

THE WORK-TO-FAMILY CONFLICT: THEORIES AND MEASURES

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The work-family conflict is a topic of increasing interest in psychological research: many are the theoretical speculations as well as the attempts to provide adequate measuring instruments. In Italy the few studies devoted to this topic mostly use Netemeyer et al. (1996) scale, which measures the work-family and family-work conflict. This study reviews the theories on the work-family interface and proposes an adjustment of Netemeyer et al.'s instrument. The adjusted scale was submitted to a sample of 369 people. Its psychometric characteristics are presented in terms of factor structure, reliability, and capability of differentiating among different individuals. The results of the data analysis are in line with the indications in the literature. Factor analysis confirms the distinction between the conflicts work versus family as opposed to family versus work. The adaptation of Netemeyer et al.'s instrument presents overlapping characteristics with the original version.

Key words: Work-family conflict; Family-work conflict; Measurement issues.

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INTRODUCTION

The interface between work and family is a topic of increasing interest in psychological research (and not only; Saraceno, 2006) in relation to the significant changes in the workforce, in terms of greater participation of women and higher number of couples where both partners have a paid occupation (D. A. Major & Germano, 2006). Such interest has been growing further, modifying its translation into research coherently with the transformations related to the information era (new technologies, on the one hand, have increased the possibility to quickly respond to work responsibilities; on the other hand, they are also source of intrusion in personal life). While the industrial revolution tended to emphasize "separation" (fragmentation, compartmenting, specialization, etc.), the information era ratifies the success of approaching, when not convergence, different life contexts (MacDermid, 2005).

The increasing degree of interest for this topic goes back to the Seventies (O'Driscoll, Brough, & Kalliath, 2006): Kanter (1977) and other authors of that period (Piotrowski, 1979; Pleck, 1977) have the merit of dismantling the myth of "separated worlds" and starting a fertile branch of research. Beside the changes in the workforce and in work conditions, the initial transformation of expectations for family role also goes back to this period, together with a diffuse permeability of borders between family and work domains.

During the Eighties the number of papers about work-to-family conflict started to increase significantly (Rothbard & Dumas, 2006) and, from 1985 till today, PsychInfo indicates 1800 citations related to the subject "Work-Family Relationship." The contributions in the litera-

ture show a wide range of samples, different for type of occupation and geographic location (MacDermid, 2005): military members, people working far from home, new mothers, religious, nurses, police officers; Australia, Canada, China, Finland, Hong Kong, Israel, Japan, Malaysia, Norway, Singapore, and Spain. Obviously, MacDermid's list is not comprehensive, even so the absence of Italy stands out; we have contributed to this topic in a non-systematic way, except for some papers (Margola, 2005; Margola & Molgora, 2002) which emphasized especially the understanding of family implications of the conflict.

Research on this matter suggests that the tension between family and work roles can become a source of stress (Thomas & Ganster, 1995), responsible for diminishing psychological (Allen, Herst, Bruck, & Sutton, 2000) and physical wellbeing (Frone, Russel, & Cooper, 1997). More than one study has shown how workers exposed to stressor agents become a cost for the organization in terms of injuries, inefficiency, and reduced productivity (Ganster & Schaubroeck, 1991). Beside the idea that balancing different roles and generating a satisfying equilibrium is a widespread challenge (O'Driscoll et al., 2006), a new way of reading the work-family relationship is being established, and it is more oriented to grasp the aspects of reciprocal enrichment (Grzywacz & Bass, 2003).

In any case, work-family conflict nowadays represents the central construct in studies about work-family balance, for it allows us to focus the attention on possible antecedents and possible outcomes of problematic feelings: the effort of balancing family and professional roles can be a cause of work dissatisfaction (Carlson & Kacmar, 2000; Kossek & Ozeki, 1998) and depression (Noor, 2002), but it is also one of the possible determinants of absenteeism and intention to change job (Allen et al., 2000; Boyar, Maertz, Pearson, & Keough, 2003).

This study aims to propose some critical reflections about the construct of work-family conflict and to describe the characteristics of an Italian adaptation of Netemeyer, Boles, and McMurrian's (1996) questionnaire, which Italian researchers have used during the last few years (Margola, 2005; Margola & Molgora, 2002).

The adaptation presents some differences compared to the scale already used in Italy in the cited studies. By submitting the 10 items adapted from the original version to a sample of 369 people, the main analyses of the original paper were reproduced.

The Theoretical Framework

The complexity of dynamics related to the work-family interface has important consequences in terms of theory and research. In fact, the models used to account for the relationship between work and family roles are numerous. Many authors have tried to give a review of prevalent models, starting from the studies found in literature (among others, Edwards & Rothbard, 2000; O'Driscoll et al., 2006; Poelmans, O'Driscoll, & Beham, 2005; Rothbard & Dumas, 2006).

Before explaining the construct of conflict, we present briefly the other models — spillover and enrichment, compensation, instrumentality, managing conflicts strategies, role identity — trying to summarize the most recent works.

The model of spillover already appeared in literature in the first reviews (Zedeck & Mosier, 1990), even though it is just in recent years that we have witnessed attempts of translating it into more complex research designs (Grzywacz & Marks, 2000). The model is based on the

idea of a high border permeability of different life domains, which does not necessarily produce negative consequences. The study considers spillover in terms of feelings, values, abilities, behaviors that drift from one context onto the other (Edwards & Rothbard, 2000). The main studies concentrated on emotional spillover: it can be bidirectional, positive and/or negative. Some authors rather referred to the idea of "contagion" (Bolger, DeLongis, Kessler, & Wethington, 1989; Stevens, King & Riley, 2006) distinguishing forms of influence that are related to the individual moving between two contexts (spillover), and crossover influence, when a person's feelings in a context influence the feelings of other people in another context (for instance, when someone's work strain affects their family's quality of life).

Lately, the construct of enrichment has been associated with the construct of spillover; enrichment accounts especially for positive influence (Barnett, 1998; Barnett & Hyde, 2001; Carlson, Kacmar, Wayne, & Grzywacz, 2006). Evidence suggests that multiple roles have a positive influence on individual wellbeing (Baruch & Barnett, 1986). These data, beside the renewed emphasis for positive psychology (Seligman & Csikszentmihalyi, 2000), induced researchers to consider the relationship between work and family in more positive terms (Grzywacz & Marks, 2000).

The perspective of enrichment aims to challenge the negative connotation of studies conducted in terms of stress and conflict, in order to capture the dimension of activation and involved participation (Rothbard, 2001; Ruderman, Ohlott, Panzer, & King, 2002). This approach is based on the theories of Sieber (1974) and Marks (1977) who, in opposition with the role strain theories, saw multiple assets from the participation in multiple roles. Some studies supported this perspective, considering the participation in different roles as beneficial for mental health (Barnett, Marshall, & Singer, 1992; Ruderman et al., 2002; Thoits, 1983, 1986). Recently, Grzywacz and Bass (2003) developed a new perspective about the facilitating influence between work and family that will yield interesting results.

A further model oriented to seize the complexity of work-family interaction is called compensation model. Compensation refers to the relationship between the two domains; it considers the attempt to set right difficulties or lacks in a context through a greater investment in another role (Champoux, 1978; Lambert, 1990; Zedeck, 1992): this is the reason why research hypotheses are related to the existence of a negative relationship among constructs measured in the two contexts. People can compensate the dissatisfaction in a role in many ways: they may reduce the importance they attribute to it, or they may search recognition in another context, or they may invest more time and attention in an alternative role (Edwards & Rothbard, 2000). Some studies provide data that sustain this mechanism (see Rothbard & Dumas, 2006, for a review).

The instrumentality model appears less scientifically relevant, but it is mentioned in literature all the same (Poelmans et al., 2005; Zedeck & Mosier, 1990). This model assumes that a context is instrumental to goal reaching in the other context (Evans & Bartolome, 1984). Like the previous constructs, instrumentality can be viewed in both directions (work is instrumental in maintaining family, family in maintaining work).

A further research perspective concentrates on conflict management strategies, taking into account individual preferences between integration (Desochers, Hilton, & Larwood, 2005) and segmentation/separation (Ashforth, Kreiner, & Fugate, 2000; Kossek, Noe, & DeMarr, 1999; Rothbard, Phillips, & Dumas, 2005). Except for Hall's (1972) pioneer work and some attempts to reproduce his study, it is during the Nineties that the speculation on this topic became more sys-

tematic. Nippert-Eng (1995) and Perlow (1998) concentrated on the active process of choice that people made between segmentation (trying to keep the two contexts separate) or integration (trying to integrate the roles, accepting and almost looking for overlaps and drifts). The segmentation considered as absence of a systematic relationship among work and non-work roles (Zedeck, 1992) was initially viewed as the inevitable result of the division in time and space between work and family (Blood & Wolfe, 1960; Dubin, 1973). More recently, since work and family have been regarded as closer domains than before (Burke & Greenglass, 1987; Kanter, 1977; Voydanoff, 1987), segmentation has been considered as an active psychological process that people may choose in order to keep a border between the two contexts, as opposed to integration choices. This decision reflects personal preferences but it can be related to some types of job that induce choices either of integration or of separation more frequently than others.

More recent studies explored the consequences of recurring to one strategy or the other (Rothbard et al., 2005): the more relevant conclusions found that coherence between strategies preferred by an individual and strategies desired by organizations is a key factor in limiting feelings of dissatisfaction.

A further framework for conceptualizing the work-family relationship is role identity and “navigation identity” among different roles. Referential literature is based on role identification process and role participation theories. Rothbard (2001) pointed out that identification with a particular role, among those that a person played, implied a greater involvement in that role. Existing studies determined that role identification is a key dimension to explain outcomes in terms of positive or negative feelings about the work-family interface.

Some authors have referred to work-family balance and fit (Campbell Clark, 2000; Reiter, 2007). These words are recurring in literature; however, Frone (2003) pointed out that a systematic and satisfactory definition of balance was missing: it was often considered simply as lack of conflict. Despite problems of definition, many authors have pointed out that balance, positive spillover, and enrichment do not equal lack of conflict (Frone, 2003): these distinctions are important because mechanisms that reduce conflict do not necessarily promote balance or enrichment.

The Work-Family Conflict Construct

The work-family conflict construct has been playing an important role in research on the job-home interface (O’Driscoll et al., 2006; Rothbard & Dumas, 2006). The work-family conflict originates from role theory (Merton, 1957) and from Goode’s (1960) role strain hypothesis. In their by now classic paper, Greenhaus and Beutell (1985) defined work-family conflict as “a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. that is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role”(p. 77). The authors recalled the role conflict theories elaborated in the Sixties by Kahn and colleagues (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Katz & Khan, 1966); these theories are based on the interference — that the person is not able to face — among expectations and requests coming from the various roles. The sources of pressure may be due strictly to time issues, but also derive from stressors in both life domains or from incoherent behavioral requests from different life contexts. The work-family

conflict construct is bidirectional (Work→Family; Family→Work) and can be asymmetrical or reciprocal. The distinction between work-family conflict and family-work conflict is based on research evidence that has generally shown a greater level of conflict in the direction W→F compared to F→W (Aryee, Luk, Leung, & Lo, 1999; Netemeyer et al., 1996).¹

What does the conflict depend on? And what are its main outcomes? O'Driscoll et al. (2006) tried to briefly identify antecedents of the conflict and referred to: requests related to each role (Boyar et al., 2003; Carlson & Frone 2003; Greenhaus & Beutell, 1985; V. S. Major, Klein, & Ehrhart, 2002); personality (type A personality, locus of control) and coping strategies (Behson, 2002a; Grandey & Cropanzano, 1999; Rothbard & Dumas, 2006; Wayne, Musisca, & Fleeson, 2004); the presence of dependents (Brough & Kelling, 2002; Noor, 2002).

Gender deserves a separate discussion. Social pressure, consolidated in common cultural practices, has always emphasized women's family role (B. Major, 1993) in which respect men still seem, even today, to be offering a support more in terms of "being side by side" than of actual sharing (Hochschild, 1997). However, a recent paper by Carr (2002) showed that men's and women's strategies to cope with balance problems are becoming more similar, even though women are still those who are in charge of family responsibilities, choosing solutions such as part time or tele-work. Pleck's (1977) hypothesis of a different permeability of boundaries between women (greater invasion of family thoughts at work) and men (greater invasion of work thoughts at home) does not appear to be confirmed. Research evidence is contradictory and cases in which conflict in the direction both W→F and F→W is greater for men are not infrequent (Bolger et al., 1989; Kirchmeyer, 1992, 1993). Bolger et al. (1989) pointed out that this can be due to the fact that men are less socialized to care tasks and this made them less prepared to contain the stress related to those tasks. Gutek, Searle, and Klepa (1991) used the gender role framework to explain why women report interference F→W levels lower than men: since family represent a traditional role for a woman, women experience the tasks associated with home and family care less as an imposition (consequently with less effort and less difficulty).

Many are the variables capable of moderating the relation between conflict and its outcomes (positive and negative, internal or external to the organization) but few are the coherent and significant results (O'Driscoll et al., 2006). Cited in literature are: gender; social support (Carlson & Perrewe, 1999: they examined the hypothesis of direct effects, mediation and moderation and only the latter were confirmed); coping (Behson, 2002a; Jex & Elacqua, 1999); trust in management (Harvey, Kelloway, & Duncan-Leiper, 2003); negative affectivity (Stoeva, Chiu, & Greenaus, 2002).

In general, even though research has not clearly determined causality bonds (longitudinal research is missing and few are the studies also including objective measures of physiological responses), it reveals that work-family conflict has a role in determining: dissatisfaction with work and life (Kossek & Ozeki, 1998); less involvement in the organization, fewer resources spent at work, more conflicts, ambiguity, absenteeism, lateness (Allen et al, 2000; Frone, 2003; Kossek & Ozeki, 1998); dissatisfaction with family life and worsening in family roles (Frone, 2003); worsening of conjugal relationship (Matthews, Conger, & Wickrama, 1996); psychological stress, worsening of physical health, some chronic health problems (Frone, 2003); worsening of sleep quality (Williams, Franche, Ibrahim, Mustrd, & Layton, 2006) and of eating behavior (Devine et al., 2006).

As to organization life, some specific constructs have been identified, in order to detect the quality of support offered by work contexts to cope with feelings of work-family conflict. For instance, Thompson, Beauvais, and Lyness (1999) defined work-family culture as characterized by “shared assumptions, beliefs, and values regarding the extent to which an organization supports and values the integration of employees’ work and family lives” (p. 394).

Continuing on this path, Allen (2001) defined family-friendly organizations those that are perceived as effectively committed in supporting their employees in managing their family responsibilities (and not only formally active in saying that the organization does); this combines pro-balance solutions accessibility with the presence of a sensitive and attentive executive board (Behson, 2002b). In those companies where the perception of support is greater, greater are also the feelings of belonging, commitment, and desire to continue one’s career inside the organization.

Measures of Work-Family Conflict

In general, measures of W-F conflict have a good reliability (alpha is on average higher than .70). This is also true for the Netemeyer et al.’s (1996) instrument, whose adaptation is presented in this paper.

McDermid (2005) pointed out that among the different measures (Table 1) some are based on Greenhaus and Beutell’s 1985 conceptual model (even though only Carlson, Kacmar, & Williams, 2000, tried to operationally translate their whole model) and some are “second generation” measures, created from an already existing pools of items (Netemeyer et al., 1996; Stephens & Sommer, 1996).

TABLE 1
 Principal measures of work-life conflict

Source	Measure
Burke, Weir, & DuWors, 1979	General W-F (+ personal life)
Holahan & Gilbert, 1979	Role Conflict (job, conjugal, parental, personal in terms of self-realization)
Bohen & Viveros-Long, 1981	W→F and F→W, time and strain
Kopelman, Greenhaus, & Connolly, 1983	W→F, time and strain
Wiley, 1987	W→F, strain
Loerch, Russel, & Rush, 1989	W→F, behavior
Small & Riley, 1990	W→F, spillover
Gutek et al., 1991	W→F e F→W, time and strain
Rice et al., 1992	W→F, strain
Frone, Russel, & Cooper, 1992	W→F and F→L, time
Matsui, Ohsawa, & Onglatco, 1995	W→F, time and strain
Netemeyer et al., 1996	W→F and F→W, time and strain
Stephens & Sommer, 1996	W→F, time, strain, and behavior
Carlson et al., 2000	W→F e F→W time, strain and behavior

However, different instruments are quite similar about the way some questions are formulated, namely, those questions that aim to detect the degree to which work (or family) interferes with the specific elements of the other domain (presenting an overlapping with the spillover construct).

Usually, answers are given on a 5- or 7-step Likert Scale (both agreement and frequency scales are used). There are no data about the influence that the presence of the neutral point in the answering scale may have. The period of time to be considered for the response is often not specified, sometimes it shifts from one to three months. The studies presented evidence of a difference between the conflict $W \rightarrow F$ and $F \rightarrow W$; in general, the existing but modest correlations with the other variables confirmed the construct validity.

Kossek and Ozeki (1998) divided W-F conflict literature referring to three kinds of measures: $W \rightarrow F$ interferences, $F \rightarrow W$, and bidirectional measures (Tetrick & Buffardi, 2006). Meta-analyses conducted by Kossek and Ozeki and Allen et al. (2000) considered correlations of W-F conflict with other measures. The authors observed a wide range of variations for the correlations among those variables, basically due to differences in the measures were used. After these preliminary remarks, we can say that the relation between work satisfaction and various measures of W-F conflict appears negative (on average, $r = -.31$). The relation is stronger for “global” conflict measures (average $r = -.31$), followed by $W \rightarrow F$ measures (average $r = -.27$), and by $F \rightarrow W$ (average $r = -.18$). Minor correlations of $F \rightarrow W$ conflict with organization variables support many researchers’ choice of not detecting this dimension in work and organization psychology. The different measures are also related with life satisfaction and, in this case, correlations seem greater for women than men (average r for women = $-.42$ versus average r for men = $-.32$).

Netemeyer et al.’s (1996) instrument is different from other measures because it tries to detect the conflict in both directions. The authors criticized former measures because of the incomplete analysis and the not always correct procedure in constructing the scale. Instead, they developed an initial pool of 110 items, including items from former measures, and 36 new items, and considering both directions of the conflict, time, and strain. Items were associated to the two declinations of the construct through an initial involvement of judges. The judges’ job allowed to reduce the pool of items to 43. This version of the instrument was administered to three different samples along with other measures and correlated constructs. The use of the more common heuristics in psychometrics allowed the authors to select items; factor analysis confirmed two factors, each composed of five items. The reliability of each subscale resulted satisfactory (alpha higher than .85), and the correlation between the two scales appeared significant with a value of $r = .42$.

Beside the best fit of the two-factor model compared to the one-factor one, further confirmation of separation between $W \rightarrow F$ and $F \rightarrow W$ derived from the different correlations of each subscale with the other measures; this was also confirmed by Italian studies that used the scale (Margola, 2005).

Considering this review, Netemeyer et al.’s (1996) instrument appears particularly suitable for research on the work-family relation for many reasons: it has a limited number of items and, thus, it can be used in wider studies; it detects both directions of the conflict; it does not include indicators related to the behavioral aspects of conflict, that are difficult to translate and appear relatively weak (Tetrick & Buffardi, 2006).

Criticisms to Work-Family Conflict Construct and Measures

The W-F conflict construct is not exempt from criticisms, from both an ideological and methodological point of view. In synthesis, some considerations follow. Kirchmeyer (1993) criticized the construct since she considered it penalizing for women: reading the relation between work and family in terms of conflict encourages the idea that women who are involved in many roles are less reliable, committed, and productive. MacDermid (2005), resuming these considerations, recalled the influence that structural functionalism still has on research, supporting the idea that role specialization is necessary in order to maintain a satisfactory overall efficiency. As a matter of fact, for these authors, enrichment or spillover perspectives are better able to capture the complexity of the matter.

Concerning the operational translation of the construct, it is again MacDermid (2005) who reminded us of the problems of distinction between $W \rightarrow F$ and $F \rightarrow W$ conflict, following Greenhaus and Powell's (2003) considerations: referring to Kahan et al.'s (1964) theories, the original definition of conflict tried to capture the reciprocity of the interference, identifying conflict as the result of a "simultaneous pressure from different domains." While empiric evidence seems to sustain this distinction, the greatest gap between theories and measurement instruments is the lack of a systematic distinction between cognitive, emotional, and behavioral elements of the conflict. Carlson and Frone (2003) tried to emphasize this distinction underlying that interferences can be generated inside or outside: internal elements are worries or recurrent thoughts about a context that extends to the other; external elements are behavior interferences. Rothbard (2001) also underlined the importance of not confusing cognitive involvement and emotional responses. Moreover, coping is an element of the work-family interaction that has been only partially explored and should be more accounted for; the only exceptions are the works by Behson (2002a), and Rotondo, Carlson, and Kincaid (2002), beside Hall's (1972) classic study.

Some criticisms are addressed directly to measuring instruments. Bellavia and Frone (2004) pointed out that Carlson et al.'s instrument (2000) was effective in distinguishing $W \rightarrow F$ and $F \rightarrow W$, but that the distinction among strain, time, and behavior was questionable: it seemed to refer more to the conflict antecedents than to the conflict per se. A further criticism, addressed also to Netemeyer et al. (1996), is on the lack of reference to personal life: this is a problem because it neglects the areas of life that are extra-work and extra-family and de facto excludes respondents who live on their own. To this end, Tetrick and Buffardi (2006) noted that W-F conflict seemed to foresee the turnover of people with a family but not of singles.

Still on the subject of instruments, MacDermid (2005) expressed some doubts about questions and scale formulation. The main reference is Schwarz and Oyserman's (2001) paper about the comprehension and mnemonic effort required in answering a questionnaire. Evaluating W-F conflict requires subjects reflect about the two domains, for an undetermined and sometimes long time, that they recall episodes, images, events which may support reflection and appraisal of experiences in both contexts. Memory failing, difficulties in comparing, tendency to refer to emotions felt in the present are important sources of distortion in answers, according to MacDermid (2005). Finally, the incidence of self-serving bias is noticeable for these measures: people could alter their answers in order to protect their self-image as problem-solvers. We mentioned that $F \rightarrow W$ conflict is usually lower than $W \rightarrow F$, this is particularly true for conflict between family

and work: considering questionnaires are distributed mainly in work situations, we cannot exclude self-serving biases aimed to safeguard one's work image.

METHOD

Participants and Procedure

In order to adapt Netemeyer et al.'s (1996) instrument, five items related to *work-to-family conflict* and five items related to *family-to-work conflict* (Table 2) were translated. As in the original version, the 10 sentences were applied using a 7-step *agreement/disagreement* scale.

TABLE 2
Netemeyer, McMurrian, & Boles's items (1996)

Original items	Italian translation
The demands of my work interfere with my home and family life	Le richieste del mio lavoro interferiscono con la mia vita familiare (i1)
The amount of time my job takes up makes it difficult to fulfill family responsibilities	La quantità di tempo che il lavoro mi richiede rende difficile adempiere alle mie responsabilità familiari (i2)
Things I want to do at home do not get done because of the demands my job puts on me	Non riesco a portare a termine le cose che vorrei fare a casa perché ho troppi impegni di lavoro (i3)
My job produces strain that makes it difficult to fulfill family duties	Sono così stanca/o e stressata/o quando esco dal lavoro che mi è difficile adempiere ai miei compiti familiari (i4)
Due to work-related duties, I have to make changes to my plans for family activities	A causa dei miei impegni di lavoro devo cambiare i miei programmi familiari (i5)
The demands of my family or spouse/partner interfere with work-related activities	Le richieste della mia famiglia (o della/del mia/o compagna/o) interferiscono con i miei impegni/attività di lavoro (i6)
I have to put off doing things at work because of demands on my time at home	Mi capita di sacrificare il lavoro perché devo passare più tempo a casa (i7)
Things I want to do at work do not get done because of the demands of my family or spouse/partner	Le cose che vorrei fare al lavoro non sono portate a termine a causa delle richieste della mia famiglia (i8)
My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime	La mia vita familiare interferisce con le mie responsabilità di lavoro (i9)
Family-related strain interferes with my ability to perform job-related duties	Le ansie e le preoccupazioni familiari interferiscono con la mia possibilità di soddisfare le richieste lavorative (i10)

As in the original study, the aim was to analyze the 10 items together and verify the presence of two dimensions of conflict and their relation.

A first version of the instrument was administered to a reduced number of respondents ($N = 25$), coming from different regions and of different socio-cultural level, in order to evaluate whether items were comprehensible or difficult to respond to. After this pre-test, some items were simplified because the original translation from English appeared too detailed; some items seemed too difficult to read and too “distant” from respondents (especially items i8 and i9).² The paper-and-pencil version of the instrument was distributed to a sample of employees from different organizations. The research involved four organizations from North-Western Italy, different for mission, size, cultural, and organizational characteristics. The occasional sample consisted of 369 participants (Table 3): 20.9% was from a no-profit organization providing welfare services (WS); 15.4% was from a soft drink distributing company (DDC); 28.7% was from a producing and distributing furniture company (DFC); 35% was from a bank (B).

In the sample, 65.9% were female, while 32.2% were male (missing cases = 1.9%); 30.1% were unmarried, and 46.6% were married. The sample consisted mainly of operators (33.1%) and employees (29.5%) from the no-profit organization. Average age was 36 years ($SD = 8.87$).

Statistical Analyses

After the descriptive analysis of each item, the psychometric characteristics of the scale were examined first through a preliminary exploratory factor analysis, performed on half of the sample ($N = 184$), and then through confirmatory factor analysis with Lisrel 8 (Jöreskog & Sörbom, 1992), performed on the other half of the sample ($N = 185$). Both samples were created randomly, paying attention to maintaining the proportion of the “organization” variable.

Moreover, for each subscale two measures were calculated: Cronbach’s alpha, as a measure of internal consistency and reliability, and the corrected item-total correlation coefficient. In line with Netemeyer et al.’s (1996), a t -test for paired samples was calculated in order to test the difference between the two subscales of conflict.

Also, the scores of each subscale were submitted to analysis of variance and t -test for independent samples in relation to the variables: organization, gender, role, marital status, age, recoded in classes, in order to evaluate the capacity of the conflict scale to discriminate between different participants.

RESULTS

Descriptive Statistics of Single Items

Items having a higher mean score referred to the perception of conflict in the work-to-family direction. This confirmed literature findings: conflict that originates from the intrusion of work into family space is felt more deeply than conflict in the opposite direction, from family to work (Table 4).

TABLE 3
 Global sample ($N = 369$) and subsamples (exploratory and confirmatory factor analysis) descriptions

	GLOBAL SAMPLE		SAMPLE FOR EXPLORATORY FACTOR ANALYSIS		SAMPLE FOR CONFIRMATORY FACTOR ANALYSIS	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
<i>Organizations</i>						
WS	77	20.9	38	20.7	39	21.1
DDC	57	15.4	29	15.8	28	15.1
DFC	106	28.7	53	28.8	53	28.6
B	129	35.0	64	34.8	65	35.1
<i>Total</i>	369	100.0	184	100.0	185	100.0
<i>Gender</i>						
Female	243	65.9	122	66.3	121	65.4
Male	119	32.2	58	31.5	61	33.0
Missing data	7	1.9	4	2.2	3	1.6
<i>Total</i>	369	100.0	184	100.0	185	100.0
<i>Civil status</i>						
Single	111	30.1	47	25.5	64	34.6
Married	172	46.6	85	46.2	87	47.0
Cohabiting	29	7.9	24	13.0	5	2.7
Separated; divorced	16	4.3	9	4.9	7	3.8
Widow/widower	2	0.5	1	0.5	1	0.5
Missing data	39	10.6	18	9.8	21	11.4
<i>Total</i>	369	100.0	184	100.0	185	100.0
<i>Organizational role</i>						
Executive	17	4.6	8	4.3	9	4.9
Area or territorial manager	35	9.5	18	9.8	17	9.2
Operator	122	33.1	59	32.1	63	34.1
Employee	109	29.5	60	32.6	49	26.5
Middle manager	37	10.0	18	9.8	19	10.3
Missing data	49	13.3	14	7.6	11	5.9
<i>Total</i>	369	100.0	184	100.0	185	100.0

Note. WS = no-profit organization providing welfare services; DDC = soft drink distributing company; DFC = producing and distributing furniture company; B = bank.

TABLE 4
 Item of conflict scale descriptions (Likert frequency scale from 1 to 7)

	<i>M</i>	<i>SD</i>
i5 A causa dei miei impegni di lavoro devo cambiare i miei programmi familiari [Due to work-related duties, I have to make changes to my plans for family activities]	3.86	1.54
i4 Sono così stanca/o e stressata/o quando esco dal lavoro che mi è difficile adempiere ai miei compiti familiari [My job produces strain that makes it difficult to fulfill family duties]	3.68	1.62
i1 Le richieste del mio lavoro interferiscono con la mia vita familiare [The demands of my work interfere with my home and family life]	3.41	1.67
i3 Non riesco a portare a termine le cose che vorrei fare a casa perché ho troppi impegni di lavoro [Things I want to do at home do not get done because of the demands my job puts on me]	3.40	1.71
i2 La quantità di tempo che il lavoro mi richiede rende difficile adempiere alle mie responsabilità familiari [The amount of time my job takes up makes it difficult to fulfill family responsibilities]	3.25	1.50
i10 Le ansie e le preoccupazioni familiari interferiscono con la mia possibilità di soddisfare le richieste lavorative [Family-related strain interferes with my ability to perform job-related duties]	2.52	1.33
i9 La mia vita familiare interferisce con le mie responsabilità di lavoro [My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime]	2.38	1.44
i7 Mi capita di sacrificare il lavoro perché devo passare più tempo a casa [I have to put off doing things at work because of demands on my time at home]	2.27	1.54
i6 Le richieste della mia famiglia (o della/del mia/o compagna/o) interferiscono con i miei impegni/attività di lavoro [The demands of my family or spouse/partner interfere with work-related activities]	2.22	1.36
i8 Le cose che vorrei fare al lavoro non sono portate a termine a causa delle richieste della mia famiglia [Things I want to do at work do not get done because of the demands of my family or spouse/partner]	2.04	1.37

Exploratory Factor Analysis

Exploratory factor analysis was conducted on a sample of 184 participants, randomly extracted from the main sample of 369.

The chosen factor solution (Table 5), obtained through a ULS extraction and Oblimin rotation, revealed two factors, in accordance with the international literature. The first factor, named Family→Work conflict (C.F→W), presented high loadings in relation to five items that referred to family-to-work conflict. The second factor, named Work→Family conflict (C.W→F), presented high loadings in relation to five items that referred to the perception of a work-to-family conflict. The solution absorbed 56.97% of the total variance, and the two factors were significantly correlated ($r = .30$). We wish to specify that exploratory factor analysis (ULS extraction, Oblimin

TABLE 5
 Two-factor exploratory factor analysis solution (ULS extraction, Oblimin rotation; $N = 184$)

	Family→Work Conflict	Work→Family Conflict
i8 Le cose che vorrei fare al lavoro non sono portate a termine a causa delle richieste della mia famiglia [Things I want to do at work do not get done because of the demands of my family or spouse/partner]	.89	.00
i6 Le richieste della mia famiglia (o della/del mia/o compagna/o) interferiscono con i miei impegni/attività di lavoro [The demands of my family or spouse/partner interfere with work-related activities]	.77	.09
i7 Mi capita di sacrificare il lavoro perché devo passare più tempo a casa [I have to put off doing things at work because of demands on my time at home]	.70	-.07
i10 Le ansie e le preoccupazioni familiari interferiscono con la mia possibilità di soddisfare le richieste lavorative [Family-related strain interferes with my ability to perform job-related duties]	.64	-.06
i9 La mia vita familiare interferisce con le mie responsabilità di lavoro [My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime]	.63	.13
i2 La quantità di tempo che il lavoro mi richiede rende difficile adempiere alle responsabilità familiari [The amount of time my job takes up makes it difficult to fulfill family responsibilities]	.04	.86
i3 Non riesco a portare a termine le cose che vorrei fare a casa perché ho troppi impegni di lavoro [Things I want to do at home to not get done because of the demands my job puts on me]	.02	.77
i1 Le richieste del mio lavoro interferiscono con la mia vita familiare [The demands of my work interfere with my home and family life]	.07	.75
i4 Sono così stanca/o e stressata/o quando esco dal lavoro che mi è difficile adempiere ai miei compiti familiari [My job produces strain that makes it difficult to fulfill family duties]	-.00	.73
i5 A causa dei miei impegni di lavoro, devo cambiare i miei programmi/impegni familiari [Due to work-related duties, I have to make changes to my plans for family activities]	-.08	.70
Alpha (five items)	.86	.86
<i>M</i>	11.02	17.57
<i>SD</i>	5.49	6.45
Correlation between factors		
	Family→Work Conflict	Work→Family Conflict
Family→Work Conflict		
Work→Family Conflict	.30	

rotation), performed on the whole samples of 369 participants, presented two factors (C.F→W and C.W→F; 56.56% of total variance) in line with the solution obtained with the subsample of 184 participants.

T-test for paired samples ($N = 369$) showed a significant difference between the means of the two subscales of conflict, in line with Netemeyer et al. (1996): the mean of the C.W→F subscale ($M = 17.47$, $SD = 6.39$) was higher than the mean of the C.F→W subscale ($M = 11.21$, $SD = 5.48$); the difference between the two means, $t(368) = 18.01$, $p < .001$, emphasizes that the perception of a feeling of intrusion of work commitments and worries into family sphere was greater. In Netemeyer et al.'s (1996), the mean of the C.W→F scale was 15.42, and the mean of the C.F→W scale was 9.99.

Confirmatory Factor Analysis

Confirmatory factor analysis with Lisrel 8 (Jöreskog & Sörbom, 1992) was conducted on the sample of 185 participants, randomly selected from the wider sample of 369 participants. In line with Netemeyer et al.'s (1996) and exploratory factor analysis, analysis with Lisrel 8 confirmed the two-factor structure: C.W→F and C.F→W. As observed in Figure 1, the items i5, i1, i4, i2, i3 were loaded of the first factor, C.W→F; the items i7, i9, i8, i6, i10 were loaded of the second factor, C.F→W. The introduction of correlations between errors of some variables has improved the model's goodness-of-fit indexes. Specifically, the following correlations between errors have been inserted: i4 and i2 (C.W→F scale), semantically connected by the word *adempiere* (*fulfill*); i9 and i10 (C.F→W scale), semantically connected by the word *interferisce/interferiscono* (*interferes*); i6 (C.F→W scale) and i3 (C.W→F scale), semantically connected by the word *impegni* (*duties*); i6 (C.F→W scale) and i5 (C.W→F scale), semantically connected by the word *impegni* (*duties*). The goodness-of-fit indexes were generally good: $\chi^2 = 34.56$, $p = .26$; χ^2 and $df(30)$ ratio = 1.15; RMSEA = .03; SRMR = .04; CFI = .99.

Reliability

Reliability of the two subscales was evaluated considering the whole sample of 369 participants through Cronbach's alpha and the corrected item-total scale correlation. Internal consistency was good, as results show: for both scales, the alpha coefficient was .86. Correlations item-total scale ranged from .65 to .78, for the C.F→W scale, and from .60 to .76, for the C.W→F scale.

Analysis of Variance

The differences for some variables, calculated on the whole sample of 369 participants, were evaluated with the *t*-test and ANOVA. The results of the *t*-test, $t(186.71) = 2.16$, $p < .04$, showed a significant difference in the experience of C.F→W in relation to gender: men claimed they perceived a greater conflict ($M = 11.98$, $SD = 5.88$) compared to women ($M = 10.55$, $SD =$

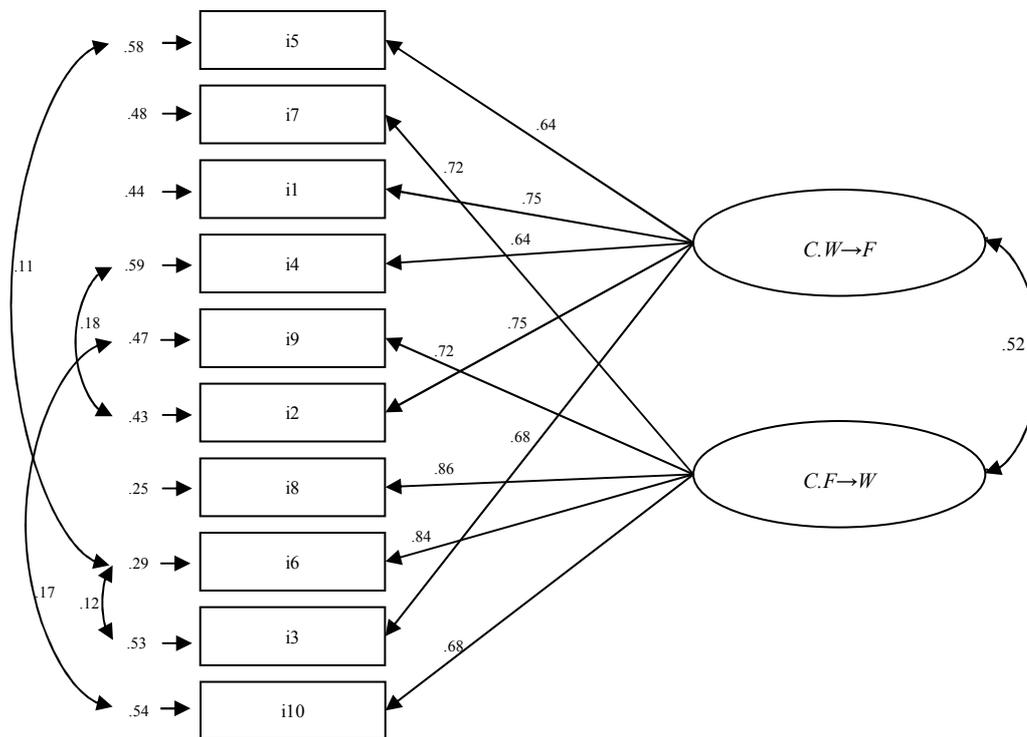


FIGURE 1
 Confirmatory factor analysis solution.

5.23). These data are in agreement with the research evidence: according to Bolger and Kirchmeyer (Bolger et al., 1989; Kirchmeyer, 1992, 1993), this perceived greater influence is related to the fact that usually men, for cultural reasons, do not play multiple roles, although they also devote some of their time to family.

Analysis of variance in relation to the organization one belongs to revealed interesting differences among organizational contexts, demonstrating the subscales ability to discriminate between different organizations. The perception of C.W→F, $F(3, 351) = 6.78, p < .001$, was greater in the WS organization compared to DDC and B; there were other differences in profit organizations: C.W→F was greater in DDC than in B. On the contrary, the perception of C.F→W, $F(3, 340) = 15.50, p < .001$, was greater in DFC compared to all the other contexts, both profit and no-profit (DDC, B, WS).

As regards roles (a few of them were present only in some organizations), there were differences in the perception of C.W→F that, even though not high, were statistically significant, $F(4, 303) = 5.84, p < .001$. Post hoc tests revealed that people with more responsibilities (area/territorial managers) in the no-profit organization perceived a greater work-to-family conflict compared to employees and mid-management in profit organizations. Also, no-profit operators perceived higher work-to-family conflict compared to employees in profit companies. No differences were found in relation with the role of director/manager in profit organizations. Differences in terms of age (recoded in classes) and civil status were not significant.

DISCUSSION

The adaptation of Netemeyer et al.'s (1996) instrument appears in line with the authors' indications. The differences between $W \rightarrow F$ and $F \rightarrow W$ conflicts are confirmed. In accordance with literature, $F \rightarrow W$ conflict systematically appears lower. We can state that the intrusion of work into the family sphere is stronger than the intrusion of family issues into the work domain. However, we must point out that these data might be related to an answering bias. Research experience suggests that the systematic difference between $W \rightarrow F$ and $F \rightarrow W$ conflicts might be in part due to people's resistance to acknowledge the presence, at their workplace, of "disturbance" coming from family; this mechanism would allow them to protect their work-efficacy image. It is advisable to further explore these issues; for instance, a social desirability scale could be included.

Anyway, data confirmed the structure of the instrument: the exploratory factor analysis solution is good and in line with the expectations; Lisrel confirmed the satisfying fit of the model. The two subscales showed different sensitivity to distinctions among participants involved in the research. The perception of $C.F \rightarrow W$ was greater for males: actually, these data are only apparently unexpected and can be interpreted as a perception/declaration of greater effort on the men's part to play a double role (Guttek et al., 1991). However, there were no differences between men and women about $C.W \rightarrow F$; both seem to perceive the intrusion of work issues into family domain the same way.

Also, the observed work environment and role-related differences about $C.W \rightarrow F$ appear in accordance with literature findings: the widespread presence of $C.W \rightarrow F$ in no-profit compared to profit organizations (especially for those people with more job responsibilities) is likely due to the stronger meaning assigned to work in no-profit contexts, where participation, involvement, and commitment are in general very high.

Perception of $C.F \rightarrow W$ is greater in the DFC organization compared to all the other profit and no-profit companies. This difference might be due to personal characteristics and greater family responsibilities for DFC employees: in other words, it is not related to the specific organization, or to different meanings assigned to work, but rather to personal characteristics such as sex, age, or marital status, that can weight on the perception of $C.F \rightarrow W$ in terms of life course and care responsibilities. However, the DFC sample is, as the other organizations, "equally" divided between males and females, both married and unmarried; the only difference is the average age in DFC ($M = 32$ years), which is lower compared to others (WS and B average age: $M = 38$; DDC average age: 35).

Among the limitations of this adaptation study we include the characteristics of the sample, which is a little "imbalanced" toward women. Also, we would like to point out that the participating organizations share an interest in equal opportunities and a special attention to family-work balance problems; this does not make them representative of the Italian work reality at large (as to this day, convincing data about the spreading of family-friendly policies and sensitivity to family-work balance problems in our country companies are missing).

CONCLUSION

In future research, it is important to evaluate the two subscales in more complex designs, with the aim of understanding if the proposed operational translation of the construct can explain

wellbeing and unease inside and outside the work environment —through longitudinal research as well (MacDermid, 2005).

Equally important is understanding which variables determine increasing and which decreasing of C.W-F, as well as which processes are implied in enrichment (Grzywacz & Bass, 2003). This would allow for a more precise definition of what kind of support and management levers are able not only to reduce critical situations but also to improve balance.

Also, under the auspices of the scientific community, future research should go beyond the work-family dichotomy to understand work impact on other dimensions of extra-familial personal life: namely, to identify adequate ways of extending studies to the relation between paid job and the rest of life (Lewis, Rapaport, & Gambles, 2003). Finally, considering the complexity of this topic, it is desirable to propose incentives for studies using a multidisciplinary approach.

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NOTES

1. The arrow indicates the direction of the conflict, while the dash indicates the conflict considered as bidirectional.
2. In item 8 only a general mention to family has been made, and not to spouse/partner. Item 9 refers to family life rather than to home life, and the problems of getting to work on time, accomplishing daily tasks, and working overtime have been ignored.

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