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Psychosocial safety climate as resource passageways to alleviate work-family conflict

A study in the health sector in Quebec

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Abstract

Purpose – The purpose of this paper is to examine a multidimensional mediating model of psychosocial safety climate (PSC) and work-family interference. More precisely, it tests the direct and indirect effects of PSC on work-family conflict (WFC)/family-work conflict (FWC)-time and WFC/FWC-strain via family-supportive supervisor behavior (FSSB).

Design/methodology/approach – The structural equation method was used to test the direct effect of PSC on WFC/FWC time and strain. As for the mediation effects, they were tested by the method of indirect effects based on a bootstrap analysis (Preacher and Hayes, 2004) based on 3,000 replications with a 95% confidence interval. The statistical treatments were carried out with the AMOS software V.22.

Findings – The results show that PSC is negatively and directly related to WFC-time, FWC-time, WFC-strain and FWC-strain. In addition, the bootstrap analyses indicate that PSC is related indirectly to WFC-time, FWC-time, WFC-strain and FWC-strain via FSSB.

Practical implications – WFC is a workplace issue that warrants intervention in order to reduce organizational costs and increase worker well-being and PSC should be considered as an appropriate target for intervention (Dollard *et al.*, 2012). However, although this management tool can be useful to reduce FWC, it is more appropriate to decrease WFC. Employers and HR managers not only should understand from the findings the importance of PSC, but also that all employees do not have the same problems, depending on the level of responsibilities at home, for example. Hence, they should offer the appropriate resources according to the need of workers. Indeed, the implementation of a unique work-family measure may not be appropriate for all workers, and it is important that employers and HR managers understand the details of WFC and FWC, as well as the possible effects of a series of different variables, in order to design the best work-family programs.

Originality/value – This research examined the effects of two new and specific resources at work, which are PSC and FSSB on WFC and FWC (time and strain), as recommended by Kossek *et al.* (2011). In addition, this study tested a new multidimensional mediating model which examined the mediation role of FSSB between PSC and time- and strain-based WFC and FWC. To the authors' knowledge, this is the first study to examine these relations. Moreover, the test of the concepts of PSC in this study provides a support for the theory of conservation of resources and proposes an extension of this theory.

Keywords Quantitative, Family-supportive supervisor behaviour (FSSB), Family-work conflict (FWC), Psychosocial safety climate (PSC), Resource Passageways, Work-family conflict (WFC)

Paper type Research paper

Introduction

The relevance of research on work-family conflict (WFC) needs no demonstration. The increasing frequency of studies in this field confirms that work-family issues continue to interest and to challenge researchers and practitioners (Poelmans *et al.*, 2013). This is no surprise given the change in the demographic composition of the workplace, including the large number of dual-earner couples in the workforce, suggesting both partners are increasingly confronting these challenges (Fiksenbaum, 2014; Goh *et al.*, 2015). Moreover, managing work and family roles simultaneously is an issue that concerns employees across most segments of society (Allen, 2012). Furthermore, work-family questions have captured attention, as it is increasingly recognized that these challenges have a significant



impact on employee well-being (e.g. Eby *et al.*, 2010); WFC has therefore become one of the major sources of strain (Braunstein-Bercovitz, 2013). Consequently, the development of organizational policies and measures that help workers in both their work and family responsibilities is crucial for employees' well-being and quality of life. Indeed, organizations are increasingly offering various formal practices (such as on-site childcare, flexible work schedules (flexitime), a compressed work week, telecommuting, job sharing, etc.) to support employees in managing work and family demands, and in reducing the negative effects of such conflict on work attitudes and outcomes (Fiksenbaum, 2014). Although these programs are usually viewed as beneficial (Fiksenbaum, 2014), Hammer *et al.* (2009) found that their presence in an organization is not sufficient to reduce workers' work and family difficulties because their application depends on the informal discretion of employees' managers (Hammer *et al.*, 2009). In addition, many employees might avoid using these practices because of the "stigmas" which may be attached to them, the use of these practices being often seen negatively (Fiksenbaum, 2014). Moreover, research has revealed that many managers do not encourage employees to use these policies (Kossek *et al.*, 1999). Thus, in recent years, human resources management research is increasingly interested not only in examining formal HR policies but also informal worker perceptions of support at work, such as a supervisor being sympathetic to work-family issues (Hammer *et al.*, 2009), or a positive and family-supportive organizational climate (Allen, 2001; Kossek *et al.*, 2011). Building an organizational culture that helps workers in managing work and family roles is therefore vital for employee well-being (Odle-Dusseau *et al.*, 2013). Likewise, organizations must focus on the role of supervisors in influencing employees "WFC and well-being" (Goh *et al.*, 2015).

This research extends work-family literature in an important way. Despite the growing importance of examining the relationships between family-focused support, such as family-friendly organizational policies, family-supportive organizational climate, family-supportive supervisor behavior (FSSB), and WFC, Kossek *et al.* (2011) note that "research has yet to fully clarify (a) what type of social support (general or work-family specific), either from supervisory or organizational sources, is most strongly related to work-family conflict; and (b) the processes by which these types of support relate to work-family conflict" (p. 290). Moreover, as individuals are interested in balancing their work and family lives (Greenhaus and Allen, 2011), and WFC is a situation where the demands of the work role deplete resources (e.g. time, energy, emotions) required to accomplish the family role (Lapierre and Allen, 2006), it is important to examine if the availability of resources in one domain may help to reduce conflict originating in the other domain (Selvarajan *et al.*, 2013). However, the role of specific types of organizational resources on differential experiences of the WFC has not yet been studied (Braunstein-Bercovitz, 2013). Therefore, this study responds to the recommendations of Kossek *et al.* (2011) and fulfils this gap. WFC has been defined as "a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect" (Greenhaus and Beutell, 1985, p. 77). Researchers have usually viewed work interference with family (WFC) and family interference with work (family-work conflict (FWC)) as having distinct antecedents and outcomes (Zhao *et al.*, 2014; Netemeyer *et al.*, 1996). WFC refers to "a form of inter-role conflict in which the general demands of, time devoted to, and strain created by the job interfere with performing family-related responsibilities" (Netemeyer *et al.*, 1996, p. 401). FWC refers to "a form of inter-role conflict in which the general demands of, time devoted to, and strain created by the family interfere with performing work-related responsibilities" (Netemeyer *et al.*, 1996, p. 401). The current research examines the specific contributions of two types of organizational resources to reduce both WFC and FWC, that is: psychosocial safety climate (PSC) (resources which value psychosocial health and safety and provide protection from psychological harm),

FSSB (social resources provided by the supervisor to strengthen employees' abilities to fulfill family responsibilities). Indeed, according to Dollard *et al.* (2012, p. 6), examining PSC allows developing "best practice standards in the field of worker psychological health and well-being and provides crucial evidence for policy development, intervention targets and the provision of resources at the national, state and industry levels." Therefore, the inclusion of PSC in a study about work-family interference is of particular importance as WFC is one of the major contributors to poor health and well-being. Work-to-family field studies usually analyze "family-friendly practices." Nevertheless, some studies have demonstrated that, although the employers believe in family-friendly programs, the rates of their use remain very low (Allen, 2001). Indeed, the use of these measures is limited if there is not a family-supportive organizational culture that creates the conditions for their usage. This concerns not only managers who acknowledge the benefits of such programs and support their usage but also global communication about the usage of these practices (Allen, 2001). As PSC includes one dimension, which takes into account a system of communication at all levels of the organization, interventions aimed at the implementation of flexible work practices to alleviate WFC could therefore be achieved by enhancing an overall PSC (Dollard *et al.*, 2012). As noted by these authors, "organizational interventions aimed at improving WFC should consider targeting PSC, which would focus on improving policies; practices and procedures within the organization that eventually affect psychological health" (Dollard *et al.*, 2012, p. 63). For instance, a high level of PSC would ensure flexible workplace practices were in place and employees felt safe and confident that their managers or supervisors support them to utilize these policies, and this could improve the balance between work and family for employees (Dollard *et al.*, 2012). However, we observe that despite the fact that the PSC is designed to protect the psychological health of workers, their possible effect on employees' work-family relationship remains unknown. This is why we examine these relationships, considering that WFC is a major source of stress, burnout and other psychological health problems. We thus examine whether the relation between family-supportive supervision and WFC is weaker in organizations where the level of PSC is high than in those where the level of PSC is low. Theoretically, examination of such resources is necessary to help build better theory and is helpful practically to better identify the types of social support that are effective in decreasing WFC (Kossek *et al.*, 2011). This is also noted by Selvarajan *et al.* (2013): "when the various types of social support systems are examined simultaneously, it can lead to a better understanding of the relative importance of the various types of social support systems" (p. 487). In addition, it seems that the supervisor's supportive behavior is associated with and strengthens the values and beliefs related to the broader organizational culture (Schein, 2004). Examining PSC and FSSP in the same study could therefore improve our understanding of the effects of multiple sources of social support on work and family interference; however, the limited research to this day has shown mixed results (Friedman and Greenhaus, 2000).

In addition, this research is an extension of the call for future research by Idris, Dollard and Winefield (2011) who invite researchers to explore the relation between PSC and other types of job demands and job resources. This study proposes a novel pathway through which organizations can have an influence on employees' work and family challenges or difficulties. Specifically, this study links the PSC (considered as a resource passageway) to supervisor's supportive behavior (as a job resource), which in turn decreases the conflict between work and family.

Accordingly, the proposed model (see Figure 1) highlights the mediating paths of FSSB between PSC and each of the dimensions of WFC and FWC.

The study was conducted in the health sector in the province of Quebec (Canada), and the respondents are a strong majority of nurses, with a few other health workers part of the same union, as will be explained in the methodology section. The health sector is particularly important to study such work-family issues as challenges are very important in

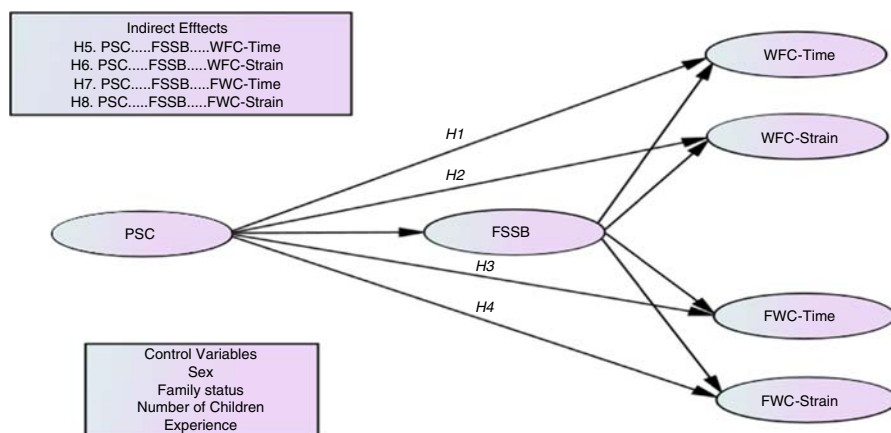


Figure 1. Conceptual model

this sector, working hours often being long, with variable schedules covering 24 hours a day and 7 days a week. Nurses are sometimes required to stay for an additional eight hours shift, when another nurse does not return to work. These are overtime and not a choice from their part and therefore this is detrimental to work-family balance, because it increases the weekly hours. It is also important to study this sector in the context of increasing demands for medical services in the context of an ageing population. In order to attract and retain health workers, work-family measures are very important, as this is a feminine sector, and this issue is extremely important for women, and nurses in particular (Tremblay, 2014).

PSC

Although the PSC construct appears to share some similarities with other safety climate constructs (Zohar, 1980) and team psychosocial safety (Edmondson, 1999; Idris *et al.*, 2011), and PSC constitutes a distinct construct (Idris *et al.*, 2014). Considered as a facet-specific component of the organizational climate construct, PSC is conceived as an organizational climate which is composed of shared perceptions regarding policies, practices and procedures reflected in management commitment, organizational communication, management priority and organizational participation concerning the value of the psychosocial health and safety of employees in the workplace (Idris *et al.*, 2014; Hall *et al.*, 2013; Dollard, 2012; Dollard and Bakker, 2010). The difference between the PSC and other constructs appears in three essential points. First, a central criticism of studies focusing on organizational climate is related to the lack of specificity in predicting outcomes (Carr *et al.*, 2003). Therefore, one unique characteristic that differentiates PSC from other climates is the notion that PSC is considered as an antecedent to work conditions (job demand-resources), or more specifically psychosocial risks, which in turn cause psychological health harms (Dollard and Bakker, 2010; Hall *et al.*, 2010; Idris *et al.*, 2014). Indeed, researchers such as Bond *et al.* (2010) and Dollard and Bakker (2010) indicated that PSC is a valid and reliable construct in relation to work conditions and psychological health problems. Second, safety climate, as another related construct and a specific facet of organizational climate, refers to a climate for physical health and safety (Zohar, 1980). It is defined as “employees’ perceptions of management’s commitment and performance with regards to safety policies, procedures, and practice” (Rasmussen *et al.*, 2006, p. 770). The difference between PSC and safety climate is presented by Dollard and Bakker (2010, p. 580): “despite its influential history in relation to worker physical health and safety, the safety climate construct has not been used in relation to psychological health and safety.” Third, the level of perception (individual, team or organizational) is the third aspect that

distinguishes PSC from other climates (e.g. team psychological climate). Team psychological climate refers to “a shared belief held by a work team that the team is safe for interpersonal risk taking” (Edmondson, 1999, p. 354). Edmondson indicates that employees who experience a psychologically safe team environment do not adopt risky behaviors (Dollard and Bakker, 2010). According to these authors, PSC can affect not only interpersonal factors but also a variety of psychosocial risk factors (e.g. work pressure, job control).

In general, two approaches have been used by researchers to try to explain the organizational climate: the cognitive schema approach and the shared perceptions approach (Anderson and West, 1998). Although some researchers believe that the work climate is a phenomenon shared by members of a group as a property of the working group or organization (Zohar and Luria, 2005), another school believes that the climate can be measured by the perceptions of individuals, or their cognitive patterns, as concern their work environments (Jones and James, 1979). In the first approach, to have a shared perception, the data are usually aggregated from many employees in one group or in a given organization, while in the second approach, individual perceptions of the climate are used (Neal and Griffin, 2006). In this research, the second approach to measure the PSC is chosen. This research evaluates the perception of each employee regarding the PSC in the organization.

PSC, WFC and FWC

Two dimensions of WFC are measured: WFC-strain and WFC-time. A time-based conflict happens when “time devoted to one role makes it difficult to fulfill requirements of another role” (Greenhaus and Beutell, 1985, p. 78). Strain-based conflict is observed when “strain from one role makes it difficult to fulfill requirements of another role.”

Based on the Hobfoll’s (2001) framework of conservation of resources theory (COR), this research proposes PSC as a resource passageway which can constitute a management tool that prompts individual motivation because it makes it possible to protect existing resources (conservation), or to develop new resources (acquisition of resources) thus creating the phenomenon of resource caravans (Hobfoll, 2011). Obtaining resources can lead, according to the “spiral of resource gains” of Hobfoll (1998, p. 82), to acquire more new resources. This is also consistent with the model of Bakker and Demerouti (2007), which indicates that individuals with greater access to workplace resources gain additional job-related psychological resources (cf. Bakker and Demerouti, 2007) that buffer stressors or high demands. This includes the relationship between PSC and WFC, considered as one of the job demands. Dollard and Bakker (2010) proposed the PSC, as an extension of the job demands-resources (JD-R) model (Bakker and Demerouti, 2007) and show that it plays an important role in the motivational pathway of the JD-R theory as a beneficial resource at individual, team and organizational levels. They also demonstrated that PSC decreases job demands and burnout (Idris *et al.*, 2011). The link between PSC and WFC can also be explained in terms of the dimensions of PSC mentioned above. Indeed, when the psychological well-being of employees becomes a priority for senior management, workers will ensure that they have enough resources at work (Idris and Dollard, 2011). These authors identify another important factor to manage health and security at work. They indicate that “Communication systems will be in place so that risks can be identified and managed, for example through better allocation of workload or by providing greater opportunity for recovery” (Idris and Dollard, 2011, p. 327). We propose that in organizations where the level of PSC is high, “employees perceive a clear and consistent message regarding the value the organization places on employees’ family lives” (Greenhaus *et al.*, 2012, p. 268). In other words, employees, those who have children but also individuals or couples who have responsibilities for their own aging or elderly parents or their spouse, or even siblings or relatives, could be encouraged to talk about their family difficulties and health risks resulting from this.

Concerning the effect of PSC on FWC, as individuals are motivated to protect their current resources (conservation) and to acquire new resources (acquisition) (Halbesleben *et al.*, 2014), they invest in resources or try to put in place a strategy of coping to adapt to stressful situations threatening their well-being (Hobfoll, 2001). Mansour and Tremblay (2016a) found that when employees feel that the organization cares for them and for their family life, they invest more time, efforts and energy in the family domain and share more responsibilities with their partner, which can reduce family pressure and decrease stress due to FWC. In organizations where the level of PSC is ensured through policies and procedures, workers feel safe and confident in the organizational support for their well-being (Dollard *et al.*, 2012); PSC can thus be considered as a passageway, which makes it possible for employees to invest in their family without fearing sanctions. They could, for example, ask for information services in the organization, which could be available where the level of PSC is high, in order to know more about how to allocate resources from work to home or family. Information services have been found to play a moderating effect on the relationship between FWC on job stress and burnout, but not however for WFC (Mansour and Tremblay, 2016b). The latter authors indicated that workers needing information services to reduce FWC tend to disengage from their work and think of leaving the organization if they do not have these services. PSC can thus help employees to feel less objective and psychological conflict and therefore experience less FWC.

This leads to the following hypotheses:

- H1. PSC will be negatively related to strain-based WFC.
- H2. PSC will be negatively related to time-based WFC.
- H3. PSC will be negatively related to strain-based FWC.
- H4. PSC will be negatively related to time-based FWC.

PSC, FSSB and WFC

In organizations where PSC is high, managers can help employees to have access to adequate job resources; in other words, PSC can increase the resource pool that employees have. By caring about employees' psychological health and safety, management offers employees a supply of various job resources, which will lead to safer working conditions (Idris *et al.*, 2011). This research proposes that FSSB, as one type of job resources, represents a tool to buffer against WFC by providing employees the adequate resources. FSSB, defined as the perception that one's manager or supervisor cares about employees' work-family well-being, can allow employees to better manage both professional and family life (Kossek *et al.*, 2011). As they are responsible for workers' workloads (Hammer *et al.*, 2009), supervisors can provide emotional support such as "discussing family-related issues" (Goh *et al.*, 2015) or instrumental care (Hammer *et al.*, 2009), in the form of flexible work-family arrangements such as flexible work schedules, part-time work or leaves of absence. Although these practices can be considered beneficial, many employees might avoid using them because of the "stigmas" which may be attached to them, as a behavior not appreciated by society (Fiksenbaum, 2014), and this is why supervisor's support is important.

In addition, research has revealed that many managers do not encourage employees to use these policies and practices (Kossek *et al.*, 1999). Consistent with the COR theory, the ability of individuals and families to build and protect their "pool" of resources (or conversely to lose their resources) is largely dependent on circumstances beyond their control (Hobfoll and De Jong, 2013). Consequently, in a high PSC environment, "managers will understand through good communication and feedback systems with employees, what job resources are required to help employees achieve both personal and work related goals"

(Idris *et al.*, 2011, p. 4). The balance between work and family demands can be considered as a personal goal. Indeed, PSC, as a management tool, can be considered as a “resource passageway” which enhances or develops new resources (FSSB in this study). This, in turn and according to the “spiral of gains of resources” of Hobfoll (1998, p. 82), contributes to employees gaining more new resources at work and/or at home (a balance between work and family life). In other words, employees perceiving that their organization and/or supervisor pays attention to the issue of reconciling work and family will feel they have more safety resources at work and can therefore transfer resources to the family domain. This results in less family resources depletion due to WFC and FWC. Although there is limited research on multiple sources of social support and the results were inconsistent (Friedman and Greenhaus, 2000), there is research that gives some insights on the role of such support. For instance, Mansour and Tremblay (2016a) considered that supervisor’s support can be viewed as a socio-emotional resource that can decrease stress resulting from FWC. Greenhaus *et al.* (2012) revealed that family-supportive supervision leads to a decrease in FWC and in turn to a better work-family balance. Further, the finding of these authors also shows that FWC mediates the interactive effects of family-supportive supervision and family-supportive organizational perceptions on work-family balance. In other words, the relation between family-supportive supervision and balance via FWC was stronger for employees in family-supportive organizational environments than in unsupportive environments (Greenhaus *et al.*, 2012).

Therefore, the following hypotheses were explored:

- H5. FSSB mediates the relationships between PSC and strain-based WFC.
- H6. FSSB mediates the relationships between PSC and time-based WFC.
- H7. FSSB mediates the relationships between PSC and strain-based FWC.
- H8. FSSB mediates the relationships between PSC and time-based FWC.

Method

Sample and procedure

The study was conducted in the health sector in the province of Quebec (Canada), and the respondents are a strong majority of nurses. Table I presents sample characteristics. The study was conducted in partnership with the main union of nurses, the FIQ (Interprofessional Federation of Health of Quebec). Respondents were solicited via the union, both by sending newsletters and circulation of leaflets giving the website address for the survey; 562 responses were collected. The survey was sent to all members of the FIQ, but all do not open the newsletters, which makes it impossible to calculate a response rate.

| | |
|-----------------------|--|
| Industry | Nursing and the health sector |
| Number of respondents | 562 |
| Sex | Women: 90.2%; men: 9.8% |
| Occupation | Nurses: 67.8%; nursing assistants: 19.2%; respiratory therapists: 8%; perfusionists: 0.2%; others: 4.8% |
| Workplace | CHU (University Hospital): 32.4%; hospital: 31.9%; CHA (Affiliated University Hospital): 5%; CLSC (Local Center of Community Services): 11.2%; CHSLD (Hospital Center for Long Term Care): 8.5%; P-CHSLD (Private Hospital Center for Long Term Care): 1.4%; Psychiatric Institute: 2%; EPC (Private Establishment): 0.9%; Others 6.8% |

Table I.
Sample characteristics

The survey covers not only a majority of nurses (68 percent) but also other health personnel (nursing assistants (19 percent), respiratory therapists (8 percent) and others (5 percent)) in Quebec. Concerning the age of respondents, 164 are between 20 and 30 years; 230 between 31 and 40 years; 94 between 41 and 50; 70 between 51 and 60; and 4 are over 61 years. As for the number of years of experience, 169 have between 0 and 5 years of experience; 155 between 6 and 10; 103 between 11 and 15; 42 between 16 and 20; and 93 have over 21 years of experience. The composite score of each variable was calculated by using the mean. The method of multiple imputation method (MICE) was used to handle missing data in our study. This method replaces each missing value with multiple plausible values (Harel and Zhou, 2007). Van Buuren (2012, p. 27) stated, “Nowadays multiple imputation is almost universally accepted, and in it is the benchmark against which newer methods are being compared.” However, there is a hypothesis implicit in running a MICE imputation procedure, which implies that the variables used in the missing data are missing randomly (MAR), which means that the probability that a value is missing depends only on observed variables and not on unobserved variable (Schafer and Graham, 2002). To determine if missing data were MAR, completely at random (MCAR) or not at random, Little’s MCAR test was performed. The result indicated that this test was significant, which means that missing data were MAR leading us to use the MICE imputation procedure. Concerning the number of imputations required, prior research indicates that —five to ten imputed data sets are sufficient (Azur *et al.*, 2011). We thus performed five imputations. Research indicates that the multiple imputation method is the best choice when missing data rates are above 10 percent and even around 5 percent (Wulff and Ejlskov, 2017). Our data contained a low percentage of missing data (around 5 percent and not above 10 percent). Other research revealed that when the percentage of missing data is low or moderate, single imputation and multiple imputation methods have the same performance (Catellier *et al.*, 2005).

Table II shows that the majority of respondents work in hospitals (71 percent), but others are in local community service centers (11 percent), or hospitals for long-term care (10 percent), where there are mostly very old patients, and where care is difficult. The survey was administered online for three months in early 2014.

Measures

PSC. The PSC scale (12 items) established by Hall *et al.* (2010) was used to measure the PSC. This scale consists of four dimensions: management commitment (e.g. senior management acts decisively when a concern over an employees’ psychological status is raised); organizational communication (e.g. information about workplace psychological well-being is always brought to my attention by my manager); management priorities (e.g. psychological well-being of staff is a priority for this institution); and organizational participation (e.g. my contributions to resolving occupational health and safety concerns in the organization are taken into consideration). It should be noted that most previous research has tested this scale within a team. As questionnaires were sent online via a hyperlink on the website of the FIQ, we were unable to identify the place of work for each worker, so that it was impossible for us to aggregate the data collected at the team level. However, this scale can also be applied at the individual level (i.e. without aggregation – cf. Kuenzi and Schminke, 2009). This method does not require sampling of workers within the same work unit, so this is how PSC is measured in this study. This allows researchers to capture the perceptions of the individual in regard to the psychological impact of the work environment on his or her own well-being (Garrick *et al.*, 2014). Items were rated on a five-point scale, going from 1 = strongly disagree to 5 = strongly agree.

FSSB. To measure FSSB, the scale from Clark (2001) was used. Participants completed a three-item scale measuring FSSB (e.g. my supervisor (or chief nurse) understands

Table II.
Means, standard deviation and correlations between the constructs

| Variables | <i>M</i> | <i>SD</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-----------------------|----------|-----------|--------|--------|--------|----------|----------|----------|---------|---------|---------|------|
| 1. Sex | 1.08 | 0.28 | | | | | | | | | | |
| 2. Family status | 5.51 | 1.87 | 0.005 | | | | | | | | | |
| 3. Number of children | 1.71 | 0.9 | 0.034 | 0.100* | | | | | | | | |
| 4. Experience | 2.53 | 1.41 | -0.043 | 0.003 | 0.035 | | | | | | | |
| 5. PSC | 2.24 | 0.82 | -.091* | -0.028 | -0.016 | 0.01 | 0.93 | | | | | |
| 6. FSSB | 3.02 | 1.08 | -0.031 | 0.058 | 0.006 | 0.159** | 0.386** | 0.92 | | | | |
| 7. WFC-time | 3.47 | 1.02 | 0.019 | 0.013 | -0.043 | -0.210** | -0.330** | -0.350** | 0.85 | | | |
| 8. FWC-time | 2.56 | 0.92 | 0.045 | 0.078 | 0.028 | -0.037 | -0.193** | -0.120** | 0.365** | 0.7 | | |
| 9. WFC-strain | 3.23 | 1.01 | -0.002 | 0.027 | 0.002 | -0.056 | -0.381** | -0.284** | 0.512** | 0.296** | 0.85 | |
| 10. FWC-strain | 2.21 | 0.9 | 0.015 | 0.021 | 0.015 | 0.044 | -0.133** | -0.098* | 0.198** | 0.355** | 0.340** | 0.88 |

Notes: *M*, mean; *SD*, standard deviation. α estimates are on the diagonal. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

my family demands). Items were rated on a five-point scale, from 1 = strongly disagree to 5 = strongly agree.

WFC and FWC. WFC and FWC were measured with the scale adapted from Carlson *et al.* (2000). This scale consists of three items assessing each of the three dimensions of WFC and FWC: time-based, strain-based, and behavior-based conflict. In this study, only two subscales of each form of conflict (WFC and FWC) were used: time-based conflict (e.g. WFC-time: the time I must devote to my job keeps me from participating equally in household responsibilities and activities; FWC-time: the time I spend on family responsibilities often interfere with my work responsibilities) and strain-based conflict (e.g. WFC-strain: due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy; FWC-strain: due to stress at home, I am often preoccupied with family matters at work). Each item was rated on a five-point scale (1 = strongly disagree, 5 = strongly agree).

Controls. As women and men experience WFC differently (Barnett and Hyde, 2001), we wanted to test the moderating role of gender in our model. However, we have 507 women and only 55 men, as the health sector is very disproportionately female, so the moderating effect of this variable cannot be verified because of the big gap between the two groups. Respondents' sex has thus been controlled. Also, we controlled for the number of children.

Family situation may impact individuals' work-family experiences (Friedman and Greenhaus, 2000). Family demands refer to the demands from family relations that are not limited only to parents with children, but also single individuals or couples who have responsibilities for their own aging or elderly parents or their spouse, or even siblings or relatives. Currently, both descendants and ascendants are included in family demands when one examines WFC or FWC. Thus, in this study, all working employees were included; this study did not exclude singles from the analysis, as has been the case in most studies since they can also have family responsibilities (see Goh *et al.*, 2015). Indeed, couples with or without children as well as singles are included here; this is justified by the fact that "even single, childless and widowed employees often have family and social commitments to their parents, siblings or relatives. These individuals may even have greater expectations and demands placed on them because they do not have a "formal family unit with kin" (Fiksenbaum, 2014, p. 659). Data were divided into two groups: the first one (364 respondents) included people (single or couples) with children and the second one (198 respondents) included people (single or couples) without children but with other responsibilities such as elderly parents, siblings or relatives. This variable has been tested as a moderator between PSC, FSSB and WFC, FWC, but the results did not show any difference between the two groups[1]. As no moderating effect has been found, this variable has only been controlled.

Results

Means, standard deviations and correlations for all variables and reliability coefficients for all the measures are presented in Table III. Bivariate within-individual correlations provide preliminary support for the hypotheses. PSC reduces WFC and FWC related to time ($r = -0.33, p < 0.01$; $r = -0.193, p < 0.01$, respectively) and decreases WFC and FWC related to strain ($r = -0.381, p < 0.01$; $r = -0.133, p < 0.01$, respectively). PSC increases FSSB ($r = 0.386, p < 0.01$). Also, FSSB was negatively correlated to WFC and FWC related to time ($r = -0.35, p < 0.01$; $r = -0.12, p < 0.01$, respectively) and WFC and FWC related to strain ($r = -0.284, p < 0.01$; $r = -0.098, p < 0.05$, respectively). We observe that the effects of PSC and FSSB on WFC-time and WFC-strain are stronger than on FWC time and FWC-strain (Table II).

Test of the measurement model

To assess the quality of adjustment of scales for the collected data, indices such as general fit index (GFI) and AGFI (Joreskog and Sorbom, 1993), comparative fit index (CFI) (Bentler, 1990), NFI and root mean square error of approximation (RMSEA), and χ^2 were retained. The statistical treatments were carried out with the AMOS software, Version 22. The results of confirmatory factor analyses are presented in Table III. To assess convergent validity, the average variance extracted (AVE) for each construct was calculated; values above 0.5 mean a good convergent validity (Fornell and Larcker, 1981). Discriminant validity was established where maximum shared variance (MSV) was lower than the AVE for all the constructs (Hair *et al.*, 2010). The results are presented in Table III.

The reliability analysis shows that the all constructs have good reliability (the ρ of Joreskog (CR) varies between 0.74 and 0.95). Regarding convergent validity (AVE), it varies between 0.54 and 0.84, which is very satisfying. Regarding the PSC scale, in the literature it is based on the four factors mentioned above. In the discriminant analysis, the multiple correlations between the four dimensions of PSC are too high (between 0.74 and 0.88) and larger than the AVE. Therefore, the discriminant validity is not proven. It seems that there is an overlap in the construct. That is why a confirmatory factor analysis of second order was conducted. Regarding reliability of the global concept of "PSC," the ρ of Joreskog is satisfactory (0.959). The ρ convergent validity is over 84 percent; it exceeds the 50 percent threshold and MSV is lower than AVE. The measurement model fits the data well ($\chi^2/df = 2.23$; GFI = 0.912 CFI = 0.953; Tucker-Lewis index (TLI) = 0.943, RMSEA = 0.047).

Structural model. To test the research hypotheses, the methods of structural equations were used. As for the mediation effects, they were tested by the method of indirect effects based on a bootstrap analysis (Preacher and Hayes, 2004) which overcomes the limits of the approach of Baron and Kenny (1986), traditionally used in the analysis of mediation and in particular the statistical power problem (Edwards and Lambert, 2007) and the decrease in type I error (Preacher and Hayes, 2008). The analyses are based on 3,000 replications generated by the bootstrap method with a 95% confidence interval. The results are shown in Tables IV (direct effects) and V (indirect effects). The quality of the model with direct effects is good. Indeed, the good fit of the theoretical model proposed for the data collected. These indices are considered satisfactory. Indeed, the $\chi^2/df = 3.921$ (1,270.503/324; $p < 0.001$), GFI = 0.848, CFI = 0.886, TLI = 0.867 and RMSEA = 0.072. However, the model of mediation fits the data better $\chi^2/df = 3.265$ (1,302.811/399; $p < 0.001$), GFI = 0.87, CFI = 0.91, TLI = 0.9 and RMSEA = 0.064.

Test of hypotheses. Hypotheses have been tested using AMOS 22. The results presented in Table IV demonstrate that, after controlling for the effects of control variables, PSC was negatively related to WFC-time and FWC-time ($\beta = -0.41$, $p < 0.001$; $\beta = -0.228$, $p < 0.001$, respectively) and WFC-strain and FWC-strain ($\beta = -0.426$, $p < 0.001$; $\beta = -0.173$, $p < 0.001$, respectively), supporting *H1-H4*. PSC is negatively related to WFC-time, FWC-time,

| Variables | CR | AVE | MSV |
|------------|-------|-------|-------|
| PSC | 0.953 | 0.84 | 0.17 |
| FSSB | 0.919 | 0.79 | 0.17 |
| WFC-Time | 0.85 | 0.655 | 0.34 |
| FWC-Time | 0.74 | 0.59 | 0.166 |
| WFC-Strain | 0.866 | 0.687 | 0.34 |
| FWC-Strain | 0.885 | 0.72 | 0.166 |

Table III.
Constructs' finality
and validity

Notes: CR, composite reliability = reliability; AVE, average variance extracted = convergent validity; MSV, maximum shared variance = discriminant validity

WFC-strain and FWC-strain after controlling for sex, family status, number of children and experience (Table V).

Concerning the mediating effects, the results of bootstrap, which gives us the value of the indirect effect and the level of significance, indicate that, after controlling for the effects of control variables (sex, family status, number of children and experience), the indirect impacts of PSC on WFC-time, FWC-time, WFC-strain and FWC-strain via FSSB are all significant ($\beta = -0.179, p < 0.001$; $\beta = -0.065, p < 0.01$; $\beta = -0.154, p < 0.001$ and $\beta = -0.067, p < 0.01$, respectively). The R^2 is 0.22 in the case of WFC-time, 0.048 in the case of FWC-time, 0.135 in the case of WFC-strain and 0.025 in FWC-strain. *H5-H8* are therefore supported: FSSB mediates the relationship between PSC and WFC-time, FWC-time, WFC-strain and FWC-strain. However, these results show that the squared multiple correlation (R^2) is stronger for WFC-time and WFC-strain than for FWC-time and FWC-strain, respectively. This means that PSC explains more of variance in WFC-time and WFC-strain than in FWC-time and FWC-strain, respectively.

Discussion

Using a sample of 562 of nurses and other professionals in the health sector in the province of Quebec (Canada), this study examined a multidimensional mediating model of PSC, FSSB and WFC-time, FWC-time, WFC-strain and FWC-strain. More particularly, this research tested the impact of PSC on WFC-time, FWC-time, WFC-strain and FWC-strain directly and indirectly via FSSB. Given the cross-sectional design of our study, we are unable to make causal inferences, so that our results should be interpreted with caution. We observed that PSC is related to WFC-time, FWC-time, WFC-strain and FWC-strain. In addition, the results demonstrate that PSC is associated with FSSB and has an indirect negative effect on WFC-time, FWC-time, WFC-strain and FWC-strain via FSSB. More precisely, when the level of PSC is high, it improves the level FSSB which, in turn, is related to WFC-time, FWC-time, WFC-strain and FWC-strain. Other studies have found support for the role of PSC among Malaysian (Idris and Dollard, 2011; Idris *et al.*, 2011, 2012) and Australian workers (Idris *et al.*, 2012; Law *et al.*, 2011). This study supports the fact that there is an impact of PSC among Canadian workers in the health sector.

| Variable | Standardized parameter estimates | | | | | | | |
|--------------------|----------------------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|
| | WFC-time | | FWC-time | | WFC-strain | | FWC-strain | |
| | β direct effect | <i>t</i> -values | β direct effect | <i>t</i> -values | β direct effect | <i>t</i> -values | β direct effect | <i>t</i> -values |
| Sex | -0.034ns | -0.812 | 0.033ns | 0.7 | -0.84* | -2.04 | 0.003ns | 0.075 |
| Family status | 0.044ns | 1.057 | 0.143* | 2.958 | 0.051ns | 1.252 | 0.018ns | 0.416 |
| Number of children | -0.061ns | -1.475 | 0.027ns | 0.559 | -0.014ns | -0.354 | 0.006ns | -0.132 |
| Experience | -0.22*** | -5.22 | -0.021ns | -0.343 | -0.077ns | -1.1878 | 0.039ns | 0.878 |
| PSC | -0.41*** | -8.731 | -0.228*** | -4.493 | -0.426*** | -8.873 | -0.173*** | -3.75 |
| R^2 | 0.164 | | 0.055 | | 0.18 | | 0.03 | |

Notes: * $p < 0.05$; *** $p < 0.001$

Table IV.
Direct effects of PSC on WFC-time, FWC-time, WFC-strain, FWC-strain

| Variable | WFC-time | FWC-time | WFC-strain | FWC-strain |
|----------|-----------|----------|------------|------------|
| PSC | -0.179*** | -0.065** | -0.154*** | -0.067** |
| R^2 | 0.22 | 0.048 | 0.135 | 0.025 |

Notes: R^2 for FSSB = 0.225. ** $p < 0.01$; *** $p < 0.001$

Table V.
Results of bootstrap of the mediation effects

PSC is conceptualized as an antecedent to working conditions, specifically psychosocial risks that in turn cause psychological health harms (Dollard and Bakker, 2010). Thus, as “working conditions are a feature of management initiatives” (Idris *et al.*, 2015, p. 187), in organizations where PSC is high, managers will design jobs and tasks so that employees will be able to assume the demands they face (Dollard, 2012). Moreover, in such organizations, employees’ psychological health is considered by the senior management to be as important as productivity (Dollard and Bakker, 2010). As work-family interaction has a significant effect on worker well-being (Eby *et al.*, 2010), managers and supervisors will also pay attention to workers’ family-related difficulties, and even provide guidance to help employees on how to better manage work and family demands. Indeed, managers will monitor and adjust work demands, working hours and manage the division and coordination of tasks to allow employees to get the job done. Employees can thus meet their own needs as well as the organization’s needs through the support of managers and supervisors (Idris *et al.*, 2015).

Furthermore, according to Law *et al.* (2011), the safety signal function included in PSC can help employees to safely utilize available resources at work. If employees feel safe and not threatened, they are likely to obtain more resources (Hobfoll, 2001). Thus, the support of managers and supervisors to meet staff’s efforts to balance their professional and private lives such as taking time off for sick children, being a little late to take a child to school, leaving early to participate in parent-teacher meetings or other family needs. Discussing family difficulties with managers and/or supervisors becomes easier and safer, and supervisors’ support becomes easier and safer when senior management supports PSC and considers the psychological health of employees to be a priority. Consequently, such a support transmits and allocates the organization’s resources to employees who feel therefore less WFC and FWC. However, our results reveal that the effect of PSC on WFC is stronger than on FWC, meaning that other sources of supports are important to alleviate FWC. Greenhaus *et al.* (2012) found that FWC mediated partially the relationship between the interaction between family-supportive supervision and family-supportive organization and work-family balance. In addition, the results of Greenhaus *et al.* (2012) did not show a mediating role of WFC and FWC on the interaction between family-supportive supervision and spousal support and work-family balance. Mansour and Tremblay (2016a) found that organizational support for reconciling work and family life is more significant than generic supervisor support and that family support reduces job stress via WFC but not via FWC. Moreover, research indicates that the need for on-site childcare has a moderating effect on the relationship between FWC, burnout (emotional exhaustion and depersonalization), and job stress (Mansour and Tremblay, 2016b). The latter authors have shown that employees who have children need childcare in the workplace to reduce their difficulties in reconciling work and family life because they have more responsibilities at home. Such a resource can therefore be more important to reduce FWC than WFC, which, according to our results, can be alleviated by offering policies and practices to support the well-being and family life of workers.

Theoretical implications

The findings have several important theoretical implications. First, this research responded to the call for more research on FSSB by Kossek *et al.* (2011) and the recent work of Goh *et al.* (2015), who indicate that “little is known regarding the relative usefulness of different forms of support, limiting the practical recommendations that one can give to supervisors.” Second, the mixed and inconsistent results found on the relationship between flexible work arrangements and WFC calls into question the effectiveness of these arrangements in terms of decreasing the conflicts between work and family, and more research integrating both WFC and FWC is needed for a better understanding (Allen *et al.*, 2013). Our study fulfills this gap by examining the effect of PSC on WFC and FWC via FSSB. Some resources, such

as flexibility, part time, on-site childcare or information service about how to manage work and family can be more effective for WFC than FWC and vice versa (Mansour and Tremblay, 2016b). These mixed findings demonstrate the importance of examining multiple sources of support in the study of work and family interference. Indeed, our study tested a new multidimensional mediating model, which examined the mediation role of FSSB between PSC and WFC-time, FWC-time, WFC-strain and FWC-strain. This is the first study to examine these relations, so this can advance our understanding in this field.

Third, the test of the concepts of PSC in this study provides a support for the theory of conservation of resources and proposes an extension of this theory. Indeed, previous research has considered the theory of COR as a theory which can be applicable at the individual level. However, establishing an environment of physical and psychological security can be useful at the organizational level, the unit/team level and at the individual level. PSC can be considered as a management tool for employees' well-being, engagement and performance (Idris *et al.*, 2015). The latter authors have already proposed the PSC as an extension of the job demands-resources model and have showed that PSC plays an important role in the motivational pathway of the job demands-resources theory, as beneficial resources at the individual, team and organizational levels. However, in this study, the COR theory is employed, and especially the concept of resource caravan passageways proposed by Hobfoll (2011, 2012, 2014), which has not been explored in the literature (Halbesleben *et al.*, 2014). This research considers the PSC as a resource caravan passageway, which can increase the resources of workers such as FSSB, which, in turn, can lead to less WFC. In addition, these results provide support to Hobfoll's (1998) theory on the spiral of gain of resources. As PSC and prevention of stress involve all levels of the organization (Dollard and Bakker, 2010), in organizations where the level of PSC is high, all members of the team or department will be encouraged to show support for employees' family responsibilities. Thus, PSC can act as a passageway leading to more resources, which, according to the spiral of gains, leads to acquiring more resources such as supervisor's support leading to less WFC and FWC. This is an important result because it shows support for the spiral of gains of resources at all levels in the organization. This is consistent with the complementary (Adler and Kwon, 2002) or enhancement (Friedman and Greenhaus, 2000) perspective, which means that the availability of a resource improves the ability of individuals to have access to other resources because of the "complementary and synergistic effects of multiple resources" (Greenhaus *et al.*, 2012, p. 268). These authors note that "the consistency between the supervisor and the organizational environment should reinforce the perception of support and facilitate the utilization of the flexibility, information, and assistance provided by a supportive supervisor such that employees experience less conflict between work and family roles and ultimately experience a higher level of work-family balance" (Greenhaus *et al.*, 2012, p. 268). In other words, organizations which pay attention to workers' well-being and consider the safety and psychological health as an objective as important as productivity, through policies, procedures and practices, will bring managers and supervisors to care about employees' basic human needs, including balance between work and family. Greenhaus *et al.* (2012) called for additional research to understand the particular synergies that explained enhancement of resources and our study can help researchers and practitioners to better understand these synergies. A better understanding of these relations will make it possible for firms and HRM managers to take into account all the challenges of FWC and WFC, and implement the right solutions in terms of organizational support and practices. This leads us to the practical implications.

Practical implications

In terms of practical implications, the study indicates that maintaining a balance between work and family and employees' well-being requires policies, practices and procedures to be

implemented by the organization. As WFC is associated with poor psychological and physical health, it is crucial that employers and organizations consider these variables as having a serious effect on employee's well-being and therefore on productivity and performance in organizations. Not taking this into account may increase costs to employers through increased staff turnover, sickness absenteeism and other negative consequences (Dollard *et al.*, 2012). When senior managers value employees' psychosocial safety, consider it as a priority, act quickly to correct problems affecting employees' psychological well-being and put in place a good system of communication at all levels, these measures can create a favorable effect on the work environment. Therefore, managers and supervisors at the unit level will be encouraged to show more support to workers' family issues and encourage workers to talk about their difficulties at work or/and at home. This support can make workers more resourceful and therefore more capable of successfully balancing work and family. Finally, the results suggest that PSC can be considered as an alternative to formal family-friendly benefits or measures for organizations which may consider the cost of these practices as too high, for example small and medium size businesses. PSC can also be complementary to family-friendly benefits or measures, reducing all the more WFC and FWC. In particular, the results show that in organizations where the level of PSC is high, managers at the unit level and supervisors are encouraged to support the staff's efforts to balance their professional and private lives, and this "family-friendly behavior is a viable way to positively influence employee well-being" (Matthews *et al.*, 2014, p. 178). Not only would these efforts indicate understanding of employees' needs as working parents, but also the entire group and organization would benefit in the long run. WFC is a workplace issue that warrants intervention in order to reduce organizational costs and increase worker well-being and PSC should be considered as an appropriate target for intervention (Dollard *et al.*, 2012). However, although this management tool can be useful to reduce FWC, it is more appropriate to decrease WFC. Employers and HR managers not only should understand from our findings the importance of PSC, but also that all employees do not have the same problems, depending on the level of responsibilities at home for example. Hence, they should offer the appropriate resources according to the need of workers. Indeed, the implementation of a unique work-family measure may not be appropriate for all workers, and it is important that employers and HR managers understand the details of WFC and FWC, as well as the possible effects of a series of different variables, in order to design the best work-family programs.

Limitations and future research

The current study has some limitations that need to be mentioned. The first limit is related to variable measurement and omission. Even if we tested many variables in our study, we were not able to test other important variables such as WFC and FWC behaviors and the age of e-children. In addition, the assessment of FSSB does not detail the forms of support provided, and thus, cannot compare all forms of support, such as instrumental and emotional support, as recommended by Hammer *et al.* (2011). Another set of concerns is related to the data. While PSC as a climate phenomenon is theorized to be shared perceptions of the group or organization, for this study, data have been collected at the individual level, which does not allow for aggregation of data. Consequently, PSC may be seen as the psychological climate of each organization rather than as a shared perception, so the results need to be interpreted with caution, although the individual perception is clearly important. Indeed, PSC is expected to differ across organizations, as it is largely dependent on senior management's values and beliefs (Hall *et al.*, 2013). The latter authors note that when the "individual responses represent data from a wide cross-section of different organizations, so we expect the dependence of data problems on climate studies that use organizational samples to be greatly reduced" (Hall *et al.*, 2013, p. 371). In this research, data

were collected from a wide cross-section of different health organizations in Quebec, so this limit is less important. A further limitation is the cross-sectional nature of the study, which limits the possibility to draw causality between variables. However, an earlier longitudinal study provides some support to the suggestion that PSC precedes work conditions (job demand-resources) (Bond *et al.*, 2010; Dollard and Bakker, 2010). Another limitation of our study is related to the potential differences between the nurse and non-nurse samples in terms of WFC. However, as nurses compose the majority of our sample (68 percent) while other health personnel are nursing assistants (19 percent), respiratory therapists (8 percent) and others (5 percent), it was not possible to do a multi-groups test because the gap between groups is too large. Finally, common method variance (CMV) bias could be considered as a limit in this study because a cross-sectional study has been conducted and data were not collected overtime. However, Podsakoff *et al.* (2003) have proposed four preventive methods to reduce the CMV bias. This includes: adding reverse items in the survey, randomly organizing items, concealing the purpose of the research, and concealing the relationship between questions. This survey was formulated on the basis of these principles in order to reduce this concern. Future research could try to go beyond these limits, and analyze other professional groups for a stronger validation of results.

Note

1. Tables on these analyses are available from authors, upon request.

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