotion regulation competence* was measured with the subscale *intrapersonal regulation* of the Profile of Emotional Competences (Brasseur, Grégoire, Bourdu, & Mikolajczak, 2013). This subscale consists of five items, such as “When I am angry, I find it easy to calm myself down”.

Daily measures. *Interpersonal conflicts at work* were assessed at the two measurement occasions at work (second and third measurement per day). An adapted version of Jehn's (1995) relationship conflict scale was used. We changed the instruction so that the items were suitable for a daily questionnaire: “Since the beginning of work, / Since the last questionnaire, between me and my supervisor / my coworkers there were...”. Then, the three items “tension”, “frictions”, and “conflicts” followed dealing with the supervisor and coworkers separately. Scales were calculated separately for supervisor and coworker conflicts, both by aggregating the measures of the two measurement occasions.

Angry mood and *depressed mood* were measured at all four daily measurement occasions using a slightly adapted version of the scale of Cranford et al. (2006).

Participants rated on a five-point Likert scale ranging from 1 (*not at all*) to 5 (*extremely*) how much they felt “angry”, “resentful”, “annoyed” (adjectives used to describe angry mood) and “sad”, “blue”, “hopeless” (adjectives used to describe depressed mood) at the respective moment.

Fathers' self-reports on their *parenting behavior* was measured at bedtime differentiating between the dimensions of positive and negative parenting behavior. Both subscales consisted of three slightly adapted items already used by Gassman-Pines (2011, 2013) and Repetti and Wood (1997). Sample items are “My child and I laughed” for positive parenting behavior and “I lost my temper with my child” for negative parenting behavior.

For the daily *spousal rating of fathers' parenting behavior*, the same items as for fathers' report were used only changing the wording from *I* to *my partner* (e.g., “My child and my partner laughed” for positive parenting behavior and “My partner lost his temper with my child” for negative parenting behavior).

Control variables. As the probability of the occurrence of specific father behavior was higher when they spent more time with their children, we included *time spent with children* (“How much time did you spend with your child/your children, this evening?”) asked at bedtime as a control variable. In few cases (five out of 536 bedtime surveys), fathers reported unrealistically high numbers of hours spent with their children on working days (e.g., 20 hours). A reason might be short-term changes of the work schedule resulting in a non-working day, where they could spend more time with the child/ren. Another reason might be an incorrect data entry. To avoid biasing the effect of the control variable and including non-working days in the analyses, we omitted bedtime measures if

time spent with children was equal or exceeded 13 hours². We also conducted analyses with the variable *weekday* included to control for time trends (Bolger & Laurenceau, 2013). As the result pattern did not change, we report results without this control variable.

Analytic Strategy

The study design resulted in interdependent data with daily measures being nested within persons. As shown in Table 1, between 41% and 80% of the variance of daily measured variables were attributable to the within-person level. To account for the non-independence of the data, we tested our hypotheses using two-level random coefficient path analysis in Mplus, Version 7.31 (Muthén & Muthén, 1998-2015). Our hypotheses refer to the within-person level. We therefore modeled only the within-person effects including a cross-level interaction term for the moderation effect of emotion regulation competence. Following the recommendation of Preacher and Selig (2012), we estimated 90% Monte Carlo confidence intervals with 20,000 repetitions using the code of Selig and Preacher (2008) for the software package R. The 90% confidence intervals correspond to one-tailed, $\alpha = .05$ significance tests (Preacher, Zyphur, & Zhang, 2010).

As we wanted to capture the changes in mood triggered by interpersonal conflicts at work, we controlled for negative mood in the morning. We tested for every effect whether the slopes varied significantly between persons which was the case only for the effect of mood in the morning on mood at the end of the working day. We allowed the slopes of this effect to vary randomly. The slopes of the effect of interpersonal conflicts at work on negative mood were also modeled as random although their variances were not significant. By doing so, we followed the recommendation of Aguinis, Gottfredson and Culpepper (2013) and Nezlek (2011) to proceed with the test of cross-level interactions even if the slope did not vary significantly. All other effects were modeled with random intercepts and fixed slopes.

² Working in a morning shift from 6 a.m. to 12 a.m. would allow a father to spend about 12 hours with the children. However, working and spending more than 12 hours with the children seems unrealistic.

All Level 1 predictors were centered at the person mean, the Level 2 moderator was centered at the grand mean (Enders & Tofighi, 2007). The fact that we included parenting time as a control variable led to the problem that some models did not converge. To solve this problem, we regressed parenting behavior on parenting time and included the resulting residuals as outcome variable in the multilevel path models. Doing so, we created the same effect as if we were including a control variable in the model. However, as potential covariances between the control variable and the other variables are not estimated, the model complexity was reduced and the models converged more easily.

Results

Table 1 displays descriptive information for all variables. Fathers reported low levels of angry mood and depressed mood in the morning ($M = 1.26$ and $M = 1.22$, respectively) and at the end of the working day ($M = 1.34$ and $M = 1.28$, respectively). Interpersonal conflicts with supervisors and coworkers were scarce ($M = 1.11$ and $M = 1.15$, respectively). The fathers' self-report of their positive and negative parenting behavior and the mothers' perception of it correlated significantly on both levels, between and within persons, indicating agreement between spouses. On the within-person level, the correlation was significantly stronger for negative parenting behavior than for positive parenting behavior ($z = 2.39$, $p = .017$); negative interactions may be more salient for mothers than (normal) positive interactions. Fathers who reported more negative mood reported also more negative parenting behavior. This relationship, however, was not significant on a within-person level which thus illustrates the differences of between- and within-person processes. On the within-person level, angry mood in the morning was not related to angry mood in the afternoon, whereas there was a relationship between the two measures of depressed mood. This suggests potentially different temporal courses of angry and depressed mood.

The results of the multilevel random coefficient path models are reported in Tables 2 to 5. In line with Hypothesis 1, supervisor conflicts were related to an increase in angry and depressed moods. In contrast to our assumption, coworker conflicts were unrelated to angry and depressed moods. In Hypothesis 2, we proposed that emotion regulation competence buffers the effect of interpersonal conflicts on negative mood; however, we found no evidence for this moderator effect (i.e., cross-level interaction terms were not significant in any of the models, see Tables 2 and 3). In Hypothesis 3, we proposed an indirect effect of interpersonal conflicts on parenting behavior mediated by negative mood. Only one of the indirect effects was significant: Supervisor conflicts were indirectly related to spouse-reported negative parenting behavior via angry mood (Table 4). All the other estimated 90% confidence intervals for fathers' and for spouses' reports include zero (Tables 2 to 5); hence, Hypothesis 3 was not supported.

Discussion

In the current study, we tested several assumptions based on the W-H R model (ten Brummelhuis & Bakker, 2012) concerning the spillover effect of interpersonal conflicts at work on home life. Data from an ecological momentary assessment with fathers provided partial support for the hypothesis that interpersonal conflicts deplete personal resources: On days with more supervisor conflicts, fathers reported more angry and depressed mood at the end of the working day. However, no such relationship was found for coworker conflicts. We did not find support for the assumption that emotion regulation competence buffers the depletion process. Furthermore, we did not find support for the proposition that the depletion of personal resources has a negative impact on home life: The indirect effects of interpersonal conflicts at work on parenting behavior in the evening mediated by negative mood were not significant. Possible explanations for the findings as well as limitations of the study are discussed in the following.

Consequences of Interpersonal Conflicts at Work

In line with our assumption and existing research (e.g., Liu, Spector, Liu, & Shi, 2011; Repetti, 1993; Volmer, 2015) supervisor conflicts diminish the affective well-being of employees. Only few studies have taken various sources of interpersonal conflicts at work into account and differentiated between supervisor conflicts and coworker conflicts thus far (Volmer, 2015). One of the few studies considering the two sources is the study of Frone (2000). He found that conflicts with the supervisor were related to organizational outcomes such as job satisfaction and organizational commitment whereas conflicts with coworkers were more strongly related to personal outcomes such as depression and self-esteem. A study that investigated the broader construct of workplace aggression including interpersonal conflicts found a similar pattern concerning organizational outcomes: The effects on outcomes such as job satisfaction or performance were stronger for supervisor aggressions than for coworker aggressions (Herscovis & Barling, 2009). According to this second study, however, supervisor and coworker aggressions are both equally related to personal outcomes such as depressions. These results lead to the assumption that supervisor and coworker interpersonal conflicts should be equally strongly related to personal outcomes such as angry and depressed mood. In our study, however, the contrary was the case: Only interpersonal conflicts with the supervisor were related to negative mood. A study that compared various types of interactions at work found that employees experience significantly more positive emotions in daily interactions involving their coworkers than in those involving the supervisor (Bono, Foldes, Vinson, & Muros, 2007). It is possible that the positive experiences with the coworkers served as a buffer against negative consequences of a conflict but that this effect was weaker for conflicts with the supervisor. Furthermore, it has been shown that supervisor behavior influences employees' psychological well-being above and beyond other important predictors of well-being such as life events, work events, or support from others at work (Gilbreath &

Benson, 2004). The result of our study in combination with previous results shows that in future research, the source of interpersonal conflicts should be considered. Furthermore, future studies should try to shed light on the different processes taking place when experiencing interpersonal conflicts with the supervisor or with coworkers.

It is known that the negative affective reactions to social stressors at work are linked to psychological (e.g., burnout and life dissatisfaction; Spector & Bruk-Lee, 2007), physiological (e.g., somatic complaints; Spector & Bruk-Lee, 2007), as well as behavioral strain (e.g., counterproductive work behavior; Yang & Diefendorff, 2009). To avoid those negative outcomes, organizations should inform supervisors about potential negative consequences of their interaction behavior towards their employees. This training should also include the importance of supervisors as crucial role models for employees in the organizational context. Social learning theory emphasizes the importance of role models for employees' behavior (Bandura, 1977) and the socialization process (Weiss, 1977), in general. Consequently, supervisors can influence and shape the quality of interactions in their team and help to avoid detrimental effects of interpersonal conflicts at work.

The Buffering Role of Emotion Regulation Competence

Against our expectation, the strength of the relationship between interpersonal conflicts at work and affective well-being did not vary with different levels of emotion regulation competence. Angry and depressed mood were reported very scarcely by the participants of our study. This might indicate that negative mood may not be appropriate in the work context of our participants and that all participants therefore downregulated the negative mood, irrespectively of their level of emotion regulation competence. Negative affective states such as angry mood are related to behavioral tendencies like attack or revenge (Lazarus, 1991). Angry mood is thus often downregulated, especially when one feels it towards a person who is more powerful (Lazarus, 1991). Additionally, the participants of our study worked in an occupation with intense customer contact. In

such occupations, employees usually have to follow specific more or less explicit display rules about the (non-)display of negative emotions (Zapf, Vogt, Seifert, Mertini, & Isic, 1999) which might lead to a downregulation of negative emotions. In this context, it might be interesting to investigate whether employees experienced a stronger feeling of emotional dissonance, which is the discrepancy between felt emotions and prescribed ones often leading to the suppression of undesired emotions in a specific situation (Zapf, 2002).

Methodological reasons, i.e., low statistical power, may also explain the insignificance of the cross-level interaction effect. In a simulation study, the effect size of the cross-level interaction has been identified as the factor that explained most of the variance in power (Mathieu, Aguinis, Culpepper, & Chen, 2012). Independently of other potential factors, the power did not exceed .2 for an effect size of .3 and remained even smaller than .1 for an effect size of .15. In combination with relatively small Level 1 and Level 2 samples sizes, there was a very small power to detect the cross-level interaction in our study. Furthermore, the slopes of the effect of interpersonal conflicts on negative mood did not vary significantly between participants. Reduced variance of the Level 1 slopes is a second factor that reduces the power of statistical analyses of cross-level interactions (Mathieu et al., 2012). As described above, it is possible that the similarities in the reaction to interpersonal conflicts might be due to the common work environment of our sample. In the future, it would be of interest to investigate the hypothesized moderation effect of emotion regulation competence in a more diverse sample.

Spillover Effects on Parenting Behavior

Contrary to our assumption and previous research (Gassman-Pines, 2011; Malinen et al., 2017; Repetti, 1994), we did not find evidence of a spillover effect of interpersonal conflicts at work on parenting behavior. A possible explanation for this unexpected result might be that parents try to protect their children from the influence of their work day.

Besides spillover, Edwards and Rothbard (2000) describe segmentation as a potential linking mechanism of work and home life. Segmentation refers to an active coping process of suppressing work-related thoughts, feelings, and behaviors in the home domain. By this process, the individuals try to protect their family from the stress experienced in the work domain (Edwards & Rothbard, 2000). Interpersonal conflicts at work were a scarcely reported event during the eight days of study participation. It is possible that the fathers in our sample had enough resources to cope with the social stressors and negative mood experienced at work and not let them spill over in the home domain.

However, it is important to study the costs and potential long-term consequences of preventing spillover of negative work experiences in more detail. A recent study investigated the spillover effect of low and high arousal negative affect at the end of the working day resulting from experienced negative interactions at work (Klumb et al., 2017). In women, no spillover effect of high arousal negative affect was found. At the same time, however, the authors found that cortisol recovery in the afternoon was slower in women. They propose that the effort of downregulating negative mood at work and therefore preventing it from spilling over into the home domain is a costly process which is associated with resource depletion (Klumb et al., 2017).

To shed light on these processes, it can be useful to enlarge the W-H R model (ten Brummelhuis & Bakker, 2012). Key resources are proposed to buffer the depleting effect of contextual demands such as interpersonal conflicts on personal resources such as mood thus far. Key resources are conceptualized as personal characteristics that help to select and to use contextual and personal resources efficiently (ten Brummelhuis & Bakker, 2012). Hence, it is possible, that key resources can be used to reallocate resources efficiently after a loss of personal resources and therefore buffer the effect of resource loss on the outcome in the other life domain.

Limitations

Despite the contributions of our study, it has some limitations. First, the power to detect the effects of interest was relatively low in our study. One important factor that impacts the power of analyses is the variance of the predictor variables (Bolger, Stadler, & Laurenceau, 2012). The variance of both predictors and mediators was small in our study. In combination with still fair, but relatively low reliability coefficients of some of the daily measures (Nezlek, 2017; Shrout, 1998), it is possible that the study did not have enough statistical power to detect the investigated effects. For future ecological momentary studies on interpersonal conflicts and mood at work, it is important to measure concepts that occur more frequently on a daily basis but are not yet perceived as a conflict. An example for such a construct is disagreements.

Second, the measures of interpersonal conflicts at work and parenting behavior might be biased by social desirability. Social desirability occurs when a person wants to be seen in a positive light concerning social norms and standards (Ganster, Hennessey, & Luthans, 1983). Reporting interpersonal conflicts at work might threaten the feeling of being a good employee and coworker, especially when the study is conducted in one company. Similarly, reporting little positive and much negative parenting behavior might threaten the self-perception of being a good parent. Hence, in future studies, it might be important to use items that emphasize less the active behavior of the participants.

Fourth, our sample is restricted in several respects. The sampling in only one organization might be a shortcoming of our study, as it is possible that specific organizational characteristics influenced the experiences but also the answers of the participants. Moreover, the restriction to fathers might have influenced the results. Malinen et al. (2017) found gender differences investigating the effect of negative social interactions at work on parenting behavior. The effect on negative parenting behavior was only significant for women but not for men. On the other hand, Klumb et al. (2017) found

a spillover effect of high-arousal negative affect only for men but not for women. This leads to the assumption that men and women shape the work-home interface differently. It seems important to understand these potential gender differences in more detail.

Conclusion

In sum, our study tested several assumptions of the W-H R model (ten Brummelhuis & Bakker, 2012). We found a relationship between interpersonal conflicts with the supervisor and negative mood at the end of the working day. According to our study, this relationship could not be confirmed when it comes to interpersonal conflicts with coworkers—a result which clearly emphasizes once more the importance of supervisors for the well-being of employees (Gilbreath & Benson, 2004). The other hypothesized relationships were not significant: Neither did emotion regulation competence moderate the relationship between interpersonal conflicts at work and negative mood nor did the effect of interpersonal conflicts spill over into the home domain. On the one hand, it might be fruitful to examine the hypothesized relationships in a larger, more diverse sample while investigating more frequently occurring events. On the other hand, it is possible that spillover effects of daily (negative) work characteristics on child-related outcomes are not as strong as the ones on individual- or couple-related outcomes because parents might try to protect their children against their stress at work. To conclude, researchers should focus on coping strategies such as segmentation processes that might be used to protect the home life from negative influences of work experiences.

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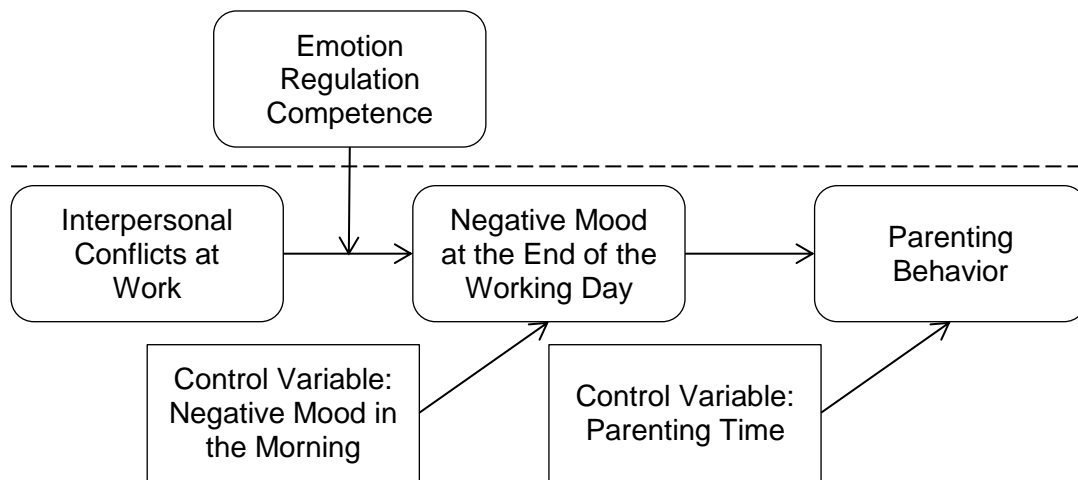
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Between-Person



Within-Person

Figure 1. Research model.

Table 1

Sample Sizes, Means, Standard Deviations, Intraclass-Correlations, and Zero-Order Correlations of the Measures

	<i>N</i> L2	<i>N</i> L1	<i>M</i>	<i>SD</i> _(b-p)	<i>SD</i> _(w-p)	<i>ICC</i>	1a	1b	2a	2b	3a	3b
1. Interp. conflicts at work												
a with supervisor	75	535	1.11	0.25	0.29	.43	(.86)	.30**	-.10**	.22*	-.14**	.06
b with coworkers	75	535	1.15	0.24	0.31	.38	.64***	(.77) ³	-.03	.17*	-.04	.10
2. Angry mood												
a morning	75	533	1.26	0.40	0.43	.46	.73***	.59**	(.75)	.11	.48***	.11
b end of work	74	467	1.34	0.42	0.46	.46	.68***	.55**	.80***	(.73)	.22*	.47***
3. Depressed mood												
a morning	75	533	1.22	0.39	0.35	.55	.75***	.40	.78***	.72***	(.63)	.39***
b end of work	74	466	1.28	0.43	0.36	.59	.67***	.40	.71***	.75***	.91***	(.54)
4. Parenting behavior												
a positive	75	443	4.21	0.54	0.63	.42	.13	-.08	.00	.10	.15	.18*
b negative	75	442	1.46	0.36	0.63	.25	.13*	.17*	.15**	.19**	.10*	.11
c positive - mother report	65	429	3.89	0.59	0.86	.32	-.12	-.12	-.05	-.05	.01	.17
d negative - mother report	65	428	1.31	0.32	0.51	.28	.05	.20	.04	.04	.00	-.04
5. Emot. regulation competence	75	-	3.48	0.26	-	1.00	-.23*	.08	-.13	-.19	-.18	-.20
6. Parenting time	75	437	2.67	0.87	1.72	.20	.16*	.01	.11	.09	.18	.14

Note. Variables 1 to 4 and Variable 6 are within-person variables, Variable 5 is a between-person variable. Correlations below the diagonal are between-person correlations, correlations above the diagonal are within-person correlations. Reliability coefficients (ω for within-person variables, calculated according to Shrout & Lane, 2012; Cronbach's α for between-person variables) are displayed in the diagonal.

L1 = Level 1; *L2* = Level 2; *SD*_(b-p) = between-person standard deviation; *SD*_(w-p) = within-person standard deviation; *ICC* = intraclass correlation (proportion of the between-person variance compared to the total variance).

* $p < .05$. ** $p < .01$. *** $p < .001$. Two-tailed tests.

³ The confirmatory factor analysis model to estimate ω with all six items (three items for the second and third measurement point, respectively) did not converge correctly. We thus estimated ω separately for the two times of measurement (for T2 $\omega = .75$, for T3 $\omega = .79$). The reported ω is the mean of both values.

Table 1 (continued)

Sample Sizes, Means, Standard Deviations, Intraclass-Correlations, and Zero-Order Correlations of the Measures

	4a	4b	4c	4d	5	6
1. Interp. conflicts at work						
a with supervisor	-.08	.03	.01	.08	-	-.02
b with coworkers	-.06	-.05	-.04	.15**	-	.05
2. Angry mood						
a morning	-.01	-.09	.00	-.13	-	-.12
b end of work	-.08	-.02	-.01	.12*	-	.03
3. Depressed mood						
a morning	-.01	-.06	.05	-.06	-	-.10
b end of work	-.01	-.06	.07	-.05	-	-.02
4. Parenting behavior						
a positive	(.76)	-.08	.19***	-.12*	-	.24***
b negative	-.20	(.84)	-.09	.34**	-	.01
c positive - mother report	.40***	-.01	(.82)	-.19*	-	.17**
d negative - mother report	-.03	.55**	-.10	(.79)	-	.07
5. Emot. regulation competence	.15	.04	.09	.00	(.73)	-
6. Parenting time	.23	.12	.05	.40***	.10	-

Note. Variables 1 to 4 and Variable 6 are within-person variables, Variable 5 is a between-person variable. Correlations below the diagonal are between-person correlations, correlations above the diagonal are within-person correlations. Reliability coefficients (ω for within-person variables, calculated according to Shrout & Lane, 2012; Cronbach's α for between-person variables) are displayed in the diagonal.

L1 = Level 1; *L2* = Level 2; $SD_{(b-p)}$ = between-person standard deviation; $SD_{(w-p)}$ = within-person standard deviation; *ICC* = intraclass correlation (proportion of the between-person variance compared to the total variance).

* $p < .05$. ** $p < .01$. *** $p < .001$. Two-tailed tests.

Table 2

Results of Multilevel Analyses Predicting Parenting Behavior (Fathers' Self Report) from Interpersonal Conflicts with the Supervisor Mediated by Angry and Depressed Mood

	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
	Angry mood (end of work)				Depressed mood (end of work)			
Daily interpersonal conflicts	0.82	2.56**	0.82	2.55**	0.27	1.68*	0.27	1.72*
Emotion regulation competence ^a	-0.11	-1.55	-0.11	-1.57	-0.11	-1.99*	-0.11	-1.99*
Interp. conflicts x emot. reg. comp.	-0.21	-0.70	-0.21	-0.70	0.06	0.40	0.06	0.38
Mood in the morning	0.12	1.05	0.12	1.04	0.34	4.15***	0.33	4.04***
	Positive parenting (residuals)		Negative parenting (residuals)		Positive parenting (residuals)		Negative parenting (residuals)	
Daily interpersonal conflicts	-0.19	-1.54	0.12	0.88	-0.12	-1.76*	0.11	0.91
Mood at the end of work	-0.05	-0.76	-0.05	-0.42	0.02	0.16	-0.12	-1.38
Indirect effect: Monte Carlo 90% CI	[-0.163, 0.040]		[-0.233, 0.096]		[-0.057, 0.058]		[-0.091, 0.009]	

Note. CI = Confidence interval.

^a Between-person effect.

* $p < .05$. ** $p < .01$. *** $p < .001$. One-tailed tests.

Table 3

Results of Multilevel Analyses Predicting Parenting Behavior (Fathers' Self Report) from Interpersonal Conflicts with the Coworkers Mediated by Angry and Depressed Mood

	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
	Angry mood (end of work)				Depressed mood (end of work)			
Daily interpersonal conflicts	0.29	1.06	0.30	1.08	0.15	1.36	0.15	1.43
Emotion regulation competence ^a	-0.11	-1.73*	-0.11	-1.74*	-0.11	-2.01*	-0.11	-1.99*
Interp. conflicts x emot. reg. comp.	-0.11	-1.08	-0.11	-1.09	0.06	0.82	0.06	0.85
Mood in the morning	0.08	0.59	0.08	0.58	0.33	4.62***	0.32	4.50***
	Positive parenting (residuals)		Negative parenting (residuals)		Positive parenting (residuals)		Negative parenting (residuals)	
Daily interpersonal conflicts	-0.14	-0.96	-0.10	-0.57	-0.15	-1.10	-0.09	-0.48
Mood at the end of work	-0.02	-0.29	-0.03	-0.32	0.07	0.49	-0.13	-1.15
Indirect effect: Monte Carlo 90% CI	[-0.049, 0.048]		[-0.097, 0.042]		[-0.013, 0.077]		[-0.072, 0.009]	

Note. CI = Confidence interval.

^a Between-person effect.

* $p < .05$. ** $p < .01$. *** $p < .001$. One-tailed tests.

Table 4

Results of Multilevel Analyses Predicting Parenting Behavior (Spouses' Report) from Interpersonal Conflicts with the Supervisor Mediated by Angry and Depressed Mood

	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
	Angry mood (end of work)				Depressed mood (end of work)			
Daily interpersonal conflicts	0.82	2.53**	0.81	2.55**	0.28	1.69*	0.27	1.69*
Emotion regulation competence ^a	-0.11	-1.57	-0.11	-1.54	-0.11	-2.00*	-0.11	-2.00*
Interp. conflicts x emot. reg. comp.	-0.21	-0.71	-0.21	-0.72	0.06	0.40	0.06	0.39
Mood in the morning	0.13	1.06	0.13	1.08	0.34	4.19***	0.34	4.14***
	Positive parenting (residuals)		Negative parenting (residuals)		Positive parenting (residuals)		Negative parenting (residuals)	
Daily interpersonal conflicts	0.05	0.50	-0.03	-0.79	0.03	0.30	0.03	0.43
Mood at the end of work	-0.04	-0.41	0.18	1.82*	0.10	0.98	-0.07	-0.80
Indirect effect: Monte Carlo 90% CI	[-0.154, 0.143]		[0.006, 0.365]		[-0.020, 0.101]		[-0.069, 0.021]	

Note. CI = Confidence interval.

^a Between-person effect.

* $p < .05$. ** $p < .01$. *** $p < .001$. One-tailed tests.

Table 5

Results of Multilevel Analyses Predicting Parenting Behavior (Spouses' Report) from Interpersonal Conflicts with Coworkers Mediated by Angry and Depressed Mood

	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
	Angry mood (end of work)				Depressed mood (end of work)			
Daily interpersonal conflicts	0.29	1.14	0.29	1.08	0.14	1.40	0.15	1.41
Emotion regulation competence ^a	-0.11	-1.74*	-0.11	-1.70*	-0.11	-1.99*	-0.11	-2.00*
Interp. conflicts x emot. reg. comp.	-0.11	-1.15	-0.11	-1.12	0.06	0.83	0.06	0.84
Mood in the morning	0.08	0.61	0.08	0.60	0.33	4.68***	0.33	4.62***
	Positive parenting (residuals)		Negative parenting (residuals)		Positive parenting (residuals)		Negative parenting (residuals)	
Daily interpersonal conflicts	-0.11	-0.73	0.12	1.08	-0.13	-0.87	0.17	1.49
Mood at the end of work	-0.04	-0.37	0.16	1.62	0.12	1.18	-0.10	-1.15
Indirect effect: Monte Carlo 90% CI	[-0.078, 0.056]		[-0.026, 0.145]		[-0.015, 0.041]		[-0.045, 0.008]	

Note. CI = Confidence interval.

^a Between-person effect.

* $p < .05$. ** $p < .01$. *** $p < .001$. One-tailed tests.

7.3 STUDY III

The Influence of Positive Workplace Interactions on Mood and Parenting Behavior at Home

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Abstract

Employees are frequently interacting with different persons at work, such as coworkers, supervisors and clients. Little is known, however, about the influence of positive work interactions on the home domain. Based on ten Brummelhuis and Bakker's work-home resources model, we hypothesize that positive workplace interactions increase positive mood after returning home and thus influence parenting behavior in the evening. On up to 14 consecutive working days, 198 participants completed four questionnaires per day: in the morning, at the end of their working day, 45 minutes after the reunion with their spouses, and at bedtime. Multilevel random coefficient path analyses revealed a positive relationship between positive workplace interactions and positive mood after returning home. Positive mood, in turn, increased positive parenting behavior and decreased negative parenting behavior. The indirect effect of positive workplace interactions on parenting behavior, mediated by positive mood, was significant. In general, our study shows the beneficial effects of positive workplace interactions on well-being and behavior in the home domain. As a theoretical contribution, our study successfully combines the work-home resources model with research on positive workplace interactions and enhances the understanding of processes that connect work and home in a positive way. As a practical contribution, the results suggest that organizations, supervisors, and employees should strive for a positive work climate and possibilities for positive workplace interactions.

Keywords: work-family enrichment, affective spillover, positive workplace interactions, parenting behavior

The Influence of Positive Workplace Interactions on Positive Mood and Parenting Behavior at Home

How many days do you spend at work without interacting with coworkers, clients, or with your supervisor? As today's jobs are more and more socially embedded (Grant & Parker, 2009), most of us experience—if any—only few working days without interactions. Interactions at work can be stressful, for instance, when conflicts with coworkers arise (Spector & Jex, 1998), but more often, workplace interactions are related to positive emotions (Bono, Foldes, Vinson, & Muros, 2007). Workplace interactions not only increase positive affect but can also help to generate resources such as energy or meaningfulness of work (Bhave & Lefter, 2018; Ragins & Dutton, 2006). If more resources are generated than required in an interaction, they can even have a replenishing effect (Lilius, 2012). Models of the influence of work experiences on home life propose that these resources are not only beneficial at work, but that they can also have a positive impact on the home domain and influence individuals' well-being and behavior in the evening (e.g., Greenhaus & Powell, 2006; ten Brummelhuis & Bakker, 2012a).

Based on the work-home resources model (W-H R model; ten Brummelhuis & Bakker, 2012a), we aim to investigate how positive workplace interactions influence parenting behavior at home, and to shed light on the mediating role of positive mood. Our study thus contributes in several ways to the existing literature. First, we bridge the research on the work-home interface with literature on positive organizational scholarship which focuses on generative processes in organizations that help individuals to flourish (Cameron & Spreitzer, 2012; Ragins & Dutton, 2006) by focusing on positive workplace interactions. There is a lot to gain by bridging these two research lines: New avenues and starting points for a beneficial combination of work and home life can be identified (Spreitzer, 2013) which can improve the well-being of employees and their family members.

Second, we go beyond the investigation of the impact of individuals' work experiences on their well-being by extending the focus on the social environment at home, particularly on parent-child interactions. Studies that investigated child-related outcomes of parents' work experiences are scarce thus far (Allen, 2012), especially in the context of positive effects that work can have on the home life (Repetti & Wang, 2014). However, to understand the impact of parents' work on their children is as important to families as to organizations as employees' family life has an effect back on their work (Cho & Ciancetta, 2016). Hence, it is particularly useful to understand factors that shape parents' interactions with their children positively.

Third, we advance the knowledge of the positive dynamics linking work and home life by testing positive mood as a potential linking mechanism between the work and the home domain. The linkage between leaving work in a good mood and heightened spirits at home is well known (e.g., Culbertson, Mills, & Fullagar, 2012; Ilies, Liu, Liu, & Zheng, 2017; Judge & Ilies, 2004; Sonnentag & Binnewies, 2013). There is, however, a shortage of knowledge of the relevance of positive mood for behavior at home. To better understand this process, we investigate how positive workplace interactions are linked to positive mood after returning home and how positive mood, in turn, is linked to parenting behavior in the evening. Figure 1 depicts our research model.

Explaining the Process of Work-Home Enrichment

The combination of work and home life has become a popular topic discussed not only in academia, but also in families, organizations, and politics (Allen, 2012; French & Johnson, 2016). It has been proposed to be one of the greatest challenges that individuals are facing nowadays due to several reasons, such as changing family structures or blurred work-family boundaries (Allen, 2012; Kossek & Lambert, 2005). In daily life, however, many employees also experience the beneficial effects that combining both domains can have (Grzywacz & Marks, 2000). For instance, enjoying one's work can create positive

energy that lasts until going to bed (Sanz-Vergel & Rodríguez-Muñoz, 2013). It was hypothesized already in the 1970s that the engagement in various life domains can be beneficial for individuals' energy level (Marks, 1977; Sieber, 1974). Nevertheless, research started to focus on these positive effects—under the label *work-home enrichment* (WHE)—only recently (Bianchi & Milkie, 2010; Lapierre et al., 2017). WHE is defined as "the extent to which experiences in one role improve the quality of life in the other role" (Greenhaus & Powell, 2006, p. 73). The improvement of quality of life across domains is likely bidirectional (Frone, 2003; Greenhaus & Powell, 2006): Work can have a positive influence on home life (work-to-home enrichment; e.g., after a successful day at work, a parent has more energy to play with the children in the evening). Vice versa, home life can have a positive influence on work life (home-to-work enrichment; e.g., playing with the children in the evening helps to detach and to recover from work increasing the productivity at work the next day).

The W-H R model (ten Brummelhuis & Bakker, 2012a) explains the processes that underlie mutual positive influences of work and home life. The model proposes as a basic assumption that contextual resources of one domain, such as positive interactions at work, act as a starting point for a resource gain spiral. Contextual resources help to generate personal resources, such as positive mood. These personal resources serve as a link between the work and home domains, as they are thought to positively influence outcomes in the other domain, such as a parent's behavior towards his or her children (ten Brummelhuis & Bakker, 2012a). Resources are defined as "anything perceived by the individual to help attain his or her goals" (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). Contextual resources are situated in the social context of the individual, whereas personal resources are aspects of the self (ten Brummelhuis & Bakker, 2012a). In the current study, we examine whether positive workplace interactions serve as a

contextual resource that helps to generate positive mood (a personal resource) and thus improves the home life.

Positive Workplace Interactions and their Influence on Home Life

With the focus that shifts from deficiencies to abundance and working conditions that help employees to grow (i.e., positive organizational scholarship; Cameron & Spreitzer, 2012; Ragins & Dutton, 2006), scholars started to emphasize and to investigate the resources generating effect of positive workplace interactions (Lilius, 2012; Ragins & Dutton, 2006). For instance, the higher the quality of an interaction is perceived, the more likely it is to generate personal resources during this interaction, which counteracts the depleting effects of demands (Lilius, 2012). Consistent with this idea, positive workplace interactions have recently been found to be related to state vitality (i.e., feeling energized; Bhawe & Lefter, 2018). Positive workplace interactions can thus be understood as job resources (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) that might generate positive affective responses also in the home domain (Greenhaus & Powell, 2006).

An underlying mechanism of the resources generating effect of positive workplace interactions can be their potential to satisfy the need to belong. Human beings strive for positive and meaningful interpersonal relationships. This basic need to belong can be satisfied by affectively pleasant interactions (Baumeister & Leary, 1995). In turn, satisfying this need may promote well-being (Ryan & Deci, 2000) and positive affective behaviors (Baumeister & Leary, 1995). Consistent with this idea, workplace interactions that served a friendship function were related to positive emotions above and beyond the influence of positive affectivity (Colbert, Bono, & Purvanova, 2016). Integrating these considerations in the W-H R model (ten Brummelhuis & Bakker, 2012a) leads to the assumption that positive workplace interactions help to create affective personal resources that spill over across domains and increase the well-being at home. Hence, we propose the following hypothesis:

Hypothesis 1: Positive interactions at work are positively related to positive mood after returning home.

Affective experiences shape the behavior of individuals (e.g., Frijda, 1986; Lazarus, 1991), and this appears to be the case not only for negative, but also for positive affective experiences (Fredrickson & Branigan, 2005): The broaden and build theory (Fredrickson, 1998, 2001) proposes positive emotions to broaden the action-thought repertoires resulting in changed behavior tendencies such as more playing and more social behavior. Focusing on parent-child interactions, Dix (1991) consistently proposes that parents in a happy mood are more prone to smile, to listen to their children, and to encourage them. Further, they have more difficulties to show mood inconsistent behavior such as disciplinary behavior (Dix, 1991). This pattern has been confirmed meta-analytically: Positive affect is related to more supportive-positive parenting and to less harsh-negative parenting (Rueger, Katz, Risser, & Lovejoy, 2011). Based on these considerations, we propose the following hypothesis:

Hypothesis 2: Positive mood after returning home is positively related to positive parenting behavior and negatively related to negative parenting behavior.

Larson and Almeida (1999) emphasize parents' work experiences as one of the most important sources of affective experiences that shape interactions within the family. This notion is in line with the W-H R model (ten Brummelhuis & Bakker, 2012a) that proposes personal resources such as mood as "linking pin between the work and home domain" (ten Brummelhuis & Bakker, 2012a, p. 549). Although research has mainly focused on behavioral outcomes of stressful experiences at work and negative affective reactions thus far (Bakker & Demerouti, 2013), it is plausible to assume that positive affective reactions to work experiences also influence the person's behavior at home. To our knowledge, the beneficial effects of positive work experiences on parent-child interactions and the mediation via positive mood have not yet been examined. Focusing at

behavior towards the spouse, however, positive affect at work has been related to increased positive affect and to more social behavior at home (Ilies et al., 2007). Similarly, supportive behavior at work was found to be related to more supportive behavior toward the spouse in the evening, and this link was mediated by positive affect in the home (Lin, Ilies, Pluut, & Pan, 2017). Cho and Ciancetta (2016) propose in their model that positive mood resulting from work experiences can be beneficial for parents' interactions with their children. Based on these considerations, we propose a mediational path, linking positive workplace interactions, via positive mood when returning home, to parents' interactions with their children:

Hypothesis 3a: Positive interactions at work are related to more positive parenting behavior, mediated by positive mood after returning home.

Hypothesis 3b: Positive interactions at work are related to less negative parenting behavior, mediated by positive mood after returning home.

The Current Study

The current study focuses on the effect of positive workplace interactions on affective as well as behavioral outcomes in the home domain. The research model depicted in Figure 1 follows the propositions of the W-H R model (ten Brummelhuis & Bakker, 2012a); it suggests that positive interactions at work spill over in the home domain by increasing positive mood after returning home (Hypothesis 1). The increased positive mood, in turn, is proposed to increase positive and decrease negative parenting behavior in the evening (Hypothesis 2). Furthermore, positive workplace interactions are thought to have an indirect effect on parenting behavior mediated by the increased positive mood (Hypothesis 3). To test the research model depicted in Figure 1, we conducted an ecological momentary assessment which enables us to study within-person daily spillover processes (Bolger, Davis, & Rafaeli, 2003). Although the investigation of these intraindividual processes are important to understand the daily interplay of work

and home life, only six percent of work-home studies used diary methods thus far (Lapierre & McMullan, 2016). By using an intraindividual approach, this study helps to understand the process of social work characteristics influencing the daily life of families.

Method

Procedure and Sample

Participants were recruited via flyers distributed in childcare facilities, family centers, and residential areas as well as via ads in the German speaking part of Switzerland. As the main focus of the study was the investigation of couple processes (Schoebi, Perrez, & Bradbury, 2012), participating in the study required: (a) to live together with a partner, (b) to work at least 12 hours per week in a regular work schedule (both partners), (c) to live with at least one child younger than 8 years. 122 couples were interested in participating, but only 113 of them fulfilled the requirements mentioned before. Research assistants visited the participants at home to give them the handheld device on which the ecological momentary assessment was conducted as well as detailed written information on the procedure. The participants had to fill in a trail questionnaire on the handheld device. Questions concerning the daily questionnaires were discussed and clarified. The data were collected between May 2009 and March 2011 and in the end, 108 couples participated in the study. The only homosexual couple who participated in the study was excluded from further analyses for reasons of comparability. Participants received a compensation of 50 Swiss Francs (approximately \$ 50) for study participation.

The ecological momentary assessment was planned for 10 consecutive weekdays. Participants could voluntarily answer the questions also on weekends. This extended the participation duration of the study to 14 days of ecological momentary assessment per participant. Two participants who did not provide sufficient data (only three days of study participation or mainly missing data) were excluded from further analyses. Furthermore, only days on which participants actually worked were relevant for the current study. Five

participants who reported no work day and nine participants who reported only one work day were therefore excluded from further analyses. The final sample size consisted of 198 participants (92 heterosexual dual-earner couples and 14 individual participants) and 1045 working days.

Participants completed four questionnaires per day: the first in the morning before starting to work (T1), the second in the evening at the end of the working day (T2), the third during the first 45 minutes after the reunion with the partner (T3), and the fourth at bedtime (T4). In total, participants completed 1018 questionnaires in the morning (response rate of 97%), 1045 questionnaires at the end of the working day (response rate of 100%)⁴, 982 questionnaires after the reunion with the partner (response rate of 94%), and 987 questionnaires at bedtime (response rate of 94%). Additionally, participants filled in a baseline questionnaire before and after the ecological momentary assessment.

The final sample consists of 103 men (52%) and 95 women (48%). On average, the participants were 36.72 years old ($SD = 5.8$, min = 24, max = 59, median = 37). They had a mean working time of 30 hours per week ($SD = 10.1$ hours, min = 8.4, max = 46.2, median = 33.6) which correspond to an average employment level of 72% ($SD = 24.06\%$, min = 20%, max = 110%, median = 80%). On average, men worked mostly full-time (mean employment level of 90.4%) whereas women worked mostly part-time (mean employment level of 52.4%). The participants were highly educated: 64 participants (32.66%) had a degree of a professional or commercial school, 131 participants (66.83%) graduated from university. The remaining participant (0.5%) had completed secondary school. On average, the couples had 1.67 children ($SD = 0.8$, min = 1, max = 5, median = 2) who were rather young with a mean age of all children of 3.7 years ($SD = 2.8$ years) and a mean age of 2.7 years ($SD = 2.03$) of the youngest child.

⁴ We used two questions of the questionnaire at the end of the working day (T2) as a criterion whether participants were at work or not. For those with a missing T2 we could not doubtlessly define whether they had worked on this day or not. Therefore, participants with a missing T2 were excluded from the analyses resulting in 100% response rate.

Measures

All questionnaires were in German.

Positive Workplace Interactions were measured at the second measurement occasion at the end of the working day. Participants rated the pleasantness of the contact with others at work on a bipolar visual analogue scale ranging from 1 (*unpleasant*) to 7 (*pleasant*) by moving the slider from the default position in the center of the scale (4) to either the left or the right side or by directly tapping on the specific location of the scale. As we were interested in variation of pleasantness of positive workplace interactions, we analyzed only variance within the side of scale reflecting more pleasant experiences. The ratings of this side of the scale (originally 5 to 7) were recoded as 1 to 3.

Positive Mood was measured at all four measurement occasions with two items chosen from the PANAS-X (Watson & Clark, 1994). The participants rated on a six-point Likert scale (1 = *not at all* to 6 = *extremely*) how much they currently felt "happy" and "cheerful".

Parenting Behavior was measured at bedtime, differentiating the two dimensions of positive and negative parenting behavior. On a Likert scale ranging from 1 (*not at all*) to 7 (*extremely*), participants described how they felt towards their youngest child rating the respective two items (a) "close/affectionate" and (b) "tender" for positive parenting behavior and (a) "irritable/annoyed" and (b) "rude" for negative parenting behavior.

Analytic Strategy

The study design resulted in non-independent data with daily measures nested within persons and persons nested within couples. Between 49% and 70% of the variance of daily measures were attributable to the within-person level as can be seen in Table 1. We conducted three-level random coefficient path analyses in MPlus, Version 7.31 (Muthén & Muthén, 1998-2015) to account for the non-independence of the data. As our focus was on intraindividual change processes, we modeled within-person effects. To test

the indirect effects, we estimated 90% Monte Carlo confidence intervals with 20000 repetitions as recommended by Preacher and Selig (2012). We used the code of Selig and Preacher (2008) for the software R. The 90% confidence intervals correspond to one-tailed, $\alpha = .05$ significance tests (Preacher, Zyphur, & Zhang, 2010). We tested for every effect whether the variance of the slopes varied significantly between persons. As this was not the case for any of the effects, we modeled all effects with fixed slopes, but random intercepts. Positive workplace interactions and positive mood in the morning were centered at the person mean to remove between-person variance (Enders & Tofighi, 2007). As we wanted to capture the changes in mood due to positive workplace interactions, we controlled for positive mood in the morning (prior to work).

Results

Table 1 displays the means, the standard deviations, the intraclass correlations, the reliability coefficients, and the zero-order correlations of all variables included in the analyses. Participants rated positive interactions with a medium positivity ($M = 1.62$ on a three-point Likert scale). On the between-person level, positive parenting was significantly correlated with positive interactions at work ($r = .23, p < .01$), as well as with positive mood in the morning ($r = .31, p < .001$), and after returning home ($r = .35, p < .001$). This shows that participants reporting more positive interactions and more positive mood tended to report more positive parenting. On the between-person level, negative parenting was significantly correlated with positive mood after returning home ($r = -.26, p < .01$), but no significant relationships were found between negative parenting and positive workplace interactions ($r = -.07, p = .38$) or positive mood in the morning ($r = -.14, p = .18$). Negative parenting seems to depend more on situational factors than on personality factors which is also reflected in the bigger proportion of within-person variance (70% – compared to 49% for positive parenting). Positive mood in the morning was not correlated significantly with positive workplace interactions on the within-person

level, but on the between-person level: On days when participants came to work in a good mood, they did not report more positive workplace interactions; however, participants reporting more positive mood in the morning also reported more positive workplace interactions.

The results of the random coefficient path analyses are displayed in Table 2. In line with our first hypothesis, positive workplace interactions were related to more positive mood after the participants returned home. Consistent with our second hypothesis, positive mood after coming home was related to more positive and less negative parenting behavior. In line with Hypothesis 3, we furthermore found a significant indirect effect of positive workplace interactions on both positive and negative parenting behavior via positive mood after returning home as both 90% confidence intervals do not include zero (see Table 2): Returning home in a better mood due to positive workplace interactions was related to more positive and less negative parenting behavior in the evening.

Discussion

In the current study, we tested the assumption derived from the W-H R model (ten Brummelhuis & Bakker, 2012a) that positive workplace interactions are related to affective and behavioral outcomes in the home domain. Focusing on positive workplace interaction and resulting positive spillover processes, we followed the call of researchers to apply a positive organizational scholarship lens on the investigation of the work-home interface (Spreitzer, 2013). Data from an ecological momentary assessment of dual earner couples provided support for the hypothesis that positive workplace interactions help to generate personal resources: On days on which interactions at work were rated more positively, parents reported more positive mood after returning home. This positive mood was related to more positive and less negative parenting behavior. Furthermore, we found significant indirect effects of positive interactions at work on parenting behavior in the

evening mediated by positive mood after returning home. Potential explanations and suggestions for future research, limitations of the study, as well as practical implications will be discussed in the following.

Positive Workplace Interactions and Affective Well-Being at Home

In line with our assumption, daily positive workplace interactions were positively related to positive mood after returning home. This result enlarges existing knowledge and provides starting points for future research in two ways. First, it is in line with the finding that interaction requirements at work have a positive effect on state vitality (Bhave & Lefter, 2018). However, the correlations of $r = .22$ on a between-person level and $r = .25$ on a within-person level between interaction requirements and experienced positive interactions (Bhave & Lefter, 2018) show that these two constructs are related, but distinct. We shift the focus from predefined work characteristics to a feature of a working day that can be influenced by supervisors and employees by investigating the valence of daily interactions. It might be fruitful to combine the approach of our study with the approach of Bhave and Lefter (2018) in future research: It is not clear yet whether positive interactions that are required (e.g., an interaction with a client) have different effects compared to voluntary interactions (e.g., spending the coffee break with a coworker one likes). A recent study has shown mixed effects of workplace friendships that serve an affective as well as an instrumental function (Methot, Lepine, Podsakoff, & Christian, 2016): These friendships had both positive and negative effects on performance. The results are interpreted in the way that maintaining friendships at work might be costly and deplete personal resources and therefore counteract the restorative effect of positive workplace interactions (Methot et al., 2016). In the future, for theoretical as well as practical reasons, it might be important to gain a deeper understanding of different effects that different types of positive workplace interaction can have.

Second, studies that investigated the relationship between social work characteristics and home outcomes focused mainly on negative interactions (e.g., Klumb, Voelkle, & Siegler, 2017; Meier, Gross, Spector, & Semmer, 2013; Volmer, 2015). Our study provides empirical evidence on the theoretical proposition of Lilius (2012) who states that interactions can also have a restorative effect. In a study that investigated general positive events at work, no direct beneficial effect of daily positive work events on end-of-work fatigue was found (Gross et al., 2011). However, they found an interaction effect: Positive work events had a beneficial effect when the participants experienced many negative events or high chronic social stressors. Building on these results, a next step to the understanding of positive workplace interaction could be the combination of research on negative and positive social interactions at work and the investigation whether the effect of positive workplace interactions is especially beneficial when employees have to deal with negative social interactions at work.

Effects on Parenting Behavior

In line with our second hypothesis, we found that positive mood after returning home is related to parenting behavior in the evening. Larson and Almeida (1999) point out that these affective experiences that shape the behavior of family members can arise outside the family domain. Consistently, and in accordance with our third hypothesis, we found an indirect effect of positive workplace interactions on parenting behavior in the evening mediated by positive mood after returning home. This pattern confirms the importance of mood as a linking mechanism between work and home life as proposed by WHE models (Edwards & Rothbard, 2000; Greenhaus & Powell, 2006; ten Brummelhuis & Bakker, 2012a). In a next step, future research should focus on the identification of mechanisms or boundary conditions that strengthen this positive effect. For instance, it has been shown that work-family interpersonal capitalization, (i.e., discussing positive work events with family members) can have a positive effect on positive affect and life

satisfaction (Ilies, Keeney, & Goh, 2013). Combining this result with our findings, one could assume that discussing positive workplace interactions at home could strengthen the effect on positive affect and therefore also the indirect effect on parenting behavior.

Second, the pattern of results points out the importance to expand the focus of WHE research, and to investigate not only affective outcomes such as life and family satisfaction (Ilies et al., 2013, 2017) or positive mood (e.g., Lawson, Davis, McHale, Hammer, & Buxton, 2014; Lin et al., 2017; Song, Foo, & Uy, 2008), but also behavioral outcomes. Parents' interactions with their children are the linking pin between parents' work experiences and child-related outcomes such as psychological health or behavioral problems (Cho & Ciancetta, 2016). Our results show that the relationship between parents' work characteristics and parenting behavior can be positive. This positive relationship might be beneficial not only for children, but also for parents themselves as well as, indirectly, for employers. For instance, positive interactions with children might help parents to mentally detach from work, and therefore to recover better in the evening. Better recovery is related to better well-being (Sonnentag, Venz, & Casper, 2017), but also to beneficial work outcomes such as work engagement (e.g., Sonnentag, Mojza, Demerouti, & Bakker, 2012; ten Brummelhuis & Bakker, 2012b) or organizational citizenship behavior (e.g., Binnewies, Sonnentag, & Mojza, 2009). Furthermore, it has been shown that family hassles influence work life in a negative way (Du, Derks, & Bakker, 2018). Positive interactions with children could have the contrary effect; they might provide a possibility to build up new resources in the evening that can be used at work the next day. Hence, a positive gain spiral of resources—started by positive workplace interactions—could continue at work. All in all, it is important to understand better how parent-child interactions can influence work outcomes the next day or, in other words, to understand the family-to-work enrichment process in more detail.

Limitations

Despite the contributions of our study, it has some limitations. We used a relatively rough measure of positive social interactions that does not allow to differentiate between interaction partners. Research on effects of interpersonal conflicts at work proposes that the source of conflict might be of importance: It has been shown that supervisor conflicts and coworker conflicts have disparate effects. (Bruk-Lee & Spector, 2006; Frone, 2000; Hershcovis & Barling, 2009). Similarly, employees seem to experience most positive emotions in interactions with coworkers and fewest positive emotions during interactions with supervisors (Bono et al., 2007). Future research should investigate whether these differential effects of interactions with different interaction partners (e.g., coworkers, clients, or supervisors) can also be found for a spillover in the home domain.

Second, our measures of the outcome variables showed only “slight” reliability (Shrout, 1998, p. 308). However, the low number of items per dimension might have attenuated the reliability coefficient in two ways. First, the reliability coefficient is dependent on the number of items with the reliability indicator increasing with the number of items increasing (Nezlek, 2017). Second, with only two items, it was not possible to use a confirmatory factor analysis approach to estimate the reliability coefficient ω (Kenny, Kashy, & Bolger, 1998). The reliability coefficient R_C , however, underestimates the reliability compared to ω (Shrout & Lane, 2012). Overall, a low reliability of the outcome variable attenuates the statistical power of analyses (Bolger, Stadler, & Laurenceau, 2012). Consequently, it is remarkable that the effects are still significant despite the relatively low reliability of some measures.

Third, we only used self-reports to assess the constructs of interest. Consequently, common method biases might have inflated parts of the investigated relationships (Podsakoff, MacKenzie, & Podsakoff, 2012). Analyses of intraindividual effects are less

prone to be biased as the influence of interindividual differences in response patterns is reduced by person mean centering (Ilies, Johnson, Judge, & Keeney, 2011; Ilies, Scott, & Judge, 2006). Nevertheless, complementary reports of the spouse and children should be used to assess behavior at home for further investigations of the effects of positive workplace interactions on home life.

Fourth, we did not consider the role of interindividual differences. The W-H R model (ten Brummelhuis & Bakker, 2012a) proposes that persons high on specific key resources, such as self-esteem or optimism, show higher ability to optimally use contextual resources to generate personal resources. On the other hand, it is possible that employees low on self-esteem profit more from positive workplace interactions: Positive workplace interactions can signal respect of others which is important for individuals' self-esteem (Semmer, Jacobshagen, Meier, & Elfering, 2007). Hence, it is important to identify moderators of the examined pathways in order to get a deeper understanding for whom positive interactions might be most beneficial.

Practical Implications

The findings of our study offer several avenues for practical implications. First, supervisors should be informed about the potentially positive effects of positive workplace interactions. They should also be encouraged to provide work environments that foster such interactions. Group climates that are characterized by open communication and trust are related to more workplace friendships (Tse, Dasborough, & Ashkanasy, 2008) and therefore facilitate positive workplace interactions. Work group climate, in turn, is strongly influenced by the behavior of supervisors (Kuenzi & Schminke, 2009). Furthermore, a good relationship between supervisors and employees (i.e., leader-member exchange) directly foster friendship at work (Tse et al., 2008). Hence, supervisors should be trained how to maintain good relationships with their employees and how to create a faithful atmosphere in their work groups.

Second, it is important that professionals (i.e., coaches, HR managers) who discuss the question how to combine work and home life successfully with employees point out the beneficial effect of work on the home life. Studies propose that role conflicts between work and home life are related to feelings of guilt (Judge, Ilies, & Scott, 2006; Livingston & Judge, 2008) which is, in turn, related to reduced well-being (Kim, Thibodeau, & Jorgensen, 2011). The knowledge of potentially positive effects of combining work and home life for children might counteract the negative effects by reducing the feeling of guilt.

Conclusion

In our study, we tested several assumptions of the W-H R model (ten Brummelhuis & Bakker, 2012a) concerning the beneficial effect of positive workplace interactions on home outcomes. The results suggest that positive workplace interactions provide a restorative effect and support the generation of personal resources such as positive mood. The increase in positive mood, in turn, is associated with parent-child interactions in the evening: When parents come home in a positive mood, they show more positive and less negative parenting behavior. Our research proposes the combination of a positive organizational scholarship lens with research on the work-home interface to be a fruitful avenue for future research: It helps to understand the beneficial effects of the combination of work and home life as well as the underlying mechanisms that link the work and home domains. Positive mood has been shown to be one of these mechanisms. This result provides evidence that work characteristics that support individuals to grow are not only important for the work, but also for the home domain.

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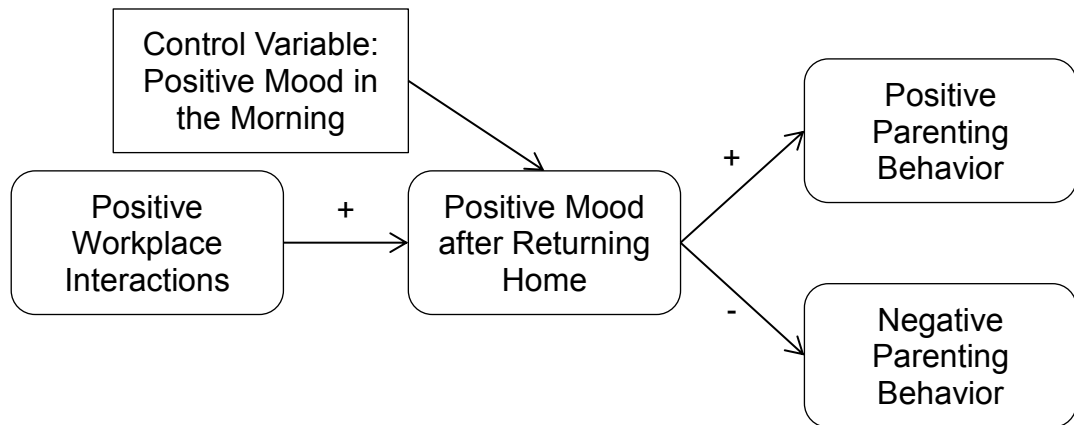


Figure 1. Research model.

Table 1

Sample Sizes, Means, Standard Deviations, Intraclass-Correlations, and Zero-Order Correlations of the Measures

	<i>N</i> <i>L2</i>	<i>N</i> <i>L1</i>	<i>M</i>	<i>SD</i> _(b-p)	<i>SD</i> _(w-p)	<i>ICC</i>	1	2a	2b	3a	3b
1. Daily pwi	198	946	1.62	0.39	0.53	.35	-	.00	.10*	.06	-.03
2. Positive mood											
a morning	198	1018	3.97	0.60	0.65	.46	.28***	(.46)	.15**	-.01	.01
b after returning home	198	982	4.22	0.62	0.74	.41	.30***	.72***	(.53)	.12**	-.14**
3. Parenting behavior											
a positive	197	857	5.82	0.69	0.67	.51	.23**	.31***	.35***	(.34)	-.20***
b negative	197	857	1.77	0.52	0.80	.30	-.07	-.14	-.26**	-.31***	(.21)

Note. Correlations below the diagonal are between-person correlations, correlations above the diagonal are within-person correlations. Reliability coefficients (R_C , calculated according to Bolger and Laurenceau, 2013) are displayed in the diagonal. Pwi = positive workplace interactions; $SD_{(b-p)}$ = between-person standard deviation; $SD_{(w-p)}$ = within-person standard deviation; ICC = intraclass correlation (proportion of the between-person variance compared to the total variance).

* $p < .05$. ** $p < .01$. *** $p < .001$. Two-tailed tests.

Table 2

Results of Multilevel Analyses Predicting Parenting Behavior from Positive Workplace Interactions Mediated by Positive Mood

	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
	Positive mood (after returning home)			
Daily positive workplace interactions	0.12	2.03*	0.12	2.02*
Positive Mood in the morning	0.19	3.29***	0.19	3.28***
	Positive parenting		Negative parenting	
Daily positive workplace interactions	0.06	1.10	-0.02	-0.19
Positive mood after returning home	0.11	2.17*	-0.18	-3.49***
Indirect effect: Monte Carlo 90% CI	[0.001, 0.031]		[-0.047, -0.003]	

Note. CI = Confidence interval.

* $p < .05$. ** $p < .01$. *** $p < .001$. One-tailed tests.

8 APPENDIX

8.1 DECLARATION OF AUTHORSHIP

I declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where states otherwise by reference or acknowledgment, the work presented is entirely my own.

Regina Jensen

Fribourg, 16.04.2018

8.2 CURRICULUM VITAE

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 10/2007 – 09/2010: Bachelor of Science in Business Psychology at the Ruhr-University Bochum, Germany

Professional experiences

09/2013 – 08/2018: Research and Teaching Assistant at the University of Fribourg, Switzerland
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Publications

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 Jensen, R., Siegler, S., Meier, L. L., & Klumb, P. L. (in prep.). The Influence of Daily Interpersonal Conflicts at Work on Parenting Behavior – Examining the Role of Negative Mood and Emotion Regulation Competence.
 Jensen, R., Schoebi, D., & Klumb, P. L. (in prep.). The Influence of Positive Workplace Interactions on Mood and Parenting Behavior at Home.