



Correlations among occupational stress, burnout and psychopathological symptoms at Madrid's area-9 outside hospital emergency care units

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ABSTRACT

This paper analyses the relationships among occupational stress, burn-out, psychopathological symptoms, and social and labour variables in a sample of 76 (85.25%) outside hospital emergency workers, doctors, nurses and assistants, in Madrid's 9th Health Care Area. The assessment instruments applied are the *Inventario de Estresores Laborales para Enfermería*, by Reig and Caruana, the *Maslach Burnout Inventory* (MBI) and the *Symptom Checklist-90 Revised Questionnaire* (SCL-90-R). High significant correlations were observed among occupational stress, burn-out and psychopathological symptoms. The social and labour variables show significant correlations, but the values are lower. Doctors are the professionals with the highest and largest number of correlations. The differences observed in the various professional groups suggest the need for a different and specific intervention for each professional group.

Key words: Occupational stress, burn-out, psychopathology, health care personnel, emergency.

INTRODUCTION

Health care workers are one of the professional groups with the highest levels of occupational stress and the consequences stemming from it. According to the European Agency for Safety and Health, 28% of health care workers suffer from occupational stress (Morris, Leikin, Eckenioide and Boston, 1990; Spillane, Lumb, Cobaugh, Wilcox, Clark and Schneider, 1997). The term 'stress' makes reference to a given interactive process of, fundamentally, discrepancies between the environmental demands and the personal resources to cope with them. Someone is considered to be under stress when they have to cope with environmental demands that they perceive as surpassing their own resources and that they cannot respond to effectively. In this sense, and according to authors such as Lazarus and Folkman (1986), occupational stress is produced when the occupational demands surpass or exceed the resources of that person to adapt to the situation.

Among the negative effects of stress, one of the most examined nowadays is the burn-out syndrome, meaning to be depressed as a result of

stress at work. The 'burnout' concept was first used by Freudenberger (1974) and then made popular by Maslach (1976, 1981), by referring to it as the debilitation suffered by workers in Human Services. Maslach and Jackson (1982) define 'burnout' as an inadequate response to chronic emotional stress whose main traits are physical, psychological or emotional exhaustion, cold and depersonalized attitude to other people and a feeling of inadequacy in face of the tasks to perform.

A number of studies have found significant relationships between occupational stress and *burnout* (Bartz and Maloney, 1986; Cáceres, Otero-López, Pardiñas, Castro and Santiago, 2000; Cronin-Stubbs and Rooks, 1985; Olkinoura, Asp, Juntunen, Kauttu, Strid, and Aarimaa, 1990). Specifically Ramírez, Graham, Richards, Cull and Gregory (1996) find that it is positively related to emotional tiredness and high levels of depersonalization. Occupational stress and burnout may give rise to a medium- and long term range of negative consequences (González, Moreno, Peñacoba, Alcocer, Del Barco and Ardoy, 2003; Gil-Monte, 2005) which may affect physical and mental health. If the responses to stress are excessively intense, frequent or long lasting, they could produce a

number of psycho-physiological disorders. (Crespo and Labrador, 2003).

When the relationship between occupational stress and the state of health has been studied, it has been pointed out that occupational stress is positively related to some psychopathological symptoms, such as the specific increase of depression and anxiety symptoms (Angelini, Cascio and Papa, 2000; Tselebis, Moulou and Ilias, 2001). Likewise, it has been observed that occupational stress is related to a number of perceived cognitive, physical and emotional symptoms (Cáceres, Otero-López, Pardiñas, Castro and Santiago, 2000), with the perceived state of health (Ribera Cartagena, Reig, Romá, Sans and Caruana, 1993), and with the development of a greater number of diseases (Bosma, Peter, Siegrist and Marmot, 1998).

A relationship between 'burnout' and the state of health has also been found. It points to a problem related to a greater number of physical complaints (Torrado, Fernández-Ríos and Martínez, 1996), psychopathological symptoms such as anxiety and depression (Aluja, 1997) and a lower level of wellbeing, which is made evident by anxiety, depression, social disfunction and somatic problems of a psychological origin (García, Sáez and Llor, 2000). The emotional tiredness dimension has been significantly related to depression (Leiter and Durup, 1994; Fernández, 2000). Likewise, Olmedo, Santed, Jiménez and Gómez (2001) point out that this is the dimension related to the greatest number of mental problems.

Over the last few years, the greatest amount of research on occupational stress and/or burnout in health care professionals has been carried out in primary care units or hospitals (Albadalejo, Villanueva, Ortega, Astasio, Calle, and Domínguez, 2004; Atance, 1997; Caballero, Bermejo, Nieto and Caballero, 2001; Molina, Avalos and Jiménez, 2005; Olmedo, Santed, Jiménez, and Gómez, 2001; Prieto, Robles, Salazar and Daniel, 2002; Soto and Santamaría, 2005). It has been focused mainly on assessing burnout prevalence and associated factors, especially socio-demographic and socio-laboural ones. Only two of these studies introduce psychopathological variables (Olmedo *et al* , 2001, Soto y Santamaría, 2005). Few studies have assessed emergency services and the works that have, have especially focused on hospital emergency services (Albadalejo *et al.*, 2004; Casado, Muñoz, Ortega, Castellanos, Rodríguez, and García., 2005; Escribá and Pérez, 2007; Garnés, 2001, 2005).

In a study among the nurses of a hospital, Albadalejo *et al.* (2004) found a greater incidence of burnout in the oncology and emergency wards. Likewise, Casado *et al.* (2005) detected higher levels

of burnout in emergency units than in intensive or palliative care units. Garnés (2002, 2005) observed moderate levels of stress in a sample of emergency service resident doctors. In a study carried out with a sample of 639 doctors and nurses belonging to the Sociedad Española de Medicina de Emergencia (the Spanish Society of Emergency Medicine), Escribá and Pérez (2007) observed less vitality, worse mental health and greater emotional tiredness in doctors than in nurses.

Outside hospital emergency services cover the closing time of health centres, which means that the professionals basically have a night, week-end and holiday working schedule. Furthermore, the workers are submitted to a series of stress factors which increase the probability that occupational stress and burnout may occur, namely rotating shifts, night work, feelings that other people undervalue their job, pressure to be always helping, scarce possibility to predict or graduate the demands for help, difficulties to relate to the patients and their relatives, the need to take important decisions in little time, and urgent and emergency situations, etc. Needless to say, this situation of high demand facilitates the frequent appearance of the burn-out syndrome.

This study seeks to analyse the correlations among occupational stress, burnout and psychopathological symptoms in the professionals performing these services, taking into consideration both the total sample and the various professional groups, namely doctors, nurses and assistants.

According to the results so far obtained, a significant correlation is expected between occupational stress and burnout, as well as between these two variables and psychopathological symptoms.

METHOD

Participants

The sample consisted of workers from the outside hospital emergency services of the Madrid's 9th health care area. A total of 76 workers participated in the study, 85.25% of the whole number. 10.81% of the workers were on sick leave and 3.94% who refused to participate in the study.

The sample consisted of 35 doctors, 27 nurses and 14 orderlies and assistants. They had an average age of 39.37 years, with a standard deviation of 11.3 years. The greatest number of them were interim (51.3%) and substitute (42.1%) workers. Only 6.4% had a fixed work position. The length of time spent in this work situation showed great variability, with an average of 7.07 years and a standard deviation of 7.08. Table 1 summarizes the main social and demographic features of the sample.

	Doctors		Nurses		Orderlies plus...		Total	
	N	%	N	%	N	%	N	%
Sex:								
Male	21	60	7	25,9	5	35,7	33	43,4
Female	14	40	20	74,1	9	64,2	43	56,6
Marital status:								
Single	10	28,6	19	70,4	3	21,4	32	42,1
Married	21	70,4	5	18,5	8	57,1	34	44,7
Divorced	4	21,4	3	11,1	2	14,3	9	11,8

Widow(er)	-	-	-	-	1	7,1	1	1,3
Work position:								
Fixed	-	-	3	11,1	2	14,3	5	6,6
Interim	20	57,1	12	44,4	7	50	39	51,3
Substitute	15	42,9	12	44,4	5	35,7	32	42,1
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age:	43,23	9,61	33,48	11,47	39,69	8,25	39,37	11,3
Years in the current position:	14,68	8,46	9,56	10,09	9,38	7,15	11,88	9,15
Years in the current work situation	8,44	6,51	5,7	7,42	6,31	8,18	7,07	7,08

Table 1: Social and demographic features of the sample

The instruments applied to assess the analysed variables were the *Inventario de Estresores Laborales para Enfermería*, by Reig and Caruana, the *Maslach Burnout Inventory* (MBI) and the *Symptom Checklist-90 Revised Questionnaire* (SCL-90-R).

The *Inventario de Estresores Laborales para Enfermería*, (Reig y Caruana, 1987a, 1987b, 1989) consists of 68 items referring to potentially stressful situations of health care professionals at work, in a Likert type scale with five alternative answers ranging from 1, no tension, to 5, very high tension, which value the extent to which each situation represents a source of stress, tension or irritability at their current job.

This questionnaire has an internal consistence that ranges between 0.75 and 0.91 according to the formula applied, Chronbach's alpha, Winer's r or Carmine's theta, and 0.78 test-retest reliability in the total 68 item scale. This was used to obtain the total stress score of the different professionals.

The *Maslach Burnout Inventory* (MBI) (Maslach and Jackson, 1081) is a questionnaire that measures burnout frequency and intensity. It consists of 22 items with seven alternative answers which mark the subject's frequency to experience the feelings stated in each item. It differentiates three subscales that measure the three factors or dimensions that shape the syndrome, namely emotional tiredness, depersonalization and personal fulfillment. The Maslach and Jackson's version (1997) was applied and the questionnaire meets the criteria of convergent and divergent validity and shows internal consistency and Cronbach's alpha reliability of 0.79 and 0.90 for the three scales. Gil-Monte and Peiró (1999) think that the MBI version adapted to the Spanish language meets sufficient requirements of factorial validity and internal consistency to be applied to the socio-cultural context of Spain. It was used to assess the frequency and intensity of burnout shown by the various professional subjects in the three dimensions that shape the syndrome.

The *Symptom Checklist-90 Revised Questionnaire* (SCL-90-R) by Derogatis (1983) is a battery of physical and psychological symptoms which consists of 90 items. It asks the subject to estimate to what extent each of them can be applied to them in a five point scale ranging 0-4. The 90 items are scored and interpreted within nine primary scales, the most relevant of which for research are somatization, interpersonal sensitivity, depression, anxiety, hostility and an index of global severity. The version by Derogatis (2002) was applied and the

questionnaire shows internal consistency ranging between 0.79 and 0.90 and with a test-retest validity between 0.78 and 0.90. This inventory was used to assess psychopathological symptoms.

In addition to this, a *personal information form* was used to register issues referring to the following: a) demographic variables, such as sex, age, marital status and educational level, and b) work position, namely fixed, interim or substitute; length of time practising their profession and time spent in the current work position.

Procedure

The questionnaires were applied in a collective way at the end of the usual team meetings carried out during each shift. Before handing them out, the evaluator explained to the workers that their collaboration was requested to participate in a research study aiming at studying occupational stress among health care professionals. They were informed that their participation was optional and the confidentiality of their responses guaranteed, and they were thanked beforehand for their collaboration. Next, the questionnaires were handed out and each professional filled them in individually. It took about forty-five minutes to complete the questionnaire.

FINDINGS

Correlational studies were carried out with each of the professional groups and with the total sample in order to analyze the correlation among occupational stress, burnout, psychopathological symptoms and some social and professional variables, such as age, length of professional service and time spent in the current work position.

Table 2 shows the findings of the correlation analysis among occupational stress, social and occupational variables, burnout and psychopathological symptoms. If the classification carried out by Ribera, Cartagena, Reig, Romá, Sans and Caruana (1993) is taken into account, the scores in occupational stress are within the average for the whole of the sample and for each one of the professional categories.

In the total of the sample is where the greatest number of correlations and of highest intensity are to be found. As for burnout, we can observe high significant correlations of occupational stress with emotional tiredness and depersonalization, and a lower correlation with personal fulfillment. As for psychopathological symptoms, the correlations of occupational stress are high in all the scales. In relation to social and professional variables, a significant correlation is observed between

	DOCTORS M= 224.17	NURSES M= 214.56	ORDERLIES... M= 189.86	TOTAL M= 214.43
Age	0,2	0,354	0,226	0,244*
TWP	0,322	0,352	-,006	0,298**
TCW	0,317	0,409*	-,14	0,24*
ET	0,641**	0,269	0,592*	0,517**
DP	0,634**	0,07	0,195	0,406**
PF	-0,427*	-,24	-,127	-,259*
Som	0,523**	0,271	0,559*	0,42**
IS	0,459**	0,194	0,291	0,328**
Dep	0,55**	0,337	0,293	0,417**
Anx	0,515**	0,197	0,322	0,38**
Hos	0,455**	0,295	0,255	0,375**
GSI	0,531**	0,277	0,388	0,409**

TWP = Time in work position (time practising the profession); TCW= Time in the current work position
 ET = Emotional tiredness; DP= Depersonalization; PF= Personal fulfillment; Som= Somatization: IS= Interpersonal sensitivity; Dep= Depression; Anx= Anxiety; Hos= Hostility; GSI= Global severity index:
 M= Average score in professional stress

** The correlation is significant at the 0.01 rate. (bilateral)

* The correlation is significant at the 0.05 rate. (bilateral)

Table 2: Analysis of the relationships of work stress with different dimensions of burnout, psychopathological symptoms and other socio-work variables

occupational stress with the length of professional service, and a lower correlation with age and time spent in the current work position.

Doctors are the professionals showing a greater number and intensity of correlations among occupational stress, burnout and psychopathological symptoms. However, no significant correlations appear with social or professional variables. In the rest of the health care professionals, there are few significant correlations; in the cases of *nurses*, only with the time spent in their current work position, and, in those of *orderlies and other assistants*, with occupational tiredness and somatization.

Table 3 shows the findings of the correlational analysis carried out among emotional tiredness, psychopathological symptoms and social and professional variables. Taking as a reference the classification on Spanish doctors, doctors show an average score in emotional tiredness, whereas the nursing personnel, orderlies and other assistants show a low score. However, if the reference taken is that of American doctors, doctors show a high score in emotional tiredness.

	DOCTORS M= 27,18	NURSES M= 19,07	ORDERLIES M= 18,79	TOTAL M= 22,69
<i>Age</i>	0,177	0,247	0,134	0,265*
<i>TPL</i>	0,318	0,166	0,396	0,323**
<i>TSL</i>	0,298	0,211	0,007	0,219
<i>Som</i>	0,612**	0,657**	0,575*	0,571**
<i>SI</i>	0,61**	0,435*	0,437	0,497**
<i>Dep</i>	0,622**	0,518**	0,381	0,541**
<i>Ans</i>	0,659**	0,533**	0,331	0,586**

Hos	0,597**	0,53 **	0,441	0,575**
GSI	0,651**	0,593**	0,486	0,59 **

TWP = Time in work position (time practising the profession); TCW= Time in the current work position
Som= Somatization: IS= Interpersonal sensitivity; Dep= Depression; Anx= Anxiety; Hos= Hostility; GSI= Global severity index

M= Average score in emotional tiredness

** The correlation is significant at the 0.01 rate. (bilateral)

*. The correlation is significant at the 0.05 rate. (bilateral)

Table 3: Analysis of the relationship of emotional tiredness with psychopathological symptoms and some socio-work variables.

As is shown in Table 3, in *the total of the sample* there are high significant correlations between emotional tiredness and all the scales measuring psychopathological symptoms. As for social and professional variables, important significant correlations are observed with the length of professional service and a lower correlation with age. If we analyse the professional groups, *doctors and the nursing personnel* show significant correlations between emotional tiredness and the psychopathological symptom scales. However, in the case of *orderlies and other assistants* we can only

observe a significant correlation with somatization.

Table 4 shows the findings of the correlational analysis carried out among depersonalization, psychopathological symptoms and social and professional variables. Doctors show a high score in depersonalization, whereas the nursing personnel, orderlies and other assistants show a medium score.

In the total of the sample one can see significant correlations among depersonalization, all the scales on psychopathological symptoms and the

	DOCTORS M= 13,38	NURSES M= 10,07	ORDERLIES M= 9,43	TOTAL M= 11,45
Age	0,073	0,352	-,074	0,22
TPL	0,249	0,267	0,252	0,292*
TSL	0,315	0,419*	0,131	0,298**
Som	0,673**	0,216	-,023	0,417**
SI	0,716**	0,162	-,18	0,397**
Dep	0,627**	0,114	-,23	0,359**
Ans	0,7 **	0,198	-,276	0,459**
Hos	0,627**	0,136	-,048	0,459**
GSI	0,694**	0,222	-,183	0,441**

TWP = Time in work position (time practising the profession); TCW= Time in the current work position

Som= Somatization: IS= Interpersonal sensitivity; Dep= Depression; Anx= Anxiety; Hos= Hostility; GSI= Global severity index

M= Average score in depersonalization

** The correlation is significant at the 0.01 rate. (bilateral)

*. The correlation is significant at the 0.05 rate. (bilateral)

Table 4: Analysis of the relationship of depersonalization with psychopathological symptoms and some socio-work variables.

time spent in their current work position, and a lower correlation with the length of time spent in their profession.

Whereas high significant correlations can be observed in *doctors* in relation to all the scales of symptoms, we can only observe a significant correlation in the *nursing personnel* with the length of time spent in their current professional position, and none is perceived in the case of *orderlies and other assistants*.

Table 5 shows the findings of the

correlation analysis carried out among personal fulfillment, psychopathological variables and social and professional variables. All the subjects, irrespective of their professional group, show scores in the personal fulfillment dimension which are within the average and homogeneous to one another.

In the total of the sample only a significant negative correlation can be noticed with the time they have spent in their current work position, and no significant correlations can be observed in the analysis on the basis of professional class.

	DOCTORS M= 31,88	NURSES M= 32,96	ORDERLIES M= 32,5	TOTAL M= 32,39
<i>Age</i>	-,063	-,22	-,159	-,21
<i>TPL</i>	-,201	-,275	0,092	-,222
<i>TSL</i>	-,25	-,254	0,065	-,258*
<i>Som</i>	,311	-,262	0,251	-,158
<i>SI</i>	-,263	-,211	-,012	-,152
<i>Dep</i>	-,196	-,316	0,181	-,139
<i>Ans</i>	-,292	-,196	0,253	-,146
<i>Hos</i>	-,153	-,252	-,005	-,099
<i>GSI</i>	-,238	-,339	0,177	-,154

TWP = Time in work position (time practising the profession); TCW= Time in the current work position

Som= Somatization; IS= Interpersonal sensitivity; Dep= Depression; Anx= Anxiety; Hos= Hostility; GSI= Global severity index

M= Average score in personal fulfillment

** The correlation is significant at the 0.01 rate. (bilateral)

* The correlation is significant at the 0.05 rate. (bilateral)

Table 5: Analysis of the relationship of *personal fulfillment* with psychopathological symptoms and some socio-work variables

DISCUSSION

The total of the sample of Area 9 emergency workers, that is, 85.25% of the total sample size, showed average scores in job stress and burnout when compared to the Spanish data by Rivera *et al.* (1993). There are high significant correlations between job stress and burnout and the subjects with a higher amount of stress equally showed a higher burnout level, that is, more emotional tiredness and depersonalization, and less personal fulfillment. These results compare with the ones obtained by the majority of the studies done (Bartz and Maloney, 1986; Cáceres *et al.*, 2000; Cronin-Stubbs and Rooks, 1985; Olkinoura *et al.*, 1990; Ramírez *et al.*, 1996). Even though they are correlational data, all seems to indicate that job stress favours the development of burnout.

Job stress and two of the values implied in burnout, namely emotional tiredness and depersonalization, showed high significant correlations with scales measuring psychopathological symptoms. The subjects with the highest level of stress, emotional tiredness and depersonalization showed the highest scores in all the scales. The findings compare with those of García *et al.* (2000), in which burnout is associated with anxiety, depression and social disfunction symptoms, and with somatic problems of psychological origin, especially when the burnout level is higher, as in the case of doctors.

The emotional tiredness dimension is the one with the greatest number of psychological symptoms, which replicate the findings by Olmedo *et al.* (2001). As in their study, significant relationships can be seen between the emotional tiredness and depersonalization variables with various

psychopathological symptoms, whereas personal fulfillment is not associated with any mental problem. It is worth pointing out that no relation with personal fulfillment appears, which is often felt to be fundamental in finding a job attractive. The presence of negative aspects seems to be more important than the lack of positive ones. In this sense, Moya-Albiol, Serrano, González-Bono, Rodríguez-Alarcón and Salvador (2005) pointed out a positive correlation between burnout and negative mood.

In the case of socio-work variables, even though the association values are lower than in other variables, the length of professional service and the time spent in the current work position are the most significant findings.

Contrary to what was expected, namely the more years of professional service, the more abilities developed, the subjects who had been practising their profession for a longer time seem to be the ones showing the highest stress and burnout levels.

As for job stress, the findings in this paper differ from those by Garnes (2001, 2005), who observed more stress in the younger doctors with fewer years of professional service. As for burnout, our findings coincide with those of other studies which find a greater emotional tiredness in subjects older than 40 and with more professional experience (Atance, 1997; Prieto *et al.* 2002); however, Olmedo *et al.* (2001) noticed less emotional tiredness in subjects with longer professional service. As pointed by Prieto *et al.* (2002), the findings obtained so far do not show a clear correlation between age or professional service and burnout, as with the passage of time the professional may acquire more security and experience in their job, but may also feel more burntout after having spent a long time in contact with ill people.

On the other hand, the professionals who have spent a longer time in the same professional position, generally as interim workers, are those with higher levels of stress, more depersonalization and less personal fulfillment. These findings coincide with those of other studies, according to which substitutes or health care professionals working as residents show lower burnout levels (Albadalejo *et al.*, 2004; García *et al.*, 2000; Olmedo *et al.*, 2001).

As explained by García *et al.* (2000), the professionals working with an indefinite contract remain either in a stagnation phase, with loss of the initial interest and enthusiasm, or in a frustration phase, with a feeling of emptiness that may become evident as emotional distance, which could be related to higher depersonalization levels and lower levels of personal fulfillment.

Doctors are the professionals showing the greatest number and intensity of correlations among occupational stress, burnout and psychopathological symptoms. In a previous analysis of results, they showed a high score in emotional tiredness and depersonalization, and significant differences from the nursing personnel, orderlies and other health care assistants (Bernaldo de Quirós and Labrador, 2007). These findings are in agreement with the ones by Garnes (2001, 2005) and Escribá and Pérez (2007).

The emergency doctor is the professional with the highest degree of responsibility. The welfare system makes them go through a greater level of occupational stress and so makes burnout more likely to appear, which makes itself evident in emotional tiredness, depersonalization and in the high correlations that such variables show with the symptoms studied. In the case of emergency wards in hospitals, the registration, admission or referral to other services depend on the emergency doctor. Likewise, in the case of out-of-hospital emergency services, critical decision making or referral to other services are in their hands, too. It is worth noting that depersonalization only correlates with psychopathological symptoms in doctors, and not in the rest of the health care professionals, as if only in doctors were it relevant to consider that their work is or is not personalized. In the case of socio-work variables, no significant correlations appear, which indicates that they have a lower relationship with stress, burnout and the related symptomatology.

No significant correlations are observed in the nursing personnel between job stress and burnout, possibly due to the fact that the levels of job stress and burnout were not high in our sample. As a matter of fact, previous analyses have pointed out that their number of high intensity stressors is quite a bit lower than that of doctors (Bernaldo de Quirós y Labrador, 2008; 2009).

Emotional tiredness is the only burnout dimension correlating with the psychopathological symptom scales. The nursing personnel display the most emotional tiredness and they also display the greatest number and intensity of symptoms. These results are in the line of the ones obtained by Olmedo *et al.* (2001). The lesser degree of occupational stress and burnout probably entails that they have not developed depersonalization symptoms.

As regards social-work variables, the most significant one is the time spent in their current work

position. Those with a longer time in their current work position, generally as interim workers, show a higher level of depersonalization. The interim situation might be negatively affecting their job satisfaction.

In the case of orderlies and other assistant personnel, higher stress levels correlate with higher emotional tiredness. In its turn, emotional tiredness only correlates with the somatization scale. Somatization may be reflected in the higher number of sick leaves. As well as in the nursing personnel, the lower level of job stress may imply that they have not developed depersonalization symptoms.

Generally speaking, we can say that job stress, burnout and psychopathological symptoms showed positive correlations. The intensity of these correlations was greater in doctors, the professionals with the most responsibility in these services. As a matter of fact, 'perceived responsibility' might be a determining factor in the development of work burnout.

In the total of the sample, the three socio-work variables, namely length of time of professional service, time spent in the current work position and age, show correlations with job stress and burnout. However, the correlation intensity is low, and most of them disappear in the analysis on the basis of professional classes.

The differences observed in the correlates of job stress, burnout and psychopathological symptoms in the various professional groups make it evident that a different specific intervention policy is necessary for each professional group. The burnout suffered by nurses seems to be more related to the time spent in their current work position and, maybe, to their provisional status. In the case of orderlies and other assistant personnel, occupational stress and emotional tiredness are related to somatization, more organic symptoms, which, consequently, might favour a greater demand for attention or sick leaves. On the other hand, doctors are the professionals who show a stronger relationship between occupational stress, burnout and psychopathological symptoms. Without doubt, the higher levels of stress (especially responsibility) may facilitate as much higher burnout levels as more negative effects on health marked by the appearance of more psychopathological symptoms.

The greatest number of research studies on occupational stress and burnout have been carried out by means of mail surveys, which may account for the low percentage of responses collected. In this research study, the assessments were done during team meetings, which has probably meant that the sample analysed reflects practically the total (85.25%) of the workers of the out-of-hospital emergency units from the 9th health care area in Madrid. With all things considered, as a possible bias to the study, it might be worth pointing to the non participation of the professionals on sick leave who should be included in future studies.

It would be desirable to extend this study to all the health care areas in the Community of Madrid, as the availability of a wider sample would permit the possibility of regression analyses and the possibility of establishing explanatory and predictive models. Likewise, given the differences among the various

professional groups, it seems logical to establish specific action plans for each one of them. In order to achieve this objective, it would be most useful to count on a detailed analysis of the most important sources of stress in each one of the professional groups.

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