



# “Don’t Bring Work Home”: How Career Orientation Moderates Permeable Parenting Boundaries in Dual-earner Couples

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## Abstract

Having parenting boundaries permeated by work, expressed in bringing work home and dealing with work-related issues while performing the parental role can relate to increasing levels of work-family-conflict. This association, however, might be influenced by inter-individual differences in the meanings associated with work (career role orientation). To investigate these links we conducted a dyadic two-wave study that included 119 highly educated (59% of mother and 43% of fathers have a university degree) dual-earner couples with preschool-aged children. Participants’ self-reported on permeable parenting boundaries (PPB), career role orientation (CRO), and work-family-conflict (WFC). Actor-partner moderated effects were modeled across time and patterns of moderating effects were tested. Results showed that, controlling for time 1 WFC, fathers’ and mothers’ PPB at time 1 predicted positively fathers’ and mothers’ WFC at time 2 (actor effects). Mothers’ and fathers’ career orientation at time 1 had no main effect on mothers’ or fathers’ WFC at time 2. However, two interaction effects were found. Mothers’ PPB at time 1 predicted higher mothers’ WFC at time 2 when fathers were less CRO and mothers’ PPB at time 1 predicted higher fathers’ WFC at time 2 when mothers were less CRO. Findings suggest that career orientation may be an important moderator of the negative relationship of permeable parenting boundaries on WFC, in particular of the effects of mothers’ permeability. The evidence of couple interactions regarding career orientation indicates the need for systemic analyses of the work-family boundary management process.

**Keywords** Parenting · Work-family boundaries · Career orientation · Segmentation · Permeability

## Highlights

- Study of actor and partner effects on boundary management using a dyadic two-wave study.
- Permeable parenting boundaries (PPB) have a positive linkage with WFC across time.
- Career role orientation (CRO) is an important moderator of the link of PPB on WFC.
- Mothers’ PPB interacted with both own and partner’s CRO.
- CRO moderated actor and partner effects of permeable parenting boundaries and WFC.

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The experience of work-family conflict (WFC), which means the individual’s experience of not having enough time and energy to manage all responsibilities (Greenhaus & Beutell, 1985), is an important concern in today’s society. As individuals seek to manage opposing pressures from work and family, they must also manage the boundaries between work and other domains. Over the last decades, boundaries have become increasingly permeable due to technological change and new forms of work organization (Allen et al., 2014). Many occupations require total availability for the job and technology affects traditional notions of the workplace making individuals always available for work. Nowadays it is quite frequent for workers to

use laptops, tablets and smartphones for work purposes, during non-work hours and non-work days. Depending on the match between individual resources and environmental demands, the blurring of boundaries may have positive or negative effects. It may allow individuals to flexibly deal with un-predictable events and to fulfill demands from either role, but it can also put the individual under an excessive pressure to fulfill incompatible demands.

Although there are organizational constraints that determine the degree to which the work-home boundary can be permeated, individuals also have some control over the permeability of these boundaries. Boundary management strategies fall along a continuum ranging from segmentation (where work and family are kept firmly segregated and boundary permeability is weak) to integration (where work and family are entirely blended and boundary permeability is strong) (Ashforth, Kreiner, & Fugate, 2000, Clark, 2000). Having high permeability implies being physically located in one role but psychologically or behaviorally engaged in another role (Ashforth et al., 2000, Pleck, 1977). Inherent to the concept of boundary permeability is directionality; i.e., having a permeable boundary entails that work can permeate family, as well as family, can permeate work. Nevertheless, boundaries can be asymmetrically permeable. Indeed, family boundaries tend to be more permeable than work boundaries (Hecht & Allen, 2009), possibly, due to the differential power of work and family domains (Clark, 2000). In this work, we are especially interested in how parental boundaries are permeated by work aspects. Having permeable parental boundaries implies having work aspects diffuse while the parent is interacting or spending time with the child. Because individuals may not always have control over their boundaries, addressing this type of intrusions may capture the actual enactment of permeability on parental boundaries besides preferences (Allen et al., 2014). In this work, this permeability is addressed in the form of intrusion, as this type of permeations on the parental role may be particularly detrimental for parents of preschool-aged children. Children at this age group are still highly dependent, demanding high amounts of attention and involvement from their parents, both in caregiving and educational activities. Parents with higher role permeability may deplete themselves of resources, and have a higher risk of experiencing inter-role conflict (Cooklin et al., 2015, Matias et al., 2017, Vieira et al., 2016a). Indeed, evidence suggests that boundary permeability and inter-role conflict are related, as the allocation of finite personal resources to one role reduces the availability for other roles (Hecht & Allen, 2009). Thus, permeating family with work may contribute for depleting individuals' available resources to fulfill family roles causing conflicts between domains to occur. The current study specifically focuses on the intrusion of a particular family role, the parental role, examining

individuals' experience of having permeable *parenting* boundaries. How individuals enact work and the parental roles in an effort to achieve work–family balance is particularly relevant. This task will entail more challenges when both parents share both roles, work and parenting. Holding a crossover perspective and assessing dual-earner parents' boundary management adds deeper knowledge to this process. In this regard, our study's approach is consistent with family systems theory (Cox & Paley, 1997), which emphasizes the interdependence among all family members, and also with Bronfenbrenner's ecological theory (1994), which supports a contextualized understanding of the family, considering how the particular work experiences of parents may differentially affect the quality of parent-child relationships.

## Work and Family Boundaries

Christena Nippert-Eng's (1996) book is considered a foundational work for understanding the boundaries between the realms of work and family. Boundary theory postulates that individuals create and maintain boundaries so as to keep order and simplify their environment and, typically, these boundaries delimit a role (Ashforth et al., 2000). Broadly, physical, temporal and psychological boundaries may be identified (Ashforth et al., 2000, Clark, 2000, Nippert-Eng, 1996). Physical boundaries define where work/family behaviors take place (e.g., family responsibilities are dealt with at home). Temporal boundaries define when the work/family role is performed (e.g., jobs are performed between 9.00 and 17.00). Psychological boundaries refer to the adequacy of thoughts, behaviors, and emotions to the role (e.g., ruminating about a work project is expected during the work schedule and when at work, but not at home). Setting these boundaries and delimiting a role is, nowadays, more difficult, as technological advances have enabled working at almost any time and in any place. Therefore, more commonly, boundaries between work and parenting are often porous. As previously mentioned, a boundary is therefore *permeable* if it allows an individual to be physically located in one domain but psychologically or behaviorally engaged in another domain (Ashforth et al., 2000, Pleck, 1977). Having permeable boundaries may entail both costs and benefits. For example, having boundaries with low permeability does not allow the individual to take care of a rising and unexpected demand from the home domain; however having boundaries with high permeability may also lead individuals to bring their work home, which may interfere with family duties. On the other hand, having boundaries with high permeability may allow a supervisor to offer emotional support to an employee during a family problem and having boundaries with low

permeability may allow individuals to be more work focused and productive.

Indeed, the parental role is a highly relevant role for most individuals and being available to the child and focusing attention on the child's needs are important dimensions of a good performance of the parental role, in particular for parents of young children. Thus, having family boundaries permeable to work may be particularly challenging if those boundaries are specific to the performance of the parental role.

## Permeable Parenting Boundaries and Work-Family Conflict

Theoretically, both conflict, and lack of conflict, can occur in more or less permeable boundary situations. Individuals with less permeable family boundaries may still experience strain-based WFC if work tension leads to fatigue and irritability at home. Individuals with highly permeable family boundaries may reduce their WFC by fulfilling some unfinished work tasks while at home. Thus, although related, boundary permeability and WFC are distinct constructs (Hecht & Allen, 2009). Research shows that greater family permeability (degree to which elements from the work domain may enter the family domain) fosters more WFC (Bulger et al., 2007, Mathews & Barnes-Farrell, 2010) or less work-family integration (Wepfer et al., 2017). Those studies, however, were cross-sectional and assessed permeability in the family domain in a global manner, not specifying different roles in this setting. Higher family permeability could lead to less conflict if the individual is able to adequately perform his/her parental role. Indeed, the core tenet for boundary permeability increasing WFC is related to resource drain; i.e. if the individual is allocating personal resources to a role, the availability for other roles is decreased. Thus, increased permeable parenting boundaries (by psychologically or behaviorally engaging in work when one is, or should be, performing the parental role) depletes the resources available to fulfill the parental role (Hecht & Allen, 2009, Mathews et al., 2010). Having permeable parenting boundaries when individuals have young children is likely to cause more WFC than for individuals who have older children or no children. Moreover, WFC requires a cognitive appraisal of perceived incompatible demands between the work and family domains. Boundary permeability, namely permeable parenting boundaries should result in experiences of WFC when the interruptions or distractions are evaluated as a threat or drain on available resources (Mathews et al., 2010). The distinction of experience from appraisal over the work-family experience is an important aspect (Allen et al., 2014).

Moreover, there is a need to assess the enduring impact of permeating boundaries on families' lives. The fact

that past research has been cross-sectional limits the inference of cause and effect (Casper et al., 2007, Matthews et al., 2014). In this study, we use a two-wave design in which parenting boundaries permeated by work measured at time 1 are expected to influence WFC approximately 18 months later.

## Career Role Orientation and Permeable Parenting Boundaries

A defining idea of boundary theory is the notion that individuals are more enactive than reactive in defining their work and family lives (Ashforth et al., 2000, Clark, 2000). Thus, people actively construct a boundary, varying in strength, around each domain. One potentially relevant aspect to actively constructing a boundary is career role orientation. According to identity theories, individuals have multiple identities such as work and family (see Stryker & Burke, 2000 for a review on identity theory) and the more valued a role is to an individual's self-concept, the more effort or resources the individual devotes to that role and the more likely he or she is to engage in that role's activities (Burke & Reitzes, 1991, Rothbard & Edwards, 2003). In addition, the greater the identification with one role, the more likely the individual is to integrate this role with the other roles (Ashforth et al., 2000). Thus, individuals oriented toward the family role may be particularly motivated to avoid interference of their work domain with their family domain, protecting family boundaries, and may also have more permeable work boundaries (Ashforth et al., 2000, Carlson & Kacmar, 2000, Mathews & Barnes-Farrell, 2010). The opposite also holds true, since individuals for whom the professional role is more salient may be motivated to avoid interferences from their family into their work role and may also have a more permeable family boundary (Kossek et al., 2012, Mathews & Barnes-Farrell, 2010). Despite the acknowledgment of role identity as an important dimension to boundary management (Kossek et al., 2012, Mathews et al., 2014), the linkage between permeable boundaries and inter-role conflict has not yet been consistently explored (for exceptions see Mathews & Barnes-Farrell, 2010). In this study, therefore, career role orientation (as opposed to family role orientation) is explored as a moderator of the link between permeable parenting boundaries and WFC. If parents of young children permeate their home boundaries with work issues and are mentally engaged with work issues while performing the parental role, this may cause increased difficulties to fulfill this role and, subsequently, increase the perception of WFC. This link will be heightened if parents are more family oriented, but may be buffered if parents are more career oriented than family oriented. If the individual is

career oriented, permeable parenting boundaries will not be seen as an intrusion of work over family but as an ordinary and even desired combination of roles.

## Crossover Effects of Boundary Management and Gender

In a review of research on work-family boundaries, Allen et al. (2014) highlighted the need to address how boundary management impacts others in the social system. Moreover, the authors called for further research examining boundary dynamics in working parents. Indeed, modes of boundary management are likely to affect not only the individual, but also others close to him/her, in particular the partners, through crossover (Ferguson et al., 2015). Pervading the family domain with aspects of the work role may disrupt routines, time, and involvement with family members, resulting in higher tension and conflict for the partners (Huffman et al., 2017). This rationale aligns with family systems theory (Kerr & Bowen, 1988), which suggests that an individual's attitudes and behaviors are significantly affected by other family members' attitudes and behaviors. Thus, permeating family boundaries may extend to partners. Carlson et al. (2015) found family to work boundary transition by one couple member to contribute to the transmission of strain to the other spouse and to work-family conflict. Limited research, however, has focused on the crossover effects of boundary management (Desrochers et al., 2012). For example, in regard to work boundary permeability, Ferguson et al. (2015) found that this permeation not only benefited the individual's work and family functioning, but it also benefited the spouse's levels of marital satisfaction. In this study, crossover

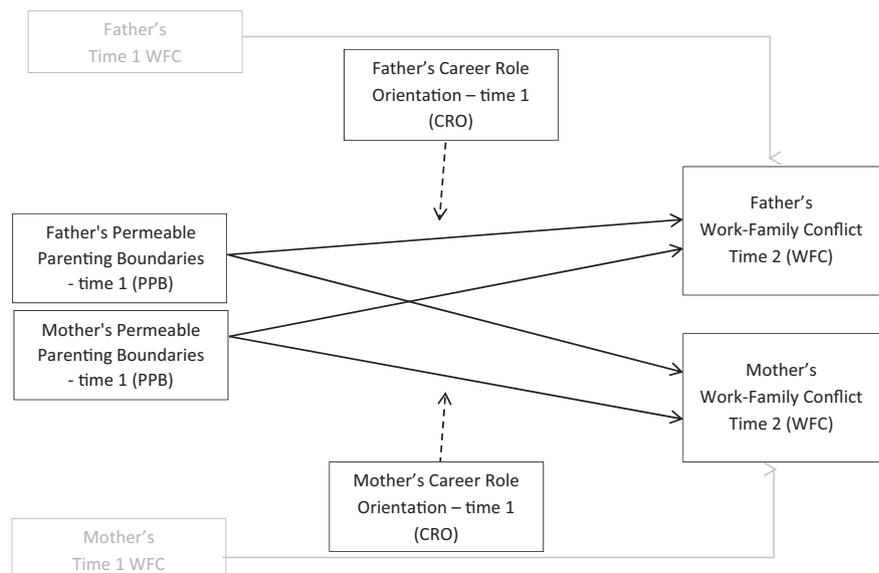
effects may be particularly relevant as we are focusing on dual-earner couples. Therefore, if one individual has permeable parenting boundaries this may add strain to the other partner's ability to juggle roles, increasing their levels of WFC.

As the performance of work and family roles is intertwined with gender (for a review see Matias et al., 2012), having the parental role permeable to work may shape levels of WFC differently for fathers and for mothers. In terms of crossover effects, most studies have found that the quality of father-child interactions was affected by mothers' work experiences, while mother-child interactions were not affected by fathers' work experiences (e.g., Costigan et al., 2003, Vieira et al., 2016a). However, Matias et al. (2017) found a bidirectional crossover pattern between one parent's WFC and the other parent's psychological availability for children.

## The Present Study

The central aim of this study is to examine the extent to which WFC is linked to permeable parenting boundaries (see Fig. 1). This study makes several important contributions. First, the linkages between boundary management and inter-role conflict may be better grasped by addressing the role of moderating variables, such as career role orientation (Matthews et al., 2014). Being more of a career oriented person may motivate the individual to permeate the family boundary with work aspects more than if the individual valued family more than work (Kossek et al., 2012, Matthews & Barnes-Farrell, 2010). Therefore, we tested for the moderating effect of career role orientation, highlighting how the individual's attachment to the work

**Fig. 1** Conceptual model of the Actor Partner Interdependence Moderation Model (APIMoM) with Permeable Parenting Boundaries at time 1 predicting Work-Family Conflict at time 2, and Career Role Orientation at time 1 as a moderator



role may buffer or amplify this link. Second, pervading the family domain with aspects of the work role affects other family members, resulting in higher tension and conflict for the partners (Carlson et al., 2015). This may be particularly relevant for parents of young children who, due to their lower level of autonomy, require a great amount of care provision and attention. Furthermore, this may be particularly challenging for dual-earner couples, where both parents face the demands of managing work and family roles. Therefore, we act in accordance with systems theory and use a crossover perspective to address how individuals' permeable parenting boundaries impact their partners' WFC. Third, recurring claims have been made for work-family research to address these questions using longitudinal designs (Casper et al., 2007, Matthews, et al., 2014); nevertheless, most research and theory is still developed based on cross-sectional designs. Thus, we address the extent to which these permeable parenting boundaries are linked to WFC 18 months later, establishing a cross-time association between permeable boundaries and WFC. Fourth, previous research on work and family boundaries has been focused on individual preferences for integrating or segmenting work and family or on individual-organization fit in regard to these preferences (Matthews & Barnes-Farrell, 2010). In contrast, this study, focuses not only on the frequency of permeable boundaries, but also on the specificity of parental boundaries, and puts focus on a demanding and salient role for individuals. This will add to our comprehension of how effectively boundary management is occurring. In sum, on the basis of the revised theory and empirical findings, we advance the following hypotheses.

H1: Having more permeable parenting boundaries at time 1 will be linked with increased levels of WFC at time 2.

H2: The relationship between permeable parenting boundaries at time 1 and WFC at time 2 will be heightened when individuals have low levels of career role orientation, assessed at time 1.

H3: Permeable parenting boundaries at time 1 by one couple members will increase the other partner's levels of WFC at time 2.

Finally, there is no consensus regarding current empirical literature on the crossover effects and gender. If, on the one hand, current gender role expectations may lead us to expect women's parental role permeability to have stronger effects on both men and women's conflict; on the other hand, recent research addressing crossover effects from WFC to parent-child dimensions point in different directions. Therefore, in this study, we address these crossover effects by exploring if there are gender differences in the crossover effect from one couple member's permeable parenting boundaries at time 1 to their partner's levels of WFC at time 2.

## Method

### Participants and Procedure

Two hundred and six dual-earner couples with preschool-aged children participated in the first wave of a larger longitudinal study aiming to understand the impact of work-family dynamics on parenting and the child's development. These couples were recruited from both public and private preschools in the Porto Metropolitan Areas, the main urban area from the Northern Region of Portugal, the most populated area of the country. The general objectives of the study were explained to school coordinators and preschool teachers, who directly recruited parents who expressed interest in participating in the study. Parents were assured that their participation would be completely voluntary and that their responses to research measures would remain confidential. Parents who agreed to participate were provided a written informed consent and two envelopes containing the questionnaire (one for the mother and another for the father). After completing the questionnaire, parents were asked to seal the envelopes and to return them to their children's teacher. All collected surveys were then returned to the researcher once data collection was completed. After approximately one and a half years, another wave took place and these couples were asked to participate following the same procedure as time 1. A total of 129 couples agreed to collaborate, yielding a 63% response rate. The sample used for this study was restricted to those couples in which both partners were employed at both measurement times. The final sample consisted of 119 dual-earner couples (238 participants). The age of the participants ranged from 27 to 50 years ( $M_{fathers} = 36.29$  years,  $SD_{fathers} = 4.97$ ;  $M_{mothers} = 34.89$  years,  $SD_{mothers} = 4.19$ ), 26.9% of mothers have 12 years of education and 58.8% have a university degree (bachelor's/master's/PhD), while 34.5% of fathers have 12 years of education and 42.8% have a university degree. Couples were living together for an average of 8 years ( $SD = 1.79$ ) at the first wave of assessment and most of them had one child (56.3%), 40.3% had two children, and only 3.3% had 3 or more children. Regarding work, the majority of the sample was composed of full time workers (working 35 hours per week or more) (99.2% of fathers and 93.3% of mothers). This convenience sample is quite characteristic of the Portuguese dual-earner population described in the national census (Statistics Portugal, INE, 2011). Our participants were very close to the dual-earner Portuguese population in terms of age range and number of working hours per week, and like the vast majority (91%) of parents of preschool-aged children in Portugal, had enrolled their children in formal pre-school facilities. However, our sample included a higher proportion of college-educated individuals than those identified in the 2011 census.

We ran a logistic regression analysis to test for longitudinal attrition and examined the extent to which participation at wave 2 was related to the aforementioned demographic variables as well as to the study variables measured at time 1. Our findings suggested that participants who did not participate in wave 2 did not differ from the remaining participants on any demographic or study variables.

## Measures

*Work-Family Conflict Scale* was measured, at both T1 and T2, with the abbreviated version of the multidimensional measure of work–family conflict (WFCS-Portuguese version; Vieira, Lopez, & Matos, 2014). The brief version, composed by six items, was developed by Matthews et al. (2010) and was developed from the original 18-item scale of Carlson et al. (2000). The six items were rated on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*) (e.g., “The behaviors I perform that make me effective at work do not help me to be a better parent and spouse”). The Cronbach’s  $\alpha$  for fathers was 0.64 (time 1) and 0.74 (time 2) and for mothers was 0.64 (time 1) and 0.69 (time 2). Mean of inter item correlation was also inspected as this is a short scale and Cronbach’s alpha is highly dependent on scale length. The means of inter-item correlations were, for fathers 0.23 (time 1) and 0.33 (time 2) and for mothers were 0.23 (time 1) and 0.28 (time 2); all values fall in the optimal range (from 0.2 and 0.4; Briggs & Cheek, 1986). To our knowledge no validation study of the brief 6-item scale has been done with Portuguese data, however, additional indicators show that this brief version correlates strongly with the full 18 items version at T1 (fathers  $r = .95$ ,  $p < 0.001$ ; mothers  $r = 0.94$ ,  $p < 0.001$ ). A dyadic confirmatory factor analysis showed good model fit at T1 ( $\chi^2(12) = 19.35$ ,  $p = 0.08$ ,  $\chi^2/df = 1.61$ , CFI = 0.97, RMSEA = 0.05) and at T2 ( $\chi^2(12) = 28.95$ ,  $p = 0.00$ ,  $\chi^2/df = 2.41$ , CFI = 0.93, RMSEA = 0.08). Metric measurement invariance of the WFC scale across time was also found ( $\Delta\chi^2(5) = 7.88$ ,  $p = 0.16$ ).

*Permeable Parenting Boundaries* was assessed solely at T1 with 5 newly constructed items. The items developed by experts in family science, parenting and work-life balance tap the dilution of the home boundary by addressing work concerns while performing the parental role. Prior to the administration to the current sample the items were pilot tested and adjustments were introduced in their wording to increase comprehensibility. Items were rated on a 4-point Likert type scale from 1 = *strongly disagree* to 4 = *strongly agree* (“When I’m at home I am often working”; “I often think about work when I’m interacting with my child.”; “I often get distracted with work issues when I’m playing with my child.”; “My family activities are

often interrupted due to work issues.”; “I rarely have a long period with my child without interruptions.”). The items tap the degree to which an individual deals with behavioral (e.g. working at home; experiencing interruptions) and psychological (thinking about work, getting distracted) elements from the work domain entering the family domain. Cronbach’s alpha was 0.75 and 0.74 for fathers and mothers, respectively. A dyadic confirmatory factor analysis showed good model fit ( $\chi^2(8) = 9.38$ ,  $p = 0.31$ ;  $\chi^2/df = 1.17$ , CFI = 0.99, RMSEA = 0.03). Additional validity indicators of the scale show it correlates, as expected, positively with the number of hours spent in professional work (fathers:  $r = 0.22$ ,  $p = 0.02$ ; mothers:  $r = 0.20$ ,  $p = 0.03$ ), with the number of children in the household (fathers:  $r = 0.24$ ,  $p = 0.01$ ; mothers:  $r = 0.24$ ,  $p = 0.01$ ) and with father’s levels of parental stress<sup>1</sup> (fathers:  $r = 0.27$ ,  $p = 0.00$ ; mothers:  $r = 0.14$ ,  $p = 0.13$ ).

*Career Role Orientation* was assessed solely at T1 using Brown and Duan’s (2007) subscale composed of 7 items which assess the importance of career over personal/family life role orientations (“Meeting my career needs has more priority than meeting my family and personal needs”). Items are rated on a 4-point Likert scale, ranging from *strongly disagree* (1) to *strongly agree* (4). The items were translated to Portuguese according to the International Test Commission Guidelines (2010). In the present study, the scale showed high internal reliability (Cronbach alphas 0.83/0.80 for men and women, respectively). A dyadic confirmatory factor analysis showed good model fit ( $\chi^2(28) = 62.96$ ,  $p < 0.001$ ,  $\chi^2/df = 2.25$ , CFI = 0.93, RMSEA = 0.07).

## Analysis Plan

We used an extended version of the Actor–Partner Interdependence Model (APIM) with distinguishable dyads (Kenny et al., 2006) to test the moderator role of career orientation. The API Moderation Model (API-MoM) (Garcia et al., 2015) allows testing for patterns of moderation for distinguishable dyads with a mixed moderator. Finding patterns can simplify the model, increase statistical power and aid in the understanding of the theoretical meaning of moderation effects. Moreover, this strategy overcomes limitations of a trimming approach (only statistically significant interactions are retained and non-significant interactions are dropped). Commonly, tests of moderation are low in statistical power, and by trimming we may drop non-significant

<sup>1</sup> Parental stress was assessed with the *Parental Stress Scale* (PSS; Berry & Jones, 1995). The scale is comprised of 18 items (e.g., “I feel overwhelmed by the responsibility of being a parent”) scored in a 5-point Likert scale from (1 = *strongly disagree*, 5 = *strongly agree*). Cronbach’s alpha was 0.79 for fathers and mothers.

interaction terms that could be potentially relevant. Thus, by testing patterns, a simpler, parsimonious and powerful model is tested. In addition, testing patterns reduces the possibility of capitalizing on chance (see Garcia et al., 2015). A RMSEA-based power calculation (MacCallum, Browne, & Sugawara, 1996) indicates our sample size provides a power of 0.80 ( $\alpha = 0.05$ ) to reject a wrong model with an amount of misspecification corresponding to  $RMSEA = 0.08$ .

The APIMoM outlined in Fig. 1 consists of 4 independent variables (two predictors and two moderators), 4 interaction terms (interaction between each partner IV and each partner Moderator), two dependent variables (one for each partner) and two controls (initial levels of WFC). The proposed model was tested using maximum likelihood estimation in AMOS 21 (Arbuckle, 2012). The strategy proposed by Kenny and Ledermann (2010) to test for dyadic patterns in regard to main effects, and the strategy proposed by Garcia et al. (2015) to test for moderation patterns were followed. With this test for dyadic patterns we tested whether actor and partner effects were significantly different for mothers and fathers by specifying equality constrains (i.e., nested models) and tested whether the models were more actor, partner, contrast, or couple oriented. Concerning the interaction models, in a first step, we tested whether the moderation effects varied across levels of the distinguishing variable (e.g., between fathers and mothers). In a second step, we tested three possible models for the moderator (M) (actor M only; partner M only and couple M) and then the three possible models for the predictor (X) (actor X only; partner X only and couple X). Finally, we chose the best fitting model and tested the simpler model with the selected patterns. The best fitting model should fit as well as the unconstrained model; it should fit better than the model that assumes no moderation to occur (all moderator effects are set to 0) and the coefficients should be significant. In addition, the fit of the candidate model should be the best relative to the fit of the other plausible pattern models (Garcia et al., 2015).

To evaluate the fit of the model to the data, and following the recommendation by Schweizer (2010), the  $\chi^2/df$ , the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) were used. Good fit is defined as  $\chi^2/df$  below 2 and acceptable when  $\chi^2/df$  is below 3; CFI values between 0.90 and 0.95 suggest an acceptable fit and between 0.95 and 1.00 indicate a good model fit; RMSEA values below 0.08 indicate acceptable model fit and below 0.05 point to good model fit (Schweizer, 2010). For the model comparison we used the SABIC (sampling-error-adjusted Bayesian information criterion): smaller values indicate better model fit (Garcia et al., 2015).

## Results

### Preliminary Analyses

Before proceeding with hypothesis testing, we conducted a series of confirmatory factor analyses to examine the distinctiveness of the three constructs that were measured at the same time (Time 1 WFC, PPB and CRO). The hypothesized three-factor model (Model 1 in Table 1; see graphical depiction in appendix 1) fit the dyadic data satisfactorily ( $\chi^2(258) = 356.91$ ,  $p < 0.001$ ,  $CFI = 0.91$ ,  $RMSEA = 0.04$ ). We compared the hypothesized three-factor model with a series of alternative models. In Models 2, 3, and 4, items for two variables loaded on a common factor, and the other items loaded on their own respective factor. Model 5 is a single-factor model in which all items loaded on a general factor. Table 1 shows the results of model fit comparisons. The hypothesized three-factor model fit the data significantly better than all alternative models. Furthermore, correlations among the three-factor model were as follows for father's: WFC-PPB  $r = 0.65$ ,  $p = 0.00$ ; WFC-CRO  $r = 0.28$ ,  $p = 0.06$ ; PPB-CRO  $r = 0.36$ ,  $p = 0.01$ ; and for mother's WFC-PPB  $r = 0.46$ ,  $p = 0.01$ ; WFC-CRO  $r = 0.30$ ,  $p = 0.03$ ; PPB-CRO  $r = 0.33$ ;  $p = 0.04$ . Hence, results suggest that our measures capture distinct constructs.

Table 2 presents the means, standard deviations, and Pearson bivariate correlations of all variables in the model. In regard to actor correlations, fathers' WFC at time 1 and time 2 were positively correlated while fathers' WFC at time 2 correlated positively with their own PPB. Similarly, mothers' WFC at time 2 also correlated positively with their own WFC at time 1 and with their own PPB at time 1. A couple member's own PPB at time 1 also correlated with their own career role orientation at time 1. Regarding partner correlations, fathers' WFC at time 2 correlated positively with mothers' WFC at time 2, but not at time 1; while fathers' WFC at time 1 correlated positively with mothers' WFC at time 2. Mothers' and fathers' career role orientation at time 1 were positively correlated, but fathers' and mothers' PPB at time 1 were not. Fathers' career role orientation at time 1 was also positively associated with mothers' PPB at time 1.

### Main and Interaction Effects of Permeable Parenting Boundaries and Career Role Orientation at T1

The model with all four main effects, all four interaction terms and two controls for time 1 WFC was fitted ( $\chi^2(23) = 22.52$ ;  $p = 0.49$ ;  $\chi^2/df = 0.98$ ;  $CFI = 1.00$ ;  $RMSEA = 0.00$ ). Because of the complexity of the APIMoM, the test for interaction effects requires large samples to detect substantial effects. Thus, we followed the procedures by

**Table 1** Confirmatory Factor Analyses of Work-Family Conflict, Permeable Parenting Boundaries and Career Role Orientation at time 1

Model	$\chi^2$	df	$\Delta\chi^2$	( $\Delta$ df)	CFI	RMSEA
1. Hypothesized three-factor model	356.91	258			0.91	0.04
2. Two-factor model (WFC and PPB combined)	401.95	262	45.04***	4	0.87	0.05
3. Two-factor model (PPB and CRO combined)	572.99	262	216.07***	4	0.72	0.07
4. Two-factor model (WFC and CRO combined)	455.35	262	98.44 ***	4	0.83	0.06
5. Single-factor model (WFC, PPB and CRO combined)	772.37	268	415.45***	10	0.54	0.09

$N = 119$ . All alternative models were compared with the hypothesized three-factor model. All  $\Delta\chi^2$  are significant at  $p < 0.001$ . WFC Work-family conflict, PPB Permeable parenting boundaries, CRO Career role orientation. \*\*\* $p < 0.001$

**Table 2** Means, Standard Deviations and Pearson Correlations among the study variables

	1	2	3	4	5	6	7	8
1. WFC Father T2	1							
2. WFC Mother T2	0.31***	1						
3. WFC Father T1	0.51***	0.31**	1					
4. WFC Mother T1	0.14	0.53***	0.33***	1				
5. Permeable Parenting Boundaries Father T1	0.43***	0.08	0.43***	0.06	1			
6. Permeable Parenting Boundaries Mother T1	-0.04	0.23*	0.06	0.35***	0.09	1		
7. Career Role Orientation Father T1	0.16	0.11	0.15	0.07	0.31**	0.19*	1	
8. Career Role Orientation Mother T1	-0.00	0.10	0.02	0.23*	-0.01	0.30**	0.21*	1
Mean	2.45	2.41	2.52	2.48	1.86	1.87	1.38	1.28
SD	0.70	0.64	0.60	0.61	0.65	0.61	0.42	0.37

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Kenny and Ledermann (2010) and Garcia et al. (2015) of testing for patterns of actor, partner and couple effects. Table 3 includes the fit statistics for the unrestricted and subsequent models. First, we examined which sub model for main effects best fit the data and found the *actor only* model to have the best fit in regard to the predictor (permeable parenting boundaries) ( $\chi^2_{(25)} = 25.01$ ;  $p = 0.46$ ;  $\chi^2/df = 1.00$ ; CFI = 1.00; RMSEA = 0.00) and the *partner only* to have the best fit in regard to the moderator (career role orientation) ( $\chi^2_{(25)} = 24.80$ ;  $p = 0.46$ ;  $\chi^2/df = 0.99$ ; CFI = 1.00; RMSEA = 0.00). Both these models showed the lowest SABIC (66.77 and 66.13, respectively). As for the interaction sub models, we first tested a model where all interaction effects were set to 0 and we found this model to have a low fit to the data (SABIC is the highest, 95.12), which indicates that career role orientation moderates the effects of permeable parenting boundaries on work-family conflict. Next, we tested whether constraining the eight interaction effects to be the same for fathers and mothers would reduce the fit of the model and we found this model to have a reduced fit (the  $\Delta\chi^2$  between the constrained and the unconstrained models was significant,  $p = 0.03$ ), indicating that dyad members differed in regard to the interaction pattern. Thus, we explored the best fitting pattern

with respect to interaction effects separately for each dyad member. Therefore, by inspecting the fit indices, namely the SABIC, in Table 3, we found that, for fathers, the *partner only* sub model fit best, with respect to both the predictor and the moderator. For mothers, regarding the predictor, the *actor only* sub model fit best and, in regard to the moderator, the mother *partner only* sub model fit best. In sum, the model that best fit our data was the model with the mother and father *partner only interaction* for career role orientation, with mother *actor only interaction* and father *partner only interaction* for permeable parenting boundaries, with partner only main effects for career role orientation and with actor only main effects for permeable parenting boundaries (last row of Table 3).

A best fitting model, according to Garcia et al. (2015), should fit the data as well as the unrestricted model (though it never fits better, as it is essentially a simpler model), should have a better fit than the fit of a model where no moderation effects occur, and should be better fitting than other plausible pattern models. Finally, we analyzed the best fitting model coefficients (Table 4).

Mothers' and fathers' PPB at time 1 predicted their WFC at time 2 (actor effects), confirming our hypothesis 1. CRO at time 1 showed no significant association with WFC at

**Table 3** Moderation Submodels

Model	$\chi^2$	Df	<i>p</i>	SABIC	$\Delta\chi^2$	<i>p</i>
Unrestricted Model	22.52	23	0.49	59.73		
All Moderation effects are zero	38.50	35	0.31	95.12	15.98	0.19
Indistinguishable interaction effects (all moderation effects equal across dyad members)	35.06	28	0.17	80.36	12.54	0.03
Fathers - actor only Permeable Parenting Boundaries	24.61	25	0.48	65.06	2.09	0.35
Fathers - partner only Permeable Parenting Boundaries	22.92	25	0.58	63.36	0.39	0.82
Fathers - couple Permeable Parenting Boundaries	24.62	25	0.48	65.06	2.10	0.35
Mothers - actor only Permeable Parenting Boundaries	23.59	25	0.54	64.03	1.07	0.59
Mothers - partner only Permeable Parenting Boundaries	27.88	25	0.31	68.33	5.36	0.07
Mothers - couple Permeable Parenting Boundaries	27.65	25	0.32	68.10	5.13	0.08
Fathers - actor only Career Role Orientation	24.64	25	0.48	65.08	2.11	0.35
Fathers - partner only Career Role Orientation	23.33	25	0.56	63.77	0.80	0.67
Fathers - couple Career Role Orientation	24.79	25	0.47	65.23	2.26	0.32
Mothers - actor Career Role Orientation	26.13	25	0.40	66.58	3.61	0.16
Mothers - partner Career Role Orientation	26.54	25	0.38	66.99	4.02	0.13
Mothers - couple Career Role Orientation	28.75	25	0.27	69.19	6.23	0.04
Best fitting model (Actor only main effects for PPB; Partner only main effects for CRO + Mother actor only interaction for PPB, Father partner only interaction for PPB + Father partner only interaction for CRO and Mother partner only interaction for CRO)	30.57	34	0.64	85.58	8.05	0.71

time 2 either for fathers or mothers. Nonetheless, mothers' CRO at time 1 moderated the effect of mothers' PPB at time 1 on fathers' WFC at time 2; while fathers' CRO at time 1 moderated the effect of mothers' PPB at time 1 on mothers' WFC at time 2, confirming predictions of hypothesis 2. These results were found while controlling for both mothers' and fathers' WFC at time 1. The final best fitting model explained around 33% of variance in WFC at time 2 for fathers and 30% for mothers.

To clarify the moderation effects, we generated the interaction plot seen in Fig. 2, using Modgraph (Jose, 2013). We computed the regression lines implied by the model for mothers' PPB at time 1 on mothers' work-family conflict at time 2 one standard deviation below (less career oriented) and above (more career oriented) the mean in fathers' career orientation at time 1. The plotted end points of mothers' PPB at time 1 are also one standard deviation above and below the mean of that variable. The y axis represents the standardized response variable, mothers' work-family conflict at time 2, so the units are, once again, standard deviations above (positive) or below (negative) the mean. As depicted in Fig. 2, the association between mothers' PPB at time 1 and mothers' WFC at time 2 is more evident for couples with fathers low in career role orientation at time 1, aligning with hypothesis 2. The simple slopes were tested for significance with *t* statistics confirming this finding: the simple slope for low levels of career orientation at time 1 is significant ( $B = 0.33$ ;  $SE = 0.13$ ;  $p = 0.01$ ), whereas for medium levels of career orientation at time 1 we found a statistical trend ( $B = 0.17$ ;

$SE = 0.09$ ;  $p = 0.05$ ) and for high levels of career orientation at time 1 no significant slope was found ( $B = 0.00$ ;  $SE = 0.09$ ;  $p = 0.98$ ). We proceeded similarly for the interaction effect of mothers' career orientation at time 1 on the link between mothers' PPB at time 1 and fathers' conflict at time 2. The plot in Fig. 3 shows that as mothers' PPB at time 1 increases, fathers' conflict at time 2 also increases (supporting part of our hypothesis 3), and this is more pronounced when mothers are less career oriented. Again, the significance of the simple slopes was tested and confirmed the following findings: the simple slope for low levels of career orientation at time 1 was significant ( $B = 0.30$ ;  $SE = 0.10$ ;  $p = 0.01$ ), whereas the simple slopes for medium ( $B = 0.17$ ;  $SE = 0.10$ ;  $p = 0.09$ ) and high levels ( $B = 0.03$ ;  $SE = 0.10$ ;  $p = 0.75$ ) of career orientation at time 1 were not.

## Discussion

This work tested individual and crossover effects of permeable parenting boundaries on work-family conflict, moderated by own and partner career role orientation, using a two-wave longitudinal design in a sample of dual earner couples. The study of boundary management using a dyadic design is of special importance as permeating parenting boundaries may have an impact on the whole family. Limited research, however, has focused on the crossover effects of boundary management and few studies have focused on the crossover and moderator effects of career

role orientation, in this regard. This last emphasis allows us to account for the active aspect of individuals' boundary management (Ashforth et al., 2000, Clark, 2000). In this study, by using a stringent test of crossover moderator effects as used in prior work (Garcia et al., 2015), we

**Table 4** Unstandardized Estimates of the Best Fitting Model

Effect	Estimate	SE	<i>p</i>
WFC at time 1 → WFC at time 2	0.49	0.06	<0.001
Mother PPB → Mother WFC at time 2	0.17	0.08	0.05
Mother PPB → Father WFC at time 2	–	–	–
Father PPB → Father WFC at time 2	0.25	0.08	0.00
Father PPB → Mother WFC at time 2	–	–	–
Mother CRO → Mother WFC at time 2	–	–	–
Mother CRO → Father WFC at time 2	0.17	0.15	0.28
Father CRO → Father WFC at time 2	–	–	–
Father CRO → Mother WFC at time 2	0.08	0.11	0.45
Mother PPB x Mother CRO → Mother WFC at time 2	–	–	–
Mother PPB x Mother CRO → Father WFC at time 2	–0.36	0.17	0.03
Father PPB x Father CRO → Mother WFC at time 2	–	–	–
Father PPB x Father CRO → Father WFC at time 2	–	–	–
Mother PPB x Father CRO → Mother WFC at time 2	–0.39	0.18	0.03
Mother PPB x Father CRO → Father WFC at time 2	–	–	–
Father PPB x Mother CRO → Mother WFC at time 2	–	–	–
Father PPB x Mother CRO → Father WFC at time 2	–	–	–

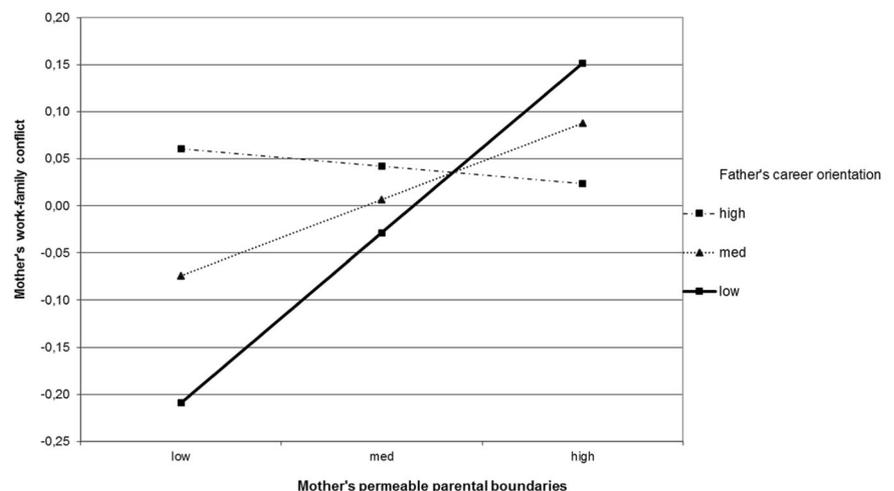
*N* = 119, *B* Non-standardized estimate, *SE* Standard error, *p* Significance, *PPB* Permeable Parenting Boundaries, *CRO* Career Role Orientation, *WFC* Work-Family Conflict

confirmed previous expectations that permeable parenting boundaries are linked to increased levels of work-family conflict (H1). Career role orientation, conversely, was not found to have a straightforward role. First, it showed no main effects on conflict; second, it only partially confirmed our second and third hypotheses. Specifically, the negative link of (mothers') permeable parenting boundaries on (mothers') work-family conflict increases when the father has low career orientation (H2); and the link does not occur between fathers' permeable parenting boundaries and fathers' work-family conflict. As for the expectation that permeable parenting boundaries by one couple member will increase the partner's work-family conflict (H3), this only occurred for mothers (mother's permeable parenting boundaries impacts father's work-family conflict) and only if mothers were low in career orientation. These findings suggest an important interaction within the couple and point to a gender pattern as we intended to explore in our research question.

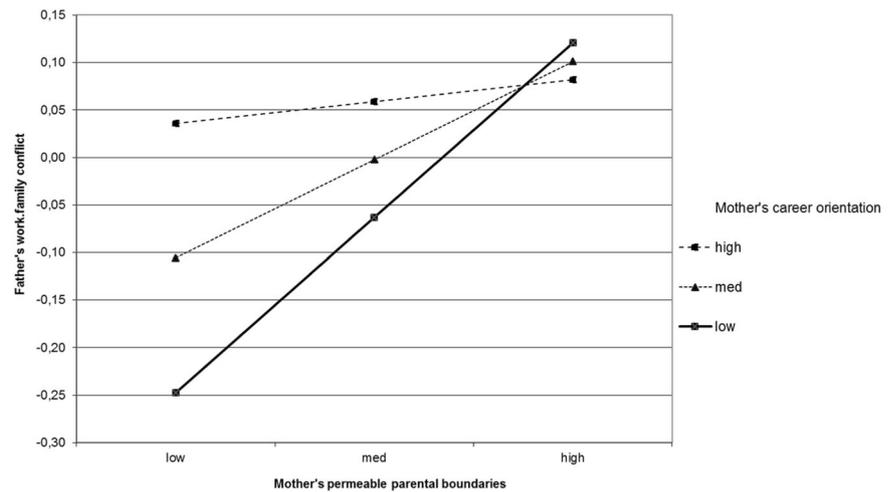
### Permeable Parenting Boundaries and Work-Family Conflict

Our finding that permeable parenting boundaries are linked to work-family conflict more than one year later exposes the potential detrimental effects of having permeable parenting boundaries. In this sense, our finding expands previous results by establishing a cross-time link and specifically addressing the permeability of the parental role (Carlson et al. (2006), Kossek et al., 2012). However, it is important to recall that our assessment of permeable parenting boundaries is focused on negative work permeation over the parental role. Therefore, if parents of preschool-aged children are psychologically or behaviorally occupied by work affairs while performing the parental role, it has a link, in the long run, on work-family conflict. Important

**Fig. 2** Interaction effects between mother's permeable parenting boundaries and father's career role orientation on mother's work-family conflict



**Fig. 3** Interaction effects between mother's permeable parenting boundaries and mother's career role orientation on father's work-family conflict



implications can be derived from these findings for the quality of the parent-child relationship and the subsequent impact on children's behavior and development. Indeed, research has been establishing that work-family conflict impairs children's behaviors, namely due to parents' unavailability to focus on the child or to be an involved and interacting partner (Vieira et al., 2016a, Matias et al., 2017). Our measure of permeable parenting boundaries is mainly focused on the cost of having such permeability. Nevertheless, we acknowledge that benefits of having a permeable parenting boundary can also occur, but were not conveyed in our measure. Further research should be aimed at examining permeable parenting boundaries to positive influences from work.

### Gender Effects on Career Orientation and Permeable Parenting Boundaries

One of our additional main aims was to assess the role of career orientation as a moderator of the above link between permeable parenting boundaries and work-family conflict. In this regard, our results pose some interesting questions. The moderator role of career orientation was found but only in two specific paths, both originating in mothers' permeable boundaries. Thus, first, the effect of permeable parenting boundaries on mothers' conflict is heightened if fathers are low in their orientation towards their career. In other words, if men are more family oriented, the detrimental effects of women being engaged, either behaviorally or cognitively with work while performing the parental role, are increased. This seemingly counterintuitive finding may have some roots in strong cultural and social expectations placed on fathers' and mothers' roles, as explained in the introduction. Despite the increased participation of women in the labor force, the role of the mother within the family is still marked by traditional gender views (Matias et al., 2012,

Wall et al., 2010). Indeed, following a gender perspective, the standard of a good parent is still different for mothers and fathers, and many employed mothers express ambivalent feelings about working outside the home and strive to show themselves as highly invested in the mother role. According to the doing gender perspective, the motivation to display one's gender is stronger when people deviate from their gender roles in some aspect (West & Zimmerman, 1987). As a result, if fathers are more family oriented, this heightens women's negative impact of having family (in particular involvement with preschool-aged children) permeated by work demands. Thus, these findings do not advocate for a compensatory mechanism within the family, where more family oriented fathers would take charge of family issues, especially when mothers may be overloaded with work demands. Adding to this argument are some findings, within the Portuguese culture, indicating that fathers' use of coping strategies to balance multiple roles (e.g., use of planning and management skills) increases their partner's levels of work-family conflict (Matias & Fontaine, 2015). It appears that Portuguese women assume the main responsibility of keeping their work and family life balanced. Therefore, when men "help out" in the management of these responsibilities women's gender identity may become threatened.

Second, mothers' permeable parenting boundaries are linked to their partners' conflict to the extent to which mothers are low in career orientation. If the mother is having her parental role permeated by work and holds a strong family oriented identity, this will impact her partner's levels of conflict. The gender explanation discussed above may also help us understanding this finding. Again, if the mother is not able to fully engage with the parental role and is highly attached to family roles, these contradictory experiences may be putting her at a higher risk of overburdening herself in an attempt to fulfill her own as well as

societal expectations. The partner may react to this burden, by absorbing the other partner's strains and struggles, through emotional contagion or emphatic reactions. Bakker et al. (2009) discuss two possible ways for emotional contagion to occur: one related to the automatic mimicking of facial expressions, postures, and behaviors of others, said to be non-conscious; and another that involves a more conscious cognitive process of tuning in to the emotions of others – empathy. Indeed, the crossover model by Westman (2001) proposes emphatic reactions as one of the main crossover mechanisms. In this way, crossover occurs through the direct transmission of stress and strain from one partner to the other, as a result of empathic reactions. It is assumed that the emotional state of one partner elicits an empathic reaction from the other partner. However, to fully confirm this explanation, an assessment of the partner's emotional process would be necessary. Notwithstanding, previous empirical studies on work-family conflict, burnout, work engagement, and job strain have found support for this empathic process (see Bakker et al., 2009, for a review). Specifically, in regard to boundary management, Desrochers et al. (2012) argued that men appeared to be more vulnerable than women to the crossover of stress originating from the blurred work-family boundaries of their spouses. Also adding to this reasoning, Neff and Karney (2007), in a longitudinal study about the impact of each partner's stress on marital satisfaction, found crossover effects to occur from wives' stress to husbands' satisfaction, but not from husbands' stress to wives' satisfaction. Husbands were, therefore, dissatisfied whenever their wives were under stress, regardless of their own levels of stress.

### Limitations, Contributions, and Implications

We acknowledge these explanations are tentative, and encourage further confirmation through new studies. In fact, to our knowledge, this work was one of the first to assess the role of career orientation as a moderator between permeable parenting boundaries and work-family conflict using a two-wave couple design, thus uncovering dyadic influences. Nevertheless, its limitations should be recognized. First, our measure of permeable parenting boundaries specifically focuses on the negative impacts of permeating the parental role with work matters. In further studies, a comprehensive focus on intrusions and an analysis on the basis of frequency of intrusions and an analysis of the satisfaction degree could be used. Second, if dual-earners with preschool-aged children comprise an important group for the study of work-family dynamics, our findings may not apply to other family compositions, namely to non-parents or parents of older children and to parents with different educational backgrounds. Third, all measures were exclusively based on self-report.

Therefore, the use of other informants, such as one partner's perceptions of the other partner's permeable boundaries, could be used to complement the gathered information. Fourth, our design is not fully longitudinal which could allow us to answer additional relevant questions such as assessing within and across time relations among the constructs. Furthermore, although robust procedures were conducted to ensure construct validity and equivalence across time, the work-family conflict measure revealed a slightly less adequate internal consistency (in some instances below the 0.70 threshold). This may have occurred due to the low number of items comprising the measure and to the assessment of diverse aspects of the work-family conflict construct (time, tension, and behavior). In fact, the measure of work-family conflict was a short measure with six items, carefully developed and tested by Matthews et al. (2010). Furthermore, we obtained invariance in factor loadings across time, which was crucial for the purpose of our study.

This study provided an important look at how boundary management is interplayed within the couple. Surprisingly, research thus far has not consistently addressed the impact of permeable parenting boundaries on the other partner's boundary management. Moreover, existing research has not explored the moderator role of career orientation in this regard; despite recognizing that an individual's attachment to roles affects the way work and family boundaries are managed (Ashfort et al., 2000, Kossek et al., 2012). We looked into this process using a robust data analytic approach, the APIMoM (Garcia et al., 2015), which aims to find patterns in moderation, overcoming power issues in dyadic data analyses. Our findings allowed us to establish a temporal link between permeable parenting boundaries and work-family conflict, using a two-wave data set. This enabled us to overcome recurring limitations regarding temporal antecedents. Our findings uncovered a gender pattern in the way career role orientation impacts home and work life. Juggling multiple roles is an important task for most families and, with this study, we were able to further comprehend this task. A couple's permeable parenting boundaries influence each other's levels of work-family conflict, pointing toward the need to consider employees' partners when addressing family-friendly initiatives. These initiatives should discourage the individual from having their parental role boundaries permeable to work matters, not only for the individual's sake, but also to ensure as little harm to the family as possible. Our study also showed how crossover between partners is linked with cultural and social expectations regarding parental roles. We therefore added to the current discussion on the interplay between gender and culture in crossover literature (Westman, 2002).

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## Compliance with Ethical Standards

**Conflict of Interest** The authors declare no competing interests.

**Consent to Participate** Written informed consent was obtained from all individual participants included in the study. Additional written consent was obtained to publish data in scientific journals.

**Ethical Approval** The study design and data collection procedures have been approved by the Portuguese Data Protection Commission (CNPD; authorization 971/2013); by the ethics committee of the researchers' institution (approval on 1<sup>st</sup> July 2015) and by the National Education Board (DGE; survey number 0367200001).

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