

Assessment of occupational stress among emergency department staff: a descriptive study at Ibn Jazzar Hospital in Kairouan

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Abstract

Introduction: Work in emergency departments is recognized as highly exposed to occupational stress due to heavy workloads, time pressure, and the severity of clinical situations. This stress can have negative consequences on healthcare workers' health, work quality, and patient safety.

Objective: To assess the level of occupational stress among emergency department staff and to identify associated organizational factors.

Methods: This is a descriptive study conducted in the emergency department of Ibn Jazzar Hospital in Kairouan between November 2024 and January 2025. Occupational stress was assessed using the Karasek questionnaire among 44 healthcare professionals.

Results: The prevalence of high psychological demand was high (65.1%). Most participants (90.5%) showed moderate to high decision latitude. Social support was considered insufficient among a large proportion of participants. Sixty percent of professionals were classified as being in a job strain situation, mainly general practitioners, predominantly female, aged between 30 and 49 years.

Conclusion: Occupational stress is very common among emergency department staff. These findings highlight the need to improve work organization and strengthen institutional support to preserve healthcare workers' health and the quality of care.

Keywords: Occupational stress, Emergency department, Karasek questionnaire, Job strain, General practitioners.

INTRODUCTION

Professional practice in emergency departments is recognized as one of the most stressful work environments in healthcare. Professionals are repeatedly confronted with life-threatening emergencies, heavy workloads,

long working hours, and strong emotional pressure.

This chronic stress can lead to emotional exhaustion, reduced quality of care, and negative impacts on the physical and psychological well-being of healthcare workers. Assessing occupational stress,

therefore, represents a major challenge in improving working conditions and preventing psychosocial risks.

This study aimed to assess the level of stress among emergency department staff and to identify the main contributing factors.

METHODS

Type and Setting of the Study: This was a descriptive cross-sectional study conducted in the emergency department of Ibn Jazzar Hospital in Kairouan.

Study Population: The study included 44 healthcare professionals working in the emergency department during the period from November 2024 to January 31, 2025. The questionnaire was self-administered. The investigator explained the aims, obtained the consent, delivered the questionnaire to the participants, and then collected the completed survey instrument.

Data Collection Tool: Occupational stress was assessed using the Karasek questionnaire, which explores three main dimensions: Decision latitude (questions 1 to 9), Psychological demand (questions 10 to 18), Social support, including supervisory support (questions 19 to 23), and coworker support (questions 24 to 29) [1, 2]. Responses were scored using a four-point Likert scale. Job strain is defined as high psychological demand (>20) combined with low decision latitude (<71). Isostrain corresponds to a job strain situation associated with low social support (<24).

Statistical Analysis: Data were analyzed using descriptive statistics. Results are expressed as means, medians, standard deviations, and percentages.

RESULTS

The sample consisted mainly of general practitioners (86%), with a predominance of females (sex ratio = 4.5). The most represented age group was 45–49 years (34.9%), followed by 35–39 years (23.3%). Regarding working hours, 72.7% of participants reported 24-hour shifts, compared with 22.7% working 8-hour shifts.

Assessment of Occupational Stress: High psychological demand was observed in 65.1% of participants, with a median score of 29.

Decision latitude was moderate to high in 90.5% of professionals.

Social support was considered insufficient, with a median score of 28, reflecting low perceived support.

Overall, 60% of participants were classified as being in a job strain situation, mainly female general practitioners aged between 30 and 49 years.

Table 1: Karasek questionnaire scores among emergency department staff.

Dimension	N	Mean	Standard Deviation	Median
Psychological demand	44	28.2	4.6	29
Decision latitude	44	29.5	3.9	29.5
Social support	44	27.5	3.2	28
Global Karasek score	44	58.5	5.2	60

DISCUSSION

The present study highlights a high prevalence of occupational stress among emergency department staff, with 60% of participants classified as being in a job strain situation according to the Karasek model. This finding confirms that emergency departments represent a high psychosocial risk work environment, as widely reported in the literature [1,2].

High Psychological Demand: The high psychological demand observed in 65.1% of participants reflects a substantial mental workload. Emergency professionals are exposed to constant time pressure, unpredictable activity levels, and often difficult clinical situations, which are recognized as major determinants of occupational stress [3]. Previous studies have shown that emergency physicians experience higher levels of psychological demand than those observed in other medical specialties [4].

According to the Karasek model, excessive psychological demand that exceeds individuals' coping capacities is associated with an increased risk of psychological and somatic disorders [1,2].

Decision Latitude: An Insufficient Protective Factor: In our study, 90.5% of participants exhibited moderate to high decision latitude, reflecting a certain level of professional autonomy. Decision latitude is traditionally considered a protective factor against occupational stress [1]. However, despite this autonomy, a significant proportion of

participants remained in a job strain situation. This suggests that decision-making autonomy alone is insufficient to counterbalance the effects of excessive psychological demand, particularly when workload is chronic [5].

Social Support and Risk of Isolation: Perceived social support was generally low in our population. Social support, whether from supervisors or colleagues, plays a fundamental role in preventing stress and burnout [6]. In the Karasek model, the combination of high psychological demand, low decision latitude, and low social support defines the isostrain situation, considered the most harmful to health [7]. Nevertheless, the high level of agreement regarding help from colleagues suggests a certain level of team cohesion, which could serve as a lever for improving the psychosocial work climate.

Most professionals classified as being in a job strain situation were general practitioners, predominantly female, aged between 30 and 49 years. Several studies have shown that female physicians are more exposed to occupational stress and burnout, partly due to the dual burden of professional and family responsibilities [8]. This age range also corresponds to a period of high professional involvement, increasing vulnerability to chronic stress.

In our study, 72.7% of participants worked 24-hour shifts, a factor widely recognized as a source of stress and fatigue. Prolonged working hours and shift work disrupt circadian rhythms,

impair sleep quality, and increase the risk of medical errors [9]. Several studies have established a direct link between excessive working hours, emotional exhaustion, and deterioration in the quality of care [10,11].

The results of this study emphasize the need to implement organizational interventions to reduce psychological workload. Strategies targeting work organization, schedule optimization, and strengthening institutional support are recognized as more effective than isolated individual approaches in preventing occupational stress [12].

LIMITATIONS: This study has several limitations, including its single-center design and the small sample size, which may limit the generalizability of the results. The use of a self-administered questionnaire may introduce reporting bias. Nevertheless, the use of the internationally validated Karasek questionnaire provides strong methodological robustness to the assessment of occupational stress.

CONCLUSION

Occupational stress is frequent and concerning among emergency department staff. Improving

working conditions, better organization of work schedules, and strengthening social support appear essential to reduce the risk of job strain and to preserve the quality of care.

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