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Quantitative and qualitative work overload and its double effect on the
work-family Interface

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**QUANTITATIVE AND QUALITATIVE WORK OVERLOAD AND ITS DOUBLE
EFFECT ON THE WORK-FAMILY INTERFACE**

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ABSTRACT

Researchers have overemphasized the effects of working time over the work-family (WF) interface. In this article, we focus on how workload acts as a stressor in the family domain. We present a framework with which we explore the relationship between quantitative and qualitative work overload and the work-home interface. A model of quantitative and qualitative work overload is proposed, and a series of research propositions is presented. We propose that quantitative and qualitative work overload are different concepts that have different dimensions, antecedents, outcomes, and effects on work-to-family conflict (WFC). Therefore, WFC may have different solutions according to the nature of the conflict. Although the literature review shows there is a strong relationship between the concept and measurement of working time and workload, research supporting the relationship between work overload and WFC is still more plentiful. Some under-explored issues include how the family domain may generate or intensify work overload, and effective methods for dealing with work overload.

INTRODUCTION

According to Greenhaus and Beutell (1985), work-to-family conflict (WFC) has been historically explained by three sources of conflict; time, strain and behavior. This influential work suggests that WFC exists when 1) an individual devotes time to the requirements of only one role, 2) individuals experience strain from participating only one role, and 3) the specific behaviors required by one role makes it difficult to fulfill the requirements of another.

Over time, many studies have shown that time-based conflict is the most important source of WFC (Pleck *et al.*, 1980). First, Pleck *et al.* (1980) reported that parents experience more WFC than married couples without children. For those with offspring, younger children demand more of their parents' time, and large families are likely to demand more time than small families (Greenhaus & Beutell, 1985). As a result, working hours has been the most used antecedent variable in work-family (WF) research for many years.

Recent research has started to add work overload as an antecedent variable, finding that work overload may be a stronger predictor of WFC than work hours (Allan, Loudoun, & Peetz, 2007; Duxbury, Lyons, & Higgins, 2008; Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011; Skinner & Pocock, 2008; Wallace 1997). It seems that the WFC related to time/working hours is a superficial and evident part of the conflict, but similar to an iceberg, there is a large portion of conflict that remain uncovered. Recently, Kuschel (2011) conducted a qualitative research study among university professors demonstrating that participants subjectively perceived working long hours as WFC but explained their choice to work long hours as a way to absorb heavy workloads. Individuals work longer hours as a coping strategy to complete unfinished work, meaning that work overload and long working hours are two faces of the same coin.

Frone, Yardley, and Markel (1997) measured the effect of work overload on WFC. They assessed work overload with a scale developed by Cammann, Fichman, Jenkins, and Klesh (1979). They found that work overload is likely to have a dual effect on WFC. In other words, high workloads are likely to increase work hours and also contribute to feelings of strain and exhaustion. In the same line and influenced by the stress literature, burnout scholars believe that emotional exhaustion—the main component of burnout syndrome—may be a response to work overload (Cordes & Dougherty, 1993; Demerouti, Bakker, & Bulters, 2004; Janssen, Schaufeli, & Houkes, 1999).

Accordingly, working hours have been losing importance as a relevant antecedent of WFC. Current evidence suggests that an important predictor of WFC is work overload, which can be simultaneously classified as time- and strain-based predictor of WFC. Work overload occurs when there is not enough time to complete work (*i.e.*, time-based conflict), which adds stress and frustration (*i.e.*, strain-based conflict). As such, although the WF literature has evolved significantly since the 1980s, the critical concept of work overload has garnered relatively scant research attention.

Aim

The aim of this paper is to contribute to WF literature by incorporating some useful concepts to explain better this double effect of work overload on WFC. According to French, Caplan, and Van Harrison (1982), there are two types of work overload: *quantitative overload* (*i.e.*, feelings related to the amount of work, working too fast or too hard, having too much to do, or sensing too much pressure) and *qualitative overload* (*i.e.*, an employee's feeling that he/she does not have the time to produce quality work or does not have the skills to perform assignments). We review the literature and develop a model based on past research and

evidence. This model describes differentiated dimensions (*i.e.*, time and strain) of each type of work overload as well as different antecedents, outcomes, and potential solutions to WFC.

LITERATURE REVIEW

This section provides an overview of the current research on work overload.

Work Overload Definition, Theoretical Approaches and Measurement

While a precise definition of *workload* is elusive, a commonly accepted definition is the hypothetical relationship between a group or individual human operator and task demands. Going a step further, work overload has been defined as employees' perceptions that they have more work than they can complete within a given time (Jex, 1998). Overworked people usually have unreasonable workloads; work long (and/or odd) hours; undergo a tougher working pace; feel pressure to work overtime (paid or unpaid); and receive shorter breaks, days off, and vacations (or none at all). As mentioned before, there are two types of work overload (measured with the Work Overload Measure based on French *et al.*, 1982): *quantitative overload* (*i.e.*, feelings related to the amount of work, working too fast or too hard, having too much to do, or sensing too much pressure) and *qualitative overload* (*i.e.*, an employee's feeling that he/she does not have the time to produce quality work or does not have the skills to perform assignments).

Similarly, role theories (Kahn, Wolfe, Quinn & Snoek., 1964; Reilly, 1982) introduced the concept of *role overload*, which is very similar to the overall notion of work overload. In particular, role overload is the degree to which a person perceives him/herself to be under time pressure because of the number of commitments and responsibilities he/she has in life. Role overload can be defined as simply having too much to do and not enough time in which to do it, and it often means feeling rushed, time-crunched, physically and emotionally

exhausted, and drained (Duxbury *et al.*, 2008). Role overload occurs in the work and family domains and generally consists of individuals 1) feeling the need to reduce some parts of their role, 2) feeling overburdened in their role, 3) feeling they have been given too much responsibility, 4) feeling their workload is too heavy, and/or 5) feeling the amount of work they have interferes with the quality of life they wish to maintain (Peterson *et al.*, 1995). Role overload is conceptually distinct from two other role stressors, role conflict—defined as having two or more different incompatible roles that collide (or do not collaborate)—and role ambiguity—defined as being uncertain about the task requirements of a particular job (instead of role clarity). Unfortunately, role overload is a concept that has been misunderstood and misused by some WF scholars. According to Korabik, Lero, and Whitehead (2008), the term role overload has been used interchangeably with role strain, role stress, time-based strain, and role conflict, which is why the role conflict concept has been employed more among WF researchers.

Allan *et al.* (2007) developed the notion of workload pressure, which encompasses both the amount and pace of work. They developed their own measurement by asking questions about the amount of time workers are given to rest during breaks; whether workers must adhere to tight deadlines, leave on time, or take work home; whether there is an adequate number of employees to complete jobs; whether there is a backlog of work if workers are sick; and whether working late is taken for granted in the workplace.

Demand-resource theories, which are rooted in scarcity theory, indicate that one way to address workload issues is to go to the source of the problem and alleviate workload by increasing resources and reducing demands (*e.g.*, increasing staff, reducing time pressure, increasing organizational support, increasing control over working time, or increasing task control). To have more resources may be a solution in an ideal world, but in reality, with deadlines, budgets, and productivity targets, this is not always possible. Providing more

resources is not always the solution as resources must be managed by the individual, which can cause people to become overloaded again (*i.e.*, because of the high amount of resources or because they manage poorly).

In this vein, Karasek and Theorell (1990) recognized that occupational stress and illness, as well as work satisfaction and effectiveness, arise from an interactive dynamic between the challenges (*i.e.*, demands) presented by work tasks *in relation to* the resources (*i.e.*, controls or decision latitude) that workers bring to bear in response to job demands. This is known as the job demand–job control model (or the job–strain model). The great influence of this model rests on the claims that psychosocial work environments (especially those with high psychological demands and low job control) have an adverse impact on employees' health and well-being. Similarly, effort-recovery theory suggests that to avoid their workers becoming overloaded, employers need to—at the very least—ensure employees can take sufficient breaks from periods of intense activity (Meijman & Mulder, 1998), encourage employees to take holiday leave, and/or implement flextime systems that include time banks (Skinner & Pocock, 2008).

Antecedents of Work Overload

In addition to introducing a variety of definitions for work overload and related concepts, scholars have also proposed a number of potential causes of work overload. These antecedents can be broken into five general categories: organizational elements, cultural norms, technology, information overload, and family/non-work commitments.

Organizational Elements. Work overload may be deeply rooted in global changes, such as those resulting from the knowledge era (*i.e.*, the knowledge or information society), the organizational capitalism model, and/or companies' restructuring plans (*e.g.*, mergers, acquisitions, and downsizing). Modern companies are starting to adopt more horizontal

organizational charts; thus, they are experiencing *de-layering* in management grades (Noon & Blyton, 1997), which usually results in a smaller staff with more tasks to perform (also called “organizational anorexia”). By means of an experimental study, Sales (1970) showed that increased workloads may improve system performance on some levels, such as productivity, but that these same increased workloads may also exert detrimental influences both upon system performance (*e.g.*, with respect to errors) and upon individuals involved (*e.g.*, with respect to their self-esteem and their experienced tension and anger). As deadlines do motivate and overloaded people do produce more (*e.g.*, Jackson, 1958; Klemmer & Muller, 1953; Miller, 1960; Miller, 1962; Quastler & Wulff, 1955), managers tend to use work overload to increase productivity by looking at the optimal levels of workload for maximizing employee performance. However, these optimal levels of workload are difficult to ascertain. Another study found that increased levels of work overload could occur when organizations set performance objectives, difficult objectives, and higher performance ratings (Brown & Benson, 2005). These findings suggest that some of the features associated with a well-designed appraisal system may generate adverse outcomes for employees and, subsequently, for their organizations. In addition to organizational structural changes, employees’ workloads in many companies are reaching epic levels, significantly increasing employee stress and burnout and diminishing commitment. At the same time, senior managers are reluctant to add personnel or provide other resources that would reduce workload. Managers are resisting organizational change instead of altering the sources of job stress (WDF Consulting, 2010), and many companies are attempting to do whatever they can with the least amount of staff possible, which generates the so-called “workload dilemma.” In addition to work overload directly related to job tasks, many employees are also overburdened by paperwork due to over-regulation (especially in the public sector), unrealistic deadlines, lower levels of support from supervisors and co-workers, and role

ambiguity (*i.e.*, confusion over whose responsibility a specific task or project is).

Furthermore, one way many individuals cope with work overload is by working overtime (unpaid or paid), including working long hours during the day, working at night, or working on weekends (Kuschel, 2011). However, employees who work more hours tend to perceive more work overload (Berg, Kallenberg, & Appelbaum, 2003), and working overtime may create total life overload. On top of organizational structural changes and increased work burdens, demanding and competitive work environments also contribute to work overload. People may come across competitive colleagues and demanding supervisors in the workplace, and corporations who exploit their employees by creating an “overwork culture” and fear of job loss are killing employee motivation, commitment, and—ultimately—productivity.

Cultural Norms. The cultural norms in many societies emphasize the importance of work and busyness at the expense of other non-work activities. For instance, the “work devotion schema” is a stereotype representing unwritten rules of the “ideal worker” who is supposed to be fully work oriented, work long hours, and be unburdened by family responsibilities (Blair-Loy, 2004). In fact, Gershuny (2005) argued that busyness is a badge of honor in our society. Nowadays, being busy is a positive, privileged position, and only people with high status tend to work long hours and feel busy. Similarly, Hammermesh and Lee (2007) claimed that complaints about being busy or lacking time are more commonly expressed by well-off couples. However, Organ and Ryan (1995) argued that as a result of these cultural norms, employees who engage in organizational citizenship behaviors (defined by Organ (1988: 4) as an “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization”) may become overloaded by the additional responsibilities they have undertaken. In the same vein, the introduction of human resources policies

designed to encourage greater worker involvement, commitment, and competition, including incentives that link effort with pay, could also be an antecedent of increased effort and thus increased workload.

Technology. Technology has been another major factor in the drastic increase in work overload and subsequent burnout. With the influx of the Internet, e-mail, laptops, cell phones, smartphones, and tablets, employees are in constant contact with their work, particularly for tasks that can be performed in any place at any time. Reich (2001) suggested that advances in technology frequently mean employees are forced to work more (rather than less) and often find it difficult to escape fully from their jobs. As a sub-factor of the overall technology problem, e-mail overload is particularly problematic regarding work overload (Girrier, 2003; Ingham, 2003; Whittaker & Sidner, 1996). While e-mail is a critical part of company infrastructure and business processes and is becoming the preferred communication method, research has shown that e-mail may both create and intensify work overload. For instance, Thomas and Smith (2006) revealed three characteristics contributing to e-mail overload: unstable requests, pressures to respond, and the delegation of tasks and shifting interactants. Furthermore, “silence” or non-response to communication (*e.g.*, e-mail, voice mail, etc.) can be very damaging to overall business effectiveness (especially for virtual teams) (Cisco, 2006), thus leading individuals to feel increasing pressure to answer e-mails at the expense of finishing other work tasks.

Information Overload. The final antecedent to work overload results from having too much information to make sense of, organize, and ultimately use. Information overload refers to the difficulty individuals can have in understanding or making decisions from excessive information (Yang, Chen, & Honga, 2003). This situation is very paradoxical: although there is an abundance of information available when people experience information overload, they often find it difficult to obtain useful, relevant information when it is needed (Edmunds &

Morris, 2000). For instance, a Thomson Reuters white paper (2010) indicated that when faced with unsorted, unverified “raw” data, 60% of decision makers will make “intuitive” decisions that can lead to poor outcomes. Similarly, Bawden and Robinson (2008) uncovered two main information overload problems: one relating to the quantity and diversity of information available and one relating to the changing information environment with the advent of Web 2.0, including loss of identity and authority, emphasis on micro-chunking, shallow novelty, and the impermanence of information.

Family/Non-Work Commitments. Many individuals become overloaded due to time-based or strain-based role conflict—namely, having two or more roles that are incompatible. Nowadays, there is an increasing proportion of working mothers, dual-career families, and employees with responsibilities for elders or disabled participating in the labor market. All types of workers feel time pressures; however, working parents with both work and home demands tend to be particularly affected by these stressors. In fact, dual-earner families experience some of the highest levels of time pressure/work overload. For instance, Demerouti *et al.* (2004) demonstrated that WFC was both a predictor and an outcome of work pressure and exhaustion, suggesting reverse causation. Specifically, higher rates of labor market participation by women with families proved to cause higher levels of worker overload and raised much concern over the successful combination of work and family life (Jacobs & Gerson, 2001; Mennino & Brayfield, 2002; Moen & Dempster-McClain, 1987; Pitt-Catsouphes & Christensen, 2004; Van der Lippe, Jager, & Kops, 2006). In fact, researchers have found that working women in particular (suffer from time famine and exhaustion because they still tend to do the bulk of household work and childcare although traditional roles are slowly changing as men are taking more of these tasks). On top of paid work and family needs, community demands contribute to employees’ work overload and general lack of time (Voydanoff, 2005). As it is expected, evidence shows that work demands

are the single most important predictor of role overload (Duxbury & Higgins, 2005); however, past research makes no distinction between quantitative versus qualitative work demands.

Organizational and Personal Outcomes of Work Overload

Studies have shown that work overload is related to some outcomes that are potentially detrimental to personal health, which, in turn, directly affects organizational health. In sum, work overload affects health, work, and social/family dimensions.

Health Effects. Regarding mental health, social and organizational psychologists (*e.g.*, Kahn *et al.*, 1964; Kraut, 1965; Mueller, 1965) have reported negative affective reactions in individuals with role overload, such as tension, low job satisfaction, poor interpersonal relations, and low self-esteem. Additionally, working people's satisfaction with various aspects of their personal lives (*e.g.*, their social lives and leisure pursuits) tend to decrease with the number of hours they work, thus negatively affecting their overall mental/emotional health (Galinsky *et al.*, 2005). Work overload or high levels of demands are also a significant predictor of emotional exhaustion, the main component of burnout syndrome. In fact, Maslach, Schaufeli and Leiter (2001) suggest that burnout is a response to work overload. Furthermore, 21% of overworked individuals have high levels of depressive symptoms compared with only 8% of those with low overwork levels (Galinsky *et al.*, 2005). Spector, Dwyer, and Jex (1988) found that work overload is associated with involuntary physiological responses that interfere with job performance. Relatedly, Shirom, Westman, Shamai, and Carel (1997) studied the effects of objective and subjective overload and physical and emotional burnout on cholesterol and triglycerides levels. For women, emotional burnout predicts changes in serum lipids, and for men, physical and emotional burnout predicts changes in total cholesterol. Furthermore, medical researchers have shown

that subjects' serum cholesterol levels increase with work overload while other studies have suggested that high workloads may be an extremely important factor in the etiology of coronary heart disease. As a result, sudden death due to cardiovascular and cerebrovascular disease among workers has been an important topic of debate. Nishiyama and Johnson (1997) suggested that work organization and management methods in specific cultures may have different occupational health effects and that overwork can kill employees, especially if combined with high demand, low control, and poor social support as seen in China and Japan ("Karoshi" or death from overwork).

Organizational Effects. The personal health consequences stemming from work overload also negatively affect organizational health. According to Bateman (1980), work overload has negative effects on productivity, the quality of employees' work, supervisors' ratings, employees' attitudes, and job satisfaction. In turn, this dissatisfaction is related to worker absenteeism (due to sick leave), turnover, complaints, and grievances. Overloaded employees also waste time and energy coping with the stress and anxiety caused by overload and the frustration that it immediately provokes (time and energy that could have been used to improve their job performance). More specifically, Hallowell introduced the notion of *attention deficit trait* (ADT) to describe the mental effects of overwork and the impact on organizations (Hallowell, 2005). The core symptoms of ADT are distractibility, inner frenzy, and impatience, and people with ADT have difficulty staying organized, setting priorities, and managing time. As such, these symptoms can undermine the work of an otherwise gifted employee, thus limiting the organization's overall productivity and success. For instance, 20% of employees reporting high overwork levels claim they commit a great deal of mistakes at work versus none among those who experience low overwork levels (Galinsky *et al.*, 2005).

Work-to-Family Conflict. Current research has shown that work overload may be the strongest predictor of WFC (Allan, Loudoun, & Peetz, 2007; Duxbury, Lyons, & Higgins, 2008; Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011; Skinner & Pocock, 2008; Wallace 1997). Frone, Yardley, and Markel (1997) found that work overload is likely to have a dual effect on WFC: high workloads are likely to increase work hours as well as contribute to feelings of strain and exhaustion.

Moderators of the Relationship between the Antecedents of Work Overload and Work Overload

This section presents the proposed moderating variables of the relationship between the antecedents of work overload and work overload itself.

Organizational Support. Organizational support can be measured as colleague support, supervisor support, and/or material resources/staff availability that support employees' tasks. According to Karasek's (1979) demand-control model, all kinds of support—particularly leaders' support (Bliese & Castro, 2000)—can serve as a buffer for work overload. On the other hand, lack of support may intensify the effect of antecedents of work overload on WFC (Lapierre & Allen, 2006).

Moderators of the Relationship between Longer Working Hours and WFC

This section presents the proposed moderators of the relationship between longer working hours (as an effect of work overload) and WFC.

Centrality and Involvement. Some initial research has examined employees' central life values involving work and family and their potential impact on WFC (*e.g.*, Carlson, 2000). For instance, Carr, Boyar, and Gregory (2008) recently examined the impact of work-family centrality as a moderator for the relationship between work interference with family

(WIF) and job satisfaction as well as between WIF and employee retention. They stated that when individuals view work as being more central to their lives, the negative relationships between WFC, their organizational attitudes, and organizational retention are suppressed. Similarly, Hall and Hall (1979) found that couples experience conflict based on four possible combinations of career and family involvement. Couples expected to experience the most stress are those seeking high-involvement careers, and high-involvement family lives (called the acrobats). However, they suggested that this typology is not static: a couple can move between various stages based on career and life stage development. They also found that domain centrality may vary across the life course (Erickson, Martinengo, & Hill, 2010). Close to the notion of work centrality is the idea of job involvement, which is also hypothesized to affect WFC, especially among managers (Greenhaus & Kopelman, 1981; Mortimer, 1980; Piotrkowski, Rapoport, & Rapoport, 1987; Repetti, 1987; Voydanoff, 1982). Job involvement is operationalized as the extent to which individuals indicate job-related activities or their job itself to be of central and unique importance in their lives and as a key source of their personal identity (Reeve & Smith, 2001). Along these lines, Hall and Richter (1988) posited that WFC increases in individuals who are more involved with their work role because they have more permeable home boundaries and tend to bring work problems home with them. Similarly, Ridley (1973) argued that work is central to most professionals' personal lives. Thus, highly work-involved individuals devote their personal time and attention to work at the cost of family participation, thereby increasing the potential for WFC. Existing research also indicates that long weekly hours and involuntary overtime have a negative effect on work-life balance (Berg *et al.*, 2003) as they reduce the quality and quantity of workers' participation in their family and social lives (Pocock, 2001; Pocock & Clarke, 2004). Also, Greenhaus, Parasuraman, and Collins (2001) found that career involvement impacted individuals' decisions to leave organizations, but family involvement

had no impact on such decisions. That is, employees who were highly involved with their careers were not greatly disturbed when work interfered with their family lives, and they were willing to tolerate the interference for the sake of their careers (Greenhaus *et al.*, 2001). Additionally, some studies have found that job involvement may exacerbate negative health outcomes in certain cases (cf. Frone, Russell, & Cooper, 1995), but may also serve as protection against job burnout because job involvement is positively related to meaning of work (MOW) (Paullay, 1991). Barnett (1998) argued that the impact of long hours depends on the subjective meaning of those hours and a person's life circumstances. However, individuals in highly engaging, interesting, and fulfilling jobs may choose and enjoy long hours (*e.g.*, Wallace, 1997).

Flexibility. This item has been studied from different perspectives—as a working condition (*i.e.*, time and place flexibility, predictability, supervisor/colleague support) and as a coping strategy (*i.e.*, control over schedule, autonomy)—both of which act as a moderator of the relationship between longer working hours (as an effect of work overload) and WFC. Berg, Kalleberg, and Appelbaum (2003) found that involuntary overtime, rather than the length of working hours, was the strongest predictor of employees' belief that their company helped them balance work and family. On the other hand, control over work schedule is a buffer against negative work-life spillover (Byron, 2005; Eby *et al.*, 2005). Our proposition is that all these variables moderate the relationship between work overload and its outcomes and may also moderate the relationship between longer working hours (as an effect of work overload—a coping strategy to absorb workload) and WFC.

Self-Efficacy and Personal Accomplishment. Burnout is a syndrome characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among people who carry out “people work” (Maslach, 1982) and is considered to develop gradually over time (Maslach, Jackson, & Leiter, 1996). The phenomenon of burnout

was first observed in human services (*i.e.*, social work, healthcare, and teaching) (Maslach & Schaufeli, 1993); however, there is now evidence of burnout in occupations beyond the human services field (*e.g.*, Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Lee & Ashforth, 1996; Shirom, 1989). Concerning burnout's overall relationship with WFC, Baghban, Malekiha, and Fatehizade (2010) recently found WFC to be affected by different levels of self-efficacy among nurses, suggesting that WFC and burnout are related in several ways. Also, Block (1995) found that self-efficacy moderated the relationship between WFC and depression among working mothers, while Gil-Monte, García-Jueas, Caro Hernández (2008) proved that perceived self-efficacy prevents burnout. In this vein, as emotional exhaustion and work overload are strongly related, researchers have suggested that workers avoid work overload to prevent burnout. All these linkages make us hypothesize that self-efficacy may moderate the relationship between work overload and “emotional and physical stress” (*i.e.*, emotional exhaustion, anxiety, fatigue, stress, burnout, depression) and also that self-efficacy may moderate the relationship between “emotional and physical stress” and WFC.

The previous research on Work Overload is summarized in Figure 1.

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PROPOSED MODEL

Frone, Yardley, and Markel (1997) found that work overload is likely to have a dual effect on WFC: high workloads are likely to increase work hours as well as contribute to feelings of strain and exhaustion. Therefore, the proposed model is based on a conceptualization of work overload that makes a distinction between quantitative and qualitative work overload. The proposed model suggests differentiated antecedents and outcomes according to the dimension

of work overload. The following propositions are rooted in the evidence reviewed in the above section.

<< Insert Table 1 about here >>

The proposed model suggests differentiated antecedents and outcomes according to the dimension of work overload. The first chain is the time dimension while the second chain is the strain dimension. Figure 2 presents our propositions graphically.

<< Insert Figure 2 about here >>

DISCUSSION

Summary and Theoretical Contributions

This paper synthesizes evidence of past research and suggests a new direction to measure the antecedents of WFC. We propose that quantitative and qualitative work overload are different concepts with different dimensions, antecedents, outcomes, and effects on WFC. Therefore, WFC may have different solutions according to the nature of the conflict.

Practical Implications

According to the double effect of work overload on the work-family interface, managers and human resources practitioners should aim to decrease the impact of WFC by implementing short- and medium-term solutions. Short-term solutions include flexible arrangements as well as work-based resources (*e.g.*, time banks, ad-hoc schedule modification, mobile technology, etc.) that workers can manage themselves. However, managing new resources may cause people to become overloaded again; therefore, employers must be cautious and help employees as they transition to using new work-based resources. More medium-/long-term solutions involve redefining employees' workload by redesigning their job (*e.g.*, hiring new

people, job-sharing, etc.), as a more stable solution, although it will need reconsideration from once in a while.

Limitations and Suggestions for Further Research

The proposed model is based—at least in part—on evidence from research with self-reported data and cross-sectional designs. Therefore, one limitation is drawing causal relationships from the work presented here. We invite scholars to conduct longitudinal studies to test the causal relationships of our propositions.

This study contributes to the management, work-family, and stress literature. Particularly, scholars in the work-family field should consider the following methodological considerations: 1) the strong relationship between the concept and measurement of working time and workload and 2) the fact that work and family overload may be a better predictor of WFC than working time. Therefore, further research should measure quantitative and qualitative work overload rather than work overload or working hours.

In summary, future research should consider the following underexplored issues:

- Is strain-based work overload or time-based work overload a stronger variable in explaining WFC?
- Particularly relevant for the stress literature, what is the relationship between quantitative and qualitative work overload and burnout? And, what is the relationship between quantitative and qualitative family overload and burnout?
- Going a step further than Dijkers *et al.* (2007), how do quantitative and qualitative work overload affect WFC and family-to-work conflict differently?
- How should employees and employers deal with quantitative and qualitative work overload—namely, what coping strategies are effective to prevent both types of work overload and thus prevent WFC?

Pursuing these research paths can provide both scholars and practitioners with a deeper understanding of work overload and its effects on employees' work, family, personal, and social lives as well as how to improve work-life balance and overall job satisfaction.

Conclusions

Overall, this review shows that there is a strong relationship between the concept and measurement of working time and workload: work overload and working long hours seem to be two faces of the same coin. However, researchers have overemphasized how working time affects the work-family interface and have relatively neglected how both types of work overload act as a stressor in the family domain.

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FIGURE 1: Past Work Overload Research and Evidence

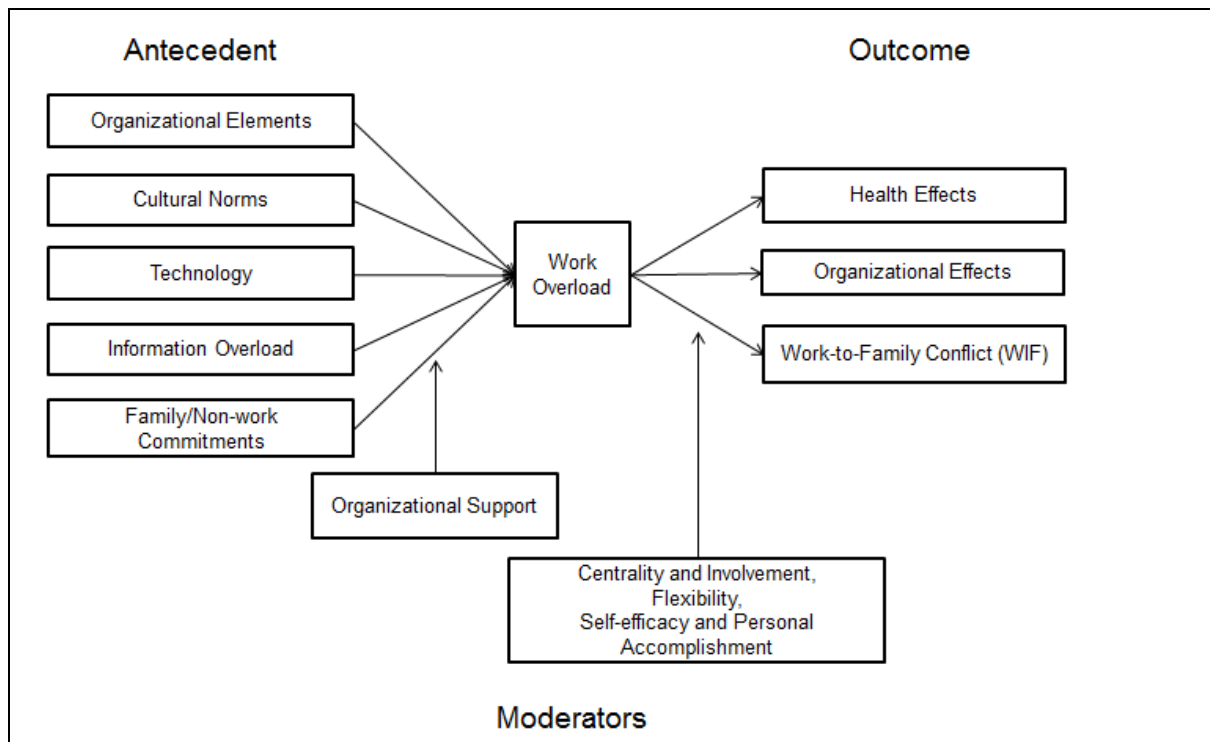


TABLE 1: Summary of Propositions

<p>Proposition 1</p>	<p>Quantitative and qualitative work overload have different antecedents.</p> <p>Quantitative work overload antecedents include the following:</p> <p>(1a) Multiple roles at work/other jobs</p> <p>(1b) Unforeseen events</p> <p>(1c) Change</p> <p>(1d) Bureaucracy</p> <p>(1e) Information overload</p> <p>Qualitative work overload antecedents include the following:</p> <p>(1f) Social pressure (e.g., organizational culture, work pace)</p> <p>(1g) Self-imposed pressure and career development (i.e., expectations)</p> <p>(1h) Shortcomings in personal organization</p> <p>(1i) Shortcomings in self-efficacy</p> <p>(1j) Emotional exhaustion</p>
<p>Proposition 2</p>	<p>Quantitative and qualitative work overload belong to different dimensions.</p> <p>(2a) Quantitative work overload is a time-based conflict.</p> <p>(2b) Qualitative work overload is a strain-based conflict.</p>
<p>Proposition 3</p>	<p>Quantitative and qualitative work overload have different moderators in their relationship with their antecedents.</p> <p>(3a) Levels of quantitative work overload increase when there is lack of resources/staff.</p> <p>(3b) Levels of qualitative work overload increase when there are tight deadlines.</p> <p>(3c) Levels of qualitative work overload decrease when there is organizational (i.e., colleague and supervisor) support.</p>
<p>Proposition 4</p>	<p>Quantitative and qualitative work overload have different outcomes.</p> <p>(4a) Quantitative work overload increases working hours.</p> <p>(4b) Qualitative work overload increases emotional and physical stress.</p>
<p>Proposition 5</p>	<p>Both long working hours and emotional and physical stress create and/or intensify WFC through different paths and dimensions.</p>
<p>Proposition 6</p>	<p>WFC created/intensified by long working hours has different solutions than WFC created/intensified by emotional and physical stress.</p> <p>(6a) WFC created/intensified by long working hours can be solved/lowered through work-based resources (e.g., flexible arrangements, redefined workload).</p> <p>(6b) WFC created/intensified by emotional and physical stress can be solved/lowered by organizational support.</p>

FIGURE 2: Proposed Model of Quantitative and Qualitative Work Overload

