

## BURNOUT AMONG GENERAL PRACTICE TRAINEES IN IBN RUSHD UNIVERSITY HOSPITAL: A CROSS-SECTIONAL STUDY

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### ABSTRACT

**Introduction:** Burnout syndrome is largely widespread among health professionals and It's further more grave when it comes to young doctors.

The aims of this study are to determine burnout prevalence and its associated factors among general practice trainees in Ibn Rushd university hospital.

**Material and method:** A descriptive cross-sectional study was carried out in May-June 2013. All the 110 CHU trainees were invited to fill in an anonymous questionnaire including the French language version of the Maslach Burnout Inventory.

**Results:** The response rate was 57%. Responders average age was 24.8 (SD=1.2) (76.2% were female). Sub-scales burnout average scores were: (Emotional Exhaustion: 32.0±9.1, Depersonalization: 13.2±30.0, Personal Accomplishment: 29.0±8.1). A total of 39.7% had severe burnout. It was associated with: time spent working (p<0.01), feeling insecurity during guards (p<0.05), having difficulties to communicate information and to announce diagnosis to the patient and his family (p<0.01), anxiety and depression (p<0.05). Protector factors were feeling equality in the medical team (p<0.01) and having leisure activities (p<0.05).

**Discussion and conclusion:** these results are globally similar to those found in previous studies. So, taking individual, collective and organizational preventive measures seems to be necessary.

**Keywords:** Burnout syndrome; Trainees; University Hospital.

### INTRODUCTION

Burnout (BO) is a psychological syndrome that can affect individuals who work with others, as a result of an accumulation of work and emotional and interpersonal stressors (2). It results from a mismatch between expectations and professional reality and it is self-sustaining by inadequate coping strategies (1). According to Maslach and Jackson, it has three dimensions:

- Emotional exhaustion (EE): refers to the feeling of being emptied of emotional and physical

resources and leads to difficulties to be in touch with others' emotions. It is the stress basic response.

- Depersonalization (DP): represents a negative or excessively detached reaction to other people who are considered as objects. It is used as a coping strategy to manage exhaustion.
- Low personal accomplishment (PA): refers to feelings of incompetence, inefficiency and lack of productivity at work. It represents the burnout self-evaluation dimension. (2)

According to literature, burnout is widespread among physicians (3). The occurrence of depression

among this population is twice the one of the general population. Mental disorders are the first cause of disability (40%) among physicians and their suicide rate is 14.3% (1).

In addition to its impact on their quality of life and their perception of their profession, burnout has a negative impact on the quality of care provided (medical errors, inappropriate decisions) (4).

In our context, general practice trainees are exposed to burnout because of their young age, high workload, some obligatory services, and the sudden access to responsibility (5).

The aim of our study was to determine the burnout prevalence and its associated factors among general practice trainees in Ibn Rushd university hospital.

### MATERIAL AND METHODS

A descriptive cross-sectional study was carried out in May-June 2013. All the 110 Ibn Rushd university hospital trainees (of general medicine and dentistry) were invited to fill in an anonymous questionnaire including 3 sections: socio-demographic data, data related to physicians health status and hospital stress factors, and the French language version of the Maslach burnout inventory (MBI-HSS); it is constituted of 22 items whose answers have a Likert scale from 0 (never) to 7 (every day). It measures the three dimensions of burnout: emotional exhaustion, depersonalization and personal accomplishment. The calculation of scores is obtained by the sum of response items. The burnout levels (high, moderate, low) are defined by specific thresholds: EE (low

BO: score <18, moderate BO: 18-29, high BO:>29) DP (low BO:<6 moderate BO: 6-11, high BO:> 11), AP (High BO:<34, moderate BO: 34-39, low BO:>39). In this study, we consider that burnout is severe when the first two scores are high and the third is low. Associations with severe burnout were established with the Fisher exact test (categorical variables) or the Kruskal-Wallis test (quantitative variables). The analysis was performed by Epi-Info 3.5.3 software.

### RESULTS

A total of 63 trainees participated in the study (response rate: 57%). The average age was 24.8 years old (SD =1.2) with a female predominance at 76.2%. First year trainees represented 52.4%, general medicine trainees represented 69.4% and the majority of participants were single.

When it comes to workload, the average number of hours worked per week was 43.3 hours (SD =17.1), 49.9% of respondents had more than 3 nightshifts per month and 82.3% had less than 2 weeks of vacation during the ongoing semester.

About a half of trainees (48.0%) reported spending enough time with their friends and family (entourage) and 34.9% had a leisure activity.

Health problems reported were (from the beginning of the internship): somatization problems (back pain, epigastric pain) with a frequency of 74.6%, eating disorders with a frequency of 68.3% and decreased immune system (prolonged colds) with a frequency of 60.3% (Figure 1).

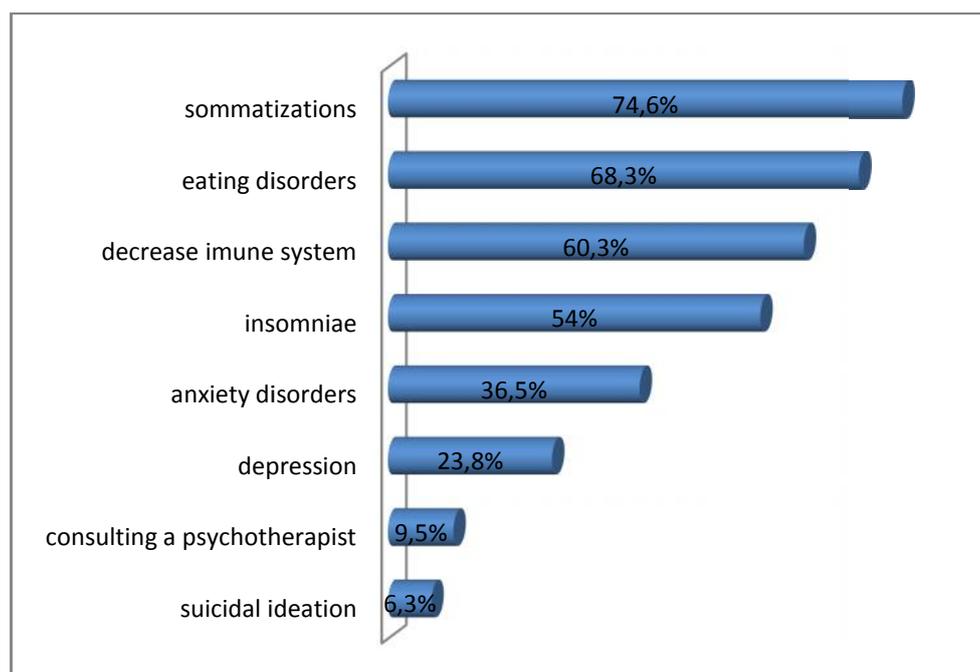
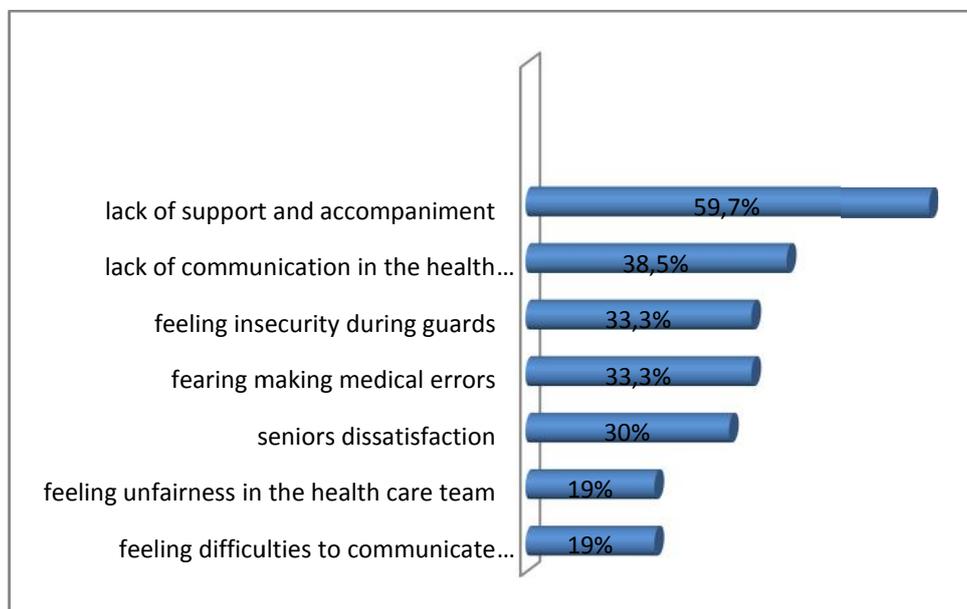


Figure 1 : Reported health problems

Moreover, perceived hospital stress causes were the lack of support and assistance (59.7%), lack of communication within the health care team (38.5%) and the (lack of safety) feeling of insecurity during nightshifts (33.3%) (Figure2).



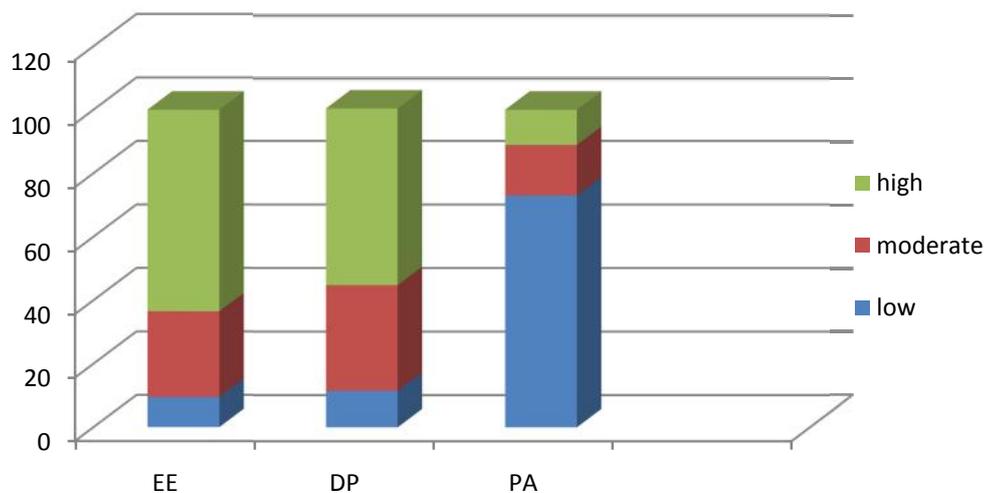
**Figure 2: reported hospital stress factors**

Average scores of emotional exhaustion, depersonalization and personal accomplishment were respectively: 32.0 (SD: 9.1), 13.2 (SD: 30.0), 29.0 (SD: 8 1). Dentistry trainees had higher scores of (EE) and (DP) than general medicine ones. However, general medicine students had lower scores of (AP) (Table I).

**Table I : Sub-scales MBI average scores**

Scores participants	Emotional exhaustion	Depersonalization	Personal Accomplishment
	Average scores (SD)		
<b>Study population</b>	32,0 (9,1)	13,2 (30,0)	29,0 (8,1)
<b>General medicine Trainees</b>	28,5 (8,74)	12,6 (5,89)	26,1 (7,1)
<b>Dentistry Trainees</b>	35,1 (7,83)	13,4 (9,43)	35,3 (9,0)

With a high level, (EE) affected 63.5% of participants, (DP) 55.6% and low (AP) 73.0% (Figure 3). Severe burnout was recorded among 39.7% of participants.



EE : emotional exhaustion, DP : depersonalization, PA : personal accomplishment

**Figure 3: Burnout levels distribution**

Some factors were significantly associated with severe burnout: workload ( $p = 0.01$ ), having difficulty to communicate information and diagnosis to patients and their families ( $p = 0.001$ ) and the lack of safety (feeling insecurity) during nightshifts ( $p = 0.040$ ). Protector factors were represented by feeling fairness in the health care team ( $p = 0.001$ ) and taking a leisure activity ( $p = 0.010$ ).

The consequences of severe burnout identified by this study were anxiety disorders ( $p = 0.030$ ) identified among 56.5% of participants with severe burnout and depression ( $p = 0.020$ ) identified among 60% of participants with severe burnout (Table II).

**Table II: Factors associated with severe burnout**

Factors	Low or moderate burnout	Severe burnout	p-value
Number of hours worked per week	38,5 (12,7)	50,6 (20,4)	0,010
Mean (SD)			
Feeling difficulties to communicate informations to patients	60,3	39,7	0,00
No	19,0	81,0	
yes			0,040
Feeling insecurity during guards		31,0	
Non	69,0	57,1	
Yes	42,9		
Feeling fairness in the health care team			
No	45,1	54,9	0,001
Yes	60,3	16,7	
Taking a leisure activity			
No	48,8	51,2	0,010
Yes	81,8	18,2	
Anxiety disorders			
No	70,0	30,0	0,030
yes	43,5	56,5	
Depression			
No	66,7	33,3	0,020
Yes	40,0	60,0	

## DISCUSSION

We noted a high prevalence of burnout among medical trainees in Ibn Rushd university hospital (severe burnout related in 39.7% of participants). Many of the factors associated to this condition were related to workload but some also had to do with

work conditions (feeling insecurity during nightshifts, unfairness in the health care team, difficulties to communicate information and diagnosis to patients and their families). The consequences were identified with a considerable

prevalence of anxiety and depression. The response rate is relatively low. We can suppose that the doctors who felt concerned with the issue were more likely to answer the questionnaire (selection bias) which can result in an overestimation of the burnout prevalence. However, the population of respondents seems to be representative (similar socio-demographic and professional data with the studied

population). The French language version of the MBI used to measure burnout has satisfactory psychometric properties (Cronbach's of the subscales range from 0.64 to 0.90) and it is widely used in medical and paramedical context (6). Burnout scores results are globally similar to those found in previous studies (5-7) Appendix I.

**Appendix I: Burnout studies among medical trainees**

Study	Place	Response rate %	EE	DP	PA
			(average score)		
Dyrbye,2006 (7)	Minnesota(US)	50	34.4	26.9	28.2
Galam,2011 (5)	France	71	20.0	9.7	34.8
Our study	Casablanca(Morocco)	57	32.1	13.0	29.0

EE: emotional exhaustion, DP: depersonalization, PA: personal accomplishment

As for the workload factor, it is controversial and literature reports that with equal work a recognized and valued doctor would be less exhausted. Moreover, the impact of working conditions is more important than workload alone (2).

On the other hand, if workload can be harmful to the mental health of workers, it is the same for sub-maximal arising boredom, reduced motivation and job dissatisfaction (8). Moreover, many studies have shown that excessive working hours do not necessarily lead to an increase of productivity. They would tend to reduce individual effectiveness and efficiency. Indeed, it could be that burnout suffering caregivers increase their workload to compensate the feeling of failure (9).

The health problems identified have been reported and may be underestimated or over-estimated; nevertheless, based on reduced personal accomplishment (PA) depressive symptoms, literature reports that burnout can lead to a major depression, and even suicide (10). Headaches, back pain and epigastric pain were the most mentioned health problems. Some authors have found a significant association between burnout and physical signs. They noted a vulnerability of burnout victims to psychosomatic and psycho-functional diseases (11).

We did not assess the negative impact of burnout on medical performance, but this impact seems to be significant; if depersonalization can "protect" against emotional stress, it alters significantly the relationship between physicians and patients, colleagues and even themselves. It is often considered as a form of personal failure expressed by the decrease of personal accomplishment (2).

## CONCLUSION AND RECOMMENDATIONS

General practice trainees' burnout in Ibn Rushd University Hospital is a reality. Among causes for this phenomenon, we identified workload but with some reservations as other factors may come into play. Its consequences are harmful to their health but also to the quality of care delivered. This explains the importance of a rational prevention program aiming to improve hospital working conditions (at the individual, collective and organizational levels) and providing better support to young doctors (gradual responsibility, teaching how to communicate with patients and their families) and more valorization of the internship.

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