

Study of the state of burnout in a group of caregivers: case of the provincial hospital El Idrissi, Kenitra, Morocco.

¹CHAKHTOURA Khalid, ²CHAIB Yassine, ³ELANSSARI Anas, ⁴ABOUSSALEH Youssef, ⁵AOUANE Mahjoub, ⁶HAMMAMA Samir, ⁷Ahmed O.T.AHAMI

Abstract

The Burnout is a syndrome that can affect all social categories including nurses. This occupation requires an overload of activities throughout its exercise. The purpose of this work is to identify the risk factors that generate the burnout profile for this category of caregiver.

We opted for a methodological kit already validated by our unit in the Moroccan context. The study was conducted at the Idrissi Provincial Hospital out of 96 caregivers of which 57.3% (n = 55) are female and 42.7% (n = 41) are male. The results show that 46.87% of nurses show signs of burnout. Indeed, 71.9% (n = 69) and 55.2% (n = 53) respectively had a high level of emotional exhaustion and depersonalization and 77.9% (n = 74) had a low level of degree of achievement.

In addition, the multiple correspondence analysis shows that gender, seniority and age are factors contributing to burnout.

To conclude these preliminary results constitute an emergency call for the leaders in order to put in place the necessary conditions to fight this plague with serious consequences on the general health status of caregivers.

Keywords: burnout - prevalence - survey - risk factor – kenitra

I. Introduction

Work is not always a source of well-being as evidenced by some epidemiological studies (Debout & Larose, 2003)¹. The arduous nature of the work has the consequences of accidents at work and occupational

¹ Nutrition and health laboratory; Department of biology; Faculty of Science ibn Tofail-Kenitra- Morocco

² Genetics and Biometrics laboratory; Department of Biology Faculty of Science ibn Tofail-Kenitra- Morocco

³ Genetics and Biometrics laboratory; Department of Biology Faculty of Science ibn Tofail-Kenitra- Morocco

⁴ Nutrition and health laboratory; Department of biology; Faculty of Science ibn Tofail-Kenitra- Morocco

⁵ Nutri Laboratory for Biotechnology, Environment and Quality; Department of Biology Faculty of Science ibn Tofail-Kenitra- Morocco

⁶ Head of the medical affairs pole, Hospital Elidrisi-Kenitra- Morocco

⁷ Nutrition and health laboratory; Department of biology; Faculty of Science ibn Tofail-Kenitra- Morocco

diseases (Guillevic, 1999)². In addition, workplace bullying is also identified as a suffering that changes the relationship of the man to his work (Desrumaux, Ntsame Sima & Leroy, 2012)³. Thus, psychological health problems arise, with central concern, stress at work and its consequences, among them, burnout.

Burnout is a concept that has been the subject of much debate over the past two decades. This phenomenon represents a real threat for professionals and is growing exponentially in our modern societies by constituting a real public health problem. Three dimensions such as explain burnout

- 1 / Emotional exhaustion (EE) or psychological fatigue
- 2 / the dehumanization or depersonalization of the relationship (DP)
- 3 / the decrease in personal accomplishment (PA),

While conducting a survey of health-care workers at the Kenitra Provincial Hospital, the main objective of this investigation is to assess the degree of burnout, the risk factors and the consequences that result.

II. Material and methods

- Population and place of study

This is a cross-sectional descriptive study conducted during the 2017/2018 period at Idrissi Provincial Hospital in Kenitra. This study was conducted on 96 caregivers working full time in the hospital. The data collection was done through a questionnaire distributed to caregivers and asking questions about identity and certain socio-economic and socio-demographic characteristics, plus questions from the Maslach test.

- Measuring tool and its psychometric properties

This is an anonymous self-questionnaire divided into two parts, the first part contains questions on socio-demographic and professional characteristics, and the second part corresponds to Maslach Burnout Inventory (MBI) adapted to carers or MBI-HSS («Human Services Survey»). Evaluating the frequency with which the caregiver has experienced the experience, feeling or emotion in question.

In terms of rating, a high score on the dimensions of emotional exhaustion and depersonalization along with a low level of self-actualization means that the subject will suffer from burnout.

- Statistical method

The statistical analysis was based essentially on the student test to compare two means and the chi-square test for the comparison of percentages. Joint analyzes were chosen to identify the variables that are significantly correlated with burnout, with a risk of the first species (α) taken at 5%, such as ACM (multiple correspondence analysis) and the ACP (Principal component analysis).

III. Results and discussion

- Sociodemographic characteristics of our sample

In this section, we will describe the socio-demographic and socio-economic profile of respondents (Table 1). The study was conducted on 96 caregivers all-practicing at Idrissi Hospital in Kenitra City, of whom 57.3% (n = 55) are female and 42.7% (n = 41) are male. The age distribution of respondents by sex shows that 11.46% (n = 11) are under 30 years of age, 20.83% (n = 20) are between 30 and 40 years of age, and 67.71% (n = 65) are over 40 years of age, including 41 female caregivers and 24 male caregivers. As a result, the sex ratio was not balanced ($p > 0.05$) and the chi-square test did not show a significant relationship between these two factors (chi-square = 3.37; 0.19). The distribution of these respondents by marital status shows that 78.12% (n = 75) are married, 16.67% (n = 16) are single and the other five are three widows and two divorced. The distribution of caregivers by level of study shows that 28.12% (n = 27) have a baccalaureate level and less, while 71.88% have a university level or equivalent degree. With regard to the distribution of the cases studied according to the seniority in the post, it appears that 42.70% (n = 41) have a seniority exceeding 15 years of service, 38.54% (n = 37) exercise between 5 and 15 years and that the rest of the respondents have a seniority of less than 5 years (n = 18).

With regard to the time system followed, the chi-square test shows a strong link between the latter and sex (chi-squared = 13.63, $p < 0.003$). In addition, 61.46% (n = 59) of caregivers adopted the 12/36 system, including 31 male and 28 female, followed by 19.79% (n = 19) of those adopting the normal system with female predominance and 6 caregivers provide day care and 12 caregivers provide night care including 7 men and 5 women.

- MBI Scale

• Emotional exhaustion

To assess the emotional state of the respondents, we proceed to calculate the total score of this dimension by adding the scores corresponding to questions 1, 2, 3, 6, 8, 13, 14, 16 and 20. These last show a clear fidelity and reliability between them, this is approved by a cronbach alpha index exceeding 0.81 (all items in this dimension decrease when an item is removed). The principal component analysis of all items shows that the two axes alone absorb 62% of the total variation. The projection of the items in the space delimited by the components 1 and 2 made it possible to highlight two distinct groups (figure 1):

✓ The first group located on the positive side of axis 1, it is composed of questions 6, 13, 14, 16 and 20, which have been significantly positively correlated with each other. In addition, caregivers in this group stated that they feel too stressful by exercising people side by side, so to cope, they must multiply their effort

✓ The second group located on the positive side of the axis 2, it is composed of questions 1, 2, 3 and 8, which have been significantly positively correlated with each other. The caregivers in this group were emotionally exhausted by work and exhausted at the end of the day. They confirm that they feel tired and have the feeling of falling over because of work.

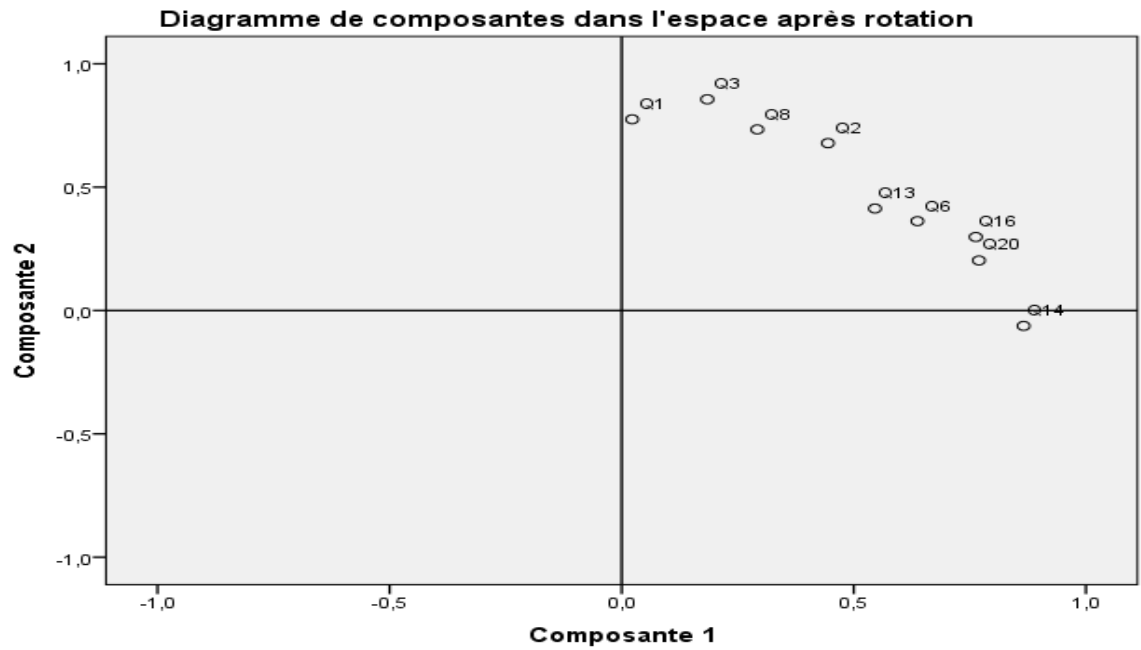


Figure 1. Projection of emotional exhaustion items by principal component analysis

The study of the total score of the "emotional exhaustion" dimension shows that the average score for male caregivers is 32.15 +/- 1.99 and for caregivers, the average score is 36.65 ± 1.56, with a minimum score of 1 and a maximum score of 54. Intra-group dispersal among male respondents is 39.63% heterogeneity and 31.62% among female caregivers. This large variation shows that the answers were very diverse. The asymmetry coefficient and the flattening coefficient were close to zero for both sexes, which confirms the compatibility with the conditions of the Gaussian law.

The results of the classification of the scores of our distribution show that 71.9% (n = 69) of the respondents are in high state of emotional exhaustion, 15.6% (n = 15) are at a moderate degree and in the end 12.5% (n = 12) of interviewees showed low or no emotional exhaustion.

- **Depersonalization / Loss of empathy (SD)**

Depersonalization identified psychic behavior among respondents by calculating the score sum of questions Q5, Q10, Q11, Q15, and Q22. The study of the fidelity and the reliability of the data was evaluated by the calculation of the cronbach's alpha which reaches 0,71, this is confirmed by the decrease of the index in case of suppression of an element. The multiple correlation of the questions in this dimension presented in Table (2) shows that all items are positively and significantly correlated. However, respondents in this group admit that they are impersonal and insensitive to people. Respondents in this group feel that patients are making them responsible for their problems.

Table 2. Multiple correlation of emotional exhaustion items

	Q5	Q10	Q11	Q15	Q22

0	Q5	1	,500**	,245*	,322**	,427**
			,000	,016	,001	,000
0	Q1	,500**	1	,573**	,504**	,631**
		,000		,000	,000	,000
1	Q1	,245*	,573**	1	,327**	,652**
		,016	,000		,001	,000
5	Q1	,322**	,504**	,327**	1	,319**
		,001	,000	,001		,002
2	Q2	,427**	,631**	,652**	,319**	1
		,000	,000	,000	,002	
**The correlation is significant at the 0.01 level (bilateral).						
*The correlation is significant at the 0.05 level (bilateral).						

The average score for the category of male caregivers is 12.97 ± 1.34 and for female careers is 12.78 ± 1.06 , with a minimum score of 0 points and a maximum score of 25 points. Intra-group dispersion in both sexes is much larger, exceeding 60%. The shape parameters (asymmetry coefficient and flattening coefficient) are acceptable.

The results of this analysis show that 55.2% (n = 53) of these respondents are in a high state of depersonalization, 10.4% (n = 10) are at a moderate degree of depersonalization and 34.4% (n = 33) showed themselves in a weak or no state of depersonalization.

- **Personal Achievement (SAP)**

Personal fulfillment includes questions (Q4 Q7 Q9 Q12 Q17 Q18 Q19). The study of the fidelity and the reliability of the data was evaluated by the calculation of the alpha of cronbach. This value is very high, it is 0.69. All questions decrease if deleted.

The principal component analysis ACP of all the items show that the two axes alone absorb 70.09% of the total variation. The projection of the items brought out two distinct groups (Figure 2)

- ✓ The first group located on the positive side of axis 1, it is composed of questions 4, 7, 12, and 17, which have been significantly positively correlated with each other. In fact, the respondents

in this group know how to communicate with their patient by creating a relaxed atmosphere with patients.

- ✓ The second group located on the positive side of axis 2, it consists of questions 18 and 19. These two items are significantly correlated; they feel energized and close to patients

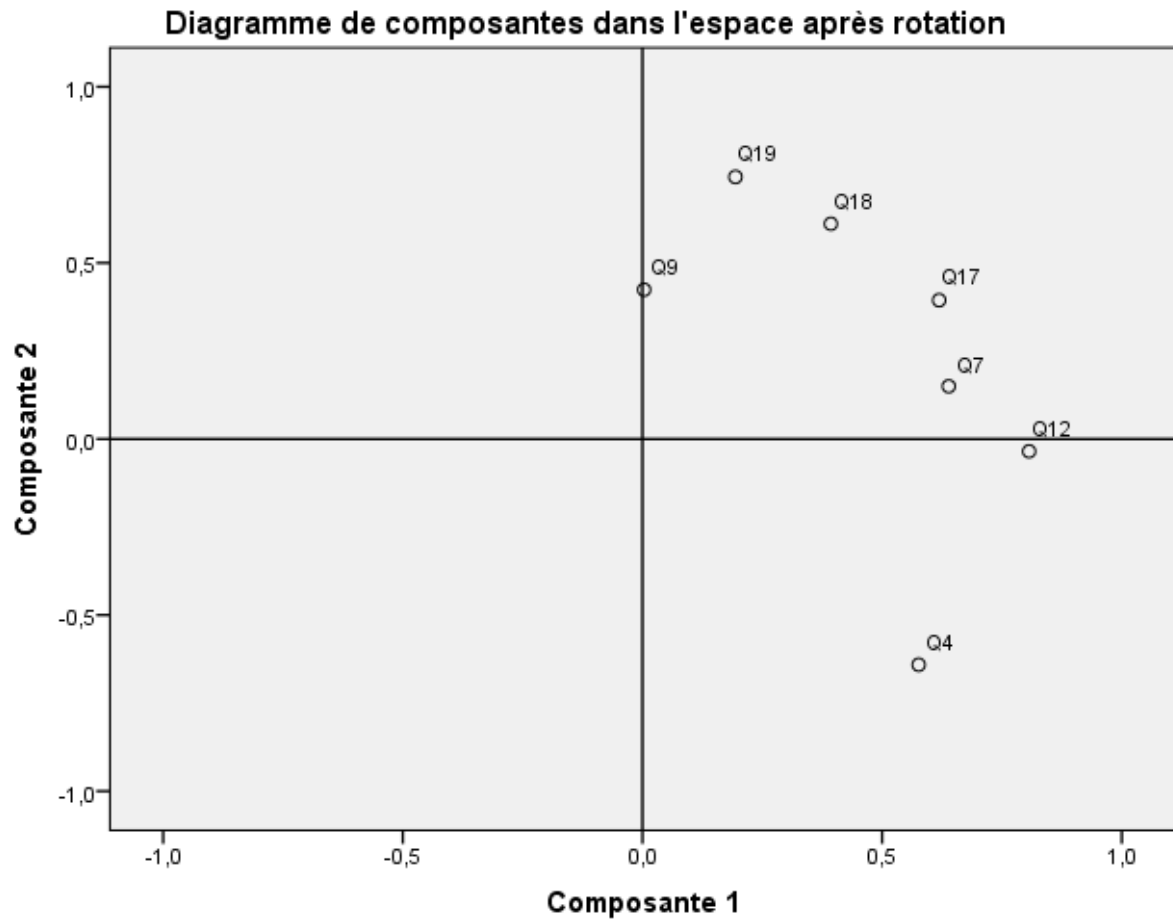


Figure 2. Projection of achievement dimension items by principal component analysis

The study of the total score of the achievement dimension shows that the average score is 30.25 ± 0.88 for males and 30.51 ± 0.80 for females, with a minimum score of 8 for females and a maximum score of 42 for both sexes.

The results of the achievement categories show that 77.9% ($n = 74$) have a high degree of achievement, 14.7% are at a moderate degree and at the end 7.4% ($n = 13$) are in a state of attainment low achievement

- **Global analysis of the three dimensions of burnout**

- **Correlation of dimensions two by two**

Table (3) summarizes the results of the two-by-two correlations of the three dimensions. Indeed, the analysis shows that emotional exhaustion and depersonalization are positively correlated with each other ($r = +0.554$) and these two factors are negatively correlated to achievement with respectively correlation coefficients of -0.332 and -0.422 .

Table 3: Multiple correlation of the three-burnout dimensions

dimension	Depersonalization	Achievement	Emotional Exhaustion
Depersonalization	1,000	-,422**	,554**
		0,000	0,000
Achievement		1,000	-,332**
			0,001
Emotional Exhaustion			1,000
**: The correlation is significant at the 0.01 level (bilateral).			

Regarding the distribution of careers surveyed taking into account the three dimensions see table (4), the results show that 46.87% of the caregivers surveyed developed a high emotional exhaustion and depersonalization, as well as a low achievement. On the other hand, 12.5% of caregivers showed high emotional exhaustion and low achievement, but were poorly depersonalized. However only one person shows that she is in a state of emotional exhaustion and low depersonalization and high achievement.

Table 4 : prévalence du burnout selon les trois dimensions

				Achievement		
				low	moderate	high
	1	Emotional	1		4	

Depersonalization	low	Exhaustion	low			
			moderate			1
			high	2		5
	moderate	Emotional Exhaustion	low			0
			moderate			0
			high			2
	high	Emotional Exhaustion	low			0
			moderate			2
			high	5		0

• **Study of the link between the three dimensions of burnout and certain socio-economic and demographic factors**

In this part, we will look for the links between exhaustion and certain socio-demographic factors. The results are shown in Figure (3). It appears from this graph

✓ A first group brings together caregivers showing signs of burnout such as high emotional exhaustion, high depersonalization and low achievement. Generally, they are female caregivers over the age of 40 and have a seniority of more than 15 years in the position. The representatives of this group do not adopt the 12/36 hour system, so they provide day or night care.

✓ The second group consists of caregivers who are usually male under 30 years of age and have a seniority of less than 5 years. Caregivers in this group have developed low to moderate achievement, low to moderate exhaustion or low to moderate depersonalization, and are adopting the 12/36 system.

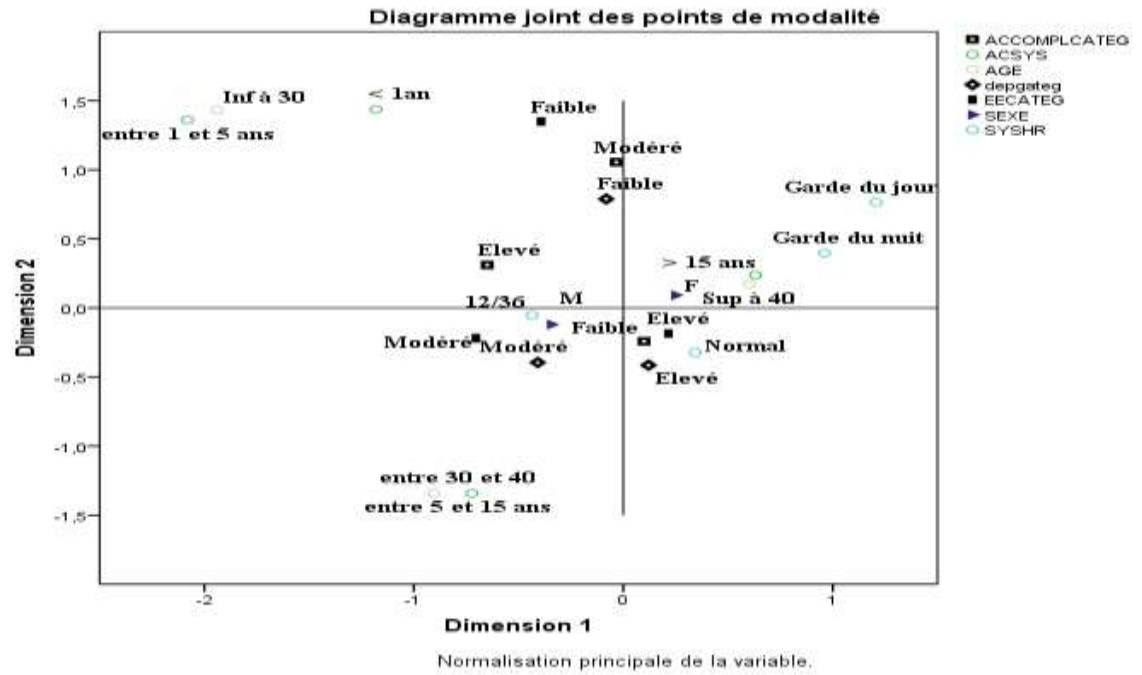


Figure 3. Projection of the modalities of the sociodemographic characteristics of the three dimensions according to the multiple correspondence analysis.

IV. Discussion and conclusion

Burnout among the nursing staff was the subject of our investigation. This theme is the idea that came after the problems caused by exhaustion, especially in the professional performance of these people.

Nevertheless, our results found in this direction open the debate on other questions, and to make certain hypotheses because the influence of psychosocial problems in the professional environment proves very complicated to identify in the presence of an interference of factors of ancestry varied at the personal and organizational level. Recalling that 71.9% (n = 69) and 55.2% (n = 53) are, respectively, in a high state of emotional exhaustion and depersonalization and that 77.9% (n = 74) have a low degree of achievement. As a result, 46.87% of the caregivers surveyed show signs of burnout, so it is important to consider taking care of them under high-level supervision by the specialists in the field. Our results far exceed those found by Massou et al. in 2013⁵, at the staff of anesthesiologists resuscitation of four university hospitals, the survey found high scores of emotional exhaustion and depersonalization and low achievement, 48%, 21%, 43%. Our study shows that women appear to be the most significantly exposed to this syndrome, in agreement with other studies that tend to show that women experience more stress than men (Brember et al., 2002)⁶. Even with a slight difference from men, this finding is supported by other publications that report no significant difference between men and women in the influence of work stress (Murray-Harvey et al., 2000)⁷. Unlike other studies that show that, the occurrence of burnout is rather related to the young age of practitioners due to lack of experience and immature psychic balance (Halayem Dhouib et al., 2010)⁸, we confirm that burnout affects the category of caregivers over 40 years and seniority over 15 years.

Ethical Clearance: Was conducted in full agreement with the authorities of the institution.

Conflict of interest: It is nil

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