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Occupational stressors in healthcare workers in France

Stress au travail chez les personnels hospitaliers en France

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Author contributions

Laetitia Rollin designed the study, analyzed and interpreted data

Jean-François Gehanno designed the study and interpreted data

Ariane Leroyer designed the study, analyzed and interpreted data

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Occupational stressors and mental health in healthcare workers in France

Abstract

Objectives: To describe psychosocial constraints and mental health of hospital workers, and to identify the psychosocial constraints significantly associated with mental health difficulties, especially in two groups: caregivers and other hospital workers.

Method. Data about working conditions and health status collected by the Evrest National observatory in 2018-2019 during occupational health consultation were used. Psychosocial constraints and mental health among caregivers, other hospital workers and non-hospital workers were described.

Results. There were 1 251 hospital workers (843 caregivers, 408 other hospital workers) and 25 129 other workers. Intensity and working time (time pressure, extra working time, missing or shortening a meal), and ethical dilemmas (not having the means to ensure high-quality work, too rapidly handling a procedure that would require more painstaking care) were significantly more reported by the caregivers than by the other hospital workers (50.8% vs 44.2%, 43.4% vs 32.5%, 47.2% vs 17.2%, 21.4% vs 16.4% and 41.5% vs 29.0% respectively). Prevalence of psychological distress was not significantly higher for caregivers (12.3%) than for other hospital workers (12.4%) but was significantly higher than for other workers (7.3%). For caregivers, factors significantly associated with psychological distress were time pressure (Odds Ratio adjusted on sociodemographic factors (OR) = 2.33 CI95% [1.35-4.04]), “difficulties to reconcile private life and work life” (OR=2.95 [1.54-5.69]), “work not recognized in the professional setting” (OR=1.89 [1.08-3.31]) and “fear of losing one’s job” (OR=2.98 [1.53-5.8]). For other hospital workers, they were “difficulties to reconcile private life and work life (OR=2.76 [1.04-7.30]), “insufficient possibilities of mutual aid” (OR=2.85 [1.24-6.53] and “not

having the means to ensure high-quality work" (OR=3.42 [1.62-7.21]).

Conclusion: Factors significantly associated with psychological distress were not the same for caregivers and other hospital workers, nor were they the most frequently reported. Detailed description of the constraints according to group of workers could help to develop a high-priority preventive program regarding psychosocial risk factors.

Trial registration: CNIL n°906290 and 906290VI

Keywords: Caregivers, Evrest national observatory, Mental health, Hospital organization.

Stress au travail chez les personnels hospitaliers en France

Objectifs : Décrire les contraintes psychosociales et la santé mentale des travailleurs hospitaliers et identifier les contraintes significativement associées à des troubles neuropsychiques, en particulier chez les soignants et les autres salariés hospitaliers.

Méthode. Les données collectées par l'observatoire national Evrest durant les consultations de santé au travail en 2018-2019 ont été utilisées. Les contraintes psychosociales et la santé mentale ont été décrites parmi les personnels hospitaliers soignants, les autres salariés hospitaliers et les travailleurs non hospitaliers.

Résultats. La population d'étude comprenait 1 251 travailleurs hospitaliers (843 soignants, 408 non soignants) et 25 129 autres travailleurs. L'intensité et le temps de travail (forte pression temporelle, dépasser les horaires normaux, sauter ou écourter un repas), les conflits de valeur (ne pas avoir les moyens de faire un travail de qualité, traiter trop vite une opération qui demanderait davantage de soin) étaient significativement plus rapportés par les soignants que par les non soignants (respectivement 50,8% vs 44,2%, 43,4% vs 32,5%, 47,2% vs 17,2%, 21,4% vs 16,4% and 41,5% vs 29,0%). La prévalence des troubles neuropsychiques n'était pas significativement différente entre les soignants (12,3%) et les non soignants (12,4%), mais était significativement plus importante que chez les autres travailleurs (7,3%). Chez les soignants, les facteurs significativement associés à la présence de troubles neuropsychiques étaient la forte pression temporelle (OR=2,33 IC95% [1,35-4,04]), les difficultés pour concilier vie privée et vie professionnelle (OR=2,95 [1,54-5,69]), l'absence de reconnaissance par l'entourage professionnel (OR=1.89 [1.08-3.31]) et la peur de perdre son travail (OR=2,98 [1,53-5,8]). Pour les autres travailleurs hospitaliers, il s'agissait des difficultés pour concilier vies privée et professionnelle (OR=2,76 [1,04-7,30]), de manquer d'entraide (OR=2,85 [1,24-6,53] et manquer de moyens pour faire un travail de qualité (OR=3,42 [1,62 – 7,21]).

Conclusions. Les facteurs associés aux troubles neuropsychiques ne sont pas les mêmes chez les soignants et les autres travailleurs hospitaliers. Il ne s'agit pas non plus des facteurs les plus fréquemment rapportés. La description détaillée des facteurs selon le groupe de travailleurs peut être utilisée pour cibler les actions de prévention prioritaires en termes de risque psychosociaux.

Mots clés : Personnels Hospitaliers. Soignants. Contraintes psyhosociales. Observatoire national Evrest. Santé Mentale.

Introduction

Healthcare workers (HCWs) are employed in organizations that are continuously evolving to optimize effectiveness and efficiency [1]. Organizational changes in hospitals include working time, work intensity, management, work-life balance, and health and safety policies. Healthcare workers are intrinsically exposed to a variety of specific occupational stress factors. They can lead to psychological distress, and numerous studies have shown high levels of such psychological distress, with mental health complaints including burnout, post-traumatic stress disorders, anxiety, and depression [2]. The consequences for physicians, nurses, and other healthcare professionals are long-term sick leave, economic losses and medical errors in daily practice situations [3-7]. However, it is difficult to disentangle the consequences of psychosocial constraints associated with hospital organization evolution from the consequences of being, as a caregiver, directly exposed to patients' difficulties. That is one reason why it is extremely important to develop targeted preventive actions. With this in mind, we decided to conduct a study aimed at better understanding the psychosocial constraints of hospital workers. The objectives of this study were 1) to describe the

psychosocial constraints and their impact on the mental health of hospital workers, and 2) to identify the psychosocial constraints significantly associated with mental health difficulties, especially among two groups: caregivers and other hospital workers.

Methods

Data from the National Evrest Observatory (*ÉVolutions et RElations en Santé au Travail* – Evolutions and Relationships in Health at Work) were used.

The Evrest observatory

Evrest is a national observatory, set up in France in 2007 by occupational health physicians and researchers aiming at collecting, for a representative sample of employees, a database concerning their working conditions and their health. Data are collected using a short, standardized questionnaire (one double-sided page), made up of closed-ended questions that have been used in the large surveys on health in workplaces in France [8-9] (http://evrest.istnf.fr/page-0-0-0.html, accessed November 30th 2021). The questions concern working conditions, training, lifestyle and state of health. Activity sectors grouped into professional categories received the French codes given by the National Institute of Statistics and Economic Studies (Insee), NAF-2008 and PCS-ESE-2003.

The questionnaire is proposed to occupational health teams (physicians and nurses) participating in the survey, and to employees during their periodic occupational health visit. In France, all employees are required to attend an occupational health visit every two, three or five years, depending on the employee's level of exposure to risk and state of health (http://evrest.istnf.fr/page-0-0-0.html). To obtain a random sample of employees, only those born in October were asked to complete the questionnaire. The part of the questionnaire concerning working conditions, training and lifestyle is completed by the employee in a sitting

105 room and the second part, concerning state of health, is completed by the occupational health
106 physician or the nurse during the visit. Since 2008, the Evrest database has included about
107 100 000 questionnaires, completed by about 80 000 employees and 1 700 occupational health
108 teams. Every year the Evrest observatory produces a consolidated weighting database
109 covering the two last years. This database is built in two steps: firstly, for employees who
110 completed several Evrest questionnaires during the two-year period, only one questionnaire
111 (the most recent) is included, and secondly, a weighting methodology allowing results to be
112 extrapolated to the French employees is used. The weighting method includes two steps: 1) a
113 first weighting to take into account the probability of participation of each employee; and 2)
114 a marginal calibration method to correct potential distortions of the sample in comparison
115 with the scope of the survey. The detailed weighted methodology is available in a previously
116 published article [10]. The observatory obtained an authorization from the informatics and
117 liberty commission for the database (CNIL n°906290 and 906290VI). Employees can decline to
118 complete the questionnaire
119
120 ***Database used***
121 The study used the most recent Evrest weighted database available: the Evrest 2018-2019
122 database. Firstly, two groups were built and compared: “hospital workers” defined as people
123 who worked in hospital activities (NAF-2008 code: 8610Z) and “national sample excluding
124 workers in hospital activities” defined as people who did not work in the hospital activities.
125 Secondly, among hospital workers, two groups were built and compared: “caregivers”
126 (physicians, interns, nurses, nursing auxiliaries, senior nurses, midwives, physiotherapists,
127 ambulance drivers, dental assistants, rehabilitation specialists) and “other hospital workers”
128 (administrative, educational and social personnel, medico-technical and technical personnel).

In this study, we focused on the part of the questionnaire relative to psychosocial constraints, which were explored according to 5 main axes as recommended by the *College d'expertise sur le suivi statistique des risques psychosociaux au travail* [11]: intensity and working time (items 1 to 4, Q1-Q4), lack of autonomy (Q5-Q8), occupational social relationships (Q9-11), ethical dilemmas (Q12-13) and job insecurity (Q14). Psychological distress was estimated based on the presence of the following associated symptoms: fatigue, sleeping disorders and anxiety-nervousness during the last 7 days.

Statistical analysis

All statistical analyses were conducted using the R software program, version 4.0.3. The statistical analyses included calculations of proportions for every psychosocial constraint. Two comparisons were conducted: the first compared "hospital workers" with "national sample excluding workers in hospital activities" and the second compared "caregivers" with "other hospital workers". Differences between groups were evaluated using the Rao-Scott test, with α risk set at 5%. In a second step, in each group the variables associated with the presence of psychological distress, defined as the association of fatigue, anxiety and sleeping disorders, were evaluated, once again using the Rao-Scott test. In this bivariate analysis, variables presenting an alpha risk lower than 0.20 were then introduced into a multivariate model (logistic regression) adjusted on the socio-demographic data (sex, age and social and occupational group). Only the significant variables ($p<0.05$) were retained in the final logistic regression models.

Results

The Evrest 2018-2019 consolidated and weighted database included 26 380 workers: 1 251 hospital workers and 25 129 who did not work in hospital activities. Among hospital workers,

there were 843 caregivers and 408 other hospital workers (Figure 1).

Comparison between "hospital workers" and "national sample excluding workers in hospital activities"

Table 1 describes the socio-demographic and occupational characteristics of the different groups. In the hospital worker group, proportions of women, employees and associate professions were higher than in the other worker group.

Table 2 details the proportions of the different psychosocial constraints. All of the items related to intensity and working time, and ethical dilemma axes were significantly more reported by hospital workers than by other workers ($p<0.001$) (Table 2). Concerning lack of autonomy, while the items "no choice in the way of proceeding" and "give up a task to another one not planned" were significantly more reported by hospital workers than by other workers ($p=0.001$), the items "the work does not allow to learn things" ($p=0.001$) and "the work is not varied" ($p=0.058$) were significantly and nearly significantly less reported, respectively.

Concerning occupational social relationships, the items "work not recognized by my professional environment" and "do things I disapprove of" were significantly more reported by hospital workers than by other workers ($p=0.001$), whereas there were no differences between the two groups for the item "insufficient possibilities of mutual aid". Lastly, there was no significant difference between hospital workers and other workers regarding job insecurity.

Table 3 presents the prevalence of psychological distress among the two groups of hospital workers. Prevalence of psychological distress was significantly higher for hospital workers than for other workers ($p=0.001$).

Comparison between "caregivers" and "other hospital workers"

In the caregiver group, the proportions of women ($p=0.001$) and employees ($p=0.001$) were

markedly higher than in the other hospital worker groups (Table 1). All items from two psychosocial axes were significantly or nearly significantly more reported by the caregiver group than by the other hospital workers group: intensity and working time, and ethical dilemmas (Table 2). For the three other psychosocial axes (lack of autonomy, occupational relationships and job insecurity), no item was significantly more declared by the caregivers. Prevalence of psychological distress did not differ between the two professional groups (Table 3).

Multivariate analyses showed that factors significantly associated with the presence of psychological distress, defined as the combination of "fatigue and anxiety-nervousness and sleeping disorders", differed between the three groups (caregivers, other hospital workers, other workers).

For caregivers, four items were significantly associated with psychological distress: “undergoing strong time pressure” (OR = 2.33 CI95% [1.35-4.04]), “difficulties to reconcile private life and work life” (OR = 2.95 CI95% [1.54-5.69]), “work not recognized in my professional setting” (OR = 1.89 CI95% [1.08-3.31]) and “work with the fear of losing my job” (OR = 2.98 CI95% [1.53-5.8]).

For other hospital workers, there were three items significantly associated with psychological distress but they differed from those of caregivers: they were “difficulties to reconcile private life and work life” (OR = 2.76 CI95% [1.04-7.3]), “insufficient possibilities of mutual aid” (OR = 2.85 CI95% [1.24-6.53]) and “do not have the means to do high-quality work” (OR = 3.42 CI95% [1.62-7.21]).

For other workers from the National sample, 10 out of 13 items were associated with psychological distress, at least one item for each psychosocial axis.

Discussion

The aim of this cross-sectional study was to compare, using data from a large-scale national study, the psychosocial constraints and mental health of caregivers, other hospital workers and other workers.

Intensity and working time, and ethical dilemma were the two psychosocial constraint factors significantly more reported by caregivers than by other hospital workers. These two axes were also more often reported by hospital workers than by other workers.

While prevalence of psychological distress did not significantly differ between caregivers and other hospital workers, it was higher in hospital workers than in other workers. The psychosocial constraints associated with psychological distress among caregivers were “to undergo strong time pressure”, “difficulties to reconcile private life and work life”, “Work not recognized in my professional setting” and “work with the fear of losing my job”.

In this study, comparison of caregivers with other hospital workers enabled us to distinguish between hospital-specific organizational constraints and patient care constraints. Hospital-specific constraints were high in the years preceding the COVID-19 pandemic; due to technological innovations, evolving patient expectations evolution and financial crises, hospital organization was transformed so as to enhance the efficacy of health interventions [12]. Aimed at reducing costs, these organizational changes could entail considerable psychological constraint among all types of hospital workers. As for caregivers, they were faced with intrinsic professional constraints such as emotional stress, emergency, fear of making mistakes, shiftwork… [13-17] Since the level of psychosocial constraints was higher among caregivers than among the other hospital workers, we can presume that psychosocial constraints result from a combination of patients car and type of organization rather than the organizational changes alone. As a consequence, reflection is needed to establish a specific

psychosocial prevention plan for caregivers. This is a major issue for hospitals insofar as it has been demonstrated that high levels of psychosocial constraints, particularly workload and decision-making latitude, have a serious impact on quality of care [17].

This study demonstrated that factors usually significantly associated with psychological distress were not exactly those reported the most by caregivers. While “strong time pressure” was more often reported by caregivers and associated with psychological distress, “difficulties to reconcile private life and work life” and “work not recognized in the professional setting” were not significantly more reported by caregivers but were significantly associated with psychological distress. “Ethical dilemmas” was more reported by caregivers but not significantly associated with psychological distress, while “job insecurity” was not significantly reported by caregivers but strongly associated with psychological distress.

In the literature, several studies have highlighted an association between sizable workload and anxiety, depression or burnout among caregivers [15-19]. On the other hand, although often described in other occupations, "fear of losing my job" has less often been reported as a determinant of caregivers’ mental health [20]. This constraint, although rarely reported among hospital personnel [21], is to be taken into consideration since it seems associated with psychological distress. In the literature, some studies have shown links between "fear of losing my job" and "fear of making errors" [22] while among caregivers, “fear of losing my job” may be induced by the fear of not being able to maintain one’s job if a medical condition were to impair one’s ability to work [23].

Proportions of psychological distress were significantly higher among hospital workers in comparison with the other workers from the nationwide sample, without significant difference between caregivers and other hospital workers. That said, proportion of psychological distress among caregivers is of concern considering the young age of this group

(median age for caregivers: 40 years old compared to that of other hospital workers: 44 years old). Several previous studies have likewise observed burnout, anxiety and depression among caregivers [24-28]. As an example, 9% of 17 437 Canadian nurses suffered from a major depressive episode in the previous year, prevalence twice as high as the average among Canadian women [29]. Psychological distress calls for special attention insofar as it is a predictive factor for depression [30].

This study was conducted before the COVID-19 health crisis, and hospital organizations were considerably transformed during 2020. That is one reason why we intend to conduct similar analyses in the near future to appraise these changes.

The strengths of this study consisted in the opportunity to apply the data of a large ongoing national study and to constructively use weighted data [10]. Questionnaires were administered during health consultations with occupational health services. It would be interesting to pursue this study with a focus group of professionals having participated in these consultations, the objective being to obtain concrete examples illustrating each one of the items.

Caregivers are exposed to psychosocial risk-factors, and hospital workers declared psychological distress in major proportions. Significant links between psychological distress and these psychosocial constraints were highlighted. The implications of this study are important for hospital organizations, especially in the context of COVID-19 pandemic since hospital organizations are evolving. Hospital managers can use the study results to guide dedicated actions on specific issues of concern. The detailed description of the constraints according to group of workers could be used to develop a concrete prevention plan based on psychosocial risk factors. Several risk factors that correlated with psychological distress can be potentially improved by future preventive activities. A number of strategies could be applied

to improve working conditions and reduce psychological distress among caregivers. For example and based on the results of present study, it is important to monitor time pressure, to develop solutions to better reconcile private life and work life, to enhance recognition by the professional setting and to diminish people's fears of losing their jobs.

List of abbreviations

Evrest: *Evolutions et Relations en Santé au Travail*

Ethics approval and consent to participate:

Employees can decline to complete the questionnaire. The Evrest observatory obtained an authorization from the informatics and liberty commission for the database (CNIL n°906290 and 906290VI).

Consent for publication: not applicable

Availability of data and materials: The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

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Figure 1. Flow chart of the study

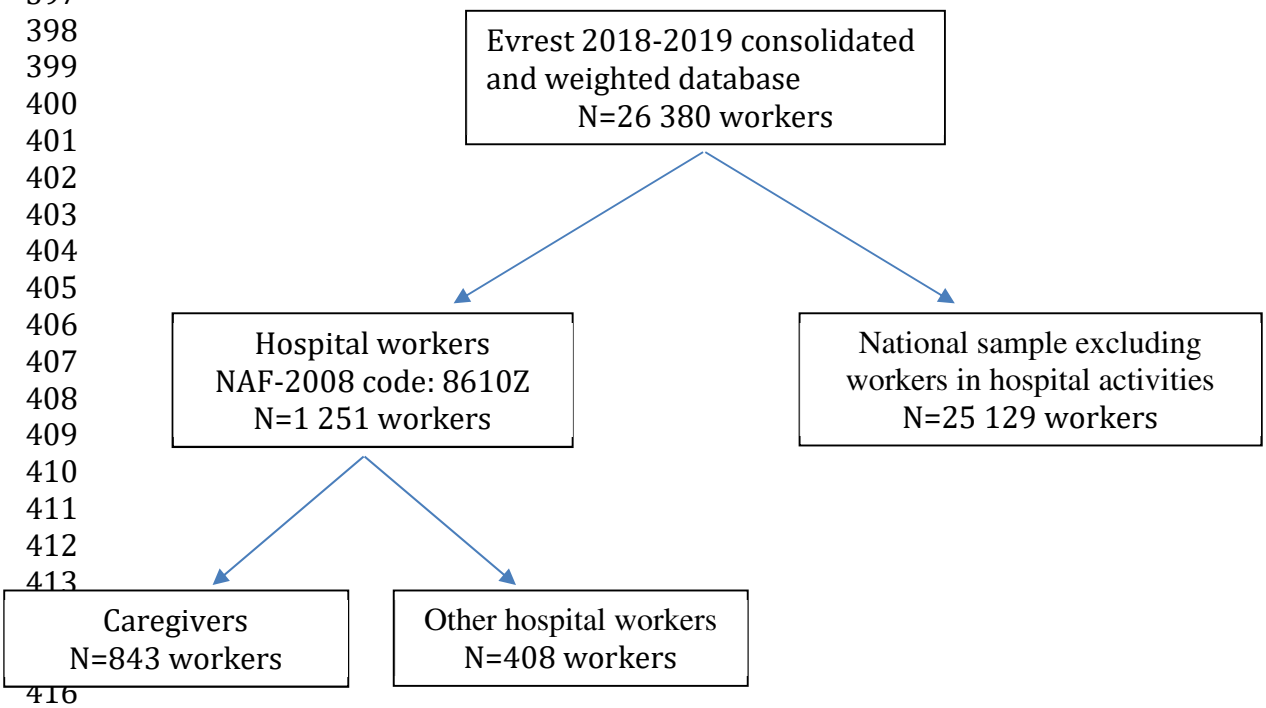

Table 1: Description of the population

		Hospital activities (n = 1 251)			National sample (n = 26 380)		
		Caregivers (n = 843) weighted %	Other hospital workers (n = 408) weighted %	p-value[a] (Rao-Scott) Caregivers vs other hospital workers	Hospital workers (caregivers and other hospital workers) (n = 1 251) weighted %	National Sample excluding workers in hospital activities (n = 25 129) weighted %	p-value[b] (Rao-Scott) Hospital workers vs other workers
Gender	Female	85.9	65.5	<0.001	79.2	47.8	<0.001
	Male	14.1	34.5		20.8	52.2	
Age	<=25 years	7.2	5.2	0.286	6.6	14.6	<0.001
	26-35 years	25.5	22.1		24.4	24.3	
	36-45 years	26.8	26.1		26.6	23.9	
	46-55 years	24.7	29.8		26.4	24.4	
	56 years and more	15.8	16.8		16.1	12.8	
Activities sector NAF-2008 code	1-Mining and Quarrying			-	0.0	1.8	<0.001
	2-Manufacturing				0.0	13.4	
	3-Construction				0.0	6.8	
	4-Wholesale and retail trade, transport and storage, accommodation and food service activities				0.0	28.0	
	5-Information and communication, real estate, financial and insurance activities				0.0	8.1	
	6-Public administration, education				0.0	13.1	
	7-Human health and social activities				100.0	9.7	
	8-Other service activities				0.0	19.1	
Profession category (PCS-ESE Code)	3 Executive manager	10.5	10.2		10.4	16.1	<0.001
	4 Associate professionals	39.5	34.6		37.9	18.8	
	5 Clerks	50.0	35.1		45.1	36.3	
	6 Workers	0	20.0		6.6	28.8	
Professions included (%)		Physicians:9.1 Interns: 4.2 Midwifes: 3.9 Supervisory nurses: 4.2 Nurses: 32.9 Assistants nurses: 34.3 Physiotherapists: 3.2 Other (ambulance drivers. dental assistants): 8.2	Technical personnel[a]: 40.0 Medico-technical[b] personnel: 21.5 Educational and social personnel: 3.4 Administrative personnel: 35.1				

[a] Technical personnel (cleaners, construction workers, workers of the laundry, workers of kitchen)

[b] Medico technical personnel (medical technicians, technicians of laboratories, pharmaceutical assistants)

Table 2: Prevalence of the psychosocial risk factors.

		Hospital activities (n=1251)			National sample (n=26380)		
Psychosocial risk factors	Items	Caregivers (n = 843) weighted %	Other hospital workers (n = 408) weighted %	p-value (Rao-Scott) Caregivers vs other hospital workers	Hospital workers (Caregivers and other hospital workers) (n = 1251) weighted %	National sample excluding workers in hospital activities (n = 25129) weighted %	p-value (Rao-Scott) Hospital workers vs other workers
Intensity and working time	Q1. Undergo strong time pressure ≥ 6 on a scale from 0 to 10	**50.8**	**44.2**	**0.045**	**48.7**	**33.2**	**<0.001**
	Q2. Exceed the usual working time	**43.4**	**32.5**	**0.001**	**39.8**	**34.2**	**<0.001**
	Q3. Miss or shorten a meal	**47.2**	**17.2**	**<0.001**	**37.4**	**20.2**	**<0.001**
	Q4. Difficulties to reconcile private life and work life	10.9	8.8	0.301	10.2	10.4	0.882
Lack of autonomy	Q5. No choice in the way of proceeding	29.3	26.6	0.355	**28.4**	**22.6**	**<0.001**
	Q6. Give up a task for another one not planned	61.0	60.0	0.768	**60.6**	**46.1**	**<0.001**
	Q7. The work is not varied	15.3	12.6	0.251	14.4	16.7	0.058
	Q8. The work does not allow to learn things	9.1	12.9	0.056	**10.3**	**15.4**	**<0.001**
Occupational social relationships	Q9. Work not recognized by the professional environment	20.2	23.7	0.193	**21.3**	**14.8**	**<0.001**
	Q10. No sufficient possibilities of mutual aid	13.6	15.9	0.304	14.3	13.4	0.407
	Q11. Do things I disapprove of	23.8	19.8	0.144	**22.5**	**18.0**	**<0.001**
Ethical dilemma	Q12. Do not have the means to ensure high-quality work	21.4	16.4	0.054	**19.7**	**10.4**	**<0.001**
	Q13. Handle too fast an operation which would ask for more care	**41.5**	**29.0**	**<0.001**	**37.4**	**21.0**	**<0.001**
Job insecurity	Q14. Work with the fear of losing my job	10.4	10.3	0.963	10.4	10.2	0.833

Significant results are bold.

Table 3: Prevalence of psychological distress.

	Hospital activities (n=1 251)			National sample (n=26 380)		
	Caregivers (n = 843) weighted %	Other hospital workers (n = 408) weighted %	p-value (Rao-Scott) Caregivers vs other hospital workers	Hospital workers (Caregivers and other hospital workers) (n = 1 251) weighted %	National sample excluding workers in hospital activities (n = 25 129) weighted %	p-value (Rao-Scott) Hospital workers vs other workers
Fatigue	35.5	37.7	0.479	**37.0**	**23.3**	<0.001
Anxiety, nervousness	24.0	23.9	0.963	**23.9**	**17.3**	<0.001
Sleeping disorders	26.7	26.2	0.865	**26.4**	**18.9**	<0.001
Association of fatigue and anxiety nervousness and sleeping disorders	12.3	12.4	0.983	**12.3**	**7.3**	<0.001

Significant results are bold.

Table 4: Psychosocial factors associated to psychological distress, bivariate analysis and logistic regression adjusted on socio-demographic factors.

		Bivariate analysis			Multivariate analysis		
		Hospital activities		National sample excluding hospital activities	Hospital activities		National sample excluding hospital activities
Psychosocial risk factors	Items	Caregivers (n = 843) OR [95%CI]	Other hospital workers (n = 408) OR [95%CI]	(n = 25 129) OR [95%CI]	Caregivers (n = 843) OR [95%CI]	Other hospital workers (n = 408) OR [95%CI]	(n = 25 129) OR [95%CI]
Intensity and working time	Q1. Undergo a strong time pressure ≥ 6 on a scale from 0 to 10	**2.88 [1.73 - 4.81]**	**2.54 [1.27 - 5.09]**	**3.09 [2.72 - 3.50]**	**2.33 [1.35 - 4.04]**	-	**1.74 [1.49 - 2.04]**
	Q2. Exceed the usual working time	1.41 [0.89 - 2.25]	1.26 [0.64 - 2.52]	**1.77 [1.56 - 2.00]**	-	-	-
	Q3. Miss or shorten a meal	1.35 [0.86 - 2.13]	**3.66 [1.76 - 7.59]**	**2.15 [1.88 - 2.45]**	-	-	-
	Q4. Difficulties to conciliate private life and work life	**4.17 [2.30 - 7.54]**	**4.80 [1.88 - 12.27]**	**3.39 [2.92 - 3.93]**	**2.95 [1.54 - 5.69]**	**2.76 [1.04 - 7.30]**	**2.18 [1.84 - 2.59]**
Lack of autonomy	Q5. No choice in the way of proceeding	**1.69 [1.06 - 2.71]**	1.26 [0.63 - 2.53]	**1.80 [1.58 - 2.05]**	-	-	**1.19 [1.02 - 1.38]**
	Q6. Give up a task for another one not planned	1.47 [0.90 - 2.40]	**2.12 [1.03 - 4.37]**	**2.12 [1.86 - 2.40]**	-	-	**1.43 [1.23 - 1.66]**
	Q7. The work is not varied	1.44 [0.81 - 2.56]	1.60 [0.62 - 4.15]	**1.52 [1.31 - 1.75]**	-	-	-
	Q8. The work does not allow to learn things	**2.63 [1.36 - 5.10]**	**2.54 [1.09 - 5.9]**	**1.72 [1.48 - 1.99]**	-	-	**1.31 [1.10 - 1.56]**
Occupational social relationships	Q9. Work not recognized by the professional environment	**2.39 [1.44 - 3.95]**	**2.14 [1.04 - 4.40]**	**2.47 [2.15 - 2.84]**	**1.89 [1.08 - 3.31]**	-	**1.27 [1.07 - 1.52]**
	Q10. No sufficient possibilities of mutual aid	1.80 [0.97 - 3.34]	**5.12 [2.46 - 10.65]**	**2.58 [2.23 - 2.97]**	-	**2.85 [1.24 - 6.53]**	**1.34 [1.12 - 1.60]**
	Q11. Make things I disapprove	**2.41 [1.49 - 3.90]**	1.72 [0.83 - 3.59]	**2.72 [2.38 - 3.10]**	-	-	**1.47 [1.26 - 1.72]**
Ethical dilemma	Q12. Do not have the means to make a good quality work	**2.93 [1.78 - 4.83]**	**5.74 [2.78 - 11.87]**	**3.02 [2.60 - 3.51]**	-	**3.42 [1.62 - 7.21]**	-
	Q13. Handle too quickly a procedure operation which would require more care	**1.62 [1.01 - 2.60]**	**3.00 [1.50 - 5.99]**	**3.06 [2.70 - 3.48]**	-	-	**1.58 [1.35 - 1.84]**
Job insecurity	Q14. Work with the fear of losing my job	**2.93 [1.58 - 5.44]**	**2.94 [1.17 - 7.37]**	**2.52 [2.16 - 2.94]**	**2.98 [1.53 - 5.80]**	-	**1.60 [1.35 - 1.91]**

Significant results are bold.