

Sources of work-family life conflict and fulfilment among healthcare professionals in the hospital sector

Les sources de conflit travail-famille et d'enrichissement chez les professionnels de soins dans le secteur hospitalier

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ABSTRACT

Hospital professionals, particularly healthcare providers, face an increase in their workload and other pressures in the current context of reduced recruitment due to budgetary restrictions. They are often subjected to high work demands and are exposed to a great deal of stress. These difficulties faced by healthcare providers in the workplace, the majority of whom are female, overflow into their private lives, making work-family life balance one of the main issues of quality of life for healthcare providers today. A quantitative study carried out among healthcare providers with family responsibilities (children) in a hospital located in Western France aimed to assess the impact of certain organizational factors such as decision-making flexibility, work demands, and workload and working hours, on the incidence of both work-family life conflict and developing

a fulfilling work and family life balance. The results of this research reveal the role played by work demands in the incidence of work-family life conflict and also in developing a fulfilling work-family life balance. It also highlights a new role for autonomy which, although reducing work-family life conflict, nevertheless does not contribute to the development of a fulfilling work-family life balance, leading us to question the nature of autonomy in healthcare providers. Moreover, the workload and working hours are no longer a factor in reducing the emergence of conflict but rather clearly promote the development of fulfilment between professional and private spheres of life.

Key-words

Work-family life conflict, fulfilment, autonomy, work demands, time

RÉSUMÉ

Les professionnels hospitaliers en particulier les soignants, doivent faire face à une augmentation de l'activité hospitalière et à d'autres pressions dans un contexte de baisse des recrutements consécutive aux restrictions budgétaires. Ils sont

souvent soumis à de fortes exigences de travail et fortement exposés au stress. Ces difficultés, que rencontrent les personnels soignants, majoritairement féminins, au travail, débordent dans la sphère privée faisant aujourd'hui de la conciliation vie privée-vie professionnelle l'un des principaux enjeux de la qualité de vie au travail

des soignants. L'étude quantitative menée auprès de professionnels de soins ayant une charge de famille (enfant à charge) d'un centre hospitalier de l'ouest de la France, vise à évaluer l'impact de certains facteurs organisationnels tels que la latitude décisionnelle, les exigences de travail, le temps et les horaires dans la survenance de conflit travail-famille et le développement de l'enrichissement travail-famille. Les résultats de cette recherche mettent en évidence le rôle que jouent les exigences de travail dans la survenance du conflit travail-famille mais également dans le développement de l'enrichissement travail-famille. Il apparaît également une nouvelle place de

l'autonomie qui prévient certes le conflit famille-travail mais ne contribue pas au développement de l'enrichissement travail-famille et famille-travail, ce qui pose la question de la nature de l'autonomie chez les soignants. Par ailleurs, le temps et les horaires ne préviennent plus le développement du conflit mais favorisent clairement le développement de l'enrichissement entre les sphères professionnelle et familiale.

Mots-clés

Conflit travail-famille, enrichissement, autonomie, exigences de travail, temps

INTRODUCTION

Working conditions, workload (both physical and psychological), pressure and reorganization are all subjects which feed the current debate on human resources management and quality of life in the workplace within healthcare establishments in France.

Several recent works have highlighted a sense of unhappiness among healthcare providers (Estryn-Behar, 2004; Belorgey N., 2010; Brami *et al.*, 2013; Haliday, 2018), which is attributed to both performance requirements induced by the most recent regulations (activity-based payment regulations of 2004, and the "HPST" (French Hospital, Patients, Health and Territories law of 2009) etc., as well as to the specific demands of care work itself. Indeed, healthcare providers are simultaneously valued and devalued (Edey-Gamassou, 2012). This dissonance, experienced daily, has demonstrable consequences on the quality of care provided¹.

Healthcare providers, particularly nurses, are required to be extremely flexible, especially in the hours they work (Michaud and Molière, 2014). These constraints

are recompensed with a reduction in time worked². Staff benefitting from these counterbalancing measures are the very same ones who are often required to work overtime hours, often not recovered with time in lieu. "Approximately 30% of hospital sector employees worked more hours than they were supposed to, every day and each week, in 2013, i.e. less than half the amount in 2003 (70%) or in 2006 (66%). Working overtime was nevertheless still a reality for more than half of nurses and midwives in 2013" (Drees, 2016³, p. 118). Finally, as the Laurent report indicates with regards to working hours in the public sector (2016), "addressing the social demand, by enabling organizations to give their staff more free time, initially came about to the detriment of working conditions, but also to the detriment of the logical organization of hospitals" (p. 29).

Conciliation between private and professional life thus emerges as *the* new issue concerning quality of life among hospital sector professionals. It is more widely a real preoccupation, particularly for employees who are parents. Grodent and Tremblay (2013) identify a link between the emergence of difficulties in conciliating one's professional and familial spheres and, on the one hand, a lack of time reported by the individuals needing to

¹ A report on ordinary maltreatment published by the French Health Authority (*la Haute Autorité de Santé - HAS*) in January 2010 [URL: <http://www.has-sante.fr>].

² As such, decree n°2002-9 dated 4 January 2002, relating to working hours and work organization in public hospital establishments, specifies variable time off for staff working more than 10 Sundays or bank holidays in a year, as well as 2 compensatory days off if they work 20 in the year...

³ Drees (2016) A Portrait of healthcare professionals. Working conditions in hospitals.

balance the two and, on the other hand, transformations in the family composition, labor and work organization.

Several French-language studies have highlighted the difficulties and interaction of work-family/private life balance among nurses in Quebec or in France (Lazzari Dodeler and Tremblay, 2016). As the work is required to be carried out over a 24-hour period, healthcare providers inevitably work atypical hours. “Working part-time hours remains the main choice for adapting work life to family constraints” (Michaux and Molière, 2014, p. 31). Also, the possibility of working 12 hours is relatively popular among nurses as it offers them the opportunity to take extra days off (Michaux and Molière, 2014; Vincent, 2014). Nevertheless, the reality in health organizations is changing due to the increasing necessity to manage restrained human resources, which leads to staff members being called in to replace absent colleagues.

This is the context in which the present authors investigate the sources of work-family life conflict and ensuing work-family life fulfilment, focusing mainly on the working environment of healthcare providers and on three main time variables: time required for work, adapted working hours, and time off and time in lieu.

The aim of the present article is to study, using quantitative methodology, the relationships between work demands on healthcare providers, the margins of autonomy available to them, the three variables pertaining to working hours, and both conflict and fulfilment in work-family life balance in healthcare professionals with children.

This paper first presents the two perspectives of the in-work/outside-work relationship which are not mutually exclusive: conflict and fulfilment. The working conditions of healthcare providers are analyzed using the model proposed by Karasek (1979). This leads us to investigate the effects of work demands and decision-making flexibility on conflict and fulfilment between their professional and private lives. The model is elaborated with the addition of certain time variables which are said to better conciliate work and family life. The methodology and measurement scales employed are then presented, followed by the results, which validate several hypotheses discussed herein. The paper concludes with a contextual perspective of the contributions, limits and avenues for further research of the study.

1. SCOPE OF ANALYSIS AND HYPOTHESES

1.1. *The risk of work-family life conflict among healthcare providers*

The task of defining the notion of ‘conflict of roles’ first raises the concept of an opposition of roles. Indeed, employees hold several roles simultaneously (employee, manager, subordinate, partner, parent, etc.). Each of these roles has its demands. An overload of roles arises when the total demands in terms of time and energy associated with the activities to be undertaken are too great for one person to adequately fulfil their obligations serenely. Various works (Kahn *et al.*, 1964; Greenhaus and Beutell, 1985; Commeiras, Loubès and Fournier, 2009) have studied the tensions which can arise between the roles and refer to the concepts of conflict and ambiguity across roles. Conflict across roles “*results from the simultaneous emergence of two or more incompatible demands in such a way that adapting to one makes it more difficult to adapt to others*”. The ambiguity of the role is relative to the “*degree of information lacking to occupy a position within an organization*”. The “*overload of roles*” occurs when “*the total demands in terms of time and energy associated with the activities to be completed are too high to fulfil one’s obligations adequately and serenely*” (Duxbury and Higgins, 2003).

Conflicts of roles occur on two levels: the ‘professional-personal type’, for which work (hours, trips, professional demands, etc.) interferes with aspects of one’s private life, and the ‘personal-professional type’, for which personal activities interfere with their occupation (Grant-Vallone and Ensher, 2001). The professional-personal type can also manifest work-family life conflict. Generally speaking, the conflict between family life and professional life reflect a “*mutual incompatibility between the demands of the professional and family roles*” (Grant-Vallone and Ensher, 2001). This is a form of conflict of roles in which the demands of family and work spheres are incompatible. As such, involvement in one role affects and makes difficult one’s involvement in the other role. Among all the dimensions of work-family conflict, Greenhaus and Beutell (1985) identified one conflict based on stress and one based on time. The

work of Karasek (1979) on stress highlighted how decision-making flexibility could provide protection against stress in a context of high work demands. Moreover, most research on work-family life interaction shows that work time and hours influence the occurrence of conflict (St-Onge *et al.*, 2002; Seiger C. and Wiese B.S., 2009). There is a plurality of sources of work-family conflict in hospital work. Work rhythm and deadlines have increased for healthcare professionals (PRESST- NEXT survey) (Estry-Béhar *et al.*, 2004). This pressure in terms of work time and rhythm is a fundamental source of work-family life conflict, because the stress generated within the professional sphere can impact one's family life.

1.2. Potential synergies between work and family life

In contrast, some studies have shown that simultaneous management of family and professional responsibilities can create mutual fulfilment of both spheres (Greenhaus and Powell, 2006; Dumas, 2008 b; Kreiner *et al.*, 2009). In other words, an individual's role in one sphere may be advantageous to their role in the other (Dumas, 2008 a). According to Greenhaus and Powell (2006), work-family life fulfilment is *"the measure in which the experiences in one role improve quality of life in the other role"*. St-Onge and Lourel (2012) define *"a paradigm of fulfilment between one's professional and personal lives, which designates the transfer of resources and investment from one role to another"*. This consideration of the aspects which facilitate the interface between work and family life is arguably the most important conceptual innovation to have been developed in the research on the work-family dynamic. Research on conflict has always taken precedence over research on fulfilment, which today constitutes a new dimension for studies on the interaction between work and family life.

In their literature review, St-Onge and Lourel (2012) place the spotlight on pioneering research on fulfilment conducted in the 1970s by Sieber (1974) and Marks (1977). Indeed, they first present Sieber's position, who *"does not deny that the cumulation of roles generates tension, but nevertheless considers that the benefits largely outweigh such tension"*.

The theory that *"cumulating roles creates energy"* proposed by Marks (1977) develops this perspective further. This theory *"does not postulate the intrinsic rarity of resources, but rather their potential expansion through implication"*. It is important to remember that Marks (1977), like Gannon and Nothern (1971) and Kirchmeyer (1992), works in contrast to the scarcity approach theory. According to Kirchmeyer (1992) *"Resources are abundant and increasing"*. So, the interaction between private and public roles is not always conflictual but can instead take the form of mutual fulfilment between the spheres. For Kirchmeyer (1992), *"the fact of spending time in a setting outside of work can increase skills which will be reusable and useful in the professional setting"*. According to Rothbard (2001) *"involvement in a given role generates emotions within that role, emotions which will then have an effect on the other role"*.

The theoretical approach to fulfilment is in-keeping with the teachings of positive psychology (Seligman, 2002; Csikszentmihalyi, 2004a; 2004b) and is based on the assumption of increasing resources. Carlson *et al.* (2006), Greenhaus and Powell (2006) present fulfilment as being a new dimension of work-family life interaction. Fulfilment thus defined assumes the existence of resources acquired upon taking up a role and deployed in the context of another role. Sources of fulfilment seem to find their roots in resources as defined by Hobfoll (1989). The conservation of resources theory proposed by Hobfoll (1989) is based on the idea wherein individuals seek to conserve, protect and reinforce their resources: resources sourced from work, family and within the person him/herself. The potential or real loss of these precious resources presents a threat. Based on the conservation of resources theory, Brotheridge and Lee (2005) explain work-family life fulfilment by supporting the idea that *"this model of fulfilment, which is identical to the social support model, could serve to regulate and protect individuals from the negative consequences of work-family life conflicts"* (p 192). For Greenhaus and Powell (2006), two types of variables, instrumental and emotional, can fulfil the work-family life relationship. Instrumental resources can be organizational in nature, such as flexible working hours, while emotional resources come rather from the family.

1.3. Decision-making flexibility, a potential protector against work-family life conflict in a context of high work demands

Tensions at work are the consequences of high work demands and low decision-making flexibility, according to Karasek (1979). Leplat and Cuny (1984) distinguish two meanings of the concept of workload: the workload as a characteristic of the task, thus the obligations and constraints it imposes on the worker, and the workload as a consequence for the worker of carrying out the task. To avoid any ambiguity on the matter, Leplat and Cuny (1984) suggest the term 'work demands' for the first case, reserving the term 'workload' for the second. Work demands are therefore what weigh on the worker and are sometimes a synonym for the mental or physical effort required to complete a task (Livian *et al.*, 2004). Regarding work demands, the PRESST-NEXT⁴ survey revealed the work of healthcare providers is very strenuous (Estry-Béhar, 2007). Indeed, the standing position, nursing tasks (washing and bathing, dressing patients and helping them to eat), the unsuitability of the premises to the demands of the job, handling of heavy loads and so on, are the fundamental sources of difficulties at work experienced by healthcare providers, alongside physical hardships are mental difficulties. Indeed, for Manoukian (2009): *"we are fairly sure to be faced with significant psychological demand in most healthcare settings. And the teams work in such a way that the healthcare provider's autonomy is very limited"*. At hospital, physical demands are great: a standing posture, frequent movements, moving and carrying heavy loads, etc. Healthcare providers leaves exhausted from their night shift. All these elements show that healthcare providers experience high work demands.

High work demands are undeniably a source of stress (Karasek, 1979) which can affect the private life of an employee. According to Greenhaus and Beutell (1985), this stress transferred to the family sphere is the manifestation of a work-family

life conflict called "strain-based conflict". Among healthcare professionals, the question of work demands is at the heart of debates around working conditions. Reviewing working conditions in hospitals, Bonmati (1998) identifies general constraints inherent to hospital work: the ongoing nature of care, the multitude of roles (healthcare providers, technicians and logisticians, administrative staff, medical device professionals, etc.) and the difficulties in carrying out work functions (the hardship in dealing with heavy loads, mental and psychological loads, the particularly difficult working hours...). Bonmati (1998) describes the main characteristic of workload in hospitals as *"being variable in time, space, volume, intensity, and in the methods and means used to complete one's tasks and to adapt to the context"*.

The work demands on healthcare providers are inevitably quite varied. The role of healthcare provider is essentially based on the therapeutic relationship (Manoukian, 2009). For example, the position of assistant nurse consists of dispensing bodily care to patients: bathing, clothing, feeding them, etc. (Messing and Elabidi, 2002). According to Manoukian (2009), this therapeutic relationship with the patient is in itself a factor of stress, given the inherent confrontation with death, handicap and suffering (the psychological and emotional dimensions of a healthcare provider's work are underlined by Estry-Béhar (1997)), notwithstanding situations wherein healthcare providers may be subjected to physical aggression and violence. Furthermore, administrative tasks are becoming an integral part of the work of healthcare providers. This situation means that in hospitals, reactions demonstrating intense fatigue and exhaustion are observed in some staff members, healthcare providers in particular (Barbier, 2004). These overly heavy work constraints can lead to the emergence of a certain kind of suffering. We can therefore observe that work demands among healthcare providers are rather high and the cause of real stress. Such demands contribute to the deterioration of quality of life in the workplace.

⁴ PRESST-NEXT (*Promouvoir en Europe Santé et Satisfaction des Soignants au Travail* – Promoting Health and Satisfaction among Healthcare providers in Europe) is a project financed by the European Commission, investigating the working conditions of healthcare providers (37161 respondents) across ten countries (Germany, Belgium, Finland, France, Italy, The Netherlands, the United Kingdom, Sweden, Norway, Poland and Slovakia).

In light of these studies on the factors of stress which demonstrate the positive and negative effects of work demands on stress, the present authors chose to study these elements as factors which positively or negatively influence work-family conflict and fulfilment, and define the following hypotheses:

- H1a1** Work demands positively influence work-family life conflict.
- H1a2** Work demands positively influence family-work life conflict.
- H1b1** Work demands negatively influence work-family life fulfilment.
- H1b2** Work demands negatively influence family-work life fulfilment.

With regards decision-making flexibility, otherwise called autonomy, this is defined by Stamps and Piedmonte (1986) as being the degree of dependence and freedom associated with the role which is required or authorized in order to carry out daily tasks in the role. Autonomy implies responsibilities in terms of results of work performance, such as increasing efficiency and motivation (Hackman and Oldham, 1976). As Chung (1977) established, autonomy has an effect on the work schedule, speed of work and the process of setting goals, as individuals with autonomy are free to control their speed of work and to determine the work to be done, as well as the assessment process thereof. According to Karasek (1979), decision-making latitude is the degree of autonomy available to the worker. Potential repercussions in terms of fulfilment experienced in completing tasks are also evoked, through the control one has over one's own work, and through participation in decisions and the possibilities to use and develop one's skills. According to Karasek, very low decision-making flexibility and little or no social support are work situations which are experienced as being difficult. Research conducted by Karasek (1979, 1990) showed that the situation wherein the individual has low decision-making flexibility and high work demands is a factor of stress. In other words, employees who are subjected to great psychological pressure and low decision-making flexibility are placed in a situation of "job strain". Indeed, psychological load is associated with completing tasks, and decision-making flexibility (decisional

autonomy) is linked to the use of skills and potential repercussions in terms of fulfilment experienced in completing tasks. In his study, Karasek (1979) demonstrates that stress results from a low degree of autonomy (thus lacking resources, according to Hobfoll (1989)) coexisting with high psychological demand (work demands). According to Barel *et al.* (2009) "*an employee who feels they cannot control their work is more at risk of depression, compromised work performance and/or disengagement from certain work-related tasks. In contrast, a sense of accomplishment or "self-determination", defined as the sense of being able to initiate and regulate one's own actions, is a source of fulfilment*". Among healthcare professionals, the works of Vandenberghe *et al.* (2009) on factors of stress in hospital working environments conducted in nursing units within a university hospital in Belgium, demonstrated how autonomy directly influences absenteeism among nurses who experience very high levels of pressure at work. The survey developed by Karasek (1979) can be used, as it has been by some authors such as Wallace (2005), to determine whether models of stress applied to depression in the literature can also apply to work-family life conflict. This is of great interest in the present study, which is based on the idea whereby work-family conflict, much as stress, is a consequence of a loss of resources, and that fulfilment is a gain of resources.

Focus is therefore placed on the protective role which autonomy may play against stress in a context of difficult working conditions and quality of life in the workplace, and the repercussions on family life. In other words, is autonomy at work a protective factor against conflict, and does it promote fulfilment? The response to this question leads us to formulate the following research hypotheses:

- H2a1** Work demands positively influence work-family life conflict.
- H2a2** Work demands positively influence family-work life conflict.
- H2b1** Work demands negatively influence work-family life fulfilment.
- H2b2** Work demands negatively influence family-work life fulfilment.

1.4. Working time and hours and work-family interaction

The importance of continuity of care and the intense nature of the tasks which constitute the work of healthcare providers, make the question of managing working time in hospitals a central issue. Nowadays, the length of work time and organization of hours in a context of difficulties, suffering and high levels of professional exhaustion are becoming a fundamental issue in the management of hospital staff (Manoukian, 2009). The question of the link between this strenuousness and the long working hours (either planned or overtime) is raised. In a study conducted within seven companies in different sectors (insurance, distribution center, industry, hospital, service provider...), Adkins and Premeaux (2012) identified a positive link between long working hours and work-family life conflict. They confirm the results of Hansez *et al.* (2008) who also found a positive correlation between working time and the emergence of a work-family life conflict. In this light, it is clear from these studies how the notion of length of work time could nurture a sense of work-family life conflict. Moreover, on the question of balancing private and professional lives, the lack of time needed to devote to one sphere has often been linked to stress (St-Amour *et al.*, 2005). This means that having enough time could be a protective factor against the experience of work-family conflict.

This study looks at the question of work time of healthcare providers with regards the potential to correctly carry out their work. Having enough time to complete one's tasks could improve the quality of one's work, quality of life in the workplace and work-private life balance. Furthermore, healthcare professionals often have to work irregular hours. They can be solicited to work at any time of day or night, when other employees have finished their day of work (Chenu, 2002). As such, analyzing the influence of variable daytime working hours on nurses' sleep patterns, Boittiaux and Pottier (1987), found evidence of negative consequences of these working hours on life outside of work. Gadbois (2004) argues that the difficulties reside "*in the existence of social rhythms which suppose that in family and social life, there is time set by for each*

thing: many activities of daily life are socially programmed in fixed timeframes. These social rhythms are regulated according to ordinary normative working hours during the day and evening or night shift workers who sleep during the day are therefore out of kilt. Hours of free time available to them are, to a large extent, at times during the day when many out-of-work activities cannot be practiced or can only be done in unsuitable conditions". This supports the incompatibility described by Greenhaus and Beutell (1985) on the emergence of the work-family conflict. Regarding the results of the PRESST-NEXT survey, Jasseron *et al.* (2006) revealed that the percentage of state-registered nurses intending to leave the healthcare profession was higher in the group of those who had changes made to their working hours or days within short time periods, i.e. changes more than twice per month. In a study on strategies for conciliating variable working hours and family responsibilities, Prévost and Messing (2001) concluded that the respondents experienced stress which was likely associated with working variable hours not of their choosing. "*They particularly reported stress about frequently having to change childcare arrangement according to their changing working hours*". This brings us back, in the context of hospital work, to the nagging issue of planning stable rosters which are communicated to employees sufficiently in advance. As hospitals have high rates of absenteeism, those managing rosters must take this into consideration. This in turn raises the issue of how care organization is perturbed (Brami *et al.*, 2013) when the absence has not been anticipated, where-in the workload, initially distributed according to planning needs, must be redistributed according to human resources available. Randon *et al.* (2011) state that "*these untimely changes to the roster engender frustration from healthcare providers solicited to work to cover the lack of staff, either by coming in on their day off or by accepting to do split shifts*" (shifts which are not continuous, for example, working from 7am until 1pm, then from 4pm until 7pm in one day). Constraints in drawing up a regular roster communicated with adequate notice can be a source of difficulty in balancing work and family life among healthcare providers. Hansez *et al.*, (2008) argues that working on weekends, nights and working compressed hours all cause work-family life conflicts.

Beyond working time and hours management in balancing private and professional lives, taking time off also plays a central role. Several studies have shown the importance of being able to easily take time off to fulfil the demands of family life and avoid the risk of work-family life conflict (Chrétien and Létourneau, 2010; Tremblay 2012; St-Amour and Bourque, 2013). “*The organizational measures for conciliating work and family lives falling in the categories “Time Off” and “Organization of working hours and location” are those which provide the most direct response to time conflicts by giving employees more control over their time management*” (Chrétien and Létourneau, 2010).

Finally, this literature review shows that all difficulties in conciliating work and family life are underpinned by a lack of time. Does having sufficient time to complete one’s tasks and hours which are adapted to one’s personal organization enable people to better conciliate work and family life, therefore reducing conflict and enabling them to develop fulfilment? The following hypotheses are proposed:

- H3a1** Having sufficient work time to complete one’s tasks negatively influences work-family life conflict.
- H3a2** Having sufficient work time to complete one’s tasks negatively influences family-work life conflict.
- H3b1** Having sufficient work time to complete one’s tasks positively influences work-family life fulfilment.
- H3b2** Having sufficient time to complete one’s tasks at work positively influences family-work life fulfilment.
- H4a1** Adapted working hours negatively influence family-work life conflict.
- H4a2** Adapted working hours negatively influence family-work life conflict.
- H4b1** Adapted working hours positively influence work-family life fulfilment.
- H4b2** Adapted working hours positively influence

family-work life fulfilment.

- H5a1** The possibility of taking time in lieu and time off negatively influences work-family life conflict.
- H5a2** The possibility of taking time in lieu and time off negatively influences family-work life conflict.
- H5b1** The possibility of taking time in lieu and time off positively influences work-family life fulfilment.
- H5b2** The possibility of taking time in lieu and time off positively influences family-work life fulfilment.

2. METHODOLOGY, DATA PROCESSING AND RESULTS

2.1. Field of study and survey data collection

The research was undertaken in a regional hospital located in the West of France. The questionnaire was administered in two ways: on paper and online, in order to maximize responses submitted. The online questionnaire was administered via the “limesurvey” platform, which also guarantees the anonymity of respondents (online responses). The URL internet address of the questionnaire was made available to participants in an email sent via the hospital intranet server. A total of 860 paper questionnaires were submitted. The human resources department requested responses from staff. Indeed, the hospital management stated that they hoped for a large database in order to obtain general information relating to working time, hours, support, etc. Consequently, beyond those staff members with children, the questionnaires were also submitted to all staff members. It was therefore necessary later to filter responses in order to retain only those healthcare providers with at least one child). The sample comprises 209 participants (176 women and 33 men) and is quite representative of the population of healthcare providers with children. The average age of participants is 39 years old. 89% are in a couple and the average number of children is 2.17. The average age of the first child is

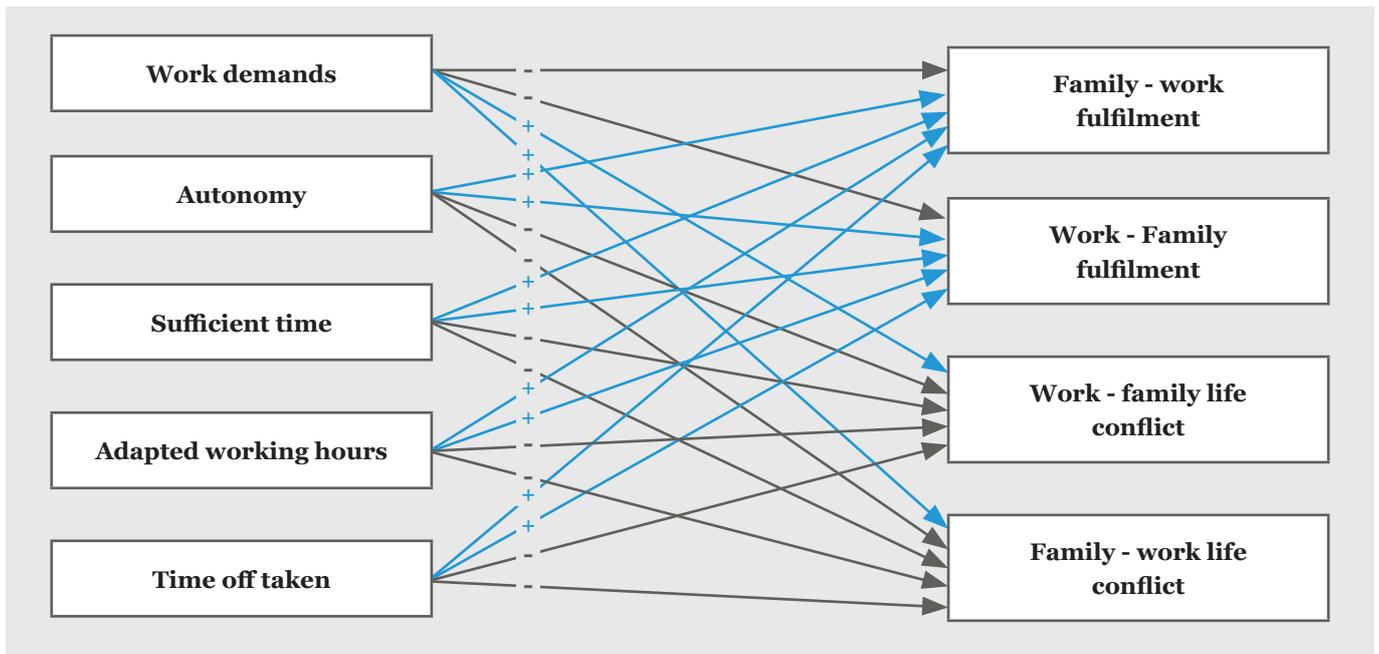


Figure 1 – Representation of the model and relationships between the variables
 — positive link — negative link

11.5 years old, that of the second child is 10.4 years old and the age of the third child is 10.2 years old.

2.2. Exploiting the data

Structural equation model methodology is employed, using AMOS 20 software. SPSS 20 software is used to calculate Cronbach's alpha and conduct the necessary factor analyses (particularly principal component analysis). To validate the goodness of fit of models to the empirical data, several indexes are retained: Chi squared/ddl, NFI (normed fit index), CFI (comparative fit index), TLI (Tucker-Lewis Coefficient), and RMSEA (root mean square error of approximation) (Roussel *et al.*, 2002).

2.2.1. Measurement scales used

Seven measurement scales are used pertaining to work demands, autonomy at work, work time, adapted working hours, possibility for taking time off and in lieu, work-family life conflict and work-family life fulfilment.

The “work demands” scale was developed according to the works of Karasek (1979), Johnson *et al.* (1989) and Karasek and Theorell (1990) and comprises five items:

1. *My work requires a high level of professional skill.*
2. *My work requires me to work fast.*
3. *My work is intense.*
4. *I am required to complete an excessive amount of work.*
5. *My tasks are often interrupted before being completed, meaning I must go back to them later on.*

The “autonomy at work” scale was developed according to the four items cited in the works of Karasek (1979), Johnson *et al.* (1989) and Karasek and Theorell (1990):

1. *My work often allows me to make decisions myself.*
2. *I have the opportunity to develop my skills at work.*
3. *I can influence how my work is carried out.*
4. *In my tasks, I have very little freedom to determine how I carry out my work.*

The “sufficient work time” scale was developed using two items drawn respectively from works by Johnson *et al.* (1989) and Karasek and Theorell (1990), and from the scale proposed by Dupret *et al.* (2012). It was important for the present study to distinguish this time scale from that of working hours adapted to one's personal and family organization.

This time scale aims solely to measure the influence of sufficient time given to an employee on the occurrence of work-family life conflict or fulfilment.

1. *I am provided with enough time to correctly carry out my work..*
2. *I have enough time to do my work.*

The “adapted hours” measurement scale was partly drawn from items identified in pre-test questionnaire responses, and partly from the scale proposed by Biétry and Creusier (2013) on wellbeing in the workplace. It comprises three items:

1. *My hours are adapted to my personal organization.*
2. *My hours are stable and communicated sufficiently in advance.*
3. *My partner’s work time and hours are compatible with mine and our family organization.*

The “possibility for taking time off and time in lieu” measurement scale used was validated by Biétry and Creusier (2013).

1. *I can take time in lieu when I want.*
2. *I can take time off when I want.*

The scales used to measure conflict and fulfilment were developed using items from the SWING (Survey Work-home Interference NijmeGen (SWING), (Geurts, 2000

and Wagena and Geurts, 2000), adapted into French and validated by Laurel *et al.* (2005). The eight items for work-family life conflict (W-FC) and the four items for family-work conflict (F-WC) are presented. Similarly, the annex summarized the five items for work-family fulfilment (W-FF) and the five items for family-work fulfilment (F-WF).

2.2.2. Internal consistency

As Table 2 demonstrates, the measurement tools used meet academic requirements. All the scales present excellent psychometric qualities after purification of the data undertaken using principle component analysis.

2.2.3. Confirmatory factor analysis of the scales

The results of the PCA of the “work demands” and “autonomy at work” scales respectively reveal a scale of work demands comprising five items and an autonomy at work scale comprising four items. Furthermore, Jöreskog’s rho calculated for the work demands scale was 0.875 and for the autonomy at work scale 0.766. These are excellent coefficients for scales comprising five and four items. The structural equation model (SEM) was applied to the 22 items of the SWING to assess the work-family and family-work interfaces. All the items have a factor loading above 0.726.

FACTORS	Chi ² /ddl	RMSEA	GFI	AGFI	NFI	CFI	TLI
Threshold values	< 5	< 0.08	>0,9	>0,8	> 0.9	> 0.9	> 0.9
Work demands	5,107	0,141	0,950	0,851	0,934	0,846	
Work demands Autonomy at work	1,492	0,049	0,977	0,947	0,973	0,993	0,988
Adapted working hours Sufficient time Taking time off	1,167	0,028	0,983	0,956	0,978	0,997	0,994
Swing scale	1,005	0,005	0,963	0,941	0,964	1	1

Table 2 – Indexes of goodness of fit of confirmatory factor analyses

2.2.4. Verifying the reliability of scales

Reliability of the scales was tested using Cronbach's alpha, the most commonly used indicator for this type of study. Other indicators of validity have also been calculated using confirmatory factor analysis. The results of these analyses enable validity tests to be conducted, particularly characteristic or construct validity tests.

Convergent validity

This was monitored when the models were assessed. The Critical Ratio of each item was verified as being above 2. This was true for each model retained. Furthermore, the approach proposed by Fornell and Larcker (1981) was used to conduct the convergent validity analysis.

Discriminant validity

The discriminant validity of the causal model is verified as long as the variance shared across the constructs is less than that shared between the

constructs and their measurement variables. In the case of a multidimensional scale, the discriminant validity verifies that each construct is distinct from the others. The correlation between the constructs of a single scale must therefore be a value different to 1. The SWING multidimensional scale presents good discriminant validity.

2.3. Results

The choice was made to test the hypotheses using the structural equations method. The model which linked conflict and fulfilment as dependent variables and the four independent variables was tested. The main advantage of this method, compared to the ordinary least squares regression, is that it is not subjected to the two crucial problems of potential endogeneity and multicollinearity between explanatory variables due to the fact that the analysis draws on several blocks of variables (Tenenhaus and Hanafi, 2007).

Dimensions	Number of items retained	Internal consistency (Cronbach's alpha)	Variance explained	KMO Bartlett's test of significance
Work demands	5	0,832	60,33	0,819 0,000
Autonomy at work	4	0,732	78,980	0,500 0,000
Sufficient time	2	0,857	87,594	0,500 0,000
Adapted working hours	3	0,797	68,321	0,685 0,000
Taking time off	2	0,838	86,071	0,500 0,000
Swing	22	0,751	77,425	0,749 0,000
Family-work life fulfilment	5	0,872	80,135	0,680 0,000
Family-work life conflict	4	0,900	83,467	0,728 0,000
Work-family life conflict	8	0,838	75,682	0,710 0,000
Work-family life fulfilment	5	0,752	67,030	0,682 0,000

Table 3 – Characteristics of the measurement scales retained for processing

FACTORS	Chi ² /ddl	RMSEA	GFI	AGFI	NFI	CFI	TLI
Threshold values	< 5	< 0.08	>0,9	>0,8	> 0.9	> 0.9	> 0.9
Values	1,361	0,042	0,886	0,851	0,874	0,962	0,954

Table 4 – Goodness of fit indexes of confirmatory factor analyses

	COEFFICIENT	STANDARD	C.R.	PROBABILITY
FWF ← autonomy	-,416	,137	-3,033	,002
WFF ← autonomy	-,258	,104	-2,484	,013
FWF ← demands	,648	,210	3,094	,002
WFC ← demands	,586	,169	3,456	,000
WFF ← demands	,393	,158	2,485	,013
FWC ← autonomy	-,301	,118	-2,543	,011
WFF ← hours	,229	,097	2,349	,019
FWF ← time	,375	,166	2,258	,024
WFF ← time	,273	,126	2,174	,030

Table 5 – Significant relationships within the model

In the results generated by Amos, there are no negative variance nor standardized coefficients greater than 1, which indicates that minimal conditions are fulfilled. Regarding goodness of fit of the model tested, the Chi²/ddl (1.361) is good (threshold <5). The AIC is 530.826 and the CAIC is 891.240, which is less than the saturated model (2226.159). The RMSEA (0.042) being below 0.080 is excellent. The GFI (0.886) and NFI (0.874) almost reach the thresholds of acceptability. Overall, the present model is acceptable as it demonstrates adequate goodness of fit with the data.

The results demonstrate validation of the hypothesis regarding a positive correlation between work demands and work-family life conflict. One result which is interesting, despite being unexpected, is the positive correlation between work demands and family-work life and work-family life fulfilment, in other words, the higher the work demands

experienced by a person, the more likely they are to be able to mobilize resources from their family sphere to help them in their work.

The most surprising result was that of a negative relationship between autonomy at work and a sense of work-family life and family-work life fulfilment among healthcare providers.

Regarding time variables, the results show that having sufficient time to complete one's work maintains a positive relationship with work-family life fulfilment, and the variable working hours adapted to family organization relates positively to work-family life fulfilment. As such, a healthcare provider who has working hours which are adapted to their personal and family organization will feel that they have a job which enables them to have a better family life. It is observed that taking time off is not related to the dependent variables.

Hypothèses	Intitulé de l'hypothèse	Validée/Infirmée
H1b1	Negative correlation between work demands and work-family life fulfilment	Validated
H1b2	Negative correlation between work demands and family-work life fulfilment	Validated
H1a1	Positive correlation between work demands and work-family life conflict	Validated
H1a2	Positive correlation between work demands and family-work life conflict	<i>Invalidated</i>
H2b1	Positive correlation between autonomy at work and work-family fulfilment	Validated
H2b2	Positive correlation between autonomy at work and family-work fulfilment	Validated
H2a1	Negative correlation between autonomy at work and work-family life conflict	<i>Invalidated</i>
H2a2	Negative correlation between autonomy at work and family-work life conflict	Validated
H3b1	Positive correlation between sufficient time provided at work and work-family life fulfilment	Validated
H3b2	Positive correlation between sufficient time provided at work and family-work life fulfilment	Validated
H3a1	Negative correlation between sufficient time at work and work-family life conflict	<i>Invalidated</i>
H3a2	Negative correlation between sufficient time at work and family-work life conflict	<i>Invalidated</i>
H4b1	Positive correlation between working hours adapted to family organization and work-family life fulfilment	Validated
H4b2	Positive correlation between working hours adapted to family organization and family-work life fulfilment	<i>Invalidated</i>
H4a1	Negative correlation between working hours adapted to family organization and work-family life conflict	<i>Invalidated</i>
H4a2	Negative correlation between working hours adapted to family organization and family-work life conflict	<i>Invalidated</i>
H5b1	Positive correlation between taking time off and work-family life fulfilment	<i>Invalidated</i>
H5b2	Positive correlation between taking time off and family-work life fulfilment	<i>Invalidated</i>
H5a1	Negative correlation between taking time off and work-family life conflict	<i>Invalidated</i>
H5a2	Negative correlation between taking time off and family-work life conflict	<i>Infirmée</i>

Table 6 – Summary of the hypotheses of factors of work-family life and family-work life conflict and fulfilment

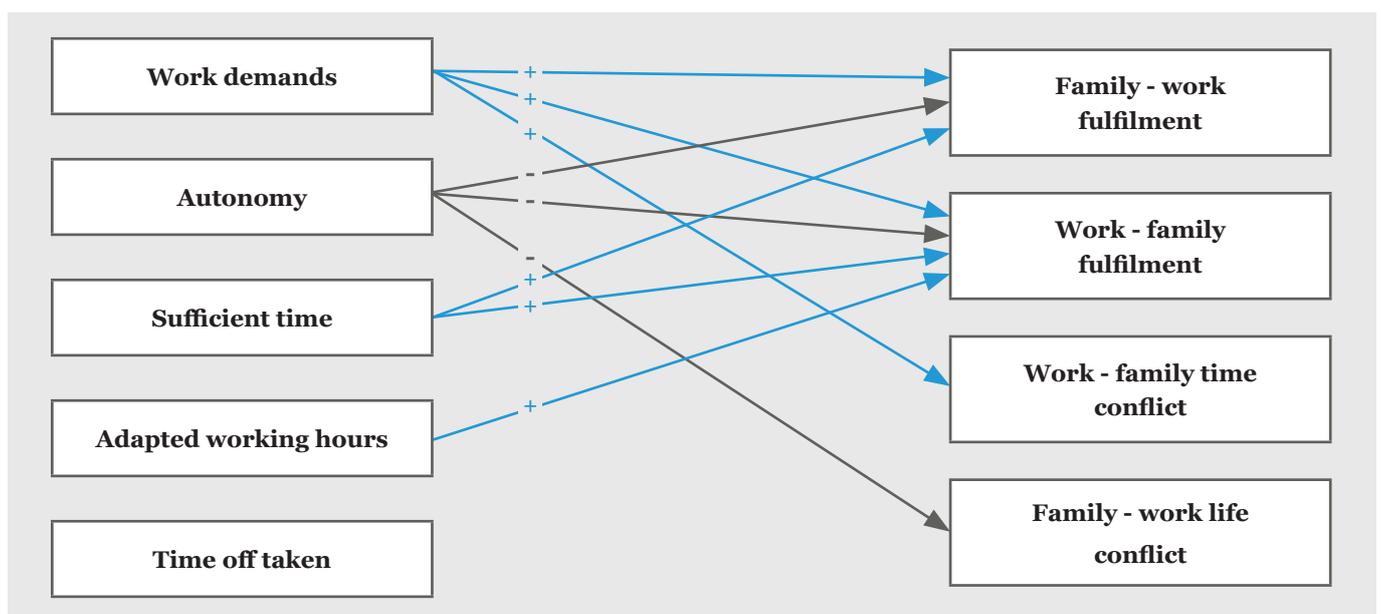


Figure 2 – Representation of the model and significant relationships

— positive link — negative link

3. DISCUSSION OF THE RESULTS AND RECOMMENDATIONS

The results of the quantitative study present a strong positive correlation between work demands and work-family conflict. Karasek (1979) established a link between low autonomy at work combined with high work demands and the occurrence of stress. In the hospital working environment, the increasingly intense nature of work, combined with high demands for quality of care provided, is the current reality. This can tend to increase work-family conflict. N.B. the statements which enable us to measure work demands were related to the existence of an excessive workload, tasks which are interrupted and returned to later, and a pressured working environment. The present results confirm those of Geurts, Rutte and Peeters (1999). In their work aiming to develop and test a model for understanding the work-family life interface among resident doctors, they established that a high volume of work was a precursor of work-family life conflict. In a study carried out among 949 nurses in Ontario, Zeytinoglu *et al.* (2007) found an increase in the intensity of work demands among these healthcare providers was reported after the reform of the health sector in the 1990s in the United States. Zeytinoglu *et al.* (2007) identified that an intensification of work demands brought about the development of increasing amounts of stress among nurses and dissatisfaction at work. In France, the advent of activity-based payment (T2A) brought about an increase in hospital activity. Difficult working conditions are inherent to work demands which are increasingly high in a context of great time pressure. Quality of life in the workplace is deteriorating and the difficulties people experience in conciliating their private and professional lives lead to conflict between these two spheres of their lives. The results confirm those of Ruppanner (2013). Ruppanner, who also used Karasek's (1979) "job demand control" in his research, found that work demands are positively correlated with work-family life conflict.

It is furthermore observed that work demands positively influence work-family life fulfilment in both directions. The busier and even the more difficult the work, the greater the fulfilment. We can assume that, despite high work demands, the inherent commitment

observed in healthcare professions and the relational dimension of the profession contribute to both work-family life and family-work life fulfilment. Studies on the factors of fulfilment highlight the fact that commitment to one sphere (work or family) enables individuals to draw on resources facilitating their commitment to the other (Grzywacz *et al.*, 2007). The results show, at most, that fulfilment can be born from imposed professional factors (work demands). The greater the work demands a person experiences, the more they will draw on family resources to cope with them. If the presence of high work demands manifests as commitment to one's work, then the present results confirm those of Chen and Powell (2012). This is a case of drawing on one sphere in order to be able to cope with another.

Regarding autonomy at work, this does not negatively influence work-family life conflict as supposed, but it is observed that autonomy does negatively influence family-work life conflict. The present authors decided from the offset to formulate the hypothesis that autonomy would negatively influence work-family life conflict, with reference to the study carried out by Wallace (2005) among married legal practitioners working full-time. Wallace concluded that "*the models which apply to depression in the research on stress (Karasek, 1979) can also apply in the study on work-family life conflict*". It was interesting also to verify whether Karasek's model of stress function could provide a better understanding of work-family conflict in hospitals. Greenhaus and Kopelman (1981) and Greenhaus and Parasuraman (1986) found that autonomy, in a context of high work demands, reduced work-family life conflict. The present results cannot confirm the findings of these studies. However, the most surprising result was the negative correlation between autonomy and fulfilment in both directions (work to family and family to work lives).

How can we explain the negative correlation between autonomy and work-family life and family-work life fulfilment? This result admittedly contrasts with the findings of Grzywacz and Butler (2005), who obtained a strong positive correlation between autonomy and work-family life fulfilment. They studied a representative sample of the population of the United States and respondents were not working in public institutions, which could explain the positive correlation between autonomy and fulfilment due to the flexibility to

organize their working hours reported by respondents, giving them time to devote to the family sphere and thus develop fulfilment between the different spheres of their lives. Cooklin *et al.* (2015) also found a positive correlation between autonomy and work-family life fulfilment. They also found a link between autonomy and controlling one's working hours. The sample of this study is entirely comprised of healthcare providers. However, what characterizes the work of healthcare providers is indeed fairly inflexible hours which are ill-adapted to family organization (working days, nights, weekends, bank holidays...). Here autonomy among healthcare providers does not concern flexibility to organize working hours but rather the possibility to take initiatives in their tasks. Indeed, several studies have demonstrated the role of autonomy, which is a dimension of the work of healthcare professionals, without apparently being a factor enabling them to cope with the difficulties inherent to difficult work situations. This is exactly what Loriol (2006) argued, supporting the argument that autonomy is an aspect of the work of healthcare providers and that it does not cause stress. Warchol (2007) argued that nurses' consultations, from a professional point of view, offer a certain degree of autonomy. Indeed, a nurse will take initiatives and decisions regarding their patients and assume responsibility for these. If they have any problems, they readily seek help from others. This practice requires a sound knowledge of both oneself and institutional regulations. It also requires advanced skills in their specialized field. The negative correlation identified between autonomy and forms of work-family life and family-work life fulfilment can be explained with regards the nature of the autonomy, which is not synonymous with deciding one's working hours. Moreover, in their conclusions of the PRESST-NEXT survey Estryn-Béhar *et al.* (2007) showed that despite the fact that healthcare professionals say they are autonomous, they are nevertheless not satisfied with their working conditions. However, empirical results have demonstrated a positive correlation between satisfaction and the perception of work-family life balance (Kilic, 2014).

Regarding working hours adapted to the employee's personal life, the results show that they strongly promote work-family life fulfilment. Anderson *et al.* (2002) argue that flexibility of working hours plays a role in increasing satisfaction at work and contribute to limiting work-family conflict. Those individuals who

benefit from flexible hours manage to better coordinate and balance their family and professional responsibilities compared to those who do not (Casper and Buffardi, 2004) and the results presented by Mauno *et al.* (2015) suggest that working hours correlate with low work-family life conflict and high work-family life fulfilment for all employees. Indeed, working hours adapted to one's family organization contribute to improving working conditions and therefore to the sense of improved work demands. However, the present results show that adapted working hours had no direct effect on work-family conflict (in both directions). Having sufficient time and adapted working hours both account for work-family fulfilment. Most studies in the existing literature pertaining to correlations between time and work-family conflict present time used as promoting conflict. In other words, the more time the individual uses to carry out their work, the more they will develop work-family life conflict, with the lack of time to devote to one of the spheres explaining such conflict (Major *et al.*, 2002). The present research investigates the hypothesis that someone with enough time to carry out their work will experience less work-family life conflict. This hypothesis was not validated. In other words, having sufficient time to complete one's work tasks is not significantly correlated with work-family life conflict.

The results herein partially confirm that work-family life conflict and fulfilment have different precursors (Kinnunen *et al.*, 2004; Greenhaus and Powell, 2006) and all experiences generally should be studied to develop a comprehensive image of the work-family life interface and these precursors across different working hour distributions.

The implications of this research are crucial for the management of hospital workers as the stress generated from work-family life conflict is the prominent factor in intending to leave the healthcare sector (Rhnima *et al.*, 2014). If a hospital wishes to offer quality healthcare, they must carefully consider the wellbeing of their professionals. However, hospitals are already understaffed and have difficulties finding qualified staff, particularly healthcare providers, who are the subject of the present study. They experience high levels of absenteeism, and with many staff members retiring, investing in quality of life in the workplace could be a factor in attracting staff to public hospitals. The results of this research concretely show the

role which the management can play in supporting professionals in terms of organization of work and hours (managing teams, drawing up rosters, managing absences, recognizing and rewarding efforts, etc.).

While many healthcare providers report working overtime (Michaux and Molière, 2014), practices monitoring performance and workload are useful and should be undertaken particularly when implementing reorganizational changes. Not knowing at what time one will be able to go home after work due to overtime, being called in during time off and then having no choice over the day on which this will be recuperated, are all common situations which complicate the balance between personal and professional lives, especially as part-time staff, which is mainly mothers, are most solicited, given that they have more time off, and this creates less disorganization for the roster.

Faced with the various constraints and lacking monitoring regulations, collective regulations are implemented among supportive healthcare providers who share tasks among themselves and help each other (Gonon, 2003). Indeed, to cope with spikes of workload and difficulties, mutual support within these teams is well-developed.

This research is particularly relevant given the importance of prevention of occupational psychosocial risks in hospitals. With the implementation of the framework agreement regarding occupational psychosocial risk prevention in state-run public services (22nd October 2013), a number of diagnostic indicators of occupational psychosocial risks were proposed, alongside traditional indicators including absenteeism due to health reasons, staff turnover, the number of requests submitted to see the occupational health doctor and the number of violent acts carried out on staff. Among the new indicators proposed we can distinguish work demands and intensity as well as emotional demands (Dickason, 2017). Healthcare staff are particularly concerned given that along with their work demands and the intensity of their work, they work atypical hours in a job in which they are under time pressure. Among emotional demands features contact with people in difficulty (physical and psychological) and the number of verbally or physically violent acts perpetrated by people outside of the unit (particularly service users).

CONCLUSION

Public hospitals are currently facing a real problem of degradation of quality of life in the workplace. The present literature review enables us to identify that the population of healthcare providers is one of the most affected by this. The research confirmed that work demands are indeed factors of work-family life conflict. It was furthermore observed that sufficient time, as well as having working hours adapted to one's personal organization, can promote fulfilment in both spheres. This information can help human resources managers in hospitals when making decisions, taking all these factors into account.

Although, in accordance with our hypothesis, work demands positively contribute to work-family life conflict, this autonomy in healthcare professionals contrasts with the conclusions of Karasek (1979) who argued that autonomy can attenuate stress in situations of high work demands. The present study investigates whether autonomy actually amplifies workload. Does being autonomous equate with having more responsibilities and therefore a greater workload? The results of our research show that, among healthcare professionals, autonomy at work does not facilitate work-family fulfilment.

Moreover, these results lead us to question managerial practices in hospitals (Lentile-Yalenios *et al.*, 2016) in terms of both working hours and autonomy at work. However, improving managerial skills among executive staff could make them actors of a policy of support in improving the quality of life in the workplace. Time and rhythm constraints do not always allow staff to take collective measures towards this goal. Haliday (2018) explains that certain managerial practices can turn out to be particularly relevant in the field of healthcare to guarantee good quality of life in the workplace among teams and executives: collective care, participative management, transformational leadership...

The limits of this study lie in the methodology. The sample size is rather small, although it is representative of the healthcare providers in the hospital concerned. It did not seem relevant to include the responses of staff without children, given that the focus of this study was work-family life balance. Despite a

small sample size, all public hospitals operate in the same way, the sample size does not exclude the fact that the results are aligned with the reality of hospitals. Moreover, the diversity of healthcare sectors means that professionals do not have the same work organization, nor even the same relationship with time or working times. We observe that the working day of a nurse is not the same as a healthcare executive or a doctor, for example.

It would be interesting for future research on healthcare professionals to adopt the same methodology as Rousseau *et al.* (2006) in order to investigate the nature of autonomy among healthcare providers at work, which does not seem to impact the hardship experienced at work.

Finally, despite the fact that autonomy at work does not enable them to draw positive resources from their working life into their family lives and vice-versa, the nature of autonomy among healthcare providers should nevertheless be explored. Is it simply autonomy with regards to undertaking one's tasks? In coping with work-family conflict and developing fulfilment, should autonomy in terms of organization of one's professional and personal time be encouraged, despite the fact that we know replacing absences often obliges people to work on planned time off? These are but a few of the many further avenues of research to be considered.

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APPENDIX

Scale of work-family and family-work conflicts

- W-FC1** I am irritable at home because my job is demanding.
- W-FC2** I have difficulty fulfilling my family obligations because I am always thinking about my work.
- W-FC3** I have had to cancel outings with my partner/family/friends due to work commitments.
- W-FC4** I have difficulty fulfilling my family obligations because of my work timetable.
- W-FC5** I don't have enough energy to do leisure activities with my partner/family/friends because of my work.
- W-FC6** I have to work so hard that I don't have any time left for my hobbies.
- W-FC7** I have difficulty relaxing at home because of my professional obligations.
- W-FC8** My work takes up time which I would have liked to spend with my partner/family/friends.
- F-WC1** My family situation makes me so irritable that I transfer my frustration onto colleagues.
- F-WC2** I have difficulty concentrating on my work because I am preoccupied with family problems.
- F-WC3** The problems I have with my partner/family/friends negatively affect my performance at work.
- F-WC4** I don't want to work because of problems I am experiencing with my partner/family/friends.

Scale of work-family life and family-work life fulfilment

- W-FF1** After a pleasant day or week at work, I feel more like doing leisure activities with my partner/family/friends.
- W-FF2** I find it easier to fulfil my family obligations thanks to what I have learned at work.
- W-FF3** I find it easier to fulfil my commitments at home because my work also places importance on respecting commitments.
- W-FF4** I find it easier to efficiently manage my time at home thanks to the way in which I work.
- W-FF5** My relationships with my partner/family/friends are improved thanks to the skills I have acquired at work.
- F-WF1** After having spent an agreeable weekend with my partner/family/friends, I appreciate my work better.
- F-WF2** I take my responsibilities more seriously at work because I have to do the same at home.
- F-WF3** I find it easier to fulfil my commitments in my work because I have to do the same at home.
- F-WF4** I find it easier to fulfil my commitments in my work because I have to do the same at home.
- F-WF5** I have more confidence in myself because my family life is well organized.