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WORK-FAMILY CONFLICT AND FACILITATION
A STUDY ON GENDER INVARIANCE AND RELATIONSHIPS WITH BURNOUT

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ABSTRACT

Work-Life balance has become a big challenge and a matter of utter relevance to the European Union, considering that the relationship between these two dimensions has individual, organizational and social implications. Such is the importance of this issue that the European Foundation for the Improvement of Living and Working Conditions considers work-life balance a keystone when intending to assess people´s life quality (Chambel, 2014). Demographic, technological and organizational changes during the past decades have also influenced the significance of this subject as far as research is concerned.

Besides the negative and positive paradigms, recent literature shows how the concept of Work-Life Balance offers an integrative perspective of the relationship between work and family. In terms of personal satisfaction pursuit, this standpoint allows for an understanding of the matter as a balance, taking into account both the positive and the negative perspectives. Moreover, the emergence of new working conditions, alongside a transition in the way family is sensed, has contributed to the development of further approaches in this area, such as the Family-Work Border Theory (Carvalho & Chambel, 2016).

For this study, the Trabalho-Família scale - developed by Carvalho and her research team (Carvalho & Peralta, 2009; Carvalho & Andrade, 2012; Carvalho, Peralta, & Castro, 2012; Carvalho, Mónico, Parreira, Fernandes, Salgueiro-Oliveira, Braga, & Gómez, 2016; Carvalho, Parreira, Mónico, & Ruivo, 2016) - and the Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1997) were applied across Portuguese Universities, and data was collected from a sample of 605 professors. This work consists of three different studies: Study 1) validate the Trabalho-Família Scale (Carvalho, 2009) and address the invariance of the male and female measurements

regarding interference (W-F) in higher education teachers; Study 2) based on the Trabalho-Família Scale (Carvalho, 2009), develop two short version scales (namely, Trabalho-Família Short version Scale and Interference of the Work-Family Relationship with Personal Life Short version Scale); Study 3) based upon the sample and the items included in the short version, work-family conflict and facilitation profiles will be created in order to study their relationship with Burnout Syndrome.

This project provided an opportunity to shed new light on the complex interaction between work and personal life. Not only was this achieved by developing a shorter version of an instrument, but also by raising awareness regarding comparative gender evaluation, and offering some insights into the matter and its connection with Burnout Syndrome from a scientific perspective.

Keywords: work-family interface, work-family balance, work-family conflict, work-family facilitation, gender invariance, burnout syndrome

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I. INTRODUCTION

Although more often than not family takes up a central place in people's lives, we frequently tend to devote more time and energy to the work sphere. However, the roles we play within each of these domains often interact with each other and can ultimately affect life quality. This raises the issue of whether it is plausible to find a balance that enables a connection between both domains and makes it possible to lead a healthy life (Gracia, González & Peiró, 1996).

Neither family nor work are static dimensions. Instead, as human domains, they affect and are affected by other factors such as culture, society and economy, and therefore they both have undergone innumerable changes over time. On the one hand, family as a construct has witnessed the consequences of cultural, demographic, political, legal and even religious changes worldwide (Gerson & Torres, 2015; Seltzer et al., 2005). In addition, transitions in the life-cycle may imply modifications as far as working is concerned, and gender differences regarding time allocation at the different life stages have been found (Anxo, Flood, Mencarini, Pailhé, Solaz & Tanturri, 2007; White, 1999). As with many modern social trends, the traditional family structure has been subject to diversification, and it has become progressively common to find single-parent families, unmarried parents, same-sex parents, blended families and couples with no children (Casares, 2008; Espinar, Carrasco, Martínez, & García-Mina, 2003; Grau & Fernández, 2015; UNECE, 2012;). On the other hand, today's job market is largely ruled by globalization, technological development (for example, in the form of smartphones and applications, that allow job tasks to be carried out in multiple locations) and increasingly competitive environments, bringing about a wider range of working patterns (such as self-employment, long-distance, part-time and temporary work, among others) and blurring boundaries between home-life and work (Peteers,

Montgomery, Bakker, & Schaufeli, 2005). According to Eurofound (2005), changes are also visible in terms of individual's expectations regarding work, being more likely for them to demand further flexibility, as well as preferring learning and development possibilities to "life-long" jobs. In addition, there are remarkable social consequences stemming from female labour-market participation.

Particularly with regard to work-life balance at a European level, the latest report published by Eurofound and ILO (2019) refers that the reported fit between work and personal life considerably varies among countries. Although the report highlights that women continue to be responsible for most domestic tasks, men have expressed a higher likelihood to feel that their working hours do not fit with their private commitments. Furthermore, it is also pointed out that women tend to work more hours than men (considering paid and unpaid work together), even when working more than 40 hours a week is likely to negatively impact on people's well-being and work–life balance. The European Commission (2017) refers to the boost of female labor-force participation as crucial in order to achieve the Europe 2020 biggest goal (75% of the population aged between 20 and 64 employed by 2020). Moreover, the European Pillar of Social Rights published by the European Commission in 2017 outlines a number of recommendations advocating for raising women's participation in the labour market, as well as promoting gender equality and work-life balance policies that benefit working parents and carers (European Commission, 2017).

Beyond individual and social implications, the relationship between these two dimensions has organizational consequences too (Balmford & Gardner, 2006). Nord, Fox, Phoenix and Viano (2002) report that many organizations have gradually become more and more involved with helping employees to mitigate the pressures and demands posed by work with those that originate in their lives beyond their jobs. These authors

refer to the use of many Work-Life Balance programmes as key strategies to recruit, retain and motivate valuable employees (Nord et al., 2002). Examples of such organizational programmes and policies include dependent-care assistance, parental leave, flextime, resource and referral services, working at home options and financial assistance in the case of adoption expenses (Felstead, Jewson, Phizacklea, & Walters, 2002; Thompson & Prottas, 2005).

The present study serves a threefold purpose. To begin with, a validation of the Trabalho-Família Scale (Carvalho, 2009) is presented, followed by an invariance analysis of the male and female measurements regarding interference (W-F) in higher education teachers. Secondly, based on the Trabalho-Família Scale (Carvalho, 2009), two short version scales (namely, Trabalho-Família Short version Scale and Interference of the Work-Family Relationship with Personal Life Short version Scale) were developed. Finally, based upon the sample and the items included in the short version, work-family conflict and facilitation profiles will be created in order to study their relationship with Burnout Syndrome.

Both curiosity and the desire to understand nature have historically characterized the human beings. In fact, it is this kind of exploratory behavior that has enabled the rapid progress of civilizations, as well as the development of knowledge and science. Research is an activity driven by the desire to understand reality by means of establishing connections and hypotheses. Because there is still a lot to understand and discover, the activity of research usually leads to a concatenation of hypotheses and questions, as well as possibilities of linking ideas and generating more knowledge. The present work seems no exception to the rule, as it brings together three studies concatenated that intend to contribute to the improvement of people's quality of life. It should be noted that this study began with a project created Prof. Carla Carvalho's, who

led to the development of solid yet long scale. The richness of such scale lies not only in incredible amount of information that can be observed upon its application, but also in the possibility of developing new versions to optimize and streamline its use, and to obtain information that will eventually generate crucial knowledge to design interventions based on empirical evidence.

The following section provides a conceptual delimitation of the subject presented, aimed at understanding the different perspectives and instruments that have been developed. In addition, the effects of the variable and its relationship with gender are also explored. Subsequently, detailed information is provided regarding the sample, instruments and procedures used in each of the three studies. Finally, results for each study are presented separately, followed by a discussion section where both implications and limitations are considered for each study, together with future research suggestions.

I. THEORETICAL FRAMEWORK

1. Conceptual delimitation

Throughout the last decades there has been an increase in research addressing the relationship between Family and Work spheres, interfaces or domains. Such growth has been followed by several theories supported by different models and paradigms, which have led to the emergence of different concepts concerning the relationship between these two spheres: conflict (Frone, Russell & Cooper, 1992; Greenhaus & Beutell, 1985), resource drain (Morris & Madsen, 2007), segmentation (Edwards & Rothbard, 2000; Kanter, 1977; Zedeck, 1992), spillover (Edwards & Rothbard, 2000; Staines, 1980), compensation (Edwards & Rothbard, 2000; Zedeck & Mosier, 1990), congruence (Edwards & Rothbard, 2000; Staines, 1980; Zedeck, 1992), enrichment (Greenhaus & Powell, 2006), facilitation (Grzywacz, 2002), and integration (Bailyn, Drago & Kochan, 2001; Bailyn & Harrington, 2010; Clark, 2000; Morris & Madsen, 2007). Such concepts are respectively aligned with different paradigms, and it is important to point out that - despite decades of study in the field of the relationship between work and family / personal life - scientific agreement still hasn´t been reached. With regard to this, Chang, McDonald and Burton (2010) highlight the imperative need of establishing better consistency in literature between construct conceptualization and further measure operationalization. In addition, the way and the direction in which work and family/personal life spheres interact with one another has also been a matter of study. Geurts et al. (2005) refer that it is possible to identify four different types of interaction: work-home negative interaction between, home-work negative interaction, work-home positive interaction and home-work positive interaction.

Struggling to meet the demands placed by work and family spheres can bring about an imbalance. The term family-work conflict has come to be used to describe a

type of interrole clash due to mutual incompatibility between pressures that originate in the work domain and those that come from the family domain (Greenhaus & Beutell, 1985). This role conflict perspective stems from Marks (1977) scarcity approach, according to which engagement in numerous roles produces time pressure and strain, as the several roles battle for a person`s restricted time and energy (Steiber, 2009). Moreover, Greenhaus and Beutell (1985) indicate that it is possible to identify three main types of work-family conflict: time-based conflict (which takes place when various roles compete for an individual´s time), strain-based conflict (which happens when the pressure from performing one role hinders the ability to fulfill other roles' requirements) and behavior-based conflict (which occurs when behaviors essential to a role interferes with the accomplishment of another role). Zhang and Liu (2011) refer that although the three types of family-conflict have different antecedent variables, there seems to be an imbalance in literature as time-based conflict and stress-based conflict have attracted more attention, thus leading to a lack of studies regarding behavior-based conflict.

A theoretical approach developed by Voyandoff (2005) allows for an analysis of work conflict related aspects, that can be classified according to demands and resources. As stated by Voyandoff (2004), work demands are associated with time costs and/or energy consumption, since they refer to the work-role requirements that workers satisfy by making mental or physical effort. On the other hand, work resources may create increased energy contribute to better coping with demands (Voyandoff, 2004). According to Steiber (2009), time-based work demands (such as long working hours, working non-day schedules or at weekends, and having to work overtime at short notice) highly relate to the occurrence of work-family conflict both among men and

women. Similarly, Steiber (2009) also points out that strain-based work demands appear to play a crucial role in unfolding conflict.

Although research in this field is predominantly dominated by the negative paradigm, some authors have oriented their studies to explore positive aspects of the work- family / life interface. In this way, it is possible to identify literature referring to facilitation (Hill et al., 2007), enrichment (Greenhaus & Powell, 2006), enhancement (Sieber, 1974), positive spillover (Crouter, 1984), and integration (Bailyn, Drago & Kochan, 2001; Bailyn & Harrington, 2010). Greenhaus and Powell´s model of work-family enrichment constitutes one of the main examples of how in the past decades there has been a shift in work-family/life research towards studying its positive consequences instead of focusing only on the negative ones (Daniel & Sonnentag, 2014). A meta-analysis study carried out by Shockley and Singla (2011) reported that the enrichment construct is theoretically independent from work-family conflict.

In addition to the negative and positive paradigms, the so-called integrative paradigm of the work-family relationship refers to a balance-oriented paradigm (frequently known as *Work Life-Balance* [WLB] in English; Vithanage & Arachchige, 2017). Although Greenhaus et al. (2003) refer that work-life balance is the most popular term, other authors prefer the terms work-family or work-nonwork, and whether the interchangeability of these terms is correct or not continues to be a matter of debate (Allen, 2013).

With the purpose of not only clarifying the meaning of the term but also of distinguishing it from other work-family concepts, Greenhaus et al. (2003) suggest that work-life balance refers to the degree to which people can be evenly engaged in and satisfied with their family role and their work role (Greenhaus et al., 2003). Regarding their definition, these authors highlight the fact that it is wide enough to contemplate

both the ideas of positive and negative balance, understanding work-life balance as a continuum docked at one end by considerable imbalance in favor of a particular role (such as family) through some rather balanced condition to lengthy imbalance in favor of another role as the other docking end (such as work). Additionally, Romeo, Yepes-Baldó and Berger (2014) support the use of the term work-life balance, since they consider it a broader concept that covers a wider range of people's lives and includes both the positive and negative impact of the relationship.

Research in this field over the past years has led to the development of various theories addressing possible mechanisms that could link these two areas (work-family), and several models have surfaced (e.g., Carvalho & Andrade, 2012; Carvalho & Chambel, 2016 Carvalho, Mónico, Pinto, Pinto, Alegre, Oliveira, & Parreira, 2018; Edwards & Rothbard, 2000; Jones, Burke, & Westman, 2006; Premeaux, Adkins, & Mossholder, 2007). In this context, Edwards and Rothbard (2000) came up with an integrative framework of these work-family linking mechanisms, indicating six major descriptive mechanisms for the relationship between both domains (either positive or negative), namely segmentation, spillover, compensation, congruence, scarcity of resources and work-family role conflict. Inclination towards one or more of these mechanisms when accounting for work-family relationships can influence the way scientists make sense of the matter and further propose possible interventions (Edwards & Rothbard, 2000). Briefly describing each of them, the segmentation mechanism assumes work and family as separate dimensions (both physically and psychologically), spillover, which is one of the most cited mechanisms in the literature, refers to the process whereby experiences (i.e., competencies, feelings, attitudes, and behaviors) in one sphere or domain affect the other domain; compensation is the mechanism whereby dissatisfaction in a life domain leads individuals to respond more actively, such as with

greater investment in the other domain; the mechanism of congruence refers the process of attributing another variable (e.g., personality, culture; Wayne, Musisca, & Fleeson, 2004) the responsibility for the way in which family life and work are congruent (or not); the mechanism of resource scarcity suggests that there is a limited transference of personal resources (e.g., energy, time, attention) between one domain or sphere and the other; finally, the work-family conflict mechanism implies that domain requirements are (often) mutually incompatible, i.e., meeting the requirements for one domain generates a tension that makes it difficult or even impossible to fully comply with the requirements for the other domain (Carvalho et al., *in press*).

An increasingly popular framework is the Border Theory**,** whereby work and family spheres are more permeable and mutually influential (Carvalho & Chambel, 2016), making it difficult to outline the boundaries between one and another. Such influence can either be positive (by way of facilitation, which is based on the enrichment or beneficial effects of involvement in multiple roles, such as work and family or personal life) or negative (due to some type of role conflict and the negative interference of demands coming from both domains), existing an exchange of knowledge between one domain and the other, thus contributing to broadening the spectrum of strategies that people can use to deal effectively with the challenges and the requirements placed by both domains (W-F/F-W). In light of such a dynamic scenario, new measures/scales become essential in order to evaluate these different forms of work and families, allowing for both positive and negative interferences being assessed (Carvalho et al., *in press*).

Regardless of the lack of consensus, this viewpoint ultimately highlights the importance of the pursuit of satisfaction in every dimension of an individual's life, which is akin to seeking a reconciliation, match or balance for both the negative

perspective of the conflict/tension and the positive perspective (enrichment) of the work-family relationship. Much like the paradigms above referred (more negative or more positive), this paradigm gave rise to several popular theories and models. However, rather than criticizing (or defending) one theory against another, it is necessary to consider that combined they provide a range of analysis regarding the dynamism of the work-family interface, which is an increasingly broad and comprehensive domain (Carvalho & Chambel, 2016).

2. Research and measuring instruments developed

The work-family interface has been at the top of academia´s agenda for a while, and a wide variety of scientific instruments have been developed in an effort to measure and gain a deeper comprehension of the relationship between these two life spheres. Such scales vary in numerous aspects, ranging from the length of the questionnaires, to directions of the conflict measured, the items measured or the population addressed (Netemeyer, Boles, & McMurrian, 1996). Additionally, there is numerous scientific work available focused on exploring the relationship between the work-family interface and other variables, as well as developing versions and validating scales according to different cultures or countries (Korabik, Lero, & Ayman, 2003; Herst, 2003; Gelfand & Knight, 2005; Fine-Davis, Fagnani, Giovannini, Højgaard, & Clarke, 2005; Haar, Russo, Sune, & Ollier-Malaterre, 2014), labour market sectors or workforces (Dolcos & Daley, 2009) family structure or roles (Waumsley, Houston, & Marks, 2010; Vieira, Lopez, & Matos, 2013; Fukui, Sakka, Amiya, Sato, & Kamibeppu, 2017; Haslam, Filus, Morawska, Sanders, & Fletcher, 2015), personality (Wayne, Musisca, & Fleeson, 2002; Andreassi, 2011; Gözükara & Simsek, 2016), religion (May & Reynolds, 2017; Rogers & Franzen, 2014; Shivani & Cunningham, 2012) and gender (Calvo-Salguero, Salinas

& Aguilar-Luzón, 2012; Duxbury & Higgins, 1991; Hagqvist, Gådin & Nordenmark, 2017). However, given the attention there has been in literature to the negative, positive and integrative paradigms of the work-family relationship, in this study we propose to analyse the different available scales according to their alignment to these paradigms or theoretical models.

Examples of available scales and measuring procedures stemmed from the negative paradigm include the Multidimensional assessment of work spillover into family life (Small & Riley, 1990), which considers time, energy, and psychological interference as three different processes by which work can affect a person´s individual and family life. The authors used a sample of bank executive and their spouses to measure work spillover into four roles (marital relationship, parent-child relationship, involvement in leisure activities and household responsibilities). The study presented a high internal consistency of the over-all measures (Cronbach's α = ,93), suggesting big common variance among the subscales.

Meanwhile, based on a 3-sample study, Netemeyer et al. (1996) developed and validated short and self-report five-item scales of Work-Family Conflict and Family-Work Conflict, showing good levels of internal consistency (alpha estimates ranged from .82 to .90), dimensionality, and discriminant validity across three samples (the difference in fit found between the model and the baseline model was χ^2 (20, N = 530) = 58.52, $p < .01$, and adequate fit was found for the factor loadings invariant model across indices).

Additionally, Carlson, Kacmar and Williams (2000) developed the Work-Family Conflict Scale (WAFCS). For this multidimensional scale´s construction and validation, the authors used five different samples (N=1211), and some of the items that make up the scale are a combination of items from previous literature, whereas some other items

were specifically developed for the study. The scale consists of 18 items and has six subscales (these being time-based WIF, time-based FIW, strain-based WIF, strain-based FIW, behavior-based WIF and behavior-based FIW) aimed at measuring the six dimensions of the work–family conflict. According to the authors, an analysis of the fit statistics for the model in which factor loadings, correlations, and error variances were fixed showed adequate fit on all indices, therefore pointing to findings of evidence of measurement invariance across samples, that allowed for confirmation of the structure of the six-factor model (Carlson et al., 2000).

On the other hand, instruments related to the positive paradigm include Work-Family Enrichment Scale (created by Carlson, Kacmar, Wayne, & Grzywacz, 2006). In this case, the authors decided to focus on the positive side of the work-family interface. To do this, the authors administered the survey to a sample of 271 students, who were asked to respond using a 5 point scale that rated the degree to which they agreed or not with the enrichment experiences and types described in each item. Additionally, the authors report that they resorted to multiple criteria so as to determine the number of retained factors: those items that were highly redundant in terms of wording were removed, in order to cut down the possibilities of within-factor correlated measurement error; only items that loaded at .5 or higher on the intended factor and less than .3 on any other were kept. The authors reported the dimensions that explain each direction of enrichment, namely Work-to-Family enrichment and Family-to-Work enrichment (Carlson, 2006). Work-to-Family Enrichment responses were factor analysed using a principal components exploratory analysis (EFA, which resulted in three factors composed of 15 items) and applying an oblimin rotation (eigenvalues for the three factors were 8.91, 1.09, 1.02, respectively, and they explained 68.9% of the variance). The first factor was composed of six items and was named Work-Family Capital

(referring to the way involvement in work can boost psychosocial resource levels, such as confidence, sense of security, accomplishment and self-fulfillment that helps people to better perform in their family role). The second factor was made up of three items, and were grouped under the Work-Family Affect (which refers to the way involvement in work can lead to a positive emotional state or attitude, thus contributing to improving people's performance in their family roles). The third factor was composed of six items, and the dimension was named Work-Family Development (referring to the way in which work involvement leads to the attainment or refinement of skills, behaviors, knowledge or ways of viewing things, which can help people to better perform in their family role) (Carlson, 2006). Family-to-Work Enrichment responses were analyzed and led to three factors made up of 15 items too (in this case, eigenvalues for the three factors were 7.76, 1.41, 1.11, respectively, and together they explained 64.3% of the variance). Two factors showed great similarity to the work-to-family direction, whereas one of them was different. The first factor had six items and were grouped under the Family–Work Development dimension (referring to the way in which family leads to the attainment or refinement of skills, behaviors, knowledge or ways of viewing things, which can help people to better perform at work). The second factor had six items and the dimension was named Family–Work Affect (it refers to the family involvement bringing about a positive emotional state or attitude, which contributes to people performing better at work). The third factor had three items and its dimension was named Family-Work Efficiency (which refers family to involvement providing a sense of focus or urgency, thus contributing to people performing better at work) (Carlson, 2006).

Based on Carlson's WFES, Rastogi, Rangnekar and Rastogi (2017) proceeded to validate and Indian version of the scale. For this study, 370 Indian full-time employees

from manufacturing and service industry were administered the WFES. Exploratory factor analysis, confirmatory factor analysis, internal consistency, and item analysis and construct validity analysis were used to test psychometric properties. The results of the study revealed that psychometric properties of the scale applied in Indian context (Cronbach's alpha values for the WFE factors were: 0.894 for work–family development to WFE (3 items), 0.956 for work–family capital (3 items) and 0.944 for work–family affect (3 items) turned out to be similar to the originally developed scale.

Finally, some other instruments have been developed in accordance with the work-life balance perspective and integrative paradigms. Such is the case of the Integrative Model of the Work-Family Interface (developed by Frone, Yardley and Markel, 1997). In this case, the authors argue that although their model is based on previous work by Frone et al. (1992) (which distinguishes between work-family and family-work conflict), it incorporates various changes, such as modeling the reciprocal relations between work and family life, differentiating proximal (direct) and distal (indirect) predictors of work-family conflict, distinguishing the relations between work-family-conflict and role-related affect into predictive and outcome relations, and incorporating role-related behavior and behavioral intentions into the model. The sample for this study consisted of 372 employed adults, and the results showed an overall good fit of the model with $\chi^2 = 77.23$ with 44 degrees of freedom and a p value lower than .01.

The Work-Family Interface Scale, developed by Curbow et al. (2003), consists of 20 items and was tested with a sample of 188 childcare providers. Statistical analysis showed the scale had an overall alpha of .90 and a mean inter-item correlation (MIC) of .31. Moreover, Geurts et al. (2005) created the Survey Work-Home Interaction–NijmeGen, which showed good overall internal consistency (Cronbach's $\alpha = .80$) and

good fit to four-dimensional structure (χ^2 = 600.7; *df* =203, NNFI = .91, RMSEA = .06, CFI = .92). Cronbach's α for each dimension is: Negative WHI = .84, Negative HWI = .75, Positive WHI = .75, Positive HWI = .81 (Romeo, Berger, Yepes-Baldó & Ramos, 2014). Further adaptation and validation of the Spanish Version of the "Survey Work-Home Interaction–NijmeGen" (SWING) to Spanish speaking countries was carried out by Romeo et al (2014). In this case, the scale consists of 27 items (9 items for the Negative WHI and 6 items for each of the three other dimensions: Negative HWI Positive WHI and Positive HWI) and showed good psychometric properties (= .84, CFI = .96, and RMSEA = .06).

Similarly, Nitzsche, Jung, Kowalski & Holger (2014) developed the Work-Life Balance Culture Scale (WLBCS), which measures how organizational culture promotes the work-life balance of employees. Work-life balance culture is defined and measured using five items, all of which are formulated as statements based upon which respondents can express their degree of agreement on an 11-point Likert scale. Regarding method, the authors refer that this cross-sectional study was carried out in the German information and communication technology (ICT) sector, where only companies with at least 10 employees were included in the survey, resulting in a final sample of 498 respondents. Nitzsche et al. (2014) report good sampling adequacy (the Kaiser-Meyer-Olkin measure was 0.78, and the Bartlett test of sphericity - $p<0.001$ - was significant), and the exploratory factor analysis using principal component analysis showed a one-factor solution (eigenvalue=2.98), which explains 59.68% of the variance. Additionally, the authors describe internal consistency of the scale as good, with Cronbach's alpha 0.83 in Study 1 and 0.82 in Study 2, as well as item-total correlation values ranged from 0.59 to 0.67, showing high discrimination ability.

The Trabalho-Família Scale developed by Carvalho and her research team on 2009, and firstly published on 2012 (Carvalho & Andrade, 2012), on which this study is based, measures the tension between work and family/personal life.

3. Outcomes stemming from the work-family interface

A meta-analytic study by Amstad et al. (2011) reports the existence of multiple outcomes regarding the work-family relationship. The authors conclude that work–family conflict impacts well-being and behavior at an individual, work and family level, and that both directions of family-work conflict have shown work-related results (Amstad et al., 2011). Such outcomes can be either positive or negative, though the latter have received more attention in terms of study and research. When the effects are negative, Friedman and Greenhaus (2000) refer that they can be considered as enemies of one another, whereas a positive relationship can bring about a partnering or allied tie. Furthermore, a literature review of the outcomes of job satisfaction and life satisfaction was carried out by Kossek and Ozeki (1998), who reported that – regardless their direction – all types of work-family conflict were negatively associated with life and job satisfaction.

3.1 Negative outcomes

Negative work effects highlighted in literature are abundant, among which the following tend to stand out: lowered commitment, reduced job satisfaction, emotional exhaustion, stress, depression, burnout syndrome, nonattendance behaviours (such as absenteeism, leaving work early and tardiness) (Allen, Herst, Bruck, & Sutton, 2000; Boyar, Maertz & Pearson, 2005; Cooke & Rousseau, 1984; Grzywaez, Almeida, & McDonald, 2002; Hammer, Cullen, Neal, Sinclair, & Shafiro, 2005; Karatepe &

Tekinkus, 2006; Thompson & Prottas, 2006; Rode, Rehg, Near, & Underhill, 2007) and willingness to quit (Noor, 2011). Additionally, a study carried out by Frone (2000) reported that both work-family and family-work conflict were related to anxiety, negative mood, dependence disorders and substance abuse.

Family-related negative outcomes can affect marital and family satisfaction, family involvement, and produce family-related strain (Adams, King & King, 1996). Finally, reports on further un-specific outcomes include somatic complaints, poor physical health, depression and substance use or abuse, as well as a possible impact on life satisfaction (Frone, Russell, & Barnes, 1996). A longitudinal study conducted in Spain by Rubio et al. (2015) points out the existence of a spiral process, where work-family conflict predicts emotional exhaustion and, simultaneously, emotional exhaustion raises work-family conflict.

3.1.a Burnout Syndrome and Work-Family interface

Eurofound and ILO's (2019) overall workforce analysis indicates that the incidence of mental health problems is globally increasing. Even though debate continues about the best strategies for the management of health and well-being at work, the report unveils how work intensity permeates and ultimately affects the modern workplace. Workers handling tight deadlines, high-speed work, or high emotional demands (due to the need to hide feelings at work or dealing with students, disappointed clients or patients) have been identified as particularly vulnerable to suffering work-related stress and its possible negative effects on health (including cardiovascular diseases and mental health problems, such as depression, anxiety and burnout). As a matter of fact, Eurofound and ILO (2019) refer that stress related to work has been singled out as the second most frequently reported work-related health

problem in Europe, followed by musculoskeletal disorders. Because work related stress can lead to important human and economic costs, addressing this issue at individual, organizational and governmental level is of utmost importance.

Burnout's relation to work-family conflict has given rise to scientific research too. The conceptual origin of the Burnout Syndrome goes back to Freudenberger´s free clinic experiences and studies, and it has been closely related to stress since the very beginning (Hoffarth, 2017; Donoso & Arquero, 2013). Maslach and Jackson (1981) defined Burnout as a Syndrome of emotional exhaustion that regularly affects individuals whose work implies some sort of social interaction with others. According to these authors, such exhaustion is the result of a reduction of a person´s emotional resources, followed by cynical attitudes, dissatisfaction, negative feelings, reactions and self-perception. Similarly, Friedman (1995) notes that Burnout as a syndrome related to work and that derives from a personal perception of serious conflict between effort (or input) and reward (or output).

Maslach & Jackson (1986) describe three components of burnout: emotional exhaustion (which is both mental and physical, and is related to a personal context), depersonalization (which refers to a distant attitude towards work and affects the interpersonal sphere) and reduced personal achievement (which affects both social and non-social aspects of work, and is reflected in self-assessment) (Maslach, Schaufeli & Leiter, 2001). Among the three components, emotional exhaustion is the most popular one, being considered by many authors as the most important and easiest burnout to detect. Leiter e Maslach (1988) refer that the three dimensions of burnout do not occur simultaneously. The authors point out that emotional exhaustion is considered a response to stress at work; one way to deal with emotional exhaustion is by distancing oneself from others, generally leading to depersonalized responses, which in turn can

bring about more negative perceptions of personal fulfillment. Nonetheless, Maslach et al. (2001) draw attention to the fact that even though emotional exhaustion is a key factor, it only focuses on a personal level and it is therefore not enough when it comes to determining the existence of burnout, which requires a global understanding of peoples' lives.

Benbow (1998) emphasized the existence of further Burnout symptoms, such as feelings of helplessness and general lack of enthusiasm regarding both work and life and frustration. Arquero and Donoso (2013) concluded that it is possible to identify three main aspects that define Burnout Syndrome: exhaustion or emotional fatigue, depersonalization (which encompasses negative attitudes and feelings towards the people with whom one works) and negative self-evaluation (resulting in a lack of personal fulfillment and dissatisfaction with oneself). A systematic review of prospective studies carried out by Salvagioni et al. (2017) led the authors to classify the different outcomes likely to be suffered by and individual experiencing Burnout Syndrome into physical, psychological and occupational consequences. Physical effects comprise cardiovascular diseases, obesity, type 2 diabetes, hypertension, hypercholesterolemia, musculoskeletal disorders, pain (overall pain, headache, neck-shoulder pain, backache, and pain-related disability), prolonged fatigue, gastrointestinal problems, respiratory issues and severe injuries. Among psychological consequences stemming from Burnout Syndrome, Salvagioni et al. (2017) mention insomnia, depressive symptoms and mental disorders, whereas occupational consequences entail job dissatisfaction, sickness absence and need for disability pensions. Maslach (1976) has drawn attention to the fact that the effects arising from Burnout Syndrome are conceivably dangerous for a company, as well as its clients and staff. For this reason, measuring attempts aimed at detecting, diagnosing and preventing Burnout Syndrome

have received a lot of attention in research (Regal, 2016; Martinez, Mera, González, López & Blobel, 2015; Gómez-Alcaina, Montero-Marín, García-Campayo, Demarzo & Pereira, 2013).

A meta-analysis carried out by Kossek and Ozeki (1999) refers to the existence of several studies reporting high correlations between work-family conflict and burnout. What is more, Smith, DeJoy, Dyal and Huang (2017) conducted a study with the purpose of examining predictors of burnout in firefighters by considering the influences of work-pressure, work-stress and work-family conflict. Overall, the authors concluded that perceived work stress and work-family conflict are two significant predictors of burnout. Aimed at investigating direct and indirect associations of faculty burnout with psychosocial work environments, a study carried out by Zábrodská et al. (2017) yielded results that reflect work-family conflict as the strongest predictor of burnout among university faculty. In addition, Frone, Rusell and Cooper (2011) carried out a study which led to the conclusion that work-family conflict was longitudinally linked to high levels of heavy alcohol consumption.

As far as work-family direction is concerned, Netemeyer, McMurrian and Boles (1996) report that work´s interference with family generally shows higher correlation with Burnout Syndrome than vice-versa.

The Work-Family interface has been studied as a predictor and as a consequence of burnout, and some studies have also referred to the possibility of reciprocal causal relationships (Innstrand, Langballe, Espnes, Falkum & Aasland, 2008; Zapf, Dormann & Frese, 1996). Despite receiving less attention, approaches considering the work-family interface as an outcome variable have also been performed. About this, Zapf et al. (1996) point to the existence of two possible explanations, namely the “drift hypothesis” and the “true strain-stressor hypothesis”. On the one hand, the “drift

hypothesis" refers to the way some individuals with poor health (which is the case of burnt out individuals) tend to wander towards unattractive or unsatisfactory jobs (for example by becoming jobless and afterwards by taking less appealing jobs due to a high absenteeism personal record, or by being moved to positions that entail less responsibilities, which sides with higher work stressors and eventually higher risks of work family conflict); on the other hand, the "true strain-stressor hypothesis" holds that stress (for example, derived from work-family conflict) could also be affected by strain (such as that experienced due to burnout) (Innstrand et al., 2008).

3.2 Positive outcomes

The concept of Facilitation and the attention it has recently gained in organizational psychology research are strong examples of the strength ''positive psychology" has gained during the past years. As stated by Seligman & Csikszentmihalyi (2000), this contemporary trend highlights factors that contribute to improving workers' health.

Positive effects that the combination of these two life domains can have at work level include job satisfaction, organizational commitment, organizational citizenship behavior (Bragger, Rodriguez-Srednicki, Kutcher, Indovino, & Rosner, 2005). Furthermore, it is important to highlight that work-family enrichment (Greenhaus and Powell, 2006), positive spillover (Edwards & Rothbard, 2000) and facilitation (Grzywacz, 2002) have also been subject of study (McNall, Nicklin, & Masuda, 2010; Carlson, Kacmar, Zivnuska, Ferguson, & Whitten, 2011; Carlson, Hunter, & Ferguson, 2011; Dunn & O´Brien, 2013; Lapierre, Li, Kwan, Greenhaus, DiRenzo, & Shao, 2017). As far as work-family enrichment is concerned, Greenhaus and Powell (2006) define it as the way experience from one role holds the potential of improving life

quality in a different role. Another meta-analytic study, this time reviewing outcomes stemmed from work-family enrichment, reveals that the enrichment process relates to far-reaching personal and organizational results and, under certain circumstances, participation in one role may enrich the quality of life in a second role. Similarly, a meta-analytic study performed by Zhang et al. (2018) indicates that work-family enrichment has stronger effects on within-domain consequences than cross-domain consequences.

4. Work-Family and gender

Most authors agree on the fact that, even in the 21st century, there are gender differences in role playing, namely that women continue to take more responsibility for child care, household chores and care for relatives, at least in some cultures. Furthermore, a recent report by Eurofound and International Labour Organization (2019) points out that women still experience the most critical challenges as they continue to earn far less than men and yet work more hours than men on the whole. Due to this additional activity, women often mention a high degree of stress and less satisfaction in their role performance as mothers compared to their partners. Likewise, they also show a tendency to consider that work interferes with their parental role (Bianchi & Milkie, 2010; Hall, 1990; Shelton, 2006; Zhang & Liu, 2011).

Although men are increasingly reporting more involvement in tasks related to paternity and domestic responsibilities, when experiencing stress owing to the performance of both roles, they tend to obtain lower average scores and to show less signs of tension compared to women. This profile is based on men praising their status quo, trying to convey an image of dedication and professionalism, and avoiding showing the adjustments they make in order to attain reconciliation between their work

and family responsibilities. Despite the vast amount of studies that have emerged about sex/genders differences in W-F, there is no agreement in the literature about the causes of these differences (Bianchi & Milkie, 2010), reinforcing the importance of psychometrics in this field of knowledge.

As stated by Carvalho and Chambel (2016), Portuguese sex expectations continue to exist, often being women the ones who carry out domestic activities and care for children or dependants, making W-F reconciliation particularly difficult for them. Likewise, divorce rates have increased and separations or new partnership unions are a fact, bringing about new configurations and new members to families (e.g., my children, your children, and our children). For these and other reasons, the specific case of Portugal is marked by having enough demands, challenges and potential sources of stress regarding the reconciliation of work with family life (Vieira, Lopes, & Matos, 2014), especially for women. That said, we understand that providing valid and reliable measures to assess levels of conciliation and interference, as well as to studying the (in) variance of these measures, become more important than ever.

In addition to the justification based on the state of the art that emphasizes the importance of assessment, the study of invariance is also based on the premise that the lack of measures of invariance between sexes with a certain scale leads to an assessment of dimensions that represents different aspects for both men and women, and this could cause a misinterpretation of the results obtained, meaning that we could be using a scale with potentially different measures (a priori) which, for example, may not allow reliable comparability of results between sexes (Raju, Laffittee, & Byrne, 2002).

Considering the literature indicates that measure invariance tests are poorly studied (Raju et al., 2002), being particularly scarce in terms of sex differences, the assessment of the measure's invariance regarding its dimensionality will contribute to

bridging the gap in this area of research. Thus, the results will allow for more rigorous recommendations in relation to use and signaling interpretation constraints.

II. METHOD

1. Sample

The sample consisted of 610 university professors from Portugal and Islands (299 men: 49.0%, 291 women: 47.7%, 20 non-respondents: 3.3%), aged between 22 and 90 years old. The age group between 31 to 47 years stands out, representing 59.2% of the sample. It is composed mostly of married teachers (60.8%), followed by 22.3% single, 7.7% divorced and 1.1% separated. Most have been teaching in higher institutions for more than 10 years (56.2%), and about 23.0% of the sample has been doing so for between 5 to 10 years.

2. Instruments

2.1 Escala Trabalho-Família (T-F) – Work-Family Scale (W-F) (Carvalho, 2009)

The W-F Scale consists of an overall measure of the relationship between work and family (in both senses), composed of a second order construct represented by first order measures that evaluate, on the one hand, the reconciliation between work and family, and on the other hand, the tension between work and family.

Second-order measures comprise the dimensions of work-family interference (WFI) that were selected based on the Sloan Work-Family Researchers Electronic Network INTF Scales (MacDermid et al., 2000): Work´s Interference with Family (WFI); Family´s Interference with Work (FWI); Work as a Family-Life Facilitator (WFF); Family as a Work Facilitator (FWF); Impact of Work-Family Stress on Work

(IWFSW); and Impact of Work-Family Stress on Family Life (IWFSF). The items that make up these scales summarise the best measures published in this area (e.g., Gutek, Searle, & Klepa, 1991; MacDermid et al., 2000; Netemeyer, Boles, & McMurrian, 1996).

Assessment of scales developed by MacDermid et al. (2000) have been very positive, and it was decided to compile them in a single scale, which was first translated into Portuguese in an academic context by Carvalho and Peralta (2009), and later tested in research carried out by the authors (e.g., Carvalho & Andrade, 2012; Carvalho, Peralta, & Castro, 2012; Carvalho, Mónico, Parreira, Fernandes, Salgueiro-Oliveira, Braga, & Gómez, 2016; Carvalho, Parreira, Mónico, & Ruivo, 2016). These authors proceeded to the translation and back-translation of the items to Portuguese, using the focus group method to discuss ideas, suggestions and revisions for each of the items, so that the final version of the items did not raise any doubts. They also used a pilot sample of 50 subjects to evaluate the degree of accessibility, adequacy and comprehension of the items of the W-F Scale, and made small adjustments to the final version of the items.

In the final version of the questionnaire, participants are asked to answer 92 items on a four-point Likert scale (1- Rarely, 2- Sometimes, 3- Often, 4- Most often), reporting the last three months of their work and family/personal life. The items cover four major areas: energy (e.g., Because of my work, I did not have the energy to perform activities with my family or other important people in my life), strain (e.g., My job made it difficult to maintain the kind of relationship I wanted with my family), time (e.g., My work schedule makes it difficult for me to fulfill my personal responsibilities) and behavior (e.g., Behaviors that were effective and necessary for me at work were

counterproductive at home). In addition to this scale, a sociodemographic questionnaire was also answered by participants.

The dimensionality of the W-F Scale was analyzed through exploratory factorial analysis (EFA) by means of the principal component analysis (PCA) with Varimax rotation. Prior to these analyses, the assumptions for its application were verified. The joint analysis of the correlation matrix, the anti-image matrix (partial correlations close to zero), from the KMO test (= .917) and the Bartlett Test of Sphericity [χ^2 (4278) = 27767.73, p <.001] support the adequacy of the data to perform the PCA with free extraction of factors.

The solution obtained after the first extraction pointed to keeping eight factors, which explained 51.1% of the total variance. Although the W-F Scale has a total of six factors, the emergence of eight factors in Screen Plot is perfectly understandable in that the responses to two of the factors ("Interference from Work with Family Life" and "Work as Facilitator of Family Life") are divided into" relative to own "and" relative to the spouse". Thus, a forced analysis of the six first-order factors was also adjusted, explaining 46.6% of the total variance. The internal consistency of the overall scale was excellent (α = .937).

Factor 1 refers to Work Interference with Family (WFI, 21.61% of variance explained (VE); α = .921], factor 2 refers to Family Interference with Work (FWI, VE = 7.24%, α = .810), factor 3 refers to Work as Family Life Facilitator (FFW, VE =,5.74% α = .844), factor 4 refers to Family as Work Facilitator (FFT, VE = 4.93%, α = .844), factor 5 refers to the Impact of Work-Family Stress on Work (IWFSW, VE = 3.49%; 943) and, finally, factor 6 refers to the Impact of Work-Family Stress on Family Life (IWFSF, VE = 3.28%, α = .946).

2.2 MBI - Masclach Burnout Inventory (Maslach et al., 1997)

The MBI assesses the three components of the burnout syndrome: emotional exhaustion, depersonalization and reduced personal achievement. It is self-administrated and takes between 10 to 15 minutes to answer.

The 22 items of the scale are divided into three subscales: Emotional Exhaustion subscale (consisting of 9 items and aimed at assessing feelings of being emotionally overextended and exhausted by one´s work), Depersonalization subscale (consisting of 5 items and aimed at measuring unsympathetic and impersonal response towards recipients of one´s service, care, treatment or instruction), and Personal Accomplishment subscale (consisting of 8 items and aimed at assessing feelings of competence and successful achievement in one´s work with people). Each item is presented as a statement regarding personal feelings or attitudes, and they are answered according to a 7-score anchored scale (ranging from 0, “never”, to 6, “every day”) based on the frequency with which the respondent experiences each feeling or attitude. Forms are scored by using a scoring key, which has directions for scoring each subscale. While higher mean scores obtained on both Emotional Exhaustion subscale and Depersonalization subscale represent higher degrees of experienced burnout, lower mean scores on the Personal Achievement subscale reflect higher degrees of experienced burnout (Maslach, Jackson, & Leiter, 1997).

3. Procedure

3.1 Formal and ethical procedure

This study fulfilled all the ethical requirements and was approved by the Ethics and Deontology Committee of Psychological Research by the Faculty of Psychology and Educational Sciences of the University of Coimbra on November 19th, 2015.

Information on the objectives of the study, completion instructions, the voluntary and anonymous nature of the participation and the guarantee of the confidentiality of the data were included in the instructions.

3.2 Data Analysis

Study 1

Data was processed using SPSS and AMOS version 22.0 (SPSS Inc, Chicago, IL). Normality was ensured by asymmetry (sk) and kurtosis (ku) values, and no results were found indicating severe infringement of the normality assumption (Finney & DiStefano, 2006; Kline, 2011), since | sk | <2.28 and | kuunivariate | < 4.70 (except only for one item with sk = 3.15 and ku = 10.48). Non-responses (missing-values, corresponding to 3.4% of the sample) were replaced by the series-mean method (Hair, Black, Babin, & Anderson, 2010). The univariate and multivariate outliers detected were classified as extreme. However, given the sample´s size, they did not compromise the normality of the sample´s distribution, and were maintained in order to ensure the possibility of generalizing results to the population. In addition, they portrayed a representative segment of the sample (Hair et al., 2010).

The global adjustment quality of the factorial models estimated by the maximum likelihood method was done by χ^2 indices (p> .05, but irrelevant if N> 500; Bentler 1990; Schumacker & Lomax, 2010), χ^2/gl (coefficients < 2 or 3 indicate a good fit, although coefficients are acceptable < 5; Kline, 2011; Marôco, 2010; Schumacker & Lomax, 2010), GFI (Goodness-of-fit index; GFI (Goodness-of-fit index, values close to .90 indicate a good adjustment , Jöreskog & Sörbom, 1982, Kline, 2011, Schumacker & Lomax, 2010), CFI (Comparative fit index; values close to .90 indicate a good fit; Jöreskog & Sörbom, 1982; Kline, 2011; Schumacker & Lomax, 2010), CFI

(Comparative fit index; values> .90 are considered a good adjustment; Bentler, 1990) and RMSEA (Root Mean Square Error of Approximation, good fit <.05, acceptable fit <.08, Kline 2011; Schumacker & Lomax, 2010).

The model adjustment improvement was assessed by means of the modification indices (MI) and we considered liberating the parameters with higher MI (Bollen, 1989). Arbuckle´s (2013) suggestion regarding analyzing IMs through their statistical significance was followed, considering the value of $\alpha = .05$. Another criterion used was based on Marôco (2010), who advises that it is safer to modify the parameters with MI higher than 11 ($p < .001$), although we have adopted a more demanding MI value, correlating only the errors between observed variables whose MIs were greater than 20 exclusively within each factor.

The verification of changes in the behavior of the structural based on teachers´ gender was performed through invariance tests, according to the structural equation modeling methodology (Byrne, 2001). The starting point of the invariance test entailed the definition of a basic structural model. The graphical representation of the factorial structure of the W-F scale (base model) is reproduced in Figure 1 (with standardized regression coefficients and proportions of variance already explained due to space saving reasons), where there are six first-order factors and a large second-order factor (WFI and General WFF), all of them represented by ellipses. Rectangles represent the observed variables (items of each dimension), which are expressions of each factor respectively. The unidirectional arrows, starting from each factor and pointing to the items (observed variables) of the W-F Scale, indicate the effect of the responses on the items, that is, the latent factors underlie the set of questionnaire items. Smaller circles, also consisting of unidirectional arrows pointing to questionnaire items and first-order

factors, represent unexplained variances (errors or disturbances) by the respective factors.

Once the basic structural model was defined (see Figure 1), the chi-square value, the degrees of freedom, and the fit of the model were determined.

In order to test the homogeneity of parameters for men and women separately, after having tested the overall model in both groups, we performed a multi-group analysis to determine if the factorial structure was invariant or variant in both sexes (estimation method by maximum likelihood). Measurement invariance was tested with the chi-square test ($\chi 2$, Cochran, 1952), the most frequently used test to verify the overall fit of the model in samples considered with a normal distribution, even though it depends on the size of the sample (Yuan, 2005); both models were specified, parameters were estimated by the maximum likelihood estimation method, and the likelihood ratio was calculated and later compared through the $\chi 2$ distribution (Cochran, 1952).

The sum of the chi-squared values obtained from the model adjustment process for each group separately reflects the extent to which the latent structure fits the data across the groups when there is no constraint imposed on the group (Byrne, 2001). Thereafter, model modifications were tested with the subgroups of interest (in this case, women and men) by progressively restricting the parameters of the model selected in the first step (free model) with the restricted models in order to test the invariance (Marôco, 2010). If the difference between the chi-squares of the tested and base models is statistically significant, we conclude that in that parameter the behavior of the model is variant. Thus, we tested the invariance for each dimension of the W-F scale, comparing each restricted model (global and by size) with the free multi-group model.

Study 2

All the analyses were completed using the statistical program SPSS and AMOS 22.0 for Windows operative system. Outliers were analyzed according to Mahalanobis squared distance (Tabachnick & Fidell 2007), without finding relevant values. The normality of the variables was assessed by the coefficients of skewness (Sk) and kurtosis (Ku), showing that no variable presented values violating normal distribution, $|Sk| < 2$ and $|Ku| < 3$.

Exploratory factor analysis was performed using SPSS by PCA – Principal Component Analysis. The PCA assumptions were tested through the sample size (ratio of 5 subjects per item and at least 100 participants; Gorsuch, 1983), the normality and linearity of the variables, factoriability of R, and sample adequacy (Tabachnick & Fidell, 2013). Since we intend to retain as independent factors as possible, we have chosen VARIMAX rotation method with Kaiser's normalization.

Confirmatory factorial analysis was performed with AMOS (v. 22.0, SPSS Inc, Chicago, IL; Arbuckle, 2013), estimation method by maximum likelihood (Jöreskog & Sörbom, 2004). Goodness of fit was analyzed by the indexes of NFI (Normed of fit index; good fit > .80; Schumacker & Lomax 1996), SRMR (Standardized Root Mean Square Residual; appropriate fit<.08; Brown 2006), TLI (Tucker-Lewis Index - TLI; appropriate fit > .90; Brown 2006), CFI (Comparative fit index; good fit > .90; Bentler 1990), RMSEA (Root Mean Square Error of Approximation; good fit < .05; Kline 2011; Schumacker & Lomax 1996), and X2 ($p > .05$, but irrelevant if $N > 500$; Bentler 1990; Schumacker & Lomax 1996). The fit of the model was improved by modification indices (MI; Bollen 1989), leading to correlation of the residual variability between variables with $MI > 90$, $p < .001$.

The improvement of model fit was evaluated by the modification indices (MI; Bollen, 1989), and we considered liberating the parameters with higher MI. We followed Arbuckle's proposal (2013), which consists in analyzing the MIs by their statistical significance ($\alpha < 0.05$). Another criterion was designed by Marôco (2011), which advises to be safer to modify the parameters with MI higher than 11 ($p < .001$).

Reliability was calculated by Cronbach's alpha (Nunally, 1978). Reliability coefficients higher than .70 were considered acceptable for convergence and reliability (Hair, Black, Babin, & Anderson, 2009). In general, the value of .80 was taken as a good reliability indicator. The composite reliability and the average variance extracted for each factor were evaluated as described by Fornell and Larcker (1981).

Study 3

Data was processed in IBM SPSS Statistics and AMOS 22.0. Missing values (<5%) were all MCAR and replaced through the Expectation Maximization Method (Ibrahim, Chen, Lipsitz, & Herring, 2005). The existence of outliers was evaluated by the square distance of Mahalanobis (Tabachnick & Fidell, 2013) and normality of the variables was evaluated by the coefficients of asymmetry (Sk) and kurtosis (Ku). No significant outliers were registered, considering we obtained $|Sk| < 1.85$ and $|Ku| < 4.05$.

After the descriptive statistics and intercorrelation matrix, data was analyzed through a multivariate analysis of variance (MANOVA, General Linear Model procedure; Hair, Anderson, Tatham, & Black, 2008), fulfilling the required assumptions for the reliable use of this test. Post-hoc Tukey LSD tests for multiple comparisons were performed, since the independent variable has four levels (Alferes, 1997). A significance level of $\alpha = .05$ for Type I error for all the analyses was considered. Effect sizes of correlations (low, medium, or high correlations) were classified according to

Cohen (1988). Magnitude of the experimental effect was obtained by calculating eta squared (η2) measure (Howell, 2013).

4. RESULTS

Study 1: Gender measurement invariance

The main quality adjustment indicators between the base model and the answers obtained from both groups of teachers (male and female) were estimated separately, and the same was done with the multi-group model (see coefficients estimated in Figure 1). The model´s stricter proved to be well adjusted in the multi-group sample considering the χ^2 / *gl* and RMSEA indices (see Table 1), although it showed weaknesses in the GFI and IFC absolute fit quality indices, the latter being due to the high number of variables in the sample, among other factors (Marôco, 2010). In order to improve the model fit, within each factor, we established covariations between a set of errors based on IM > 20 and on the interpretive weighting, given the theoretical reference that resulted in the construction of the W-F scale. Covariation between errors could indicate systematic and non-random measurement errors and, in the case of this study, it is likely to be a result of semantic redundancies among items within each factor, associated with identical phrasing, in addition to the sample´s characteristics, which should not be overlooked (Aish & Jöreskog, 1990). After establishing these covariations, the model´s goodness of fit improved substantially, as shown in Table 1, in the line corresponding to the results of the multi-group analysis after covariation of the errors.

The analysis of the models generated for men and women separately indicated low values (see Table 1, Female and Male models). The GFI and CFI values for both models presented unadjusted values, improving considerably after covariation of the errors (see Table 1, female and male models after covariation of errors).

Table 1. *Work-Family scale base model goodness of fit indices*

Model	**χ²**	**gl**	**X^2/gl**	**GFI**	**CFI**	**RMSEA**
Female	11074.66*	4179	2.65	.524	.599	.075
Female after covariation of errors (IM > 20)	7347.97*	4126	1.78	.662	.789	.052
Male	10703.23*	4179	2.56	.535	.614	.072
Male after covariation of errors (MI > 20)	7231.34*	4125	1.75	.665	.794	.050
Multigroup	21777.92*	8358	2.61	-	.606	.052
Multigroup after covariation of errors (MI > 20)	14055.09*	8156	1.72	-	.806	.035

Caption: χ2 = Chi-square; gl = degrees of freedom; GFI = Goodness-of-Fit Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation" * p <.001

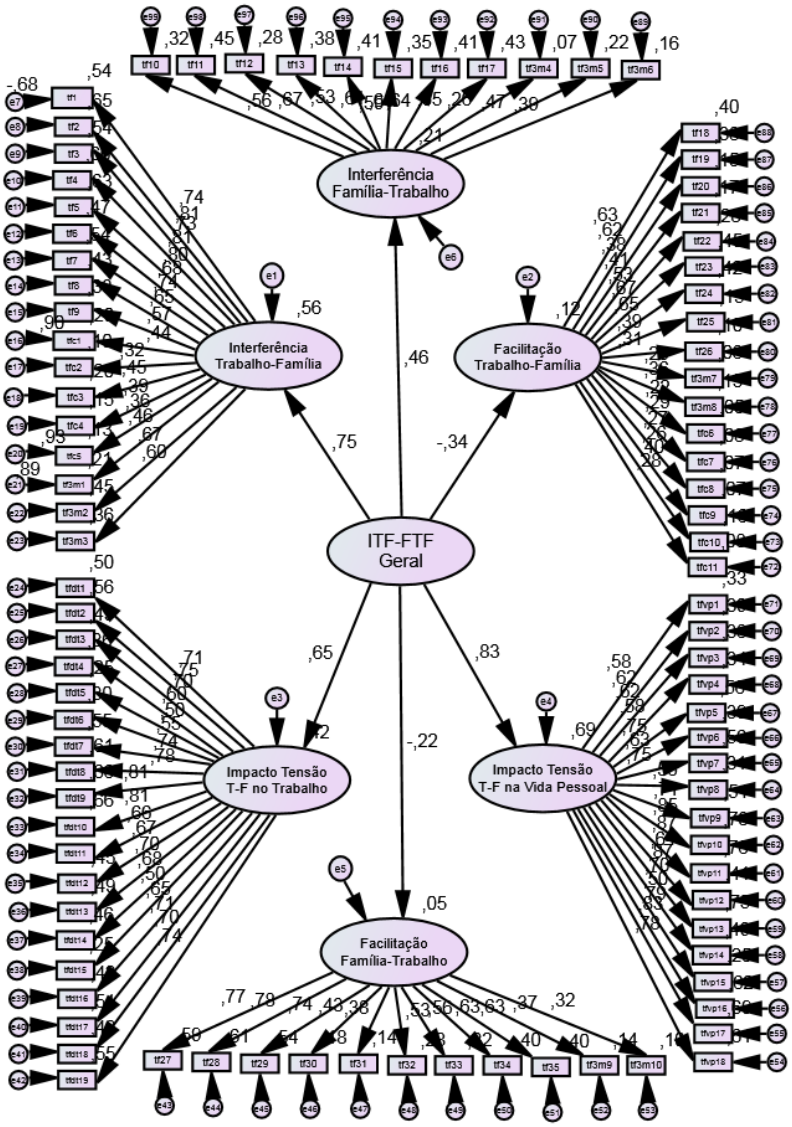

Figure 1. Theoretical structural model of the Work-Family Scale (W-F) used in the analysis of invariance among university teachers (male and female): standardized regression coefficients and proportions of variance explained in each observed variable.

Starting from an acceptable model fit, we performed the invariance test of the factors of the Work-Family scale, without correlating the errors based on the modification indices. Based on the non-restrictive base model, the chi-square (χ^2) of the completely restrictive model was performed, which showed a significant difference ($p < .001$). These indicated differences between the structural models, meaning that progressively imposed restrictions do not remain the same between male and female teachers (see row 1 in Table 2).

Table 2. *Work-Family Scale Invariance using the Chi-square test (X^2): comparison of the global restrictive models and for each factor of the T-F scale with regard to the multi-group free model*

	χ²	***gl***	***Δχ²***	***Δgl***	***p***	**Conclusion**
Restricted Model	22207.3	8544	429.381	186	.000	Variant
Factors:						
Restricted Model IWFSW	21821.893	8396	43.974	38	.233	Invariant
Restricted Model IWFSF	21820.121	8394	42.202	36	.221	Invariant
Restricted Model WFI	21858.131	8392	80.212	34	.000	Variant
Restricted Model FWI	21865.26	8380	87.341	22	.000	Variant
Restricted Model WFF	21879.611	8392	101.692	34	.000	Variant
Restricted Model FWF	21844.578	8380	66.659	22	.000	Variant

Caption: IWFSW: Impact of Work-Family Strain on Work; and IWFSF: Impact of Work-Family Strain on Family; WFI: Work-Family Interference; FWI: Family´s Interference with Work; WFF: Work as Family Life Facilitator; FWF: Family as a Work Facilitator.

$\chi 2$ = Chi-square; gl = degrees of freedom; $\Delta\chi^2$ = chi-squares difference between the base model and the tested models; Δgl = degrees of freedom difference between the base model and the tested models; p = significance level

The invariance test was performed with the restrictive imposition on each of the factors separately, analyzing the invariance in both groups (see Table 2). Restrictions

were made only for the intercepts of first order factors, and the procedure for each individual variable was not performed (which justifies the small difference between degrees of freedom - Δgl). The results obtained from the models generated by the constraints were then compared with the non-restrictive base model, and a conclusion was drawn with regard to the (in)variance. It was noted that there was no difference in statistical significance between restrictive models, where the factors Impact of Work-Family Strain on Work (IWFSW) and Impact of Work-Family Strain on Family (IWFSF) were fixed, thus being invariant among teachers, regardless of gender (see Table 2). Regarding the restrictive models where the factors Work-Family Interference (WFI), Family´s Interference with Work (FWI), Work as a Family Life Facilitator (WFF), and Family as a Work Facilitator (FWF) were fixed, differences were statistically significant, showing that these factors vary between sexes (see Table 2).

Study 2: Short scales development

Exploratory factor analysis

Two EFA were performed, one for the **Conflict subscale** and another for the **Facilitation subscale**. In both cases, requirements necessary for reliable interpretation of PCA were analyzed. Since the questionnaire we used has 28 items for Conflict and 28 for Facilitation, the ratio found was 610 subjects/56 items = 10.9 subjects/item, which enables, a priori, a reliable utilization of PCA (Gorsuch, 1983). Additionally, the intercorrelation matrix differed from the identity matrix, since the Bartlett's test showed a significant X2, $p < .001$, and the sampling was adequate – the obtained value for Kaiser-Meyer-Olkin (KMO) measure was .879 for Conflict and .761 for Facilitation, higher than the required value of .70.

According to the eigenvalue criteria over one, for each subscale emerged a solution of two factors, responsible for 64.40% of the total variance. However, this factorial solution was not interpretable. Moreover, factorial loadings (s) showed the following items as less representative of each factor (s <.50; Tabachnick & Fidell, 2013) or less discriminative (factorial loadings similar in two or more factors): 2.

For the Conflict subscale, the screen plot showed a solution of two interpretable factors, responsible for 56.71% of the total variance, with the first factor explaining 38.65% of the total variance, and the second factor 18.06%. Factorial loadings are greater than .50 (Tabachnick & Fidell, 2013) in all dimensions and are arranged in descending order in Table 2, together with the commonalities, eigenvalues, and explained variances. As can be seen, Factor 1 aggregates items related to Work-to-Family Conflict, so this factor was designated as Work→Family Conflict. Factor 2 focuses on items corresponding to Family-to-Work, so we called this dimension Family→Work Conflict.

For the Facilitation subscale, the screen plot showed a solution of two interpretable factors, responsible for 55,75% of the total variance, with the first factor explaining 35.97% of the total variance, and the second factor 19.78%. Factorial loadings are greater than .50 (Tabachnick & Fidell, 2013) in all dimensions and are arranged in descending order in Table 2, together with the commonalities, eigenvalues, and explained variances. As can be seen, Factor 1 aggregates items related to Work-to-Family Facilitation, so this factor was designated as Work→Family Facilitation. Factor 2 focuses on items corresponding to Family-to-Work, so we called this dimension Family→Work Facilitation.

Table 3. *Principal Component Analysis of the Conflict dimension measure: Factorial loading of F1 and F2, communalities (h2), eigenvalues, and shared variance of the rotated component matrix*

	F1 Work→Family Conflict	**F2 Family→Work Conflict.**	***h2***
tf2. Because of my work, I did not have the energy to do activities with my family or other important people in my life.	.846	.087	.723
tf5. The amount of time my job requires has made it difficult for me to fulfill my personal responsibilities.	.834	.172	.726
tf4. My job made it difficult to maintain the kind of relationship I wanted with my family.	.806	.232	.703
tf7. Because of my work, I didn`t have enough time to participate in leisure activities that I find relaxing and enjoyable.	.790	.083	.630
tf1. I came home from work too tired to do some of the personal / family stuff I wanted to do.	.780	.042	.611
tf6. My work schedule made it difficult for me to fulfill my personal responsibilities.	.762	.161	.606
tf3. I was worried about my work and could not relax while I was at home.	.755	.168	.598
tf16. My personal responsibilities made me behave inappropriately at work.	.014	.735	.540
tf14. The amount of time my personal responsibilities took made me work less than I wanted to.	-.010	.698	.488

Table 3. *Principal Component Analysis of the Conflict dimension measure: Factorial loading of F1 and F2, communalities (h2), eigenvalues, and shared variance of the rotated component matrix*

tf13. My personal responsibilities make it difficult to deal with my supervisor and colleagues in the way that I would like.	.178	.691	.509
tf17. Behaviors that are effective and necessary for me at home have proven counterproductive at work.	.138	.687	.491
tf11. My family or personal life took up the energy necessary to do my job.	.182	.657	.465
tf15. The scheduling requirements regarding my personal responsibilities made it difficult to meet deadlines at work.	.097	.650	.431
tf12. I was worried about my personal responsibilities while I was at work.	.241	.599	.417
Eigenvalues	5.41	2.53	
% of explained variance	38.65	18.06	

Note: items' free translation, validated questionnaire in Portuguese.

Table 4. *Principal Component Analysis of the Facilitation dimension measure: Factorial loading of F1 and F2, communalities (h2), eigenvalues, and shared variance of the rotated component matrix*

	F1 Work→Family Facilitation	**F2 Family→Work Facilitation**	***h2***
tf35. My family and friends have given me support that has helped me face difficulties at work.	.807	.003	.651
tf27. My family or personal life gave me energy to do my job.	.804	.127	.663

Table 4. *Principal Component Analysis of the Facilitation dimension measure: Factorial loading of F1 and F2, communalities (h2), eigenvalues, and shared variance of the rotated component matrix*

tf34. Talking to someone at home helped me deal with problems at work.	.803	.026	.645
tf28. I felt better at work because of my family or personal life.	.781	.230	.663
tf29. My home-life has helped me relax and feel ready for the next day's work.	.725	.228	.577
tf22. My work has given me fair time to take care of my personal responsibilities.	.021	.774	.600
tf23. The problem-solving strategies I used at work were effective in solving problems at home.	.067	.735	.544
tf21. My work schedule was flexible enough to allow me to take care of my personal responsibilities.	-.027	.701	.492
tf24. The skills I used at work helped me deal with personal, practical matters at home.	.201	.652	.465
tf19. Because of my work I felt better at home.	.190	.635	.439
tf18. My work gave me energy to do activities with my family or with other people important to me.	.188	.598	.393
Eigenvalues	3.96	2.17	
% of explained variance	35.97	19.78	

Note: items' free translation, validated questionnaire in Portuguese.

Confirmatory factor analysis

CFA was performed in order to test the fit of the factorial solution found by EFA (see fit indices for model 1 in Table 3, no error terms correlated). For model 1, NFI, SRMR, TLI, and RMSEA indices showed a poor fit. Based on modification indices higher than 11 ($p < .001$), we correlated error terms in each dimension in model 2, as

shown in Figure 1. This covariation shows non-random measurement errors, which may result from items' similarities (e.g., semantic redundancy), sequential positioning in the scale, as well as the specific characteristics of the respondents (Aish & Jöreskog, 1990). Model 2 showed a good fit, attending all fit statistics (see table 3, model 2).

Table 5. *Fit statistics of the two-factor model for Conflict and Facilitation measures*

Model	***NFI***	***TLI***	***CFI***	***χ^2/df***	***RMSEA***	***RMSEA 90% CI***
1	.726	.754	.777	2.26* (*df* = 272)	.100	.094 - .107*
2	.850	.899	.910	2.25* (*df* = 113)	.064	.057 - .071*

X2 chi-square, df degrees of freedom, NFI normed fit index, CFI comparative fit index, PNFI parsimony normed fit index, SRMR standardized root mean square residual, RMSEA root mean square error of approximation, CI confidence interval, * $p < .05$

Standardized regression weights and squared multiple correlations of model 2 are shown in Figure 2.

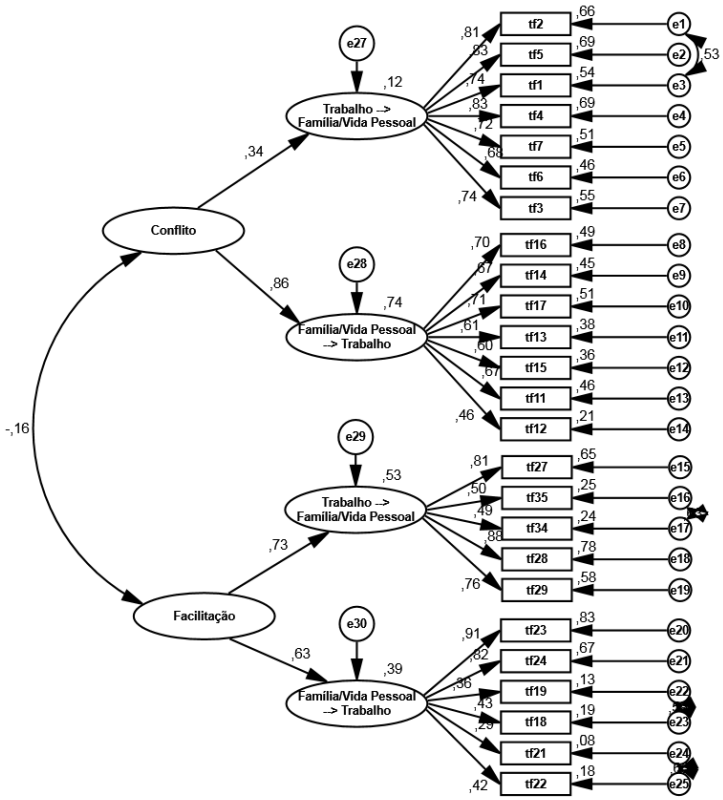

Figure 2. CFA for W-F measure (model 2): standardized regression weights and squared multiple correlations

Cronbach alphas (see Table 6) were good, since they were above .80 for factors 1 and 2, and acceptable for factor 3. Composite reliability was also good, since it was higher than .70 (Hair, Anderson, Tatham, & Black, 1999). Concerning the average variance extracted (AVE), factor 2 exceeds .50, ensuring that the explained variance is greater than the residual variance (Bagozzi & Yi, 1988), and factors 1 and 3 exceed the cut-off value of .40 (Diamantopoulos & Siguaw, 2000), showing an acceptable convergent validity. We are also in the presence of discriminant validity, given that the variance extracted from each factor is greater than the values of the squared correlations between each pair of factors (Fornell & Larcker 1981) (see Table 6 for R^2).

The descriptive statistics and inter-correlations between the dimensions of the Conflict, Facilitation and MBI measures are also indicated in Table 6. Mean scores showed higher values for F7- MBI Personal Achievement (M = 4.10), followed by F3 – Facilitation W-F (M = 2.83), and at last, F6- MBI Depersonalization (M = .94). Intercorrelations are strong between all factors ($R^2 > 0.7$) (Cohen, 1988; Moore, Notz & Flinger, 2013).

Table 6. *Composite reliability (CR), average variance extracted (AVE), Cronbach's* Alpha (α), means *(M), standard-deviations (SD), and intercorrelations among factors (R^2 between brackets) for the Conflict, Facilitation and MBI measures*

	CR	*AVE*	*mín*	*máx*	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
							C W-F	***C F-W***	***F W-F***	***F F-W***	***E. E***	***D***	***P. A***
1. Conflict W-F	.90	.58	1.00	4.00	2.16	0.75	(.91)	.31**	-.05	-.46***	.60***	.28***	-.09*
2. Conflict F-W	.82	.40	1.00	3.29	1.32	0.37		(.81)	-.06	-.06	.34 ***	.43 ***	-.09*
3. Faciliitation W-F	.82	.50	1.00	4.00	2.83	0.69			(.85)	.32***	-.09*	-.13**	.19***
4. Facilitation F-W	.73	.35	1.00	4.00	2.28	0.60				(.78)	-.39***	-.17***	.26***
5. MBI Emotional Exhaustion	.91	.52	0.00	5.56	1.84	1.10					(.91)	.51***	-.15***
6. MBI Depersonaliz ation	.71	.33	0.00	5.00	.94	0.84						(.69)	-.22
7. MBI Personal Achievement	.82	.37	1.38	6.00	4.10	0.87							(.82)

Cronbach Alphas can be found *** $p < .001$ ** $p < .001$ * $p < .05$

Study 3: Burnout and profile analysis

For each dimension of the Conflict Scale, two clusters were suggested by K-means analysis: Work-Family Conflict cluster and Family-Work Conflict cluster. For each dimension of the Facilitation Scale, we found a Work-Family Facilitation cluster

and a Family-Work Facilitation cluster. All clusters showed satisfactory quality, as their silhouette measure of cohesion and separation was higher than .5 (see Table 7). Respondents were then considered individually to see which cluster they belonged to, creating profiles that combined such clusters with high and low Burnout Syndrome levels. The emerging profiles were: Profile 1 (Low Conflict – High Facilitation; N = 245, M =1.31), Profile 2 (Low Conflict – Low Facilitation; N = 128, M = 1.56), Profile 3 (High Conflict – Low Facilitation; N = 107, M = 2.58), and Profile 4 (High Conflict – High Facilitation; N = 125, M = 2.54).

Table 7. *Clusters Sizes, means, and description of Profiles Clusters. W-F means of each profile and multiple comparisons between profiles*

	Profile 1 *Low Conflict – High Facilitation* ***(N = 245)***		***Profile 2*** *Low Conflict – Low Facilitation* ***(N = 128)***		***Profile 3*** *High Conflict – Low Facilitation* ***(N = 107)***		***Profile 4*** *High Conflict – High Facilitation* ***(N = 125)***		***F***	***Partial Eta Squared η^2***
MBI	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***		
Emotional Exhaustion	1.31 a	.73	1.56 a	.92	2.58 b	1.10	2.54 b	1.14	75.05	.27
Depersonalization	.68 a	.60	.88 a	.72	1.22 b	.88	1.28 b	1.10	20.41	.09
Personal Achievement	4.29 a	.82	3.87 b	.87	3.83 b	.88	4.20 a	.84	11.66	.05

Note. Unshared subscripts indicate that means are significantly different. *$p \leq .05$

Differences in Burnout between W-F profiles

Due to the existence of multiple dependent variables, Multivariate Analysis of Variance (MANOVA) was carried out in order to analyse them simultaneously and see the differences between group means. Analysis of the multivariate test indicates that the overall effect turns out to be statistically significant, λ of Wilks = 0.690, F (9, 1457) = 26.731, p <.001.

By undertaking Tukey HSD multiple comparison tests, we noticed that there were statistically significant differences in the dimensions of the MBI between some profiles. Profiles 3 and 4 show resemblances in the prediction of Emotional Exhaustion and Depersonalization ($p \leq .05$), whereas profiles 2 and 3 share similarities in the prediction of Personal Achievement ($p \leq .05$) (see Tables 7 and 9).

Table 8. *Differences Between the Averages and Standard Errors (in brackets) of the MBI Scale dimensions and the 4 W-F Profiles*

	Profile 1	**Profile 2**	**Profile 3**	**Profile 4**
		Differences between the averages (MBI)		
		Emotional exhaustion		
Profile 1		-.24 (.10)	-1. 27*** (.11)	-1.22*** (.10)
Profile 2		-	-1.02*** (.12)	-0.98*** (.11)
Profile 3		-	-	.04 (.12)
Profile 4		-	-	-
		Depersonalization		
Profile 1		-.19 (.09)	-.53 (.09)	-.59 (.09)
Profile 2		-	-.34 (.10)	0.40 (.10)
Profile 3		-	-	- .05 (.10)
Profile 4		-	-	-
		Personal Achievement		
Profile 1		0.43 (.09)	.46 (.10)	.09 (.09)
Profile 2		-	.03 (.11)	-.34 (.11)
Profile 3		-	-	-.37 (.11)
Profile 4		-	-	-

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

Table 9. *Differences between Burnout levels according to W-F Profiles: Post Hoc – Tukey HSD*

Dependent Variable	**(I) Profile**	**(J) Profile**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**	**95% Confidence Interval**	
						Lower Bound	**Upper Bound**
Emotional Exhaustion	**1. Low Conflict and High Facilitation**	low conflict and low facilitation	-0,2431	0,10223	0,083	-0,5064	0,0203
		high conflict and	-1,2670*	0,10862	0	-1,5469	-0,9872

		low facilitation					
		high conflict and high facilitation	-1,2248*	0,10304	0	-1,4903	-0,9594
	2. Low Conflict and Low Facilitation	low conflict and high facilitation	0,2431	0,10223	0,083	-0,0203	0,5064
		high conflict and low facilitation	-1,0240*	0,12279	0	-1,3403	-0,7076
		high conflict and high facilitation	-,9818*	0,11788	0	-1,2854	-0,6781
	3. High Conflict and Low Facilitation	low conflict and high facilitation	1,2670*	0,10862	0	0,9872	1,5469
		low conflict and low facilitation	1,0240*	0,12279	0	0,7076	1,3403
		high conflict and high facilitation	0,0422	0,12346	0,986	-0,2758	0,3603
	4. High Conflict and High Facilitation	low conflict and high facilitation	1,2248*	0,10304	0	0,9594	1,4903
		low conflict and low facilitation	,9818*	0,11788	0	0,6781	1,2854
		high conflict and low facilitation	-0,0422	0,12346	0,986	-0,3603	0,2758
Despersonalization	**1. Low Conflict and High Facilitation**	low conflict and low facilitation	-0,1957	0,08726	0,113	-0,4205	0,0291
		high conflict and low facilitation	-,5384*	0,09272	0	-0,7773	-0,2996
		high conflict and high facilitation	-,5924*	0,08795	0	-0,8189	-0,3658
	2. Low Conflict and Low Facilitation	low conflict and high facilitation	0,1957	0,08726	0,113	-0,0291	0,4205
		high conflict and	-,3427*	0,10481	0,006	-0,6127	-0,0727

		low facilitation					
		high conflict and high facilitation	-,3967*	0,10062	0,001	-0,6559	-0,1375
	3. High Conflict and Low Facilitation	low conflict and high facilitation	,5384*	0,09272	0	0,2996	0,7773
		low conflict and low facilitation	,3427*	0,10481	0,006	0,0727	0,6127
		high conflict and high facilitation	-0,0539	0,10538	0,956	-0,3254	0,2175
	4. High Conflict and High Facilitation	low conflict and high facilitation	,5924*	0,08795	0	0,3658	0,8189
		low conflict and low facilitation	,3967*	0,10062	0,001	0,1375	0,6559
		high conflict and low facilitation	0,0539	0,10538	0,956	-0,2175	0,3254
Personal achievement	**1. Low Conflict and High Facilitation**	low conflict and low facilitation	,4285*	0,09237	0	0,1906	0,6665
		high conflict and low facilitation	,4599*	0,09815	0	0,207	0,7127
		high conflict and high facilitation	0,0932	0,0931	0,749	-0,1467	0,333
	2. Low Conflict and Low Facilitation	low conflict and high facilitation	-,4285*	0,09237	0	-0,6665	-0,1906
		high conflict and low facilitation	0,0313	0,11095	0,992	-0,2545	0,3171
		high conflict and high facilitation	-,3354*	0,10651	0,009	-0,6098	-0,061
	3. High Conflict and Low Facilitation	low conflict and high facilitation	-,4599*	0,09815	0	-0,7127	-0,207
		low conflict and	-0,0313	0,11095	0,992	-0,3171	0,2545

	low facilitation					
	high conflict and high facilitation	-,3667*	0,11155	0,006	-0,6541	-0,0793
4. High Conflict and High Facilitation	low conflict and high facilitation	-0,0932	0,0931	0,749	-0,333	0,1467
	low conflict and low facilitation	,3354*	0,10651	0,009	0,061	0,6098
	high conflict and low facilitation	,3667*	0,11155	0,006	0,0793	0,6541

Based on observed means.
The error term is Mean Square(Error) = ,717.
*The mean difference is significant at the ,05 level.
Note: items' free translation, validated questionnaire in Portuguese.

Figure 3 shows how scores are plotted in the form of graph or profile, in this case, the 4 profiles with regard to the 3 variables of the MBI measure: Emotional Exhaustion, Depersonalization and Personal Achievement (Maslach et al., 1997).

Figure 4 contains the pattern of means of how individuals belonging to each profile show burnout levels according to MBI´s three dimensions. In this graphic, standardized values were used when building the graphic in order to better illustrate the differences between profiles. Standardization was made based on the means of each dimension across all profiles.

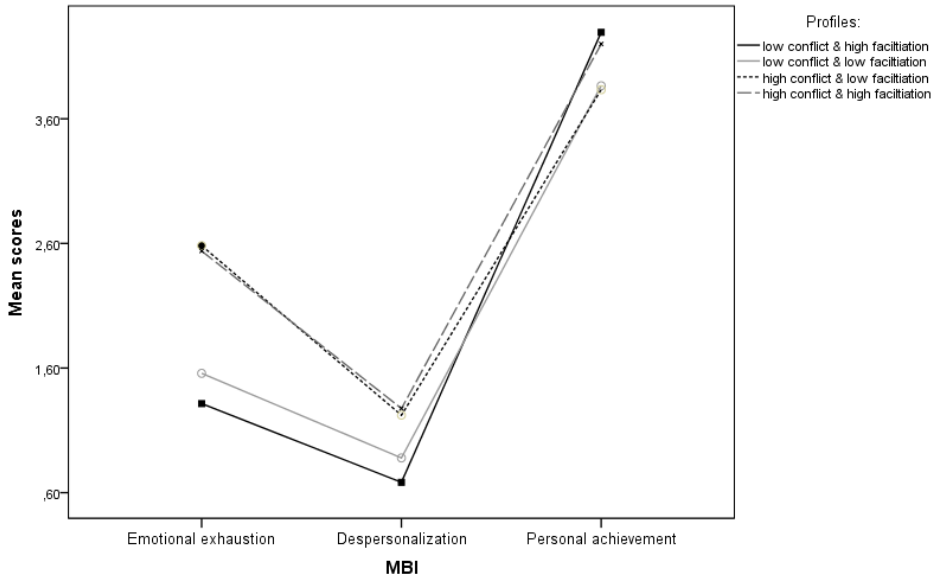

Figure 3. Average scores of MBI Scale dimensions and the 4 W-F Profiles

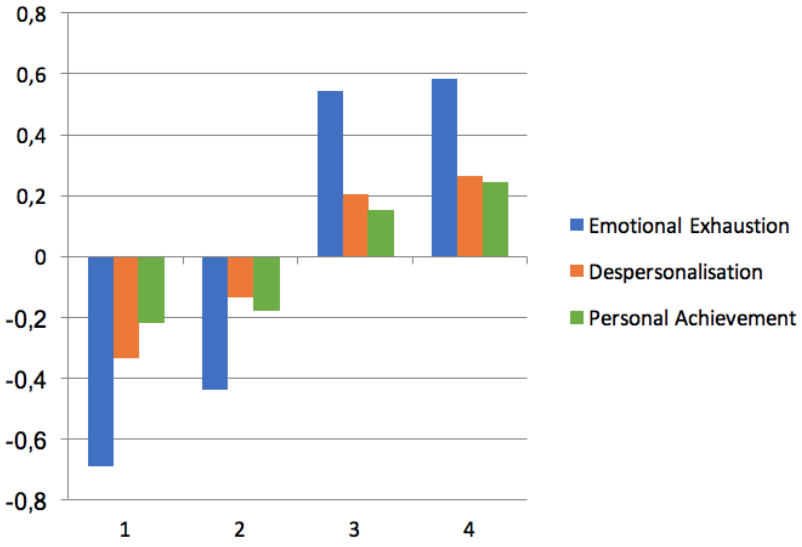

Figure 4. Pattern of means portraying how individuals belonging to each profile and burnout levels according to MBI´s dimensions

5. DISCUSSION

1. Study 1: Study on gender invariance

The purpose of this study was to explore the measurement invariance between sexes, in the different dimensions of the W-F Scale (Work-Family, adapted in an academic context by Carvalho & Peralta, in 2009, and later tested by Carvalho & Andrade, 2012; Carvalho et al., 2012; Carvalho et al., 2016a; Carvalho et al., 2016b) in higher education teachers from mainland Portugal and Islands. We found special motivation for carrying out this study after detecting that current literature reviews attempt to explain the complexity of the W-F relationship by the mechanisms of conflict (W-F) and worker´s scarcity of resources (e.g., time), but there is a considerable lack of research when it comes to measurement invariance between sexes.

The invariance study performed through the analysis of groups with structural equation models showed no measurement invariance regarding the W-F scale dimensions (WFI: Work´s Interference with Family; FWI: Family´s Interference with Work; WFF: Work as a Family-Life Facilitator; and FWF: Family as a Work Facilitator), showing variance in the structural model of the two subsamples under study. This result highlights the importance of not carrying out comparative studies with such dimensions for both sexes, since they do not represent the same concepts in both groups. They therefore call for cautious use of these four dimensions of scale, which relate to interference and work-family facilitation – as a result, therefore, comparative studies between men and women with these dimensions may lead to an interpretative bias regarding the obtained scores and their interpretation.

It should be noted, however, that current literature emphasizes the disadvantages of using the Chi-square test, given its sensitivity to sample size (in large samples, test results tend to be significant even for small differences between observed and specified

covariance matrices). For example, Hayduk (1987) refers that in the case of samples with N> 500 participants the test tends to indicate noninvariance, and it is also sensitive to non-normality, specifically regarding kurtosis (Yuan, 2005). Due to these limitations, other methodologies have been proposed in the study of measurement invariance through multi-group analysis, testing configural, metric and scalar invariance, as well as full uniqueness invariance, by comparing the adjustment indices CFI, SRMR (standardized root mean square residual; Brown, 2015) and RMSEA (e.g., Cervo, Mónico, Santos, Hutz, & Pais, 2016), since they are neither affected by the size of the sample nor by the complexity of the model (e.g., Chen, 2007; Cheung & Rensvold, 2002; Meade, Johnson, & Braddy, 2008). For this reason, future research should consider testing the measurement invariance of the W-F scale using more recent methodologies. Moreover, we suggest carrying out an invariance test based on the Multidimensional Item Response Theory in further studies. It is also worth mentioning the possibility of performing a MIMIC model (multiple indicators and multiple causes), in order to obtain modification indices for individual items, using sex (male vs. female) as a covariant of the latent model.

Another aspect of the W-F scale to be improved is the detailed analysis of the items that constitute each dimension, given the high semantic redundancies among many of them. Future improvement of each dimension of the scale could help reduce the number of items and avoid redundancies. This would be possible considering the high levels of internal consistency obtained, due to the strong intercorrelations between the items within each dimension.

Much of the literature on the Work-Family relationship highlights the differences between the sexes essentially linked to the expectations associated with the roles played by both. Therefore, this may evidence conceptual differences that result in

variance of measure in terms of the perception that men and women have regarding the dimensions of the W-F (Work-Family) scale. Men generally tend to assume more professional responsibilities, providing a stable income for the family and contributing to its well-being, though also being less available at home. In spite of being educated, emancipated, and an integral part of the work force, women still tend to play the role of caretakers in the family sphere, often prioritizing it over many of their professional aspirations, especially if they have children. In fact, it is generally women who manage children's daily lives, taking part in their hygiene, dressing and transportation to and from school, as well as helping them with homework or managing their extracurricular activities, meals and bedtime.

Furthermore, differences among cultures in relation to work-family interference may support variance between men and women. People in individualistic societies tend to view work as a means of achieving success and personal development (Hofstede, 1980), showing differences in male and female profiles. Consequently, excessive efforts at work are a sign of self- devotion at the expense of the family, which seems to be particularly valued by women. On the other hand, people in collectivist societies tend to see individuals as part of a social network (Hofstede, 1980), work roles are considered to serve group needs and are therefore weighed against individual needs, enabling shared responsibilities between men and women. Those who strive in the work sphere are supported and praised for their effort in the interest of the group (such as the family) (Yang, Chen, Choi, & Zou, 2000; Yang, 2005), thus making the construct variant between men and women.

The invariant results between men and women regarding the dimensions Impact of Work-Family Strain on Work and Impact of Work-Family Strain on Family Life represent identical conceptions of these factors for men and women, reflecting safety in

comparative evaluation between men and women, translated into a greater or lesser Impact of Work-Family Strain on Work and Impact of Work-Family Strain on Family Life. This will allow us, in the future, to reliably compare average scores from such dimensions. To a certain extent, we can also say that the representation of men and women in these dimensions echo their roles in society nowadays, largely due to changes in the "family" concept, followed by the emergence of adjusting responses from "family friendly businesses "or" family-owned businesses". What is more, there have also been efforts to create organizational and social policies to support families or to recognize equal work opportunities, career access and growth. These facts lead to a similar representational setting for both men and women regarding the concepts that shape such dimensions. Thereby, similarities between men and women in terms of work-family and family-work interaction may reflect the emergence of the new so-called "non-traditional" family structures (e.g., single-parent families with children and relatives from other relationships - "my children, yours and ours," unemployed men, men benefiting from parental leave, Skype/Facebook or virtual families), in addition to social responsible businesses that increasingly offer work-family reconciliation policies to men and women, providing more quality of life at work, greater satisfaction with both career and life, and greater productivity and quality. These facts, along with the increasing participation of women in the labor market, seem to require men and women to share non-labor tasks, bringing close the requirements for both sexes/genders at home and at work. In fact, Portugal is one of the European Union countries with highest female labor market participation rates, and even women with small children are working full time. However, there are few known Portuguese family-friendly organizations (providing W-F supportive and reconciliation practices that address the real needs of both sexes).

Limitations and future research suggestions for Study 1

In our view, there are two main limitations to this study. The first one is related to the extension of the W-F Scale, consisting of 92 items, which makes the process of answering the questionnaire very tiring and time-consuming. The other limitation concerns the way the questionnaire is administered. Although self-administered surveys have the advantage of anonymity and privacy respect, guaranteeing the internal validity of the study is usually a challenge (Alferes, 2012).

In addition to pointing out the need to carry out future research on the measurement invariance in all dimensions of the scale with other methodologies, it is necessary to investigate other variables such as the impact of personality on the work-family relationship, and the impact of W-F stress at different levels (personal and professional). Previous studies show that extroversion has a positive influence on this domain, facilitating work and family performance, though not being related to conflict. In addition, neuroticism seems to show a strong relationship with conflict, since more conscientious individuals create less conflict, which results in better family-work outcomes (Wayne, Musisca, & Fleeson, 2004).

All things considered, it was concluded that the W-F scale is adequate to perform the comparative gender evaluation of the dimensions Impact of Work-Family Strain on Work and Impact of Work-Family Strain Family Life (invariant dimensions). However, this is not the case of dimensions related to Interference and Work-Family Facilitation (variant dimensions).

2. Study 2: Short scales development

During the past years, there has been an increasing inclination to develop short forms for construct measures (Hagtvet & Sipos, 2016). Such trend has been motivated by the call for curtailing the burden on respondents to go through extended and time-consuming forms. Shortening scales also allows the detection and reduction of redundancies that may appear in some measures. Additionally, it also favors many constructs to be measured within a given time span, which turns out particularly attractive if we consider usual application settings. Hence, the aim of this study was to create two shortened versions of the Trabalho-Família scale (Carvalho, 2009), one for the Conflict dimension and the other for the Facilitation dimension, ensuring in both cases good psychometric properties.

The 14-item Conflict scale and the 11-item Facilitation scale identified in this analysis were the result of the shortest combination of items that met our criteria for scale validity. Later on, these measures allowed us to separate respondents into four profiles (Low Conflict and High Facilitation, Low Conflict and Low Facilitation, High Conflict and Low Facilitation, High Conflict and High Facilitation) in a sample of Portuguese higher education professors (see Study 3).

Regarding shortening strategies, some authors advise on the convenience of combining statistics-driven strategies and a judgmental approach (Coste, Guillemin, Pouchot, & Fermanian, 1997). It should be noted that this study predominantly followed a statistically driven approach to item reduction, rather than selecting items for conceptual reasons, which means that it is possible that some omitted items represent unique, but important aspects of both Conflict and Facilitation. However, a close look at the Facilitation scale reveals how item 21 might have meant and exception to the statistical item selection criteria. Even though the item loaded quite poorly, it was the

decision to keep it was based on the ponderation of its importance in terms of content, as well as the fact that its inclusion proved not negatively affect the scale´s validity and overall properties.

In conclusion, these short form scales constitute a contribution to further research as they demonstrate adequate psychometric properties and would therefore be useful for assessing Work-Family conflict and facilitation with minimal respondent burden. Gaining further insight of how these variables behave and affect life is critical for tailoring appropriate interventions both at personal and organizational levels.

Limitations and future research suggestions for Study 2

Because findings are based on a sample of Portuguese higher education professors, special care should be taken in generalizing the results across other populations and contexts (Shadish, Cook, & Campbell, 2002). In addition to this, it should not be forgotten that the Impact dimension of the WF Scale was not considered for this study. For this reason, considering the development of a short version based on this dimension is suggested for future studies.

3. Study 3: Burnout and profile analysis

Hardly an hour goes by in our everyday life without us thinking about family or work. These domains have been present in human life throughout history, presenting us with joys and satisfactions, but also with pressures, challenges, responsibilities and conflicts. As social beings, we draw on family for references, identity, support, boundaries and safety, to name but a few examples. On a similar note, it would be a mistake to reduce work`s role in our lives to a mere source of income. Its increased relevance relies on the fact that work also affects the way we manage our time, and provides us with the possibility of satisfying our psychosocial needs, ranging from personal identity to self-determination, prestige, social interaction and acknowledgement, or skills and professional development, among others (Salanova, Gracia, & Peiró, 1996).

Some occupations present inherent challenges in terms of balancing family and work. Thompson and Prottas (2005) put forward the fact that the nature of a job itself affects the ability of workers to blend work and family. This is certainly true in the case of university professors, who are frequently exposed to high pressure at work due to the parceled nature of their activities and the responsibilities placed on them, often without relying on the necessary to respond accordingly. Under such stressful circumstances, the risk of mental disorders increases (Ferreira et al., 2015). Carlotto and Palazzo (2006) state that owing to the nature of professors´ work and the context where it is carried out, there is a higher exposure to several stressors which, if persistent, could lead to Burnout Syndrome. We believe that the relevance of this study relies not only on better understanding burnout to design intervention programs, but also on the development of strategic prevention policies and early detection practices that could notoriously benefit workers' health and well-being.

For this study, cluster analysis was performed based on a sample of 610 Portuguese Higher Education Professors and the short versions developed. This led to the differentiation of four subject profiles that respond to different combinations of conflict and facilitation levels among professors, which are correlated with the three dimensions that comprise the MBI measure (Maslach et al., 1997). K-means cluster analysis led to two clusters for each scale, which meant that we could identify four groups of professors that are significantly similar among each other while being significantly different from other professors. Despite being statistical artefacts, they underline correlations between the occurrences of certain characteristics, therefore offering a way of understanding how some characteristics relate to behavior, even considering that some characteristics might lead to a certain kind of behavior in one case and to different kinds in other cases. For the time being, the four identified profiles remain only numbered and named according to the conflict-facilitation levels, although names based on their most striking characteristics could be suggested eventually. With regard to this, we understand that naming them has advantages and disadvantages. On the one hand, a name aggregates typical features and makes the differences between the types clearer. However, these names should be understood as technical terms, defined by the results of the analysis, even when the names are close to everyday languages and thus suggest additional correlations, which are not part of the data set. A study conducted by Carvalho and Chambel (2014) analyzed conflict-enrichment profiles, based on a sample of 1885 Portuguese bank workers. None of the five profiles analyzed in this study received a specific label. Instead, they were also referred to according to the different combinations of conflict and enrichment levels.

Analysis of the average scores of MBI Scale dimensions and the four Conflict-Facilitation profiles reveal meaningful results when it comes to understanding the way

these variables behave. Low-conflict profiles (1 and 2) showed lower levels of Emotional Exhaustion and Depersonalization, and higher levels of Personal Achievement. On the contrary, higher levels of Emotional Exhaustion and Despersonalization emerged for high-conflict profiles (3 and 4), followed by lower levels of Personal Achievement. These results match previous findings in literature, where conflict is reportedly related to the existence of burnout syndrome. Moreover, high-facilitation profiles (1 and 4) showed increased levels of Personal Achievement, although Emotional Exhaustion remained high despite facilitation factor (profile 4).

The results obtained not only reflect how struggling to meet the demands placed by work and family spheres can bring about an imbalance. In fact, they probably also show how when intrinsic occupational stress is added to an economic and financial crisis, the outlook in terms of leading a balanced life becomes even more challenging. Sadly, during the past years the situation of Portuguese professors has been a notable example of this scenario. As from the year 2010, Portugal has suffered the consequences of a financial crisis that persists nowadays, despite signs of improvement reported by the European Commission (2017). The consequences of the crisis drove to the intervention of the International Monetary Fund (IMF), the European Union and the European Central Bank. Such mediation brought about many austerity policies and prudent measures. On these grounds, the academic and scientific sector was one of the hardest hit. According to Ganga et al. (2016), a large and growing new wave of highly qualified Portuguese scientific emigration is one of the outcomes of such economic crisis, with very few public policies having been designed to reverse this unpleasant situation. It is worth bearing in mind that soon after the year Troika was introduced in Portugal, professors were debarred from being eligible to career promotions and, at the same time, wages were reduced. On top of this, there was also an increase in research

requirements, together with teaching efforts and compliance with strict performance evaluation requirements allegedly reflected in wages, although these ended up being cut and further taxes were introduced. Finally, work-family conciliation interferences in the lives of university professors were produced due to increased work demands, aside from the reduction of salaries, which had a negative impact above all on young families that had taken loans.

Limitations and future research suggestions for Study 3

Although the results of the present study provide new insight into the relationship between WFI and burnout, some limitations should be noticed. To begin with, even though we suspect the Portuguese economic crisis must have had an impact on the results, further research on this matter is required. Given the country is slowly leaving the recession period, collecting a second sample nowadays and performing a retrospective study could provide an insight into the impact of the crisis. In fact, the importance of studying the relation between work-family interaction and burnout over time has already been pointed out in literature (Innstrand et al., 2008).

Given men and women tend to experience the work-family interface differently, further research could explore the way conflict and facilitation profiles behave according to gender. Similarly, the impact of other variables such as age could also be analyzed.

It important to shed light on the fact that these days both the definition of the depersonalization dimension and the fact of whether it should be included as a burnout component is being questioned and revised in literature. According to Cox, Tisserand and Taris (2005), some authors consider that the depersonalization component of burnout is an associated coping strategy rather than an indispensable part of the

syndrome. Additionally, although depersonalization and cynicism have been considered the same in literature, Salanova et al. (2005) explored whether they constitute two different dimensions of bumout, or if they could actually be collapsed into one construct of mental distance. The authors concluded that cynicism and depersonalization contribute differently to burnout syndrome, reason why they should be considered separately.

4. Final discussion

Regardless being critical to the development of successful interventions and social policies, the slow translation of research into real-world outcomes remains one of the biggest challenges in terms of bridging the gap between academia and practice. In this sense, the development of a shorter version of the Work-Family Scale constitutes a first step towards accelerating good quality data gathering. After all, the power of scientific research lies in its ability to translate into practical results by bringing together observations, knowledge and data to solve problems and develop solutions.

Once data has been collected, ensuring the reliability and validity of instruments is essential, above all when they are used with different groups and in different situations (Schmitt & Ali, 2014). With regard to this, the results obtained from the gender invariance study strengthen the instrument's use by providing a wake-up call in terms of interpreting future results.

Today's patterns of non-stop economic process and constant pursuit of innovations require people to invest a large amount of their time and energy at work. The increasingly blurred borders of home and work cannot go unnoticed in most countries and cultures (Aycan, 2004). Due to the problems derived from work-related stress and disturbance in the work-family relationship, further learning about work-life

balance is necessary to develop interventions and health-oriented policies. We believe that the results obtained from this study add to a growing body of literature on the interaction between work and family. Last but not least, we wholeheartedly wish that these findings contribute to propel practitioner's work forward, by providing a blueprint to enable real changes that can truly improve people's wellbeing.

References

Adams, G, King, L. & King, D. W. (1996). Relationships of job and family involvement, family social support, and work–family conflict with job and life satisfaction. *Journal of Applied Psychology*, *81*(4), 411-420. http://dx.doi.org/10.1037/0021-9010.81.4.411

Aish, A., & Jöreskog, K. (1990). A panel model for political efficacy and responsiveness: An application of LISREL 7 with weighted least squares. *Quality and Quantity, 19*, 716-723.

Allen, T. (2013). The Work–-Family Role Interface: A Synthesis of the Research from Industrial and Organizational Psychology. In I. Weiner (Ed.), I. *Handbook of Psychology, Second Edition* (pp. 698-718). New Jersey: Wiley & Sons Inc.

Allen, T., Herst, D., Bruck, C. & Sutton, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology*, *5*(2), 278-308.

Amstad, F., Meier, L., Fasel, U., Elfering, A., & Semmer, N. (2011). A meta- analysis of work-family conflict and various outcomes with special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology*, *16*, 151–169.

Andreassi, J. (2011). What the person brings to the table. Personality, coping and work-family conflict. *Journal of family issues*, *32*(11), 1474-1499.

Anxo, D., Flood, L., Mencarini, L., Pailhé, A., Solaz, A., & Tanturri, M. (2007). Time Allocation between Work and Family over the Life-Cycle: A Comparative Gender Analysis of Italy, France, Sweden and the United States. *IZA Discussion Paper*, 3193, 1-35. http://ftp.iza.org/dp3193.pdf

Arbuckle, J. L. (2013). *Amos 22 user's guide*. Chicago, IL: SPSS Inc.

Arquero, J.L. & Donoso, J. A. (2013). Docencia, investigación y burnout: el síndrome del quemado en profesores universitarios de Contabilidad. *Revista de Contabilidad, 16*(2), 94-105. https://doi.org/10.1016/j.rcsar.2013.04.001

Aycan, Z. (2004). Key success factors for women in management in Turkey. *Applied Psychology, An International Review, 53*(3), 453-477.

Bagozzi, R., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science, 16* (1), 74-94.

Bailyn, L., Drago, R. & Kochan, T. (2001). *Integrating Work and Family Life. A Holistic Approach. A Report of the Sloan Work-Family Policy Network.* MIT, Sloan School of Management

Bailyn, L. & Harrington, M. (2010). Redesigning work for work–family integration. *Community, Work & Family, 7*(2), 197-208.

Balmforth, K. & Gardner, D. (2006). Conflict and Facilitation between Work and Family: Realizing the outcomes for organizations. *New Zealand Journal of Psychology*, *35*(2), 69-76.

Barnett, R. (1995). Toward a review and reconceptualization of the work/family literature. *Genetic, Social, and General Psychology Monographs*, *124*(2), 125-182.

Benbow, S. (1998). Burnout: a current knowledge and relevance to old age psychiatry. *International Journal of Geriatric Psychiatry, 13*, 21-30.

Bentler, P. (1990). Quantitative methods in psychology: Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238-246.

Bianchi, S. M., & Milkie, M. A. (2010). Work and family research in the first decade of the 21st century. *Journal of Marriage and Family, 72*, 705-725.

Bollen, K. A. (1989). *Structural equations with latent variables*, New York: Wiley.

Bragger, J., Rodriguez-Srednicki, O., Kutcher, E. Indovino, L. & Rosner, E. (2005) Work-family Conflict, Work-family Culture, and Organizational Citizenship Behavior Among Teachers. *Journal of Business and Psychology*. *20*(2), 303–324. https://doi.org/10.1007/s10869-005-8266-0

Boyar, S., Maertz, C. & Pearson, A. (2005). The effects of work–family conflict and family–work conflict on nonattendance behaviors. *Journal of Business Research*. *58*(7), 919-925.

Calvo-Salguero, A., Salinas, J.M. & Aguilar-Luzón, M. (2012). Gender and work–family conflict: Testing the rational model and the gender role expectations model in the Spanish cultural context. *International Journal of Psychology*, *47*(2),118-132.

Carlson, D., Kacmar, M. & Williams, L. (2000). Construction and Initial Validation of a Multidimensional Measure of Work-Family Conflict. *Journal of Vocational Behavior, 56*, 249-276.

Carlson, D., Kacmar, M., Wayne, J. & Grzywacz, J. (2006). Measuring the positive side of the work–family interface: Development and validation of a work–family enrichment scale. *Journal of Vocational Behavior*, *68*(1), 131-164.

Carlson, D., Hunter, E. & Ferguson, M. (2011). Work–Family Enrichment and Satisfaction. Mediating Processes and Relative Impact of Originating and Receiving Domains. *Journal of Management. 40*(3), 845-865.

Carlson, D., Kacmar, M., Zivnuska, S., Ferguson, M. & Whitten, D. (2011). Work-family enrichment and job performance: a constructive replication of affective events theory. *Journal of Occupational Health Psychology*, *16*(3):297-312.

Carvalho, C., & Peralta, C. F. (2009). Projecto de Investigação sobre Antecedentes e consequentes da Conciliação Trabalho-Família: Um estudo com docentes e investigadores do ensino superior português. Unpublished work. Coimbra: Universidade de Coimbra. Portugal.

Carvalho, C., & Peralta, C. F. (2011). Gestão das emoções em contexto de trabalho: Antecedentes e consequentes do emotional labor (trabalho emocional). Revista Psicologia na Actualidade Online, Nº 3/Out/2011, Cap. 17 (140-141): Social e Organizações.

Carvalho, C., & Andrade, M. (2012). A síndrome de *burnout* em docentes do ensino superior: O papel do conflito trabalho-família. In C. Carvalho, P. Lourenço & C. Peralta (Orgs.), A emoção nas organizações (pp. 111-136). Viseu: PsicoSoma.

Carvalho, C., Mónico, L., Pinto, V., Pinto, C., Alegre, M. I., Oliveira, D., & Parreira, P. (*in press*). Work-Family Interference and Work-Family Facilitation: A study of measurement invariance between genders. *Revista Psicologia: Teoria e Prática,20*(2), 42-63.

Carvalho, V.S., & Chambel, M., J. (2014). Work-to-family enrichment and employees' well-being: High Performance Work System and job characteristics. *Social Indicators Research, 119*, 373-387. doi:10.1007/s11205-013-0475-8

Carvalho, V. S., & Chambel, M. J. (2016). A relação trabalho-família. In M. J. Chambel (Coord.). *Psicologia da Saúde Ocupacional* (pp. 187-213). Lisboa: Pactor.

Carvalho, C., Mónico, L. S., Parreira, P. M., Fernandes, C., Salgueiro-Oliveira, A., Braga, L., & Gómez, D. (2016a). Conciliação trabalho-família e comprometimento organizacional: Um estudo com profissionais de saúde. *Gaceta Sanitária, 30* (Espec Congr): 278-279.

Carvalho, C., Parreira, P. M., Mónico, L., & Ruivo, J. (2016b). Work-life balance in health professionals and professors: Comparative study of workers with shift work and fixed schedule. *BMC Health Services Research*, *16*(3), 126. doi: 10.1186/s12913-016-1423-5

Casares, E. (2008). Estudios sobre el cambio en la estructura de las relaciones familiares. *Revista de Trabajo Social*, *8*(1), 183-195.

Chambel, M. J. (2014). A interface entre o trabalho e a família. In M. J. Chambel & M. T. Ribeiro (Eds.), *A relação entre o trabalho e a família* (pp. 42-62). Lisboa: Editora RH.

Clark, S. (2000). Work/Family Border Theory: A New Theory of Work/Family Balance. *Human Relations*, *53*(6), 747-770.

Cochran, W. G. (1952). The $\chi 2$ test of goodness of fit. *Annals of Mathematical Statistics*, *23*, 315-345.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cooke, R. & Rousseau, D. (1984). Stress and strain from family roles and work-role expectations. Journal of Applied Psychology, *69*(2), 252-260.

Cox, T., Tisserand, M & Taris, T. (2005). The conceptualization and measurement of burnout: Questions and directions. *Work & Stress, 19*(3), 187-191.

Crouter, A. C. (1984). Spillover from family to work: The neglected side of the work–family interface. *Human Relations, 37*, 425-442.

Curbow, B., McDonnell, K., Spratt, K., Griffin, J. & Agnew, J. (2003). Development of the Work–Family Interface Scale. *Early Childhood Research Quarterly*, *18*(3), 310-330.

Daniel, S. & Sonnentag, S. (2014). Work to non-work enrichment: The mediating roles of positive affect and positive work reflection. *Work & Stress, 28*(1), 49-66.

Diamantopoulos, A., & Siguaw, J. A. (2000). *Introducing Lisrel: a guide for the uninitiated*. London: Sage.

Dolcos, S. & Daley, D. (2009). Work Pressure, Workplace Social Resources, and Work–Family Conflict: The Tale of Two Sectors. *International Journal of Stress Management*, *16*(4), 291–311.

Dunn, M. & O´Brien, K. (2013). Work-family enrichment among dual-earner couples: can work improve our family life? *Journal of Counseling Psychology*, *60*(4):634-40.

Duxbury, L. & Higgins, C. (1991). Gender differences in work-family conflict. *Journal of Applied Psychology*, *76*(1), 60-74.

Edwards, J. R., & Rothbard, N. P. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review, 25*, 178-199.

Espinar, I., Carrasco, M., Martínez, M. & García-Mina, A. (2003). Familias reconstituidas: Un estudio sobre las nuevas estructuras familiares. *Clínica y Salud, 14*(3), 301-332.

Eurofound (European Agency for the Improvement of Living and Working Conditions) (2005). Living to work-working to live: Tomorrow´s work-life balance in Europe. https://www.eurofound.europa.eu/publications/2004/living-to-work-working-to-live-tomorrows-work-life-balance-in-europe-background-paper-for-foundation

Eurofound and International Labour Organization (2019), *Working conditions in a global perspective*, Publications Office of the European Union, Luxembourg, and International Labour Organization, Geneva.

European Commission (2017). European semester thematic factsheet. Labour force participation of women. https://ec.europa.eu/info/sites/info/files/european-semester_thematic-factsheet_labour-force-participation-women_en.pdf

European Commission (2017). European Pillar of Social Rights. https://ec.europa.eu/commission/sites/beta-political/files/social-summit-european-pillar-social-rights-booklet_en.pdf

Felstead, A., Jewson, N., Phizacklea, A. &, Walters, S. (2006). Opportunity to work at home in the context of Work-Life Balance. *Human Resource Management Journal. 12.* 54 - 76.

Fine-Davis, M., Fagnani, J., Giovannini, D., Højgaard, L. & Clarke, H. (2005). *Fathers and Mothers: Dilemmas of the Work-Life Balance. A Comparative Study in Four European Countries*. The Netherlands: Kluwer Academic.

Finney, S. J., & DiStefano, C. (2006). Non-normal and categorical data in structural equation modeling. In G. R. Hancock & R. O. Mueller (Eds.), *Structural equation modeling: A second course* (pp. 269-314). Greenwich, CT: Information Age Publishing.

Friedman, I. A. (1995). Student behavior patterns contributing to teacher burnout. *Journal of Educational Research, 88*(5), 281-289.

Friedman, S. D., & Greenhaus, J. H. (2000). *Work and family—allies or enemies? What happens when business professionals confront life choices*. New York: Oxford University Press.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

Frone, M., Russell, M. & Cooper, M. (1992). Antecedents and Outcomes of Work-Family Conflict: Testing a Model of Work-Family Interface. *Journal of Applied Psychology*, *77*(1), 65-78.

Frone, M., Russell, M. & Barnes, G. (1996). Work–family conflict, gender, and health-related outcomes: A study of employed parents in two community samples. *Journal of Occupational Health Psychology*, *1*(1), 57-69.

Frone, M. R. (2000). Work–family conflict and employee disorders: The National Comorbidity Survey. Journal of Applied Psychology, *85*, 888–895.

Frone, M., Rusell, M. & Cooper, M. (2011). Relation of work–family conflict to health outcomes: A four-year longitudinal study of employed parents. Journal of Occupational and Organizational Psychology, *70*(4), 325-335.

Frone, M., Yardley, J. & Markel, K. (1997). Developing and Testing an Integrative Model of the Work-Family Interface. *Journal of Vocational Behavior*, *50*, 145–167.

Fukui, C., Sakka, M., Amiya, R., Sato, I. & Kamibeppu, K. (2017). Validation of family conflict scale for family caregivers of persons with dementia in long-term care facilities and exploration of family conflicts and support. International Psychogeriatrics, 1-11. doi:10.1017/S1041610217002356

Ganga, R., Silva, J., Gomes, R., Vaz, H., Lopes, J., Silva, S., Cerdeira, L., Cabrito, B., Magalhães, D., Machado-Taylor, M., Peixoto, P., Patrocínio, T., & Brites, R. (2016). Portuguese Scientists' Migration: a study on the 2008 crisis aftermath. *International Migration, 54*(6), 43-55.

Gelfand, M. & Knight, A. (2005). Cross-Cultural Perspectives on Work-Family Conflict. In Poelmans, S. (Ed.) *Work and Family: An International Research Perspective* (400-414). New Jersey: Psychology Press.

Gerson, K. & Torres, S. (2015). Changing family patterns and the future of family life. In Scott, R.A. & Kosslyn, S.M. (Eds.) *Emerging Trends in the Social and Behavioral Sciences Hoboken*, NJ: John Wiley and Sons.

Geurts, S. A. E., Taris, T. W., Kompier, M. A. J., Dikkers, J. S. E., van Hooff, M. L. M., & Kinnunen, U. M. (2005). Work- home interaction from a work psychological perspective: development and validation of a new questionnaire, the SWING. *Work y Stress*, *19*(4), 319-339.

Gómez-Alcaina, B., Montero-Marín, J., García-Campayo, J., Demarzo, M. & Pereira, J. (2013). Usefulness of biological markers in early detection and prevention of burnout syndrome. *Revista de Psicopatologia y Psicologia Clinica, 18*(3), 245-253.

Gorsuch, R. (1983). *Factor analysis*. Hillsdale, NJ: Lawrence Erlbaum.

Gözükara, I. & Simsek, Ö. (2016). The Big-Two Model of Personality and Work-Family Conflict. *International Journal of Human Resource Studies*, *6*(1), 73-88.

Gracia, F., González, P. & Peiró, J. (1996). El trabajo en relación a otros ámbitos de la vida. In Peiró, J. & Prieto, F. (Eds.) *Tratado de psicología del trabajo. Vol.II: Aspectos psicosociales del trabajo* (187-223). Madrid: Síntesis.

Grau, C. & Fernández, M. (2015). Relaciones de parentesco en las nuevas familias. Disociación entre maternidad/paternidad biológica, genética y social. *Gazeta de Antropología*, *31*(1). Retrieved from: http://digibug.ugr.es/bitstream/handle/10481/34248/GA%203102%20ClaudiaGrau_MariaFernandez.pdf?sequence=6&isAllowed=y

Greenhaus, J. & Beutell, N. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, *10*(1), 76-88.

Greenhaus, J., Collins, K., & Shaw, J. (2003). The relation between work–family balance and quality of life. *Journal of Vocational Behavior*, *63*(3), 510-531.

Greenhaus, J. & Powell, G. (2006). When work and family are allies: a theory of work-family enrichment. *The Academy of Management Review*, *31*(1), 72-92.

Grzywacz, J. (2002). Toward a theory of Work-Family Facilitation. Paper presented at Persons, Processes, and Places: Research on Families, Workplaces and Communities Conference, San Francisco. Retrieved from https://www.researchgate.net/publication/254404919_Toward_a_theory_of_WorkFamily_Facilitation

Grzywaez, J., Almeida, D. & McDonald, D. (2002). Work-family spillover and daily reports of work and family stress in the adult labor force. *Family Relations*, *51*(1), 28-36.

Gutek, B., Searle, S., & Klepa, L. (1991). Rational versus gender role-explanations for work-family conflict. *Journal of Applied Psychology*, *76*, 560-568.

Haar, J., Russo, M., Sune, A. & Ollier-Malaterre, A. (2014). Outcomes of work–life balance on job satisfaction, life satisfaction and mental health: a study across seven cultures. *Journal of vocational behavior*, *85*(3), 361-373.

Hagqvist, E., Gådin, K. & Nordenmark, M. (2017). Work-family conflict and well-being across Europe: the role of gender context. *Social Indicators Research*, *132*(2), 785-797.

Hagtvet, K. & Sipos, K. (2016). Creating short forms for construct measures: the role of exchangeable forms. *Pedagogika, 66*(6), 689–713.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). (7th Ed.). *Multivariate data analysis.* New Jersey: Prentice Hall.

Hall, D. T. (1990). Promoting work/family balance: an organization-change approach. School of Management: Boston University.

Hammer, L., Cullen, J., Neal, M., Sinclair, R. & Shafiro, M. (2005). The longitudinal effects of work-family conflict and positive spillover on depressive symptoms among dual-earner couples. *Journal of Occupational Health Psychology*, *10*(2), 138-154.

Haslam, D., Filus, A., Morawska, A., Sanders, M. & Fletcher, R. (2015). The Work–Family Conflict Scale (WAFCS): Development and initial validation of a self-report measure of work–family conflict for use with parents. *Child Psychiatry and Human Development*, *46*, 346–357.

Herst, D. (2003). Cross-cultural measurement invariance of work/family conflict scales across English-speaking samples. Graduate Theses and Dissertations. Retrieved from http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=2388&context=etd

Hill, E.J., Allen, S., Jacob, J., Ferrin, A., Bikhazi, S.L., Van Langeveld, A., Martinengo, G., Parker, T. & Walker, E. (2007). Work–Family facilitation: expanding theoretical understanding through qualitative exploration. *Advances in Developing Human Resources 9*(4), 507-526.

Hoffarth, M. (2017). The making of burnout: from social change to self-awareness in the postwar United States, 1970–82. *History of the Human Sciences, 30*(5), 30–45.

Innstrand, S., Langballe E.M., Espnes G. A., Falkum, E. & Aasland O.G. (2008). Positive and negative work--family interaction and burnout: a longitudinal study of reciprocal relations. *Work & Stress, 22*(1), 1-15.

Jones, F., Burke, R. J., & Westman, M. (2006). *Work-life balance – A psychological perspective*. Psychology Press: East Sussex.

Jöreskog, K. G., & Sörbom, D. (1982). Recent developments in structural equation modeling. *Journal of Marketing Research*, *19*, 404-416.

Kanter, R. M. (1977). *Work and family in the United States: a critical review and agenda for research and policy.* New York: Russell Sage Foundation.

Karatepe, O. & Tekinkus, M. (2006). The effects of work-family conflict, emotional exhaustion, and intrinsic motivation on job outcomes of front-line employees. *International Journal of Bank Marketing, 24*(3),173-193.

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York: The Guilford Press.

Korabik, K., Lero, D. & Ayman, R. (2003). A multi-level approach to cross-cultural Work-Family research. A micro and macro perspective. *International Journal of Cross Cultural Management*, *3*(3), 289-303.

Kossek, E., & Ozeki, C. (1998). Work–family conflict, policies, and the job-life satisfaction relationship: A review and directions for organizational behavior-human resources research. *Journal of Applied Psychology*, *83*, 139–149.

Lapierre L., Li, Y., Kwan H., Greenhaus J., DiRenzo M. & Shao P. (2017). A meta-analysis of the antecedents of work–family enrichment. *Journal of Organisational Behavior*, 1–17.

Leiter, M. P., & Maslach, C. (1988). The impact of interpersonal environment on burnout and organizational commitment. *Journal of Organizational Behavior, 9*, 297-308.

MacDermid, S. M., Barnett, R., Crosby, F., Greenhaus, J., Koblenz, M., Marks, S., Perry-Jenkins, M., Voydanoff, P., Wethington, E., & Sabbatini-Bunch, L. (2000). The measurement of work/life tension: recommendations of a virtual think tank. Boston: Alfred P. Sloan Foundation. Retrieved from: http://wfnetwork.bc.edu/pdfs/measure_tension.pdf

Marks, S. R. (1977). Multiple roles and role strain: Some notes on human energy, time and commitment. *American Sociological Review*, *42*, 921–936.

Marôco, J. (2010). *Análise de equações estruturais: fundamentos teóricos, software & aplicações*. Perô Pinheiro: Report Number Ltda.

Martínez, E., Mera, G., González, C., López, D. & Blobel, B. (2015). EmoBurnout: An approach for supporting Burnout Syndrome diagnosis. *Studies in health technology and informatics, 211*, 111-118.

Maslach, C. (1976). Burned-out. *Human Behavior, 5*(9), 16-22.

Maslach, C., & Jackson, S. E. (1986). *Maslach Burnout Inventory manual* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Jackson, S., & Leiter, M. (1997). Maslach Burnout Inventory: Third edition. In C. P. Zalaquett & R. J. Wood (Eds.), *Evaluating stress: a book of resources* (pp. 191-218). Lanham, MD, US: Scarecrow Education.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology, 52*, 397-422.

May, M. & Reynolds, J. (2017). Religious affiliation and Work–Family Conflict among women and men. *Journal of Family Issues*, *39*(7) 1797 –1826.

McNall, L., Nicklin, J. & Masuda, A. (2010). A Meta-Analytic review of the consequences associated with Work–Family enrichment. *Journal of Business and Psychology, 25*(3), 381–396.

Moore, D. S., Notz, W. I. & Flinger, M. A (2013). *The basic practice of statistics* (6th ed.). New York, NY: W. H. Freeman and Company.

Morris M & Madsen S. (2007) Advancing work-life integration in individuals, organizations, and communities. *Advances in Developing Human Resources*, *9*, 439-454.

Netemeyer, R., Boles, J. & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology*, *81*(4), 400-410.

Nitzsche, A., Jung, J., Kowalski, C. & Holger, H. (2014). Validation of the Work-Life Balance Culture Scale (WLBCS). *Work, 49*, 133–142. DOI 10.3233/WOR-131643

Noor K. (2011). Work-life balance and intention to leave among academics in Malaysian public higher education institutions. *International Journal of Business and Social Science*, *2*(11), 240-248.

Nord, W.R., Fox, S., Phoenix, A. and Viano, K. (2002). Real world reactions to work-life balance programs: lessons for effective implementation. *Organizational Dynamics, 30*, 3, 223-238.

Nunnally, J. C. (1978). *Psychometric theory*. New York, McGraw-Hill.

Peteers, M., Montgomery, A., Bakker, A. & Schaufeli, W. (2005). Balancing work and home: how Job and home demands are related to burnout. *International Journal of Stress Management*, *12*(1), 43–61.

Premeaux, S. F., Adkins, C. L., & Mossholder, K. W. (2007). Balancing work and family: a field study of multi-dimensional, multi-role work-family conflict. *Journal of Organizational Behavior*, *28*, 705-727.

Raju, N. S., Laffittee, L. J., & Byrne, B. M. (2002). Measurement equivalence: a comparison of methods based on confirmatory factor analysis and item response theory. *Journal of Applied Psychology, 87*, 517-529.

Rastogi, M., Rangnekar, S. & Rastogi, R. (2017). Work–Family enrichment in India: validation of Work–Family Enrichment Scale. *Global Business Review, 18*(6), 1568–1579. DOI: 10.1177/0972150917713050.

Regal, M. (2016). Health surveillance for early detection of burnout in primary care physicians' syndrome. *Atención Primaria, 47*(1), 25-31.

Rode, J., Rehg, M., Near, J. & Underhill, J. (2007). The Effect of Work/Family Conflict on intention to quit: the mediating roles of job and life satisfaction. *Applied Research in Quality of Life*, *2*(2), 65–82.

Rogers, J. & Franzen, A. (2014). Work-family conflict: The effects of religious context on married women's participation in the labor force. *Religions*, *5*(3), 580-593.

Romeo, M., Berger, R., Yepes-Baldó, M., & Ramos, B. (2014). Adaptation and validation of the Spanish Version of the 'Survey Work-Home Interaction-NijmeGen' (SWING) to Spanish speaking countries. *Anales de Psicologia, 30*(1), 287-293.

Romeo, M., Yepes-Baldó, M., & Berger, R. (2014). Contribución española e iberoamericana al estudio del "Work Life Balance": claves para la intervención. *Papeles del Psicólogo*, *35*(1), 48-58.

Rubio, C., Osca, A., Recio, P., Urien, P. & Peiró, J. (2015). Work-family conflict, self-efficacy, and emotional exhaustion: A test of longitudinal effects. *Journal of Work and Organizational Psychology*, *31*, 147-154.

Salanova, M., Llorens, S., García-Renedo, M., Burriel, R., Bresc, E. & Schaufeli, W. (2005). Towards a four-dimensional model of burnout. A multi-group factor-analytic study including depersonalization and cynism. *Educational and Psychological Measurement, 65*(5), 901-913.

Salvagioni, D.A., Melanda, F. N., Mesas, A. E., González, A. D., Gabani, F. L. & Andrade, S. (2017). Physical, psychological and occupational consequences of job burnout: a systematic review of prospective studies. *PLoS ONE, 12*(10), 1-29.

Schmitt, N. & Ali, A. (2014). The Practical Importance of Measurement Invariance. In Lance, C.E. & Vandenberg R.J. (Eds.) *More Statistical and Methodological Myths and Urban Legends*. New York: Routledge.

Schumacker, R. E., & Lomax, R. G. (2010). *A beginner's guide to structural equation modeling* (3rd ed.). Mahwah, N.J.: Lawrence Erlbaum Associates.

Seligman, M.E.P. & Csikszentmihalyi, M. (2000). Positive psychology. An introduction. *American Psychologist, 55*, 5 14.

Seltzer, J., Bachrach, C., Bianchi, S., Bledsoe, C., Casper, L., Chase-Lansdale, P.L., DiPrete, T., Hotz, J., Morgan, S.P., Sanders, S.G. & Thomas, D. (2005). Explaining family change and variation: challenges for family demographers. *Journal of Marriage and Family*, *67*(4): 908–925.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference.* Boston, MA: Houghton Mifflin.

Shelton, L. M. (2006). Female entrepreneurs, work-family conflict, and venture performance: New insights into the work-family interface. *Journal of Small Business Management, 44*(2), 285-297.

Shivani, P. & Cunningham, C. (2012). Religion, resources, and work-family balance. *Mental Health, Religion & Culture*, *5*(4): 389-401.

Shockley, K. & Singla, N. (2011). Reconsidering Work–Family Interactions and Satisfaction: A Meta-Analysis. *Journal of Management, 37*(3), 861-886.

Sieber, S. D. (1974). Toward a theory of role accumulation. *American Sociological Review, 39*, 567-578.

Small, S. & Riley, D. (1990). Toward a multidimensional assessment of work spillover into family life. Journal of Marriage and the Family, *52*(1), 51-61. http://dx.doi.org/10.2307/352837

Smith, T., DeJoy, D., Dyal, M. & Huang, G. (2017). Impact of work pressure, work stress and work-family conflict on firefighter burnout. *Archives of Environmental and Occupational Health*, *25*, 1-8.

Staines, G.L. (1980). Spill-over versus compensation: A review of the literature on the relationship between work and non-work. *Human Relations*, *33*, 111-29.

Steiber, N. (2009). Reported levels of time-based and strain-based conflict between work and family roles in Europe: A multilevel approach. *Social Indicators Research, 93*, 469–488.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.) New Jersey: Pearson Education.

Thompson, C., Prottas, D. (2006). Relationships among organizational family support, job autonomy, perceived control, and employee well-being. *Journal of Occupational Health Psychology, 11*(1), 100-18.

Tziner, A. & Sharoni, G. (2014). Organizational citizenship behavior, organizational justice, job stress, and work-family conflict: Examination of their interrelationships with respondents from a non-Western culture. *Journal of Work and Organizational Psychology*, *30*(1), 35-42. doi: 10.5093/tr2014a5

UNECE (2012). Measurement of emerging forms of families and households. United Nations. Retrieved from: http://www.unece.org/fileadmin/DAM/stats/publications/Families_and_Households_FINAL.pdf

Vieira, J., Lopez, F. & Matos, P. (2014). Further validation of work–family conflict and work–family enrichment scales among Portuguese working parents. *Journal of Career Assessment*, *22*(2), 329-344.

Vithanage, V., & Arachchige, B. (2017). A study on the work-family balance and job performance of academics in Sri Lanka. *The IUP Journal of Management Research, 16*(2), 7-28.

Voyandoff, P. (2004). The effects of work demands and resources on work-to-family conflict and facilitation. *Journal of Marriage and Family*, *66*, 398–412.

Voyandoff, P. (2005). Toward a conceptualization of perceived work-family fit and balance: A demands and resources approach. *Journal of Marriage and Family*, *67*, 822–836.

Wayne, J. H., Musisca, N., & Fleeson, W. (2002). Considering the role of personality in the work-family experience: Relationships of the Big Five to work-family conflict and facilitation. *Journal of Vocational Behavior, 64*, 108-130. doi: 10.1016/S0001-8791(03)00035-6

Waumsley, J., Houston, D. & Marks, G. (2010). What about us? Measuring the Work-Life Balance of people who do not have children. *Canadian Center of Science and Education*, *2*(2), 3-17.

White, J. M. (1999). Work–family stage and satisfaction with work–family balance. *Journal of Comparative Family Studies*, *30*(2), 163-175.

Yuan, K. (2005). Fit indices versus test statistics. Multivariate Behavioral Research, *40*(1), 115-148.

Zábrodská, K., Mudrák, J., Šolcová, I., Květon, P., Blatný, M. & Machovcová, K. (2017). Burnout among university faculty: the central role of work–family conflict. *Educational Psychology*, *38*(6),1-20.

Zapf, D., Dormann, C. & Frese, M. (1996). Longitudinal studies in organizational stress research: A review of the literature with reference to methodological issues. *Journal of Occupational Health Psychology, 1*, 145 169.

Zedeck, S. (1992). *Introduction: Exploring the domain of work and family concerns*. In S. Zedeck (Ed.), *Work, families, and organizations* (pp. 1-32). San Francisco: Jossey-Bass.

Zedeck, S., & Mosier, K. L. (1990). Work in the family and employing organization. *American Psychologist*, *45*, 240-251.

Zhang, J. & Liu, Y. (2011). Antecedents of Work-Family Conflict: review and prospect. *International Journal of Business and Management*, *6*(1), 89-103.

Zhang, Y., Xu, S., Jin, J. & Ford, T. (2018). The within and cross domain effects of work-family enrichment: A meta-analysis. *Journal of Vocational Behavior*, *104*, 210-227. https://doi.org/10.1016/j.jvb.2017.11.003

ANNEXES

1. Tutoring meeting minutes

DATE	MODE	TUTOR	REPORT
1/12/17	SKYPE MEETING	HOME TUTORS	**Thesis title:** *Relação Trabalho-Família em docentes de ensino superior: perfis de conflito e enriquecimento, e relações com o Burnout.* **Description and objectives:** We will use the TF scale developed by Professor Carla Carvalho and database collected with sample 605 higher education teachers in Portugal. It is proposed to carry out a study with the following objectives: 1. Validate the TF scale developed by Professor Carla Carvalho. To do this, we shall: **1.A** Make a validation study through the analysis of the psychometric qualities of all the items of the original scale (long version). For this purpose, the scale will be split into two halves, in order to do an exploratory factor analysis (EFA) with the first 50%, and a confirmatory factor analysis (CFA) with the remaining 50%. **1.B** Based on the previous work, we will design a short or reduced version with good psychometric qualities ensuring the maintenance of the same dimensions. Also, we will perform the same analyses made for the long version, but with another random sample partition. 2. Through the "Two Step Cluster Analysis" method, identify the profiles of workers based on the conciliation or conflict between their family life and their professional life, make a sociodemographic characterization within each of these profiles, and analyse the levels of burnout. **Questions:** • Professor Lisete said that we can begin to make convergent validity and discriminant validity of the short scale. I would like to know if I shall include this aspect in the job description, and ask what I can do myself. • Reliability Analysis: is it done for both versions? • I would appreciate it if you could confirm the information

			you would like me to include in the abstract, and what you consider I should not mention.
29/1/18	FACE-TO-FACE MEETING	HOME TUTORS	It should be emphasized that higher education has undergone changes at different levels (requirement in terms of publications, research component, increased teaching efforts and meeting performance assessment requirements). In addition, the Troika entered Portugal in 2010, which led to the withhold of career development and a reduction in wages. Find out what scales there are to measure the work-family relationship (include years in which they were published). Importance of scales designed and validated for the Portuguese population. It is decided to carry out a cohort study and collect a second simple, in order to analyse the socio-economic impact of the Portuguese crisis.
8/3/18	SKYPE MEETING	HOME TUTORS	Based upon comments made by Host University professors, we decide to exclude the economic crisis analysis from the study.
12/3/18	FACE-TO-FACE MEETING	HOST TUTOR	Prof. Marina asked for a schedule, which I will should develop to plan the whole thesis process and timing. As for the antiquity of the sample, she referred that we can mention this as a limitation of the study. She said that for our next meeting (April 4th) I should take both the timeline and the developed theoretical framework. In this sense, she requested me to ask Prof. Carla about the theoretical model that he used for the construction of the instrument. On the other hand, both Prof. Marina and Prof. Regina (from the methodology chair) asked me for the database so I could start working.
16/3/18	SKYPE MEETING	HOME TUTORS	We began to work with the aim of developing the short scale version. Professor Lisete carried out statistical analysis. Prof. Carla and I were asked to do a chart classifying the items according to the dimensions they belonged to.

4/4/18	FACE-TO-FACE MEETING	HOST TUTOR	In the first place, I showed Prof. Marina what I had been able to do in terms of designing a schedule. I told Prof. Marina about what we did in our last Skype meeting (that is, we had started working on the validation of the scale so as to develop the short version). She said that this is very good, but that for the Position Paper instance the most important thing is to have the introduction and the theoretical framework well developed. To do this, she gave me an idea of how to organize the information, and suggested the following: - Introduction: in addition to accounting for the macro-social relevance of the study, Prof. Marina thinks it is very important to justify why we are going to do a short version of the scale. Including the context of Portugal in this part or not should be something to consider afterwards. - Theoretical Framework: Prof. Marina understands that the variable TF should be the central axis of the conceptual framework, and her suggestion was to start with the definition of the variable T-F, giving an account of the different authors who have studied the topic and the diversity that exists in the literature. To conclude this first section, she suggested rounding up with the idea that -although there is diversity in the literature- it is possible to identify consensus of most authors in some respects. Thirdly, she suggested developing the consequent variables and delving into the effects they might have. Fourthly, she suggested to concretize the different theoretical perspectives that prevail in the literature regarding the variable, and to connect this with the different measuring instruments that have been developed. A Prof. Marina recommended the following article for the Theoretical Framework: http://www.papelesdelpsicologo.es/pdf/2321.pdf
12/4/18	FACE-TO-FACE MEETING	HOST TUTOR	As requested by Prof. Marina, a day previous to our meeting we sent her the document based on the suggestions she had made at our last meeting. For the meeting, the Teacher read the documents and made new comments and corrections that follow in the attached document.

			In addition to what appears in the document, she also stated that I must continue to grow literature. The next meeting with Prof. Marina was combined for the day of April 19th at 6:00 p.m. On the other hand, on Friday we had a class with Prof. Rita Berger, where we explained how the Position Paper should be presented on April 27th. In general terms, we are expected to follow the following structure: 1 * Introduction: justification of work 2 * State of the art 3 * Contributions from our study 4 * Objectives and assumptions 5 * Method (participants, procedure, instruments - psychometric characteristics, choice argument, validation and statistical analysis). Since we have almost two weeks for the presentation and if the teachers agree, I would like to prepare the PP document and the presentation at the next weekend (soon to the meeting with Prof. Marina on the 19th, to include their comments) , and send you on Monday (23/4). I think this way I could have a few days to make the modifications that the teachers think pertinent, as well as to train the presentation.
22/5/18	FACE-TO-FACE MEETING	HOST TUTOR	Prof. Marina posed the following questions: 1- Why are we going to build two short versions and not just one? 2- With regard to Burnout: what role does it play? Is this to be considered as a criterion variable? If so, she stressed the importance of studying the usual results analyzed in the literature and making a conceptual analysis of the variable Burnout and other variables that result from the Work-Family interface. On the other hand, Prof. Marina mentioned the fact that some authors today question the depersonalization dimension. PP modifications based on the comments and suggestions of the

			teachers is sent by email. Additionally, a meeting with Home Tutors is requested so as to be able to continue working, specially on the part of creating the W-F Conflict and W-F Facilitation profiles to study their relationship with Burnout Syndrome.
6/6/18	SKYPE MEETING	HOME TUTORS	The meeting took place between 3-6 pm. Short versions EFA and CFA were carried out with Prof. Lisete.
8/6/18	SKYPE MEETING	HOME TUTORS	We ran Cluster and Profile Analysis on SPSS for Study 3.

2. Project timing

RESEARCH PAPER ACTION PLAN

PHASE	TIMELINE START	TIMELINE END	STATUS
ABSTRACT	13/11/17	7/12/17	COMPLETED
PRE-POSITION PAPER	31/1/18	23/2/18	COMPLETED
POSITION PAPER	5/3/18	27/4/18	COMPLETED
RESEARCH PAPER I	30/4/18	12/7/18	COMPLETED
REVIEW & EDITING	17/9/18	28/5/19	COMPLETED
FINAL REVIEW	28/5/19	25/6/19	ON TRACK
FINAL RESEARCH PAPER	25/6/19	8/7/19	PENDING

	1st	2nd	3rd	4th	5th
STAGE GOAL	**Literature review**	**Scale validation**	**ieveloping short-sclae veriso**	**Data Collection**	**Cluster Analysis**
ESTIMATED TIME	(February - March - April, 2018)	(March, 2018)	(March, 2018)	(April, 2018)	(May, 2018)

3. Examiners' suggestions and corrections

Comments and Improvment sugestions

Dra. Cláudia J. S. Fernandes

FORMAT CORRECTIONS	ACCEPTED	DECLINED	COMMENTS
Page 2 "Comission" for "Commission"			Typo
Page 2 "forevery" for "for forever"			Typo
The thesis is in English, but there are some tables (e.g. Table 3, Table 4, Table 9) totally or partially in Portuguese. Even though Table 3 is referring to items in the Portuguese scale, a translation from the author is advised. There should be a note referring that is a free translation and that the validation was made for the Portuguese text.			Editing mistake
The header of Table 3 should repeat after the page break.			
The header of Table 4 should repeat after the page break			
The header of Table 9 should repeat after the page break.			
Page 60. There is an open parenthesis and it does not close, please review.			Editing mistake
There are some references in the text that don't appear in the References section, please review, e.g. i) Carvalho et al., in press; ii) Carlson, 2006.			Editing mistake
Annexes should be numbered.			APA style
Annexes should appear in the index after numbering/title			APA style

CONTENT SUGGESTIONS	ACCEPTED	DECLINED	COMMENTS
When I started reading the work, I felt it was missing the global motivation for developing this group of 3 studies. I would like to see what your main motivation and objectives were and what lead you to embrace this thematic. There are specific objectives for			

each one of the studies. Isn't there any global objective? Why did you join these 3 studies?			
Concerning the "burnout syndrome" theoretical framework, to mention the last month communication from ILO/WHO concerning the diagnosis would be a plus. The alignment (or not) with the results achieved.			I particularly appreciate this suggestion as it contributed with updated information from an essential source.
I would appreciate to read a "global discussion" and "global results" for the 3 studies that are encompassed in the thesis. Giving the "big picture" and making the best out of the achieved results and its potential alongside with the conclusions achieved. These would be new sections in the thesis document.			Results were considered separately but a final overall and integrative discussion has been included.

Comments and Improvment sugestions

Dra. Maria José Felício

CORRECTIONS	ACCEPTED	DECLINED	COMMENTS
Acknowledgements: gralha no segundo parágrafo "I will forevery .."	√		Typo
"key words" (Keywords)	√		(Key-word is also correct)
Índice: salta do subtópico 3.1 para o 3.3			Editing mistake
Índice: espaço entre 3.1 e 3.2 nos procedimentos			Editing mistake
As normas de referenciação em texto: por vezes tem os autores separados por & outras por and, quer seja em texto, quer seja dentro de parêntesis. Sugiro a sua uniformização.			APA style
Por vezes utiliza "et al" (com ponto em alguns casos " et al." e sem ponto noutros "et al"), outras vezes não o faz, apresentando exaustivamente os autores. Sugiro a revisão e uniformização			APA style
A primeira referência da bibliografia apresenta tipos de letra diferentes	√		Editing mistake
Há referências no corpo do trabalho que não estão na bibliografia: por ex. Nord, Fox, Phoenix and Viano (2002) (p. 10); Felstead, Jewson, Phizacklea, & Walters, 2002 (p. 10); (Romeo, Berger, Yepes-Baldó and Ramos, 2014) (p.22).			APA style
Título de livro em itálico (ex. Nunnally, J. C. (1978). Psychometric theory. New York, McGraw-Hill.			APA style
Título do journal em itálico (Ex. Shelton, L. M. (2006). Female entrepreneurs, work-family conflict, and venture performance: New insights into the work-family interface. Journal of Small Business Management, 44(2), 285-297.			APA style
Artigos/Livros: só a primeira letra do título e complemento em maiúscula			APA style

Uniformizar links de págs. de acesso.			APA style
Identificação e numeração dos anexos			APA style

SUGGESTIONS	ACCEPTED	DECLINED	COMMENTS
Faltaria um parágrafo síntese quanto aos resultados obtidos, uma vez que este é também um dos elementos que deve constar no abstract.			Final overall discussion included.
Integrar, na estrutura do trabalho, um ponto explicativo dos objetivos que nortearam a investigação, apesar de eles estarem patentes quer no abstract, como na transição que faz da introdução para o corpo teórico (...) a dissertação beneficiaria se complementada com um tópico prévio explicativo do objetivo global do trabalho (o que a levou a realizá-lo e que se subdividiu nos objetivos dos três estudos, relacionando-os e articulando-os). Julgo que daria coesão ao trabalho.			

4. Informed consent and instructions

UNIVERSIDADE DE COIMBRA

Faculdade de Psicologia e de Ciências da Educação

O presente questionário destina-se exclusivamente a fins de investigação e insere-se num estudo sobre a gestão de emoções em contexto de trabalho e sua relação com o bem-estar, em docentes do ensino superior. Todas as respostas que lhe solicitamos são rigorosamente anónimas e nenhuma informação disponibilizada será tratada individualmente.

Leia com atenção as instruções que lhe são dadas, certificando-se de que compreendeu correctamente o modo como deverá responder. Note que as instruções no topo de cada página não são sempre iguais.

Responda sempre de acordo com aquilo que faz, sente ou pensa, pois não existem respostas correctas ou incorrectas, nem boas ou más respostas.

Por favor, certifique-se de que tudo é preenchido.

No final, coloque o presente questionário no envelope que lhe foi entregue, feche-o e coloque-o no interior da caixa que se encontra no balcão de informações da sua Faculdade.

Muito obrigado pela sua colaboração!

5. Maslach Burnout Inventory (MBI)

As 22 afirmações que se seguem estão relacionadas com sentimentos ocorridos em relação ao seu trabalho. Leia cuidadosamente e **diga o que sente sobre o seu trabalho**. A cada uma das afirmações **deve responder consoante a frequência com que tem esse sentimento**, assinalando o número respectivo de acordo com a seguinte escala:

Nunca 0. Nenhuma vez	Quase nunca 1. Algumas vezes por ano	Algumas vezes 2. Todos os meses	Regularmente 3. Algumas vezes por mês	Bastantes vezes 4. Todas as semanas	Quase sempre 5. Algumas vezes por semana	Sempre 6. Todos os dias

Em relação ao meu trabalho…

1. Sinto-me emocionalmente esgotado com o meu trabalho.	0	1	2	3	4	5	6
2. Sinto-me esgotado no fim do meu dia de trabalho.	0	1	2	3	4	5	6
3. Sinto-me fatigado quando me levanto de manhã e tenho de enfrentar outro dia de trabalho.	0	1	2	3	4	5	6
4. Posso facilmente compreender como os meus alunos se sentem acerca de coisas que acontecem.	0	1	2	3	4	5	6
5. Sinto que trato alguns alunos como se fossem “objectos” impessoais.	0	1	2	3	4	5	6
6. O trabalho com pessoas durante todo o dia esgota-me bastante.	0	1	2	3	4	5	6
7. Lido de uma forma muito eficaz com os problemas dos meus alunos.	0	1	2	3	4	5	6
8. Sinto-me exausto com o meu trabalho.	0	1	2	3	4	5	6
9. Sinto que estou a influenciar positivamente as vidas de outras pessoas através do meu trabalho.	0	1	2	3	4	5	6
10. Desde que comecei este trabalho tornei-me mais insensível para com as pessoas.	0	1	2	3	4	5	6
11. Aborrece-me que o tipo de trabalho que desempenho me pressione bastante emocionalmente.	0	1	2	3	4	5	6
12. Sinto-me cheio de energia.	0	1	2	3	4	5	6
13. Sinto-me frustrado com o trabalho que realizo.	0	1	2	3	4	5	6
14. Sinto que estou a trabalhar com demasiada pressão no meu trabalho.	0	1	2	3	4	5	6
15. Não me importo grandemente com o que acontece aos meus alunos.	0	1	2	3	4	5	6
16. Trabalhar directamente com pessoas faz-me sentir demasiado stresse.	0	1	2	3	4	5	6
17. Posso criar facilmente uma atmosfera relaxante com os meus alunos.	0	1	2	3	4	5	6
18. Trabalhar com os meus alunos é estimulante.	0	1	2	3	4	5	6
19. No trabalho que desempenho tenho realizado muitas coisas válidas.	0	1	2	3	4	5	6
20. Sinto-me no limite das minhas forças.	0	1	2	3	4	5	6
21. No meu trabalho lido com problemas emocionais de uma forma muito calma.	0	1	2	3	4	5	6
22. Sinto que os alunos me culpam por alguns dos seus problemas.	0	1	2	3	4	5	6

6. Escala Trabalho-Família

6.1. Em que medida vivenciou cada uma das situações seguintes **nos últimos três meses**? Por favor responda, usando a seguinte escala:

1.	2.	3.	4.
Raras vezes	Algumas vezes	Muitas vezes	A maior parte das vezes

Nota: Para os propósitos do presente instrumento, o conceito de **responsabilidades pessoais** refere-se a tarefas como: fazer bricolage, tomar conta de outras pessoas, manter o contacto com amigos/familiares, tarefas de casa e vida pessoal.

1. Cheguei a casa do trabalho demasiado cansado para fazer algumas das coisas pessoais/em família que queria fazer.	1	2	3	4
2. Por causa do meu trabalho, não tive energia para realizar actividades com a minha família ou com outras pessoas importantes na minha vida.	1	2	3	4
3. Estava preocupado com o meu trabalho e não conseguia relaxar, enquanto estava em casa.	1	2	3	4
4. O meu trabalho dificultou a manutenção do tipo de relacionamento, que eu gostaria, com a minha família.	1	2	3	4
5. A quantidade de tempo que o meu trabalho requer tem tornado difícil o cumprimento das minhas responsabilidades pessoais.	1	2	3	4
6. O meu horário de trabalho torna difícil o cumprimento das minhas responsabilidades pessoais.	1	2	3	4
7. Por causa do meu trabalho, não tive tempo suficiente para participar em actividades de lazer que acho relaxantes e agradáveis.	1	2	3	4
8. O meu trabalho fez-me comportar de formas que são inadequadas em casa.	1	2	3	4
9. Os comportamentos que foram eficazes e necessários para mim no trabalho foram contraproducentes em casa.	1	2	3	4
10. Estava muito cansado para poder ser eficaz no trabalho por causa de tarefas caseiras.	1	2	3	4
11. A minha família ou vida pessoal consome a energia que eu precisava para fazer o meu trabalho.	1	2	3	4
12. Estava preocupado com as minhas responsabilidades pessoais enquanto estava no trabalho.	1	2	3	4
13. As minhas responsabilidades pessoais tornaram difícil lidar com o meu supervisor e colegas da forma que eu gostaria.	1	2	3	4
14. A quantidade de tempo que as minhas responsabilidades pessoais ocupam fez-me trabalhar menos do que queria.	1	2	3	4
15. As exigências da calendarização relativa às minhas responsabilidades pessoais dificultaram o cumprimento dos prazos no meu trabalho.	1	2	3	4
16. As minhas responsabilidades pessoais fizeram-me comportar de modo inadequado no trabalho.	1	2	3	4
17. Comportamentos que foram eficazes e necessários, para mim, em casa, revelaram-se contraproducentes no trabalho.	1	2	3	4
18. O meu trabalho deu-me energia para fazer actividades com a minha família ou com outras pessoas importantes para mim.	1	2	3	4
19. Por causa do meu trabalho estava mais bem-disposto em casa.	1	2	3	4
20. Ter um bom dia no trabalho tornava-me um melhor companheiro em casa.	1	2	3	4
21. O meu horário de trabalho era suficientemente flexível para me permitir cuidar das minhas responsabilidades pessoais.	1	2	3	4
22. O meu trabalho proporcionou-me tempo suficiente para atender às minhas responsabilidades pessoais.	1	2	3	4
23. As formas de resolução de problemas que uso no trabalho foram eficazes na resolução de problemas em casa.	1	2	3	4
24. As competências que usei no trabalho ajudaram-me a lidar com questões pessoais e de carácter prático em casa.	1	2	3	4
25. Falar com alguém no trabalho ajudou-me a lidar com problemas em casa.	1	2	3	4
26. Os meus colegas deram-me apoio que me ajudou a enfrentar dificuldades em casa.	1	2	3	4
27. A minha família ou vida pessoal deu-me energia para fazer o meu trabalho.	1	2	3	4
28. Estava mais bem-disposto no trabalho por causa da minha família ou vida pessoal.	1	2	3	4
29. A minha vida em casa ajudou-me a relaxar e a sentir-me pronto para o próximo dia de trabalho.	1	2	3	4

30. As exigências da minha calendarização de responsabilidades familiares e/ou de vida pessoal eram suficientemente flexíveis para me permitirem fazer o meu trabalho.	1	2	3	4
31. As minhas responsabilidades familiares e/ou de vida pessoal deixam-me com tempo suficiente para fazer o meu trabalho.	1	2	3	4
32. As formas de resolução de problemas que usei em casa foram eficazes na resolução de problemas no trabalho.	1	2	3	4
33. As competências que usei em casa ajudaram-me a lidar com questões pessoais e de ordem prática no trabalho.	1	2	3	4
34. Falar com alguém em casa ajudou-me a lidar com problemas no trabalho.	1	2	3	4
35. A minha família e os meus amigos deram-me apoio que me ajudou a enfrentar dificuldades no trabalho.	1	2	3	4

6.2.1. Quando o seu trabalho e a sua vida pessoal interferem um com o outro, de que forma cada um dos seguintes aspectos do **seu desempenho no trabalho é afectado**? Por favor responda, usando a seguinte escala:

0. Não se aplica a mim	1. Efeito negativo mínimo	2. Efeito negativo moderado	3. Efeito negativo severo	4. Efeito negativo muito severo

1. Capacidade de concentração	0	1	2	3	4
2. Qualidade do desempenho	0	1	2	3	4
3. Quantidade de trabalho que é feito	0	1	2	3	4
4. Vontade de estar com o meu superior hierárquico	0	1	2	3	4
5. Chegar a horas ao trabalho	0	1	2	3	4
6. Vir para o trabalho todos os dias	0	1	2	3	4
7. Criatividade	0	1	2	3	4
8. Vontade de “fazer o último esforço”/”dar o litro”	0	1	2	3	4
9. Eficiência	0	1	2	3	4
10. Vontade de agarrar o trabalho	0	1	2	3	4
11. Relacionamento com colegas	0	1	2	3	4
12. Relacionamento com superiores hierárquicos	0	1	2	3	4
13. Tirar proveito das oportunidades de desenvolvimento profissional ou de formação	0	1	2	3	4
14. Estabelecer contactos e *networking*	0	1	2	3	4
15. Serviço a clientes	0	1	2	3	4
16. A qualidade da minha supervisão de outros	0	1	2	3	4
17. A qualidade das minhas aulas	0	1	2	3	4
18. A qualidade da minha investigação	0	1	2	3	4
19. Gerar sugestões de melhoria	0	1	2	3	4

1. Dormir o suficiente	0	1	2	3	4
2. Sentir-me calmo e relaxado	0	1	2	3	4
3. Cuidar da minha condição física	0	1	2	3	4
4. Ir ao dentista, médico, etc.	0	1	2	3	4
5. Estar com o/a cônjuge ou parceiro(a)	0	1	2	3	4
6. Desejo de manter o meu casamento ou relacionamento íntimo	0	1	2	3	4
7. Estar com os amigos	0	1	2	3	4
8. Dar-se bem com crianças/filhos	0	1	2	3	4
9. Fazer bricolage/ fazer tarefas caseiras	0	1	2	3	4
10. Actividades de lazer com o/a cônjuge ou parceiro(a)	0	1	2	3	4
11. Actividades de lazer com os amigos	0	1	2	3	4
12. Actividades de lazer com os seus filhos	0	1	2	3	4
13. Actividades de lazer com familiares	0	1	2	3	4
14. Participar em actividades voluntárias e/ou comunitárias	0	1	2	3	4
15. Participar em actividades religiosas	0	1	2	3	4
16. Actividades de tempos livres (por exemplo, ler, tocar um instrumento, fazer desporto, jogar, dançar, etc.)	0	1	2	3	4
17. Relaxar/ Desfrutar de tempo de lazer	0	1	2	3	4
18. Desenvolver a minha mente através da leitura, actividades culturais, etc.	0	1	2	3	4

6.2.2. Quando o seu trabalho e a sua vida pessoal interferem um com o outro, de que forma **cada um dos seguintes aspectos da sua vida pessoal é afectado**? Por favor responda, usando a seguinte escala:

0.	1.	2.	3.	4.
Não se aplica a mim	Efeito negativo mínimo	Efeito negativo moderado	Efeito negativo severo	Efeito negativo muito severo

6.3. Para cada uma das 10 seguintes afirmações, por favor, seleccione com um círculo, **a alternativa que melhor caracteriza os últimos três meses**.

1. Nos últimos três meses, o meu trabalho interferiu com a minha vida pessoal: a. Muito menos do que o normal para mim b. Menos do que o normal para mim c. Mais ou menos o mesmo do que é normal para mim d. Mais do que é normal para mim e. Muito mais do que é normal para mim	**6. Nos últimos três meses, sacrifiquei o meu trabalho em função de um objectivo ou comprometimento pessoal:** a. Raras vezes b. Algumas vezes c. Muitas vezes d. A maior parte das vezes
2. Nos últimos três meses, classificaria a interferência do meu trabalho na minha vida pessoal como: a. Mínima b. Moderada c. Severa d. Muito severa	**7. Nos últimos três meses, o meu trabalho ajudou a melhorar a minha vida pessoal:** a. Muito menos do que o normal para mim b. Menos do que o normal para mim c. Mais ou menos o mesmo do que é normal para mim d. Mais do que é normal para mim e. Muito mais do que é normal para mim
3. Nos últimos três meses, fiz sacrifícios pessoais para concluir o meu trabalho: a. Raras vezes b. Algumas vezes c. Muitas vezes d. A maior parte das vezes	**8. Nos últimos três meses, classificaria a melhoria da minha vida pessoal por causa do meu trabalho como:** a. Mínima b. Moderada c. Considerável d. Muito considerável
4. Nos últimos três meses, a minha vida pessoal interferiu com o meu trabalho: a. Muito menos do que o normal para mim b. Menos do que o normal para mim	**9. Nos últimos três meses, a minha vida pessoal ajudou a melhorar o meu trabalho:** a. Muito menos do que o normal para mim b. Menos do que o normal para mim

c. Mais ou menos o mesmo do que é normal para mim d. Mais do que é normal para mim e. Muito mais do que é normal para mim	c. Mais ou menos o mesmo do que é normal para mim d. Mais do que é normal para mim e. Muito mais do que é normal para mim
5. Nos últimos três meses, classificaria a interferência da minha vida pessoal no meu trabalho como: a. Mínima b. Moderada c. Severa d. Muito severa	**10. Nos últimos três meses, classificaria a melhoria do meu trabalho por causa da minha vida pessoal como:** a. Mínima b. Moderada c. Considerável d. Muito considerável

6.4. Caso esteja ou tenha estado numa relação nos últimos três meses indique, por favor, em que medida, durante esse período de tempo, o seu cônjuge/companheiro(a) vivenciou cada uma das situações seguintes, usando a seguinte escala:

1.	2.	3.	4.
Raras vezes	Algumas vezes	Muitas vezes	A maior parte das vezes

Caso não esteja ou tenha estado numa relação nos últimos três meses, passe, por favor, para a escala seguinte (4 ELS).

1. Devido ao trabalho, o meu/minha cônjuge ou companheiro(a) não teve energia para realizar actividades com a nossa família.	1	2	3	4
2.O trabalho do meu/minha cônjuge ou parceiro(a) dificultou a manutenção do tipo de relacionamento com a nossa família, que ele / ela gostaria.	1	2	3	4
3. A quantidade de tempo que o trabalho do/da meu/minha cônjuge ou parceiro(a) requer dificultou o cumprimento das suas responsabilidades pessoais.	1	2	3	4
4. O horário de trabalho do/da meu/minha cônjuge ou parceiro(a) dificultou o cumprimento das suas responsabilidades pessoais.	1	2	3	4
5. Os comportamentos que são eficazes e necessários para o meu/minha cônjuge ou companheiro(a) no trabalho foram contraproducentes em casa.	1	2	3	4
6. Devido ao trabalho, o/a meu/minha cônjuge ou companheiro(a) tinha mais energia para fazer as actividades com os nossos familiares ou com outras pessoas importantes para nós.	1	2	3	4
7. Devido ao seu trabalho, o meu/minha cônjuge ou companheiro(a) estava mais bem-disposto(a) em casa.	1	2	3	4
8. O horário de trabalho do(a) meu/minha cônjuge ou parceiro(a) era suficientemente flexível para permitir que ele/ela cuidasse das suas responsabilidades pessoais.	1	2	3	4
9. O trabalho do(a) meu/minha cônjuge ou companheiro(a) proporciona-lhe tempo suficiente para atender às suas responsabilidades pessoais.	1	2	3	4
10. As competências que o/a meu/minha cônjuge ou parceiro(a) utilizou no trabalho foram úteis para as tarefas que ele/ela tinha de fazer em casa.	1	2	3	4
11. Falar com alguém no trabalho ajudou o/a meu/minha cônjuge ou companheiro(a) a lidar com problemas em casa, como por exemplo educação dos filhos, problemas nas relações com o/a cônjuge ou companheiro(a), saúde de familiares, etc.	1	2	3	4