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TITLE:

A CROSS-NATIONAL STUDY ON THE ANTECEDENTS OF WORK-LIFE BALANCE FROM THE FIT AND
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A CROSS-NATIONAL STUDY ON THE ANTECEDENTS OF WORK-LIFE BALANCE FROM THE FIT AND BALANCE PERSPECTIVE

Abstract

Drawing on the perceived work-family fit and balance perspective, this study investigates demands and resources as antecedents of work-life balance (WLB) across four countries (New Zealand, France, Italy and Spain), so as to provide empirical cross-national evidence. Using structural equation modelling analysis on a sample of 870 full time employees, we found that work demands, hours worked and family demands were negatively related to WLB, while job autonomy and supervisor support were positively related to WLB. We also found evidence that resources (job autonomy and supervisor support) moderated the relationships between demands and work-life balance, with high resources consistently buffering any detrimental influence of demands on WLB. Furthermore, our study identified additional predictors of WLB that were unique to some national contexts. For example, in France and Italy, overtime hours worked were negatively associated with WLB, while parental status was positively associated with WLB. Overall, the implications for theory and practice are discussed.

Keywords

Work-life balance, Job autonomy, Supervisor support, Work demands, Family demands, Cross-national research.

1. INTRODUCTION

Work-life balance (WLB) refers to individuals' perceptions of how well work and non-work roles fit together and are managed in accordance with their personal system of life values, goals, and aspirations (Casper, de Hauw, Wayne and Greenhaus 2017; Greenhaus and Allen 2011; Haar 2013; Valcour 2007). WLB is a concept that is gaining momentum in work-life research, alongside work-family conflict (WFC) and work-family enrichment (WFE) (Casper et al. 2017; Greenhaus and Allen 2011). Despite this growing interest, research on WLB needs further development (Frone 2003; Greenhaus and Allen 2011; Greenhaus, Collins and Shaw 2003; Pichler 2009; Kossek, Baltes and Matthews 2011).

One area in which research on WLB is still at the early stages of development is cross-national comparative research. A recent review estimates that WLB is examined in only 10% of cross-cultural work-family research (Shockley, Douek, Smith, Yu, Dumani and French 2017). Broadening the cross-national scope of work-life research is important because individuals' work-life experiences, including WLB, are embedded in national structural and cultural contexts (Kossek and Ollier-Malaterre 2013; Greenhaus and Powell 2017; Poelmans 2005; Ollier-Malaterre and Foucreault 2017; Ollier-Malaterre, Valcour, Den Dulk and Kossek 2013).

In this study, we focus on antecedents of WLB in four countries on which there is still to date little work-family research (Shockley et al. 2017): New Zealand, France, Italy, and Spain. We examine whether work-related antecedents—work demands, number of hours worked per week, overtime, job autonomy and supervisor support and family-related antecedents—family demands, family size and parental status, are likely to increase or decrease individuals' perception of WLB in these four countries.

Overall, this paper makes two important contributions to the work-life literature. Firstly, this study provides empirical evidence of the positive and direct influence that job autonomy and supervisor support may have on WLB, as well as evidence of the negative and direct effects that work demands and family demands may have on WLB in different countries. Our study thus provides cross-national empirical validation of relationships that have been tested primarily in the United States and in a limited number of other countries (Ollier-Malaterre 2015; Shockley et al. 2017). Secondly, we provide empirical evidence that the relationship between the above-mentioned antecedents and WLB is not direct but rather more complex. For instance, our results demonstrate that the relationships between work and family demands and WLB are moderated by job autonomy and supervisor support. These findings contribute to advancing our understanding of how resources and demands present in an individual's workplace are likely to shape

his or her ability to achieve WLB, which is a remarkable contribution, considering that WLB is an indicator of an individual's quality of life (Greenhaus et al. 2003; OECD 2014) and that people spend most of their life at work.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

The definition of WLB we cited above conceives individuals as subjectively gauging balance between work and the rest of their life (Guest 2002). This approach stands in contrast with prevailing views that considered WLB to be equivalent to low role conflict (Duxbury and Higgins 2001), to high role enrichment (Frone 2003) or to an equal division of time and attention amongst the several roles that compose an individual's eco-system (Marks and MacDermid, 1996). WLB also differs from other related constructs that only focus on work and family roles, like work-family conflict (WFC), work-family balance (WFB) or work-family enrichment (WFE). Indeed, WLB captures individuals' experiences in a broader set of personal roles, thereby being closer to real life experiences in which individuals are usually involved in multiple nonwork roles beyond family (Hall et al. 2013). To broaden the scope of research on balance, Keeney et al. (2013) identified eight non-work domains that are susceptible to be influenced by work-life dynamics: health, family, household, friendship, education, romantic relationships, community and leisure. To summarize, scholars now converge on the following points regarding the conceptualization of WLB: it is a holistic concept that concerns all the meaningful roles in which an individual is engaged. WLB is unique to each person and its achievement mostly depends upon the fulfilment of personal life values, priorities and aspirations in accordance with one's social context (Greenhaus and Allen 2011; Pichler 2009; Kossek, Valcour and Lirio 2014).

2.1. The perceived work-family fit and balance perspective

We base our rationale on the perceived work-family fit and balance perspective (Voydanoff 2005). Consistent with the person-organization fit perspective (Chatman 1991), the work-family fit and balance perspective posits that individuals tend to experience greater strain and lower balance when they perceive a misfit between the demands present in their social environment and the resources at their disposal to cope with such demands (Moen, Kelly and Huang 2008; Voydanoff 2005). Fit is likely to occur when an individual has the resources or abilities needed to meet the demands of the environment, while strain is expected when demands exceed the individual's resources or abilities (Moen et al. 2008). Voydanoff (2005) directly associates the perception of balance to an overall assessment of fit in work and family domains. Drawing on this theoretical perspective, as well as on the recent work of ten Brummelhuis and Bakker (2012) who have elucidated the importance of individual and contextual resources to

address work-family demands in a successful way, in the next section we examine whether specific demands and resources belonging to the work and non-work roles can increase or decrease individuals' perceptions of WLB.

2.2. Demands

Demands are structural or psychological claims associated with role requirements, expectations and norms to which individuals must respond or adapt by exerting physical or mental effort (Voydanoff 2004). We classify demands into two domains: demands pertaining to the work domain and demands pertaining to the family domain. We argue that both domains may influence individuals' perceptions of WLB because perceiving higher demands from these two important domains in people's lives can prevent individuals from investing and participating in other life roles.

In the work domain, we focus on three antecedents that have been identified as major determinants of role tensions in prior studies of WFC (e.g., Byron 2005; Buonocore and Russo 2013; Eby, Casper, Lockwood, Bordeaux and Brinley 2005; Michel, Kotrba, Mitchelson, Clark and Baltes 2011) and WFE (e.g., Crain and Hammer 2013; Eby et al. 2005; McNall, Nicklin and Masuda 2010): *work demands*, the number of *hours worked* per week, and *overtime hours* worked per week. *Work demands* capture an individual's overall perceptions of how demanding the work role responsibilities are (Boyar, Carr, Mosley and Carson 2007). Work demands are viewed as a perceptual construct that accounts for an individual's overall consideration of his or her work role responsibilities. Work demands include pressures that originate from the individual (e.g., the desire or motivation to accomplish specified work or personal goals) and from the work environment (e.g., assigned level of role responsibility). Previous studies have found that work demands increase WFC (Byron 2005; Hammer, Cullen, Neal, Sinclair and Shafiro 2005) and reduce WFE (Butler, Grzywacz, Bass and Linney 2005). In addition to work demands, prior research has also shown that *the number of hours worked* per week and the frequency of *overtime* work can influence an individual's role functioning (Laurijssen and Glorieux 2013; Sturges and Guest 2004; Valcour 2007). For example, Sturges and Guest (2004) found that the number of hours worked per week was positively related to work/non-work conflict; whereas Valcour (2007) found that the number of hours worked per week was negatively related to work-family balance. These findings align with the fit and balance perspective (Voydanoff, 2005) suggesting that greater work demands diminish employees' WLB as they can impact the resources at people's disposal to cope with multiple life roles, leading to the first set of hypotheses:

H1: (a) Work demands, (b) the number of hours worked, and (c) overtime will be negatively related to WLB across countries.

In the family domain, we consider *family demands*, *family size* and *parental status* as antecedents of WLB. *Family demands* refer to the individual's overall perceptions of the level and intensity of responsibilities within the family (Boyar et al. 2007). Family demands involve caring for other family members, most commonly children and older family members (Yang, Chen, Choi and Zou 2000), and they have been linked to higher WFC and lower WFE (Voydanoff 2005). In addition to family demands, studies on the work-family interface have also found that having children at home can increase WFC (Byron 2005; Grandey and Cropanzano 1999; Sturges 2008); therefore, we also include *parental status* and *family size* as possible predictors of WLB, suggesting that family demands might be likely to increase in presence of parental responsibilities and a larger family size, reducing the mental and physical resources that an individual can devote to other roles. Consistently, we posit that these family factors may decrease individuals' perceptions of WLB as demands can surpass resources at the one's disposal, with negative repercussions on their perception of WLB. Accordingly, we hypothesize the following:

H2: (a) Family demands, (b) parental status, and (c) family size will be negatively related to WLB across countries.

2.3. Resources

Resources are structural or psychological assets that may be used to facilitate role functioning, enhance role performance, and generate additional resources (Voydanoff 2004). Ten Brummelhuis and Bakker (2012) argue that individual and contextual resources might help individuals to experience better work and non-work outcomes as they can be used to address the specific role demands. Based on prior research, we identify *supervisor support* and *job autonomy* as important resources that can shape an individual's capacity to achieve WLB. Indeed, both variables are important contextual resources that can help individuals constructively address the challenges faced in their lives (ten Brummelhuis and Bakker 2012; Carvalho and Chambel 2014; Russo, Buonocore, Carmeli and Guo 2015).

First, *supervisor support* is defined as the employees' beliefs concerning the degree to which their supervisor cares about their wellbeing and values their contribution to the organization (Maertz, Griffeth, Campbell and Allen, 2007). Supervisor support is associated with lower WFC (Hammer, Kossek, Yragui, Bodner, and Hanson 2009), greater WFE (Odle-Desseau, Britt and Greene-Shortridge 2012; Carvalho and Chambel 2014; Russo et al. 2015) and higher life satisfaction (Newman, Nielsen, Smyth and Hooke 2015). Supervisors may assist their employees in integrating work and non-work roles by providing emotional support and instrumental support, by modelling roles, and by creatively managing the work and family demands of their employees (Lambert 2000; Hammer et al. 2009; Wayne, Shore and Liden 1997).

Second, *job autonomy* relates to an employee's ability to use discretion over how the work is done without unnecessary monitoring or restrictions (Thompson and Prottas 2006). Job autonomy has been identified in prior work-life research as a relevant job condition which enables individuals to achieve greater well-being and lower levels of distress (see Kohn and Schooler 1969; 1982 on occupational self-direction). Similarly, research in multiple literatures supports the importance of job autonomy in promoting positive employee outcomes (Knudsen, Johnson, Martin and Roman 2003; Haar and Spell 2009). According to Vera et al. (2016), job autonomy is an important resource that can help individuals accomplish their preferred level of WLB. For example, having control over one's schedule can enable employees to manage their time freely and complete their work and non-work responsibilities more efficiently (Boyar, Maertz, Mosley and Carr 2008). Carvalho and Chambel (2014) also found that job autonomy increases WFE, as having discretion over how the job is performed can help employees to develop further skills that can be instrumental to experience greater family performance. Therefore, having job autonomy and working with a supportive boss can enhance employees' perceptions of fit between demands faced in the work and family domains and resources at their disposal, with positive repercussion on individuals' sense of balance (ten Brummelhuis and Baker 2012). Accordingly, we hypothesize the following:

H3: (a) Supervisor support and (b) job autonomy will be positively related to WLB across countries.

2.4. The interplay between demands and resources

The interactions between job demands and resources have been previously examined in the field of psychological wellbeing (Karasek 1979; Karasek and Theorell 1990). In particular, Karasek (1979) in his job demands-control model theorized that mental strain depends upon the interaction between the amount of demands present in one's job and an employee's job decision latitude, which refers to the discretion an employee has over his or her job (i.e., job autonomy). Karasek argued that the highest level of psychological strain occurs when job demands are high and job autonomy is low, whereas active coping behaviours are likely to occur under the condition of high job demands and high job autonomy (Karasek et al. 1998). Social support was later considered in Karasek's model as a significant job dimension which interacts with job demands. Johnson and Hall (1988) found that social support moderates the relationship between job demands and strain, such that employees reporting the lowest levels of work-related social support had the highest level of strain in high demanding work environments. More recently, Grönlund (2007) found that the interplay between job autonomy and job demands moderates both employees' psychological wellbeing and their work-family conflict.

Aligned with the above-mentioned studies, we suggest that the interaction between demands and resources has a critical role in influencing individuals' perception of WLB, rather than the demands and resources per se. This is consistent with the fit and balance perspective (Voydanoff 2005; Moen et al. 2008). Consistently, we hypothesize that resources moderate the relationships between demands and WLB. Being in a situation in which resources exceed role demands may increase the employees' capacity to achieve WLB. On the contrary, being in a situation in which demands exceed resources is likely to reduce the employees' capacity to achieve WLB. For example, employees may have supportive supervisors who buffer them from experiencing work and family tensions and strains (Anderson, Coffey and Byerly 2002; Frone, Yardley and Markel 1997; Thompson and Prottas 2006). Likewise, employees who enjoy job autonomy may have greater capacity to accommodate work and non-work roles demands in line with their preferences and aspirations (ten Brummelhuis and Bakker 2012; Voydanoff 2005). Therefore, we hypothesize that supervisor support and job autonomy will moderate the relationships between demands and WLB, such that:

H4: Supervisor support will moderate the relationships between (a) work demands and (b) family demands and WLB.

H5: Job autonomy will moderate the relationships between (a) work demands and (b) family demands and WLB.

Our general study model is shown in Figure 1.

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Figure 1 about here

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3. METHODS

3.1. Samples and Procedures

In order to be consistent with our goal of providing cross-national validation for our hypotheses we collected data from four countries: New Zealand, France, Italy, and Spain. To the best of our knowledge, only two studies have included these four countries in their analysis (Haar et al. 2014; Hill et al. 2004). As noted by Shockley and colleagues' recent review (2017), Latin Europe was included in less than 12% of cross-cultural work-family research and New Zealand was considered in only 25% (16/58) of these studies. In addition, the contrast between the Anglo cluster (New Zealand) and the Latin cluster is also of interest (Shockley et al. 2017). A breakdown of respondents is

shown in Table 1, as well as an analysis of the combined sample. The authors personally coordinated data collection from the countries in which they lived using various networks and associations (i.e., personal and professional networks, and HR associations) in order to generate the largest number of employees from a broad range of organizations. Recruited participants were asked to recommend participation in the research to colleagues and friends also working full-time, following a snowball sampling approach (Biernacki and Waldorf 1981). Other work-life researchers have used this approach (eg., Allen and Armstrong 2006; Lapierre et al. 2008; Chen, Powell and Greenhaus 2009; Baltes, Zhdanova and Clark 2011) and the snowball sampling technique has not been considered a limitation to the results' validity as long as participants work in a wide variety of occupations and organizations. Our dataset includes a diverse sample of full-time employees from different organizations, sectors, study levels and personal conditions to avoid any potential bias from data collection¹.

The survey was translated into each country's native language (i.e., French, Italian and Spanish) and back-translated to English by two independent translators hired by the language services of each university. When differences appeared, both translators were asked about the best alternative to minimize translation error (Brislin 1980). Participants were supplied with paper surveys. All surveys had the same instructions on the front page, which explained the overall purpose of the study, the institution and the researcher who carried out the study. The instructions also informed respondents that the surveys were anonymous and that only aggregate data would be published. Surveys were pre-tested to ensure clarity and similarity in meanings amongst items. Specifically, given that the survey instruments are established in English-speaking countries, non-English-speaking countries pre-tested 5-10 surveys to confirm that the translations were appropriate.

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Table 1 about here

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The combined sample included 870 employees. Their average age was 38.5 years, 52% of participants were female, and the majority of participants were married (73%) and parents (59%). Respondents represented a wide range of industries in which 62.1% worked for private firms, 35.5% worked for public organizations and 2.4% worked for non-for-profit organizations.

¹ This study is part of a larger study of work-family issues (anonymized) that included three additional samples. In these samples, a shorter survey instrument was required and the variables used in the present study were not collected.

3.2. Measures

Except where noted, all items were coded 1=strongly disagree, 5=strongly agree. All measures achieved adequate reliability within each country sample (all $\alpha > 0.70$). The four samples were first combined in order to collectively test the relationships and were later cross-compared.

Outcome Variable: *Work-Life Balance* was measured using a 3-item measure by Haar (2013). Survey items were ‘I am satisfied with my work-life balance, enjoying both roles’, ‘Nowadays, I seem to enjoy every part of my life equally well’ and ‘I manage to balance the demands of my work and personal life well’. A higher score indicated greater perceptions of balance between work and non-work roles. This measure was previously tested in cross-national studies (Haar et al. 2014) and had good reliability ($\alpha = 0.81$).

Predictor Variables: *Work demands* were measured using three items by Yang et al. (2000), with items being ‘I often feel that I am being run ragged’, ‘I am given too much work to do’ and ‘I have more work than I can do well’. A higher score represented more detrimental demands from the work role and the measure had good reliability ($\alpha = 0.84$).

Number of hours worked: following Spector et al. (2007), we included a single item that asked, ‘How many hours do you work in a typical week?’ In addition, we asked about the number of *Overtime Hours Worked* in order to ascertain overtime hours worked in a typical work week.

Family demands were measured using three items by Yang et al. (2000). Items were: ‘My family/home duties leave me feeling tired’, ‘It is difficult to do all I should do as a family member’ and ‘I have more house/family work to do than I can do well’. A higher score represented more detrimental demands from the family role, and the measure had good reliability ($\alpha = 0.84$).

Parental status was measured as 1=parent, 0=non-parent.

Family size was measured using total number of children. Non-parents were scored zero.

Job autonomy was measured using four items by Knudsen et al. (2003). Items were: ‘I have a lot to say over what happens on my job’, ‘I take part in job decisions that affect me’, ‘My job allows me freedom to decide how I do my own work’ and ‘I can decide how I do my work’. The measure had good reliability ($\alpha = 0.82$).

Supervisor support was measured using three items by Lambert (2000). Questions followed the stem ‘My supervisor...’ and items were ‘...is concerned about me as a person’, ‘...is helpful when I have a personal

emergency’, and ‘...is understanding when I have personal or family problems which interfere with my work’. This measure had excellent reliability ($\alpha = 0.90$).

Control Variables: We controlled for variables that typically impact employees’ WLB (e.g., Valcour 2007). The model controlled for *age* (in years), *gender* (1=female, 0=male), and the *employment sector* in which respondents worked (1 = private, 0 = public and not-for-profit sectors).

3.3. Confirmatory Factor Analysis (CFA)

To confirm the separate dimensions of the study factors, we conducted a CFA using AMOS v.24 on the combined sample. We followed recommendations by Williams, Vandenberg and Edwards (2009) regarding goodness-of-fit measures: (1) the comparative fit index ($CFI > 0.95$), (2) the root-mean-square error of approximation ($RMSEA < 0.08$), and (3) the standardized root mean residual ($SRMR < 0.10$). Overall, the hypothesized CFA-model was a good fit for the data (Williams et al., 2009) and this was confirmed by testing alternative models where the demand multi-item constructs and the resource constructs were combined. An analysis following Hair, Black, Babin and Anderson (2010) confirmed the hypothesized model was a superior fit as the alternative models showed a significantly poorer fit than the hypothesized CFA (both $p < 0.001$). The hypothesized and alternative CFA-models are shown in Table 2.

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Table 2 about here

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Because we combined the data from four countries, we performed an additional check by running a multi-group CFA analysis as a test for measurement invariance (Bou and Satorra 2010) in order to confirm that respondents from the four countries answered the survey items in the same way. This involves re-running the CFA analysis of the constructs (factor loadings) on each country individually and then comparing them to each other to ensure that one country (or potentially more) is not significantly different from the others. If a significant difference is found, that would indicate the factor structure does not hold for that country and including that country in the analysis would be problematic. To compare the CFA across countries, we used the change in CFI score because Cheung and Rensvold (2002) note this fit statistic can adequately assess metric invariance, stating “value of ΔCFI smaller than or equal to -0.01 indicates that the null hypothesis of invariance should not be rejected” (p. 251). In our sample our change CFI score was $-.005$ (.964 versus .959) which is within their established threshold. As such, this provides support that respondents in each country answered items in a similar way and can be suitably compared.

3.4. Structural Equation Modelling (SEM)

Hypotheses were tested using SEM. We ran a model where work and family demands and resources were predictors of WLB and included the control variables (age, gender and sector), which tests Hypotheses 1-3. Hypotheses 4 and 5 (moderation) were tested following Haar et al. (2014), who noted potential issues of multi-collinearity and model complexity with SEM moderation. For example, an interaction construct of job autonomy x work demands would require an additional construct with so many items they are likely to lead to issues of multi-collinearity. Consequently, we tested moderation in SEM but tested each model individually as per Haar et al. (2014) and z-scored all interaction items (Aiken and West 1991).

4. RESULTS

4.1. Correlations

Table 3 shows descriptive statistics and intercorrelations for the study variables from the combined samples. Table 3 shows that WLB is significantly related to the predictors in the expected directions: family size ($r = 0.09$, $p < 0.01$), family demands ($r = -0.20$, $p < 0.01$), work demands ($r = -0.31$, $p < 0.01$), job autonomy ($r = 0.23$, $p < 0.01$), hours worked ($r = -0.12$, $p < 0.01$), overtime hours worked ($r = -0.09$, $p < 0.01$), and supervisor support ($r = 0.25$, $p < 0.01$). Amongst the control variables, age ($r = 0.10$, $p < 0.01$) was also significantly related to WLB.

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Table 3 about here

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4.2. Structural Models

We present two types of structural models, which used the data exactly from the CFA (i.e. all items): A non-moderated model to test hypotheses H1-H3 and a set of 12 moderated models to test hypotheses H4 and H5. Our first model was an excellent fit to our data, exceeding all minimum requirements (Williams et al. 2009): $\chi^2 = 393.4$, $df = 150$ ($p = 0.000$), CFI = 0.97, RMSEA = 0.04, and SRMR = 0.03.

All structural models included control variables (age, gender, private sector) which were directly related to WLB and correlated with all other constructs. In our first model, the combined work demand factors (work demands, hours worked, and overtime hours worked) and family demand factors (family demands, parental status, and family size), along with supervisor support and job autonomy, were all directly related to WLB, and covaried with each other. The moderation SEM resulted in 12 different models (six demands x two resources) and thus 12 different scores were

generated, but these were all within goodness of fit ranges (William et al. 2009; Bentler and Bonett 1980). For example, the model with supervisor support x overtime hours worked: $\chi^2 = 550.9$, $df = 204$ ($p = 0.000$), CFI = 0.96, RMSEA = 0.04, and SRMR = 0.04. The results of structural models are shown in Table 4.

Table 4 about here

Table 4 shows that work demands (path coefficient = -0.24, $p < 0.001$), the number of hours worked (path coefficient = -0.01, $p < 0.01$), family demands (path coefficient = -0.17, $p < 0.001$) and parental status (path coefficient = 0.19, $p < 0.05$) were significantly related to WLB. This provides support for hypotheses H1a, H1b, H2a and H2b on the demands-related antecedents of WLB. Supervisor support (path coefficient = 0.14, $p < 0.001$) and job autonomy (path coefficient = 0.21, $p < 0.001$) were significantly and directly related to WLB, thus supporting hypothesis H3a and H3b regarding the resource-related antecedents of WLB. Amongst the control variables, being employed in the private sector had a significant and negative relationship with WLB (path coefficient = -0.09, $p < 0.10$). Overall, the structural model accounted for moderate amounts of variance for WLB ($r^2 = 0.29$).

4.3. Multi-Group SEM Analysis

While our test of metric invariance means the four country samples can be combined, we also conducted a multi-group analysis to investigate the effects across each of the four country samples (see Table 4). This provides additional insights because it allows us to confirm similarities across countries while it also highlights country differences. Table 4 shows consistent effects across the majority of countries sampled: work and family demands towards WLB; supervisor support towards WLB and job autonomy towards WLB.

Additional relationships were observed in individual countries: The overtime hours worked were negatively related to WLB only in the French and Italian samples. These effects were not significant at the combined sample level, indicating that they are not generalizable across all samples. Finally, it is worth noting the overall variance accounted for was 29% for the combined sample, it ranged across countries from a low of 25% in New Zealand to a high of 39% in France.

4.4. Moderation Effects

We tested Hypotheses 4 and 5 (resources buffering demands) and across the 12 moderation models, four relationships were significant. We analysed these only at the combined level to minimize space (as an addition 48

models would be reported on, 12 models x country sample). The significant effects from supervisor support were with overtime hours worked (path coefficient = -0.04, $p < 0.05$) and family demands (path coefficient = 0.05, $p < 0.05$). The significant effects from job autonomy were with parental status (path coefficient = 0.11, $p < 0.01$) and family demands (path coefficient = 0.06, $p < 0.10$). We plot interactions (Figures 2 and 3) to provide greater understanding of the interaction effects and combine the plots for each resource because the significant models for work and family demands and across both job autonomy and supervision support were identical in their graphed interaction effects. In the plots, low and high values represent one standard deviation below and above the mean (Aiken and West, 1991).

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 Figures 2-3 about here
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Figures 2 and 3 show that at low levels of demands there is a significant difference in WLB with respondents with high resources (supervisor support or job autonomy) reporting higher WLB than respondents with low resources. When demands increase to high, respondents with low resources report a reduction in WLB as expected. However, those respondents with high resources report no reduction, and even a small lift in WLB levels. This supports the buffering effect hypothesized, and supports Hypotheses H4 and H5.

5. DISCUSSION

The goal of this paper was to examine antecedents of WLB in four countries to cross-national validation for work-life research. Overall, we found strong and consistent support for the hypothesized research model across all the studied countries. We found that work demands were negatively related to WLB. As such, work demands were universally detrimental towards employee achievement of greater WLB. This aligns with other studies examining the impact on WLB of work demands and number of hours worked per week (Yang et al. 2000; Spector et al. 2007). We found that working overtime did not necessarily translate into a perception of lower WLB, although overtime was an influential antecedent of WLB in France and Italy.

Results also indicate that family demands were negatively related to WLB in each of the four countries studied. This aligns with prior studies suggesting that family demands can have a detrimental effect on other life domains (Yang et al. 2000). Employees with greater demands, including work and family, need more resources to accommodate multiple role demands, and this may have negative repercussions on their capacity to achieve WLB

when they do not have enough resources at their disposal (Voydanoff 2005). Regarding parental status, we had hypothesized a negative relationship with WLB, which is consistent with existing research on WFC (e.g. Grandey and Cropanzano 1999). However, we found a strong and positive association between parental status and WLB in France and Italy. It is possible that such a positive relationship reflects a perception of fit between a conscious decision to have children and the more supportive resources that are available in these two countries in comparison with Spain or New Zealand, which could make the demands of childcare more manageable. Indeed, France and Italy are two countries in which people can typically count on a wide set of societal (in France, Ollier-Malaterre 2009; Ollier-Malaterre 2017) and family (in Italy, Riva 2016) resources to take care of children, which can compensate for the increased family demands incurred by parental status. These findings concur with the insistence of the burgeoning cross-national work-life research that individual experiences of the work-life interface are embedded in specific cultural and structural national contexts (e.g., Ollier-Malaterre and Foucreault 2017; Powell, Francesco and Ling 2009).

Regarding resources, our results demonstrate that supervisor support and job autonomy were strongly and positively related to WLB, indicating that support and job discretion are valued contextual resources that can help employees balance work with other life roles across countries (ten Brummelhuis and Bakker 2012). These findings add to the previous research on employee wellbeing (e.g., Thomson and Prottas 2006; Russo, Shteigman and Carmeli 2016).

An important contribution of this research is that the relationships between job and family demands and WLB are moderated by resources, meaning that certain work resources can directly increase WLB but also contribute to buffering job and family demands. More precisely, the results show that supervisor support moderates the relationships between family demands and overtime hours worked towards WLB, with employees benefiting from high supervisor support reporting higher levels of WLB than employees with low supervisor support regardless of demands level. This gap widens when demands increase. Similarly, job autonomy moderates the relationships between family demands and parental status towards WLB, with employees having discretion at work reporting higher levels of WLB than employees with low autonomy regardless of demands level and, again, the gap is greater for higher levels of demands. These results are an important contribution to our understanding of the interactions between resources and demands because high demands have a negative impact on WLB only when resources at an individual's disposal are low. However, our findings show that the highest levels of WLB are reported when both

demands and resources are high, exceeding levels of WLB reported when demands are low and resources are high. This has important theoretical and practical implications that are discussed below.

5.1. Theoretical contributions

This study extends existing work-life research by including four national contexts that have not been the most studied so far (Ollier-Malaterre and Foucreault 2017; Shockley et al. 2017). In doing so, we provide cross-national empirical validation for role fit and balance theory (Voydanoff 2005; Haar 2013) and interaction models that focus on the relationships between demands and resources (Johnson and Hall 1988; Karasek 1979; ten Brummelhuis and Bakker 2012).

An important contribution to the work-life literature lies in our findings that the relationships between job and family demands and WLB are moderated by the available resources. In a sample of 870 full time employees across four countries, we have found that individuals are more likely to experience WLB when resources at their disposal are high, regardless of whether demands are high or low. This finding shows that high demanding jobs and family situations have no negative effects on WLB if resources at an individual's disposal are sufficient to cope with such demands (ten Brummelhuis and Bakker 2012). On the contrary, high WLB was experienced when both demands and resources were high, showing that "active jobs" (Karasek 1979) and "active lives" (Csikszentmihalyi 1990) might be balanced if individuals have enough resources at their disposal. An important implication of this study is therefore that it may be possible to achieve WLB although a particular role is highly demanding, when supportive resources are available. A similar effect was described by Grönlund (2007) when studying the effects of job control (studied here as job autonomy), but in Grönlund's study the interaction term (demands x control) was not found significant either in relation to work-family conflict or psychological wellbeing.

In sum, this study contributes to refining the understanding of how resources and demands may influence individuals' attainment of WLB by suggesting more complex relationships than the direct effect of demands and resources on WLB. This is important given the repeated calls to examine the complex mechanisms through which workplace resources and demands influence individuals' outcomes more thoroughly (Schieman, Milkie and Glavin 2009; Straub 2012).

5.2. Practical Implications

This study extends the growing body of work on WLB and, in particular, on the antecedents of WLB. This is important, given that we were able to establish significant relationships across four countries and were also able to

confirm a set of factors that can enhance or reduce employees' WLB. On a practical note, the findings provide important information to employers on how to allocate workplace supportive resources more adequately, as results suggest that employees can achieve greater WLB when they can count on supervisor support and job autonomy. These resources were beneficial in all the countries examined in this paper regardless of job and family demands levels. Our findings showed that WLB decreased as demands increased except in presence of high supervisor support or job autonomy. As such, it is critical to foster a more autonomous workplace that is conducive to employees having control over their jobs (Carvalho and Chambel 2014; Kossek et al. 2014) and to train supervisors through interventions designed to foster supportive supervisory behaviours (Hammer et al. 2009, 2011; Kelly et al. 2014; Newman et al. 2015). Another important implication of this study is that it is possible to achieve WLB even in challenging (i.e. active) jobs when supervisor support and job autonomy are high enough.

5.3. Limitations and future research

While the present study includes four country samples, it is limited in that the data are self-reported and cross-sectional, as is typical in the work-life literature (Greenhaus and Allen 2011; Haar et al. 2014; Spector et al. 2007). These limitations have been alleviated by conducting higher order statistical approaches, specifically CFA and SEM. The issues of potential bias from common method variance (CMV) are alleviated by using SEM (Evans 1985; Kenny 2008). In addition, the current measure of WLB advocates a self-report approach as a means for monitoring the perception-centred measure of balance (Haar 2013). To overcome these limitations, future studies might seek to collect data from other sources, such as supervisor ratings of workload, co-worker ratings of support, or partner-rated perceptions of family demands.

This paper has implications for future research. First, while the study's variables are all significant predictors of WLB, the overall model accounts for 29% of total variance, which indicates that there are still large proportions unaccounted for that require further examination. This provides opportunities for exploring additional antecedents of WLB such as support at home (paid or unpaid), co-workers support, or job conditions. Second, this study demonstrates the complex relationships between demands and resources towards WLB. These complex relationships have been frequently overlooked or found not significant in previous studies (e.g., Grönlund 2007). Future studies might include the interaction effects in their study models. Third, the study's findings indicate that WLB can increase even when family or job demands increase, provided that resources are high enough. This suggests an opportunity to extend research on active jobs and their relationships to WLB.

Finally, another avenue for future research might be studying the effects of cultural variations on WLB across countries (Powell et al. 2009; Powell and Greenhaus 2010; Ollier-Malaterre and Foucreault 2017). We found more similarities than differences in the studied antecedents of WLB across countries, but when we analysed the relationships at country level we found some exceptions (e.g., family demands and supervisor support were not found significant towards WLB in the French sample, while parental status and sector were not found significant towards WLB in New Zealand and Spain). Cultural variations between these four countries may explain these exceptions (Kossek and Ollier-Malaterre 2013; Ollier-Malaterre and Foucreault 2017), and therefore we encourage researchers to explore in more depth the interplay of national cultures in the relationships between WLB and its antecedents.

6. CONCLUSIONS

The present study examines the antecedents of WLB across four countries. Empirical results confirm that demands from work and family roles are detrimental while job autonomy and supervisor support are beneficial; and this is uniformly supported regarding WLB across countries. In addition, the results show that supervisor support and job autonomy moderated the relationships between demands and WLB, so that individuals may experience WLB when job autonomy and supervisor support are high, whether demands are high or low. Thus, how full-time employees assess their ability to embrace all roles in life may have these common antecedents across countries. However, our findings show that some antecedents generate somewhat different effects, depending on the country; the number of hours worked, the overtime hours worked and the parental status were significant in some studied countries. Overall, the findings of this cross-national study offer a fresh and nuanced picture of similarities and differences in the antecedents of WLB, which we hope will encourage future studies in the growing field of comparative work-life research.

7. REFERENCES

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Table 1. Overall Study Demographics

Country	n	Age (Years)	Demographics			Employment sector		
			Gender (Female)	Married	Parent	Private	Public	Not-for-Profit
New Zealand	366	34.3	55%	70%	51%	56%	40%	4%
France	139	39.2	62%	80%	74%	74%	22%	4%
Italy	238	44.0	43%	69%	60%	63%	35%	2%
Spain	127	39.7	50%	78%	66%	62%	36%	2%
Total Sample			N=870					
Average Age			38.5 years (SD=11.7 Years)					
Gender			52% female					
Married			73%					
Parents			59%					
Industry			62.1% Private					
			35.5% Public					
			2.4% Not-For-Profit					

Table 2. Results of Confirmatory Factor Analysis of Study Variables

Model	Model Fit Indices				Model Differences				Details
	χ^2	df	CFI	RMSEA	SRMR	χ^2	Δdf	p	
1. Hypothesized 9-factor model: Work-Life Balance, Parental Status, Family Size, Family Demands, Work Demands, Job Autonomy, Hours Worked, Overtime Hours Worked and Supervisor Support.	315.2	120	.97	.04	.04				
2. Alternative 8-factor model: Work-Life Balance, Combined Demands (Work and Family), Parental Status, Family Size, Job Autonomy, Hours Worked, Overtime Hours Worked, and Supervisor Support.	1213.9	128	.85	.10	.07	898.7	8	.001	Model 2 to 1
3. Alternative 8-factor model: Work-Life Balance, Combined Resources (Supervisor Support and Job Autonomy), Parental Status, Family Size, Family Demands, Work Demands, Hours Worked, Overtime Hours Worked, and.	1292.8	128	.84	.10	.08	977.6	8	.001	Model 3 to 1

Table 3. Means, Standard Deviations, and Correlations of Model Variables

	M	SD	1	2	3	4	5	6	7	8	9
1. Age	38.5	11.6	--								
2. Family Size	1.3	1.3	.53**	--							
3. Family Demands	2.7	1.0	-.06	.05	--						
4. Work Demands	2.9	1.0	-.02	-.05	.39**	--					
5. Job Autonomy	3.6	.92	.20**	.13**	-.11*	-.07*	--				
6. Hours Worked	39.7	9.9	.08*	.04	-.07*	.13*	.17**	--			
7. Overtime Hours Worked	3.7	5.3	.07*	.01	-.01	.15**	.14**	.33**	--		
8. Supervisor Support	3.6	.97	-.06	.05	-.04	-.16**	.28**	.01	.01	--	
9. Work-Life Balance	3.3	.79	.10**	.09**	-.20**	-.31**	.23**	-.12**	-.09**	.25**	--

N=870. * p<.05, ** p<.01

Table 4. Final Structural Model Path Results

Variables	Combined	New Zealand	France	Italy	Spain
<i>Direct Effects of Demands:</i>					
H1a) Work Demands → WLB	-.24***	-.27***	-.33***	-.17*	-.15†
H1b) Hours Worked → WLB	-.01**	-.01	-.01	-.01†	-.01
H1c) Overtime Hours Worked → WLB	-.01	-.00	-.02†	-.01†	.00
H2a) Family Demands → WLB	-.17***	-.10†	-.04	-.21**	-.27*
H2b) Parental Status → WLB	.19*	-.10	.44*	.31*	.10
<i>Direct Effects of Resources:</i>					
H3a) Supervisor Support → WLB	.14***	.15**	.02	.12**	.14**
H3b) Job Autonomy → WLB	.21***	.15*	.22†	.36***	.11†
<i>Moderation Effects:</i>					
H4a) Supervisor Support x Overtime Hours Worked → WLB	-.04*				
H4b) Supervisor Support x Family Demands → WLB	.05*				
H5b) Job Autonomy x Parental Status → WLB	.11**				
H5b) Job Autonomy x Family Demands → WLB	.06†				
<i>Control Variables:</i>					
Private Sector → WLB	-.09†	.01	-.23*	-.21*	-.14
Total R ² WLB	.29	.25	.39	.34	.29

Unstandardized path coefficients. †p< .1, *p< .05, **p< .01, ***p< .001.

Control variables Age and Gender were uniformly non-significant across the combined and individual samples.

Figure 1. Hypothesized model

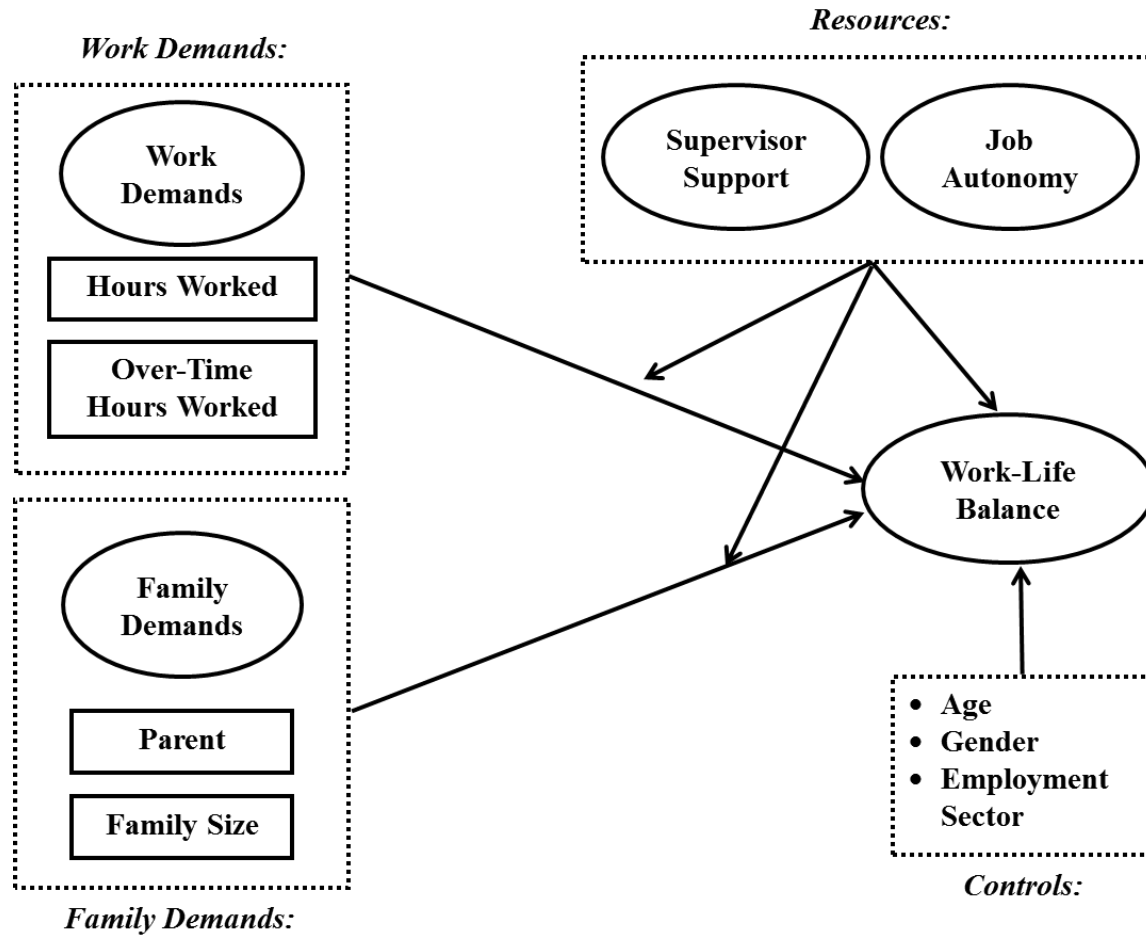


Figure 2. Interaction Plots, Demands and Supervisor Support to WLB

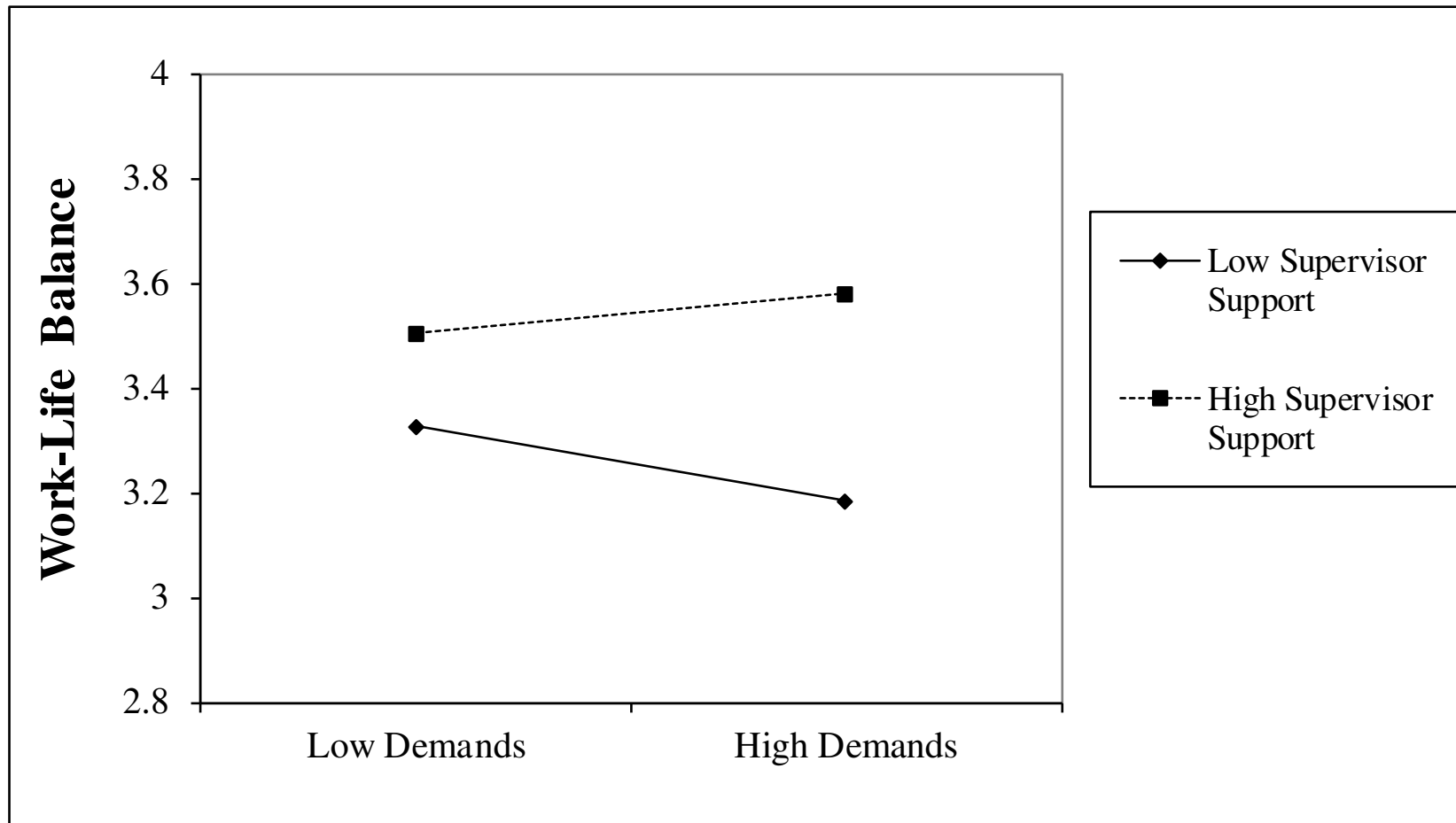


Figure 3. Interaction Plots, Demands and Job Autonomy to WLB

