

Study of Psychosocial Risks in the Professional Environment of Health Care Workers in Morocco

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Abstract

Caregivers are a particular target for psychosocial risks, including stress and burnout. Burnout is a consequence of exposure to permanent and prolonged stress. It concerns professions with high mental, emotional and emotional demands and high responsibility such as nurses. The objective of this study was to describe and identify psychosocial risks, occupational stress and its components in health professionals. This epidemiological study involved 191 health professionals working in the provincial hospital centers of Kenitra and Sidi Slimane, Morocco. The questionnaire included: socio-demographic and occupational data; the Karasek scale (KJCQ) with its three components: psychological demand (DP), decision-making latitude (LD) and social support (SS). These three dimensions allow the identification of risk situations. Job strain is the combination of low decision latitude and high psychological demand. The Maslach Burnout Inventory (MBI) scale consists of three dimensions (emotional exhaustion, depersonalization and feeling of personal fulfillment at work). The positive diagnosis of burnout was chosen if the score exceeded the values defined in one of the three components of MBI (high for the first two and low for the third).

Keywords: stress, caregivers, burnout, Morocco, job strain

Introduction

The nursing profession requires the assessment of a patient's clinical situation, the application of medical supervision, the initiation of diagnostic tests, the determination of a plan of care and treatment and/or the execution of such plan. Nurses encounter complex situations of care on a daily basis and must intervene in this context to maintain patient stability, avoid complications and provide quality care¹. Nurses are faced with managing situations that put the lives of individuals at risk. The urgency, unpredictability and seriousness of the interventions punctuate the practice of emergency medicine and expose the participants to intense and repeated stress. This work environment

can cause chronic stress called "work stress". Occupational stress has been widely developed by health psychology².

Stress is defined as "a particular transaction between an individual and a situation in which the individual is assessed as being beyond his or her resources and potentially endangering his or her well-being." Thus, in the face of a disturbance, the individual assesses the problem, his or her personal and social resources to deal with it, and then develops adjustment strategies to reduce perceived stress. It is when all these transactions prove to be ineffective that work stress sets in and, if the situation persists, may lead to burnout.

The high psychological demand and high workload in Moroccan hospitals can be explained in part by the increasing shortage of medical staff and budgetary constraints. For the World Health Organization (WHO), the number of health professionals in Morocco did not reach the recommended critical threshold of 22.8 doctors, nurses and midwives per 10,000 inhabitants³.

The increased demand for higher-quality care from an increasingly demanding population afflicted by emerging and often chronic conditions implies excessive workload and stress. 21% of Moroccans have at least one chronic disease and 75% of deaths are related to non-communicable diseases reported the Health ministry in Morocco in 2008⁴. Poor work organization, adverse socio-demographic and economic factors contribute to burnout compounded by stress, anxiety, fatigue and depression⁵. The common denominator is the existence of the discrepancy between an increased professional requirement and the reality of an often limited individual capacity. Caregivers' BO vulnerability is increased by emotional dissonance that is positively correlated with work dissatisfaction and emotional exhaustion. Emotional dissonance occurs when the work situation requires an expression that is not the one actually felt by the subject. It results from a conflict between the person and the role he holds, between the subject and the motions prescribed by the organization^{6,7}.

Burnout or burnout syndrome is a translation of work-induced personal suffering. Also, a multitude of research studies have focused on this sector of activity and have revealed that the bulk of the cost of psychological suffering is related to staff malaise, the most frequent consequences of which include an increase in absenteeism, a high turnover rate and a decrease in performance and productivity^{8,9}.

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of psychological suffering is related to staff malaise, the most frequent consequences of which include an increase in absenteeism, a high turnover rate and a decrease in performance and productivity^{8,9}. The professional exhaustion syndrome, insufficiently explored in the Moroccan hospital staff, prompted us to conduct this study, the objective of which was to identify and describe the psychosocial risks, the professional exhaustion syndrome and its components in the nursing staff at the hospital network level.

Method

This epidemiological survey, cross-sectional by self-questionnaire and a psychometric kit, conducted in 2018, interested 191 caregivers from two provincial hospital centers in the Rabat –Sale-Kenitra region, namely the Kenitra and Sidi Slimane CHP.

1. Participants

It includes all health care workers, nurses, who provide direct care to patients and who come under the various departments and departments of the provincial hospital centers.

2. Data collection tools

It was conducted through a self-questionnaire, the Maslash Burnout Inventory (MBI), the Karasek scale (JDCS) and the General Health Questionnaire (GHQ12).

The General Health Questionnaire (GHQ-12) is an evaluation tool developed by Goldberg and Williams (1998). It allows to quantify at the dimensional level the degree of subjective psychological suffering and, at the categorical level, to define, from threshold notes, pathological cases or not¹⁰.

Karasek's Job Content Questionnaire in French (KJCQ) ranks three dimensions of the psychosocial environment at work. Psychological demand (DP) evaluates quantity, speed, the complexity, intensity, fragmentation and predictability of the work. The decision-making latitude (LD) values the room for

maneuver, the use acquired and the development of skills. Social Support (SS) values professional and emotional support from superiors and colleagues ¹¹. These three dimensions allow the identification of risk situations. Job strain is the combination of low decision latitude and high psychological demand.

Maslach scale (Maslach Burnout Inventory; MBI) consists of three dimensions: Emotional Exhaustion (EE), Dehumanization or Personalization (DP) and Self-Fulfillment at Work (AP). Responses are scored on a Likert scale in seven points from 0 (never) to 6 (daily). For each dimension, the sum of the responses allows to define a low, moderate or severe level ¹⁰.

The self-survey to collect data on social and occupational variables, also the main stressors of the care environment among participants, included 4 components with 23 items

3. Statistical analysis

Analytical statistics were based on association tests such as Pearson's Chi-Square test, correlation matrices by Bravais-Pearson and Spearman, single-factor variance analysis (ANOVA).

Results

1. Socio-demographic and occupational stress and characteristics of caregivers

The study covered 191 respondents, 43% (n=82) male and 57% (n=109) female. The sex ratio was balanced (Female/Male) with a $p < 0.189$ (single-sample binomial test). The breakdown of these respondents by grade shows that 65% (n=124) are state-certified nurses (Nurses) of whom 58 are male nurses and 66 are nurses, and 35% (n=67) are auxiliary nurses (Auxiliaries) of whom 23 are male and 44 are female. The khi2 independence test did not show a significant association between these two factors (sex \times category) ($\chi^2 = 1,36$; $p < 0,243$).

The age distribution of nurses surveyed shows that 68% (n=130) are over 40 years of age, including

82 nurses and 48 male nurses, followed by the class of nurses between 30 and 40 years of age (17 female and 23 male), which represents 21% and finally the age category of respondents less than 30 years and representing 11% (n=21). The khi2 test did not show any significant difference between these two factors (age \times sex) ($\chi^2 = 3.37$; $p < 0.186$).

For better organization, hospital managers adopt an hourly work system that is appropriate to patients' expectations. The khi2 test shows a strong link between sex and the schedule system ($\chi^2 = 13.63$; $p < 0.003$). In fact, 19% (n=36) follow the regular schedule system (30 female and 6 male), 60% (n=115) adopt the 12/36 system (61 male and 54 female), 6% (n=11) day work (no male) and 15% (n=29) ensure the system night shift (17 male and 12 female). A significant connection combines the hourly system and age ($\chi^2 = 14,74$; $p < 0.022$). However, the nurses who provide day and night care are all over 40 years of age and 79% of the nurses who follow the regular system are over 40 years of age. However, 54% of respondents with the hourly 12/36 system are over 40 years of age, compared to 17% who are under 30 years of age. Although the khi2 test did not show a significant difference between the timing system and marital status ($\chi^2 = 10.55$; $p < 0.308$), the majority of nurses who provide day and night care and the normal system are married and 87% (n=40) of single nurses provide the 12/36 system.

The joint analysis of socio-demographic and occupational variables identified three distinct groups:

- The first group is located on the positive side of dimension 1 and dimension 2 groups the nurses who provide day and night care. These nurses are generally over 40 years of age and have a seniority that exceeds 15 years of practice in the position. A lot of them are female.
- In contrast to the negative side of Axis 1, single nurses under 30 years of age with a seniority of less than 5 years and with a higher level of education are usually employed in the 12/36 hourly system.

• The third group, located on the negative side of Dimension 2, is generally married nurses, the majority of whom are male and follow a normal schedule. These nurses are between 30 and 40 years old, and work in the position between 5 and 15 years old.

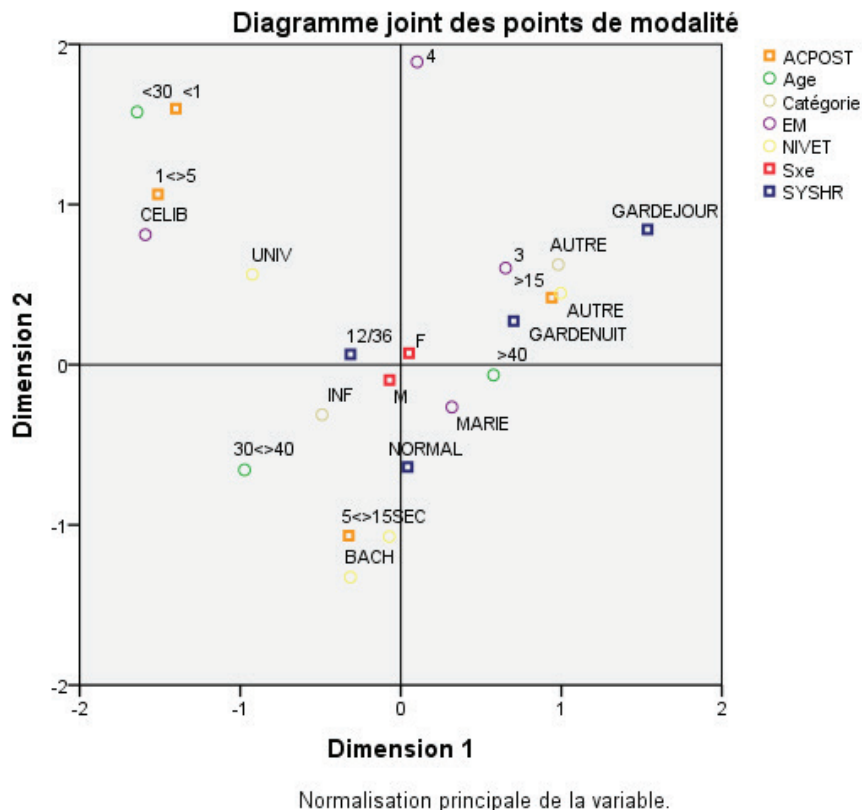


Figure 1: Projection of the modalities of the variables studied in ACM according to two dimensions 1 and 2

Results of responses to organizational factors items show that more than 80% of respondents responded “often” to overwork (n=153), ambiguity in role (n=157), and lack of staff (n=167), contributing to burnout. However, 40% of those surveyed responded that conflict with colleagues is a determining factor in burnout.

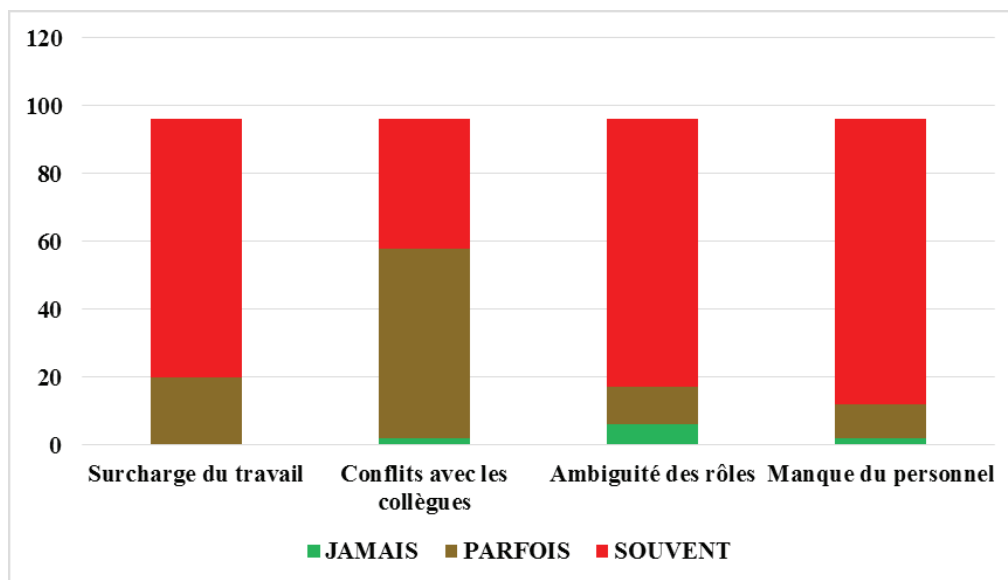


Figure 2: Distribution of organizational factors according to their frequency

Multiple correlation analysis shows that work overload is strongly correlated with conflicts with colleagues ($r = +0.317$; $p < 0.002$) and ambiguity of roles ($r = 0.241$; $p < 0.018$). However, the ambiguity of the roles is positively correlated with the question; does a lack of staff put you in a state of burnout? ($r = 0.860$; $p < 0.000$).

On the other hand, 92% of respondents said that

the physical and/or technical environment of the care environment is a determining factor in burnout.

The breakdown of responses to the physical and/or technical environment questions shows that more than 80% confirmed that poor site design, space limitations, and humidity are environmental factors for burnout, and less than 70% said yes to inadequate lighting and heat.

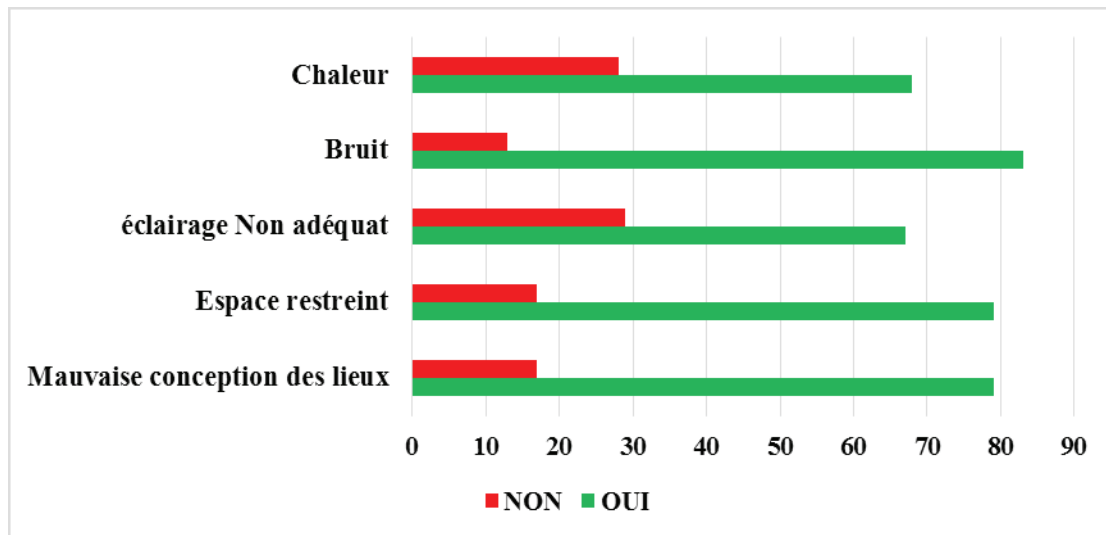


Figure 3: Distribution of physical and/or technical factors of care according to their frequency

2. Psychological impairment at work of caregivers:

The results of the CMA identified four distinct groups:

✓ The first group is located on the positive side of Axis 1 and is composed of female nurses generally over 40 years of age. These nurses provide night and day care with almost 15 years of service. These nurses are characterized by low depersonalization and moderate achievement.

✓ The second group on the negative side of Axis 1 is composed mainly of single nurses less than 30 years of age with a seniority of less than 5 years. These nurses, the majority of whom had a university

education, developed a low level of emotional exhaustion, a high level of achievement

✓ A third group located on the negative side of Axis 2, consisting mainly of male nurses aged 30 to 40. These nurses developed a moderate level of EE and a high level of achievement and a moderate to high level of depersonalization. Nurses operate the 12/36 hourly system.

✓ The fourth group consists of high EE nurses and low achievement and high depersonalization. They are generally married, working with a normal hourly system and have a level of education less the bachelor's degree and a seniority between 5 and 15 years.

3. Psychological distress in the professional environment of the caregivers:

The table below shows the results of the GHQ12 khi2 independence test and some variables (gender, age, school level, marital status, time system and length of service in the position). Although the test did not show a significant association between GHQ12

and these variables, a difference in representability was reported. Among nurses who reported disorders, 58.73% (n=112) were female and 66.67% (n=127) were over 40 years of age. In terms of marital status, 80.95% (n=155) declared that they were married, while 42.86% (n=66) of them had more than 15 years of seniority in the position and 60.32% (n=93) followed the 12/36 hourly system.

Table 2: Test khi2 between GHQ12 and certain socio-demographic and occupational variables

| | | GHQ12 | | Total | Khi2 (p-value) |
|---------------------------|------------|--------|----------|-------|-------------------|
| | | Normal | Distress | | |
| Sexe | M | 29 | 52 | 81 | 0,15 (p<0,659) |
| | F | 36 | 74 | 110 | |
| Age | <30 | 8 | 13 | 21 | 0,22 (p<0,88) |
| | 30<>40 | 12 | 28 | 40 | |
| | >40 | 46 | 84 | 130 | |
| Marital status | SINGLE | 17 | 24 | 41 | 1,03 (p<0,712) |
| | MARIED | 48 | 102 | 150 | |
| School level | SEC | 30 | 54 | 84 | 0,14 (p<0,98) |
| | BACH | 13 | 30 | 43 | |
| | UNIV | 22 | 42 | 64 | |
| Seniority in the position | <1 | 6 | 6 | 12 | 0,72 (p<0,86) |
| | 1<>5 | 8 | 16 | 24 | |
| | 5<>15 | 24 | 49 | 73 | |
| | >15 | 28 | 54 | 82 | |
| Hourly system | NORMAL | 12 | 26 | 38 | 1,22 (0,748) |
| | 12/36 | 42 | 75 | 117 | |
| | Day care | 2 | 10 | 12 | |
| | Night care | 10 | 14 | 24 | |
| Total | | 65 | 126 | 191 | |

Discussion

1. Socio-demographic and occupational stress and characteristics of caregivers

The data in this study on the impact of the physical and/or technical environment of the care environment are consistent with other studies that emphasize that the environment has consequences on both the physical and the psychic. While insufficient labor forces increase the workload, this lack is a real source of exhaustion ¹².

On the other hand, the material in the care service remains a fundamental factor in distributing and organizing the nursing work, the quantity and quality of the material (carts, tensiometers, tubing,...) plays a crucial role in spreading the tasks ¹³, the organization of the material and the resources determine how to carry out the work and therefore constitutes one of key elements that can reduce stress at work.

The role of personal factors and socio-demographic characteristics in determining the vulnerability of individuals to burnout is highlighted by several authors. Age, sex, marital status, work experience, and education or training are among the socio-demographic characteristics studied in relation to burnout ¹⁴.

2. Psychological impairment at work of caregivers:

Career burnout, particularly affecting caregivers, is a psychological and physiological condition resulting from the daily accumulation of stress factors that have worn the individual. It has its roots, in response to a multitude of stressful factors over time ^{15, 16}. OB is a syndrome of emotional exhaustion, depersonalization and loss of a sense of personal efficacy, which can occur in subjects working in any way with other human beings ¹⁷.

Our results showed that nurses over 40 years of age are located at the high stress quadrant and even for married nurses, something that has been cited by several studies that say that other potential explanatory

variables of higher occupational stress were generally demographic factors such as age, marital status and education ^{18,19}

3. Stress and burnout of caregivers:

According to our study, 11% (n= 22) of nurses are in a state of job strain. Indeed, they have demonstrated low decision-making latitude and high psychological demand. So these are people under stress. This is strongly correlated with other findings that indicate that nurses have a higher degree of stress ^{20,21}. Working in a hospital can be a source of stress, given the workload, the lack of staff and equipment, which requires a high psychological demand and influences the well-being of the caregiver.

In our study, a significant difference in the level of stress between the sexes reflects that the demands and immediacy of stressful situations were likely to be perceived differently by the gender. Studies have already reported a higher level of stress among independent women of nationality and health unit ^{18, 19}.

Also, a very important variable was shown in our study as a factor in occupational stress, namely the hourly system showing that night-shift nurses have accumulated a high degree of emotional exhaustion and a high degree of depersonalization. Our results are consistent with several studies that cite night work that transgresses circadian rhythms ²², which has certain consequences for the health of nurses: cardiovascular disorders ²³.

4. Psychological distress in the professional environment of health-care workers

The interpretation of the GHQ12 score showed that 66% (n=126) had poor mental health (score \geq 2), and its results are correlated with other studies that indicate that nurses have mental overload that influences their physical, mental and behavioral well-being. A Tunisian study reported that 62% of caregivers are mentally ill ²⁴. Although our research

did not show a significant association between GHQ12 and age, other studies found statistically significant associations between poor mental health and age < 30 years ($p = 0.014$)²⁴.

Conclusion

This study shows that caregivers experience significant levels of stress, burnout and psychological distress. The mission of care is defined by specific stressors, such as noise, frequent change of tasks, and the time system.

To conclude, the strain job has been highlighted with a gender and age effect. Nurses are more stressed than men; the age of over 40 was a key factor in high work stress.

This requires the adoption of a heuristic approach based on comprehensive and integrated strategies aimed at improving the personal and professional performance of nurses and coping with daily stressors in the performance of their duties.

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Compliance with ethical standard

Conflict of Interest: The authors declare that they have no competing interests.

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