



Research Article

Assessing the Risk of Burnout in Three Belgian Hospitals

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Abstract

Background: The COVID-19 pandemic, which emerged in 2019, spread rapidly across the globe and caused a global health crisis, which Belgium did not escape. As a result, the pressure on professionals in the care sector has increased during this crisis and many of them authors are still worried about the consequences for their health. The aim of this article is to identify the risk of burnout among hospital staff in three Belgian facilities. **Methodology:**

The Burnout Assessment Tool Schaufeli et al., was used to assess the risk of burnout of an individual. 1388 responses were collected from staff at three hospitals in June and July 2021. **Results:** Of the respondents, 26% were at risk of burnout ($p < 0.001$) and 22% were in medium risk of burnout. The mean score (SD) on the dimension "Exhaustion" evaluated at 3.01 (0.77), and the mean score (SD) on the dimension "Emotional Difficulties" evaluated at 2.43 (0.87) seem to explain the overall mean score. **Conclusion:** The nursing staff seem to be in a critical situation, but this is not the only category of staff that seems to be at risk of burnout in hospitals. Indeed, those in logistic functions and people under 45 years of age also show worrying results. That having been said, doctors in the hospitals studied seem to be less at risk of burnout than nurses and healthcare assistants.

Keywords: Burnout; Nursing; Wellbeing; Hospital

Introduction

The COVID-19 pandemic, which emerged in 2019, has rapidly spread to the entire planet and has caused a global health crisis from which Belgium has not been exempt. Belgian hospitals have been forced to undergo an urgent reorganization of materiel and human resources with significant important psychological and social consequences for healthcare staff. As examples, El-Hage & al [1], mention physical exhaustion, reorganization of work spaces, being confronted with a high number of patient deaths, and ethical issues related to decision-making in a stressed healthcare system.

As a result, pressure on healthcare professionals has increased during this crisis and many of them are still concerned about the consequences for their health. In Belgium, a Sciensano survey of June 2021 concludes that after 16 months of crisis,

"many care workers (...) continue to feel the effects of chronic stress (...)" and that "exposure to this chronic stress has a negative impact on the well-being of care workers" [2]. Furthermore, this prolonged exposure to high levels of stress may increase the risk of burnout prevalence in care workers. Schaufeli et al [3] define burnout as "a work-related state of exhaustion that occurs among employees, which is characterized by extreme tiredness, reduced ability to regulate cognitive and emotional processes, and mental distancing. These four core dimensions of burnout are accompanied by depressed mood as well as by non-specific psychological and psychosomatic complaints."

In order to better define target this state of burnout, Schaufeli et al [3] have constructed a measurement scale aimed at identifying the risk of burnout and overcoming the difficulties of existing burnout assessment tools. The lack of evaluation of the risk of burnout in hospitals, combined with the end of a health

crisis situation now justifies the need to implement this type of measurement scale in hospital practices.

The objective of this article is to identify the risk of burnout among hospital staff in three Belgian facilities. The identification of the dimensions that pull the general score upwards is also carried out in order to propose concrete actions to support the reduction of risk emergence.

Methodology

The sample

Data were collected from all staff at three Belgian general hospitals, including one university hospital. The Belgian hospitals were anonymized by randomly assigning them a letter: A, B, or C. The study population thus consisted of hospital professionals: doctors, nurses, managers, technologists, technical staff, administrative staff, etc.

The entire hospital population was informed of the initiative through a mail-out and workplace communication messages. The communication messages were aimed at announcing the initiative and referencing the internet link (QR code) which enabled respondents to fill out the questionnaire anonymously. After testing this questionnaire with volunteers in May 2021, the electronic version of the questionnaire was made available during the period from June 14, 2021 to July 15, 2021. The communication campaigns resulted in 1388 responses.

The survey

The questionnaire was set up in the hospital's IT environment, which already had this type of application for conducting patient surveys. The electronic questionnaire was available for use on a computer, a tablet or a smartphone.

The form had 3 sections:

1. The introduction to contextualize the approach,
2. The Burnout Assessment Tool questionnaire (BAT) [4] in French,
3. The descriptive section to collect information from our study population (age over or under 45 years, hospital, department/ care unit, function (optional)).

The questions were in a multiple-choice format. After completing the form, the respondent was shown his or her score for risk of burnout. Depending on the score and the thresholds defined by the BAT, the respondent was offered specific treatment.

The Burnout Assessment Tool

The Burnout Assessment Tool (Schaufeli et al., 2020) [3] is a self-administered questionnaire designed to assess an individual's risk of burnout.

With its 33 questions, the BAT analyses, on a Likert scale from 1 (Never) to 5 (Always), five different dimensions (physical and mental exhaustion, mental distance, cognitive difficulties, emotional difficulties and secondary symptoms). No item is reversed.

The measures

The dependent variables in our study are the measure of the overall score and the scores for each of the dimensions. These are obtained by summing the scores of the responses to the items (from 0 to 5) according to the recommendations mentioned in the instructions for use of the scale. To identify the levels of risk of burnout, we followed the thresholds defined by the study of Schaufeli et al [3].

For information, here are the thresholds considered in this study:

General Score Burnout	Category 1 No burnout	Category 2 Risk of burnout	Category 3 Plausible burnout
	1.00 – 2.58	2.59 – 3.01	3.02 – 5.00

Regarding the main symptoms, here are the thresholds that were met in our study.

DIMENSIONS	Category 1 <i>Low risk</i>	Category 2 <i>Risk</i>	Category 3 <i>High risk</i>
Exhaustion	1.00 – 3.05	3.06 – 3.30	3.31 – 5.00
Mental distance	1.00 – 2.49	2.50 – 3.09	3.10 – 5.00

Cognitive difficulties	1.00 – 2.69	2.70 – 3.09	3.10 – 5.00
Emotional difficulties	1.00 – 2.09	2.10 – 2.89	2.90 – 5.00

The independent descriptive variables of this study were constructed according to the literature review and based on respect of the respondents' anonymity. Therefore, respondents were free to choose to answer the question regarding professional function or to leave it blank. Thus, our descriptive variables are: the hospital, the service, the department in which the respondent carries out his or her main activity and the age of the individual formulated as "more or less than 45 years".

Our study respected the guarantee of anonymity through the standards of the General Data Protection Regulation (GDPR).

Statistical Analysis

Statistical analyses were carried out using SPSS software, version 27, means \pm Standard Deviations (SD) were used to describe symmetric variables and medians (Mdn) for non-symmetric variables. A p-value < 0.05 was considered statistically significant.

The Kruskal-Wallis and Mann-Whitney tests were used to test for significant differences in the dependent variables on the ordinal and dichotomous independent variables.

The predictors used for the model were age, department and function. We recoded our independent variables into dummy variables to perform our statistical modelling. The selection of these independent variables was based on the significance of the data from the univariate analysis. A stepwise linear regression was then performed on the dependent variable of the overall burnout risk score.

Results

Descriptive Analysis

There were 1388 respondents with a mean (SD) general score of 2.59 (0.66). Of these, 52% of respondents fall into category 1 ($p < 0.001$), 22% into category 2 ($p < 0.001$) and 26% into category 3 (Table 1).

The mean (SD) score on the dimension "Exhaustion" rated at 3.01 (0.77) as well as the mean (SD) score on the dimension "Emotional difficulties" rated at 2.43 (0.87) seem to explain the overall mean score. 57% of the respondents under 45 years of age had a mean (SD) OS of 2.62 (0.64), which places them in risk category 2. The mean OS is higher in this population than in the over-45 population, which is 2.55 (0.70) and therefore in category 1. At service level, 40% of the respondents work in care units. They have a mean (SD) OS of 2.63 (0.63) ($p < 0.05$). These care units had a high mean (SD) exhaustion of 3.08 (0.72). In particular, in the operating theatre, we find a mean (SD) SG of 2.66 (0.67) and a mean (SD) exhaustion of 3.13 (0.78) (Table 1).

Outside the care services, the logistics department also had a high mean OS (SD) of 2.80 (0.63) ($p < 0.001$) and a high mean burnout (SD) of 3.27 (0.71). With regard to the proposed thresholds, all the services were in category 2 for the dimension "emotional difficulties", while they were in category 1 for the dimensions "mental distance" and "cognitive difficulties".

In terms of the functions in difficulty and in line with the results obtained in the services, we find the "nursing staff" category (nurses + care assistants) (565 people) with a mean SG (SD) of 2.65 (0.64) ($p < 0.001$). This function is notably found in risk category 2 for burnout with a mean score (SD) of 3.13 (0.73).

The logistics functions (logistics professions + porters stretcher bearers), which recorded a mean (SD) score of 2.78 (0.68) ($p < 0.005$), are found in risk category 3 for average exhaustion with a score of 3.31 (0.79). Finally, it should be noted that 11% of the respondents who did not wish to disclose their job function nevertheless recorded a mean burnout of 3.02 ($p < 0.05$) (Table 1).

All the functions are in category 2 in the "emotional difficulties" dimension, whereas they are in category 1 for the "mental distance" and "cognitive difficulties" dimensions.

		Average (Standard Deviation)					
	N	General Score	Sign	Exhaustion	Mental distance	Cognitive difficulties	Emotional difficulties
General score	1388	2,59		3,01	2,21	2,44	2,43
	100%	0,66		0,77	0,85	0,68	0,87
Category of burnout							
1	719		< 0,001	713	902	900	552
	52%			51%	66%	65%	40%
2	302		< 0,001	159	256	279	427
	22%			11%	18%	20%	31%
3	367			516	230	209	409
	26%			37%	17%	16%	29%
Age categories							
Under 45 (years of age)	793	2,62		3,04	2,27	2,46	2,45
	57%	0,64		0,74	0,84	0,63	0,88
Over 45 (years of age)	595	2,55	0,052	2,97	2,13	2,42	2,41
	43%	0,70		0,81	0,86	0,74	0,85
Department							
Patient administration	158	2,55		2,99	2,19	2,43	2,32
	11%	0,71		0,82	0,85	0,76	0,90
Other	106	2,33	< 0,001	2,71	1,91	2,22	2,27
	8%	0,68		0,90	0,74	0,67	0,82
Operating theatre	115	2,66		3,13	2,25	2,43	2,58
	8%	0,67		0,78	0,89	0,86	0,92
Management	136	2,46	< 0,001	2,78	2,13	2,57	2,18
	10%	0,62		0,73	0,81	0,69	0,74
Logistics function	89	2,80	< 0,001	3,27	2,46	2,51	2,68
	6%	0,63		0,71	0,86	0,73	0,86
Medico-technical	228	2,57		2,95	2,19	2,45	2,45
	16%	0,70		0,78	0,87	0,70	0,93
Care units	556	2,63	0,029	3,08	2,25	2,44	2,49
	40%	0,63		0,72	0,84	0,64	0,84
Function							
Nursing staff	565	2,65	< 0,001	3,13	2,26	2,43	2,52
	41%	0,64		0,73	0,85	0,65	0,87
Administrative staff	177	2,55		2,90	2,19	2,55	2,34
	13%	0,70		0,81	0,90	0,70	0,90
Missing data	153	2,63	< 0,05	3,02	2,28	2,49	2,47
	11%	0,61		0,70	0,81	0,63	0,81
Manager	115	2,42		2,79	2,00	2,53	2,12
	8%	0,61		0,76	0,74	0,61	0,71
Medico-technical staff	108	2,58		2,96	2,24	2,41	2,49
	8%	0,73		0,83	0,87	0,68	0,98
Doctor	103	2,41		2,79	2,01	2,32	2,27
	7%	0,64		0,70	0,82	0,78	0,79
Logistical staff	75	2,78	< 0,005	3,31	2,46	2,37	2,65
	5%	0,68		0,79	0,86	0,81	0,90
Paramedical staff	52	2,56		2,92	2,16	2,42	2,53
	4%	0,60		0,70	0,76	0,62	0,81
Other	40	2,28	< 0,05	2,61	1,90	2,23	2,18
	3%	0,82		0,98	0,92	0,84	0,92

Table 1: Descriptive data for the total population. Cells with orange background indicate values above category 1 reference.

	A			B			C		
	N	General Score (Avg/SD)	Sign	N	General Score (Avg/SD)	Sign	N	General Score (Avg/SD)	Sign
General score	203	2,68		715	2,52		470	2,64	< 0,001
		0,61			0,68			0,65	
Category of burnout			< 0,001			< 0,001			< 0,001
1	94	2,14		399	2,03		226	2,09	
	46%	0,29		56%	0,36		48%	0,34	
2	48	2,79		152	2,79		102	2,78	
	24%	0,44		21%	0,48		22%	0,43	
3	61	3,42		164	3,47		142	3,43	
	30%	0,32		23%	0,68		30%	0,31	
Age Lib			< 0,05			NS			NS
Under 45 (years of age)	129	2,78		386	2,55		278	2,63	
	64%	0,61		54%	0,64		59%	0,63	
Over 45 (years of age)	74	2,50		329	2,49		192	2,66	
	36%	0,58		46%	0,72		41%	0,69	
Department			< 0,001			< 0,001			< 0,05
Patient administration	23	2,48		73	2,53	< 0,05	62	2,60	
	11%	0,63		10%	0,72		8%	0,73	
Other	22	2,66		57	2,22		27	2,32	< 0,05
	3%	0,57		8%	0,70		6%	0,67	
Operating theatre	13	2,55		44	2,50		58	2,81	< 0,05
	6%	0,67		3%	0,66		2%	0,67	
Management	9	2,54		104	2,47		23	2,40	
	4%	0,53		6%	0,64		5%	0,59	
Logistics function	7	2,39		48	2,81	< 0,05	34	2,87	< 0,05
	3%	0,53		7%	0,68		7%	0,57	
Medico-technical	19	2,56		130	2,45		79	2,76	
	9%	0,53		6%	0,73		7%	0,66	
Care units	110	2,79	< 0,05	259	2,60	< 0,05	187	2,59	
	54%	0,62		36%	0,63		40%	0,62	
Function			< 0,001			< 0,001			< 0,05
Nursing staff	108	2,82	< 0,001	248	2,60	< 0,05	209	2,64	
	53%	0,63		35%	0,65		44%	0,63	
Administrative staff	13	2,24	< 0,05	97	2,46		67	2,73	
	6%	0,44		14%	0,70		14%	0,70	
Missing data	24	2,65		85	2,62		44	2,63	
	12%	0,57		12%	0,61		9%	0,63	
Manager	16	2,41		71	2,36	< 0,05	28	2,57	
	8%	0,62		10%	0,63		6%	0,53	
Medico-technical staff	7	2,65		75	2,46		26	2,92	< 0,05
	3%	0,52		10%	0,74		6%	0,64	
Doctor	16	2,55		49	2,39		38	2,37	< 0,05
	8%	0,56		7%	0,70		8%	0,59	
Logistical staff	6	2,65		39	2,72		30	2,88	
	3%	0,52		9%	0,72		6%	0,68	
Paramedical staff	4	2,25		33	2,56		15	2,64	
	2%	0,29		9%	0,56		3%	0,73	
Other	9	2,68		18	2,16	< 0,05	13	2,16	< 0,05
	4%	0,51		3%	0,95		3%	0,75	

Table 2: Descriptive data by hospital, cells with orange background indicate values above category 1 reference.

Descriptive analysis at the inter-hospital level

In this part of the document, we present the same results as in the previous chapter, but broken down by hospital. This approach allows us to make an inter-hospital comparison.

Hospitals A and C are in category 2 with an average OS of 2.68 (0.61) for hospital A and 2.64 (0.65) for hospital C (Table 2). An analysis of the proportions shows that these two hospitals have the same proportion of subjects in category 3: 30%. Hospital B had 56% of respondents in category 1.

With regard to age, the mean score (SD) is higher for the under-45s in the three hospitals. We observe a significant difference between these two age groups in hospital A, with a mean score (SD) of 2.78 (0.61) for the under-45s and a mean score (SD) of 2.50 (0.58) for the over-45s ($p < 0.05$) (Table 2). The difference between the two age groups in hospital C is almost negligible, but it should be noted that both age groups are in category 2 of the risk score, with an almost equivalent mean (SD) OS score of 2.62 (0.63) for the under-45s and 2.66 (0.69) for the over-45s.

At the ward level, the wards of all three hospitals were in category 2 with an OS of 2.59 (0.62) for hospital C, 2.60 (0.63) ($p < 0.05$) for hospital B and 2.79 (0.62) ($p < 0.05$) for hospital A (Table 2).

While hospitals A and B recorded only one other department with a mean (SD) OS in category 2, hospital C recorded 4 other departments other than wards in category 2: the patient administration department with a mean (SD) OS of 2.60 (0.73), the operating theatre with a mean (SD) OS of 2.81 (0.67) ($p < 0.05$), the logistics department with a mean (SD) OS of 2.87 (0.57) ($p < 0.05$), and the medico-technical department with a mean (SD) OS of 2.76 (0.65).

In the analysis of functions by hospital, we observe that the "nursing staff" function appears in all three hospitals as a function which is in difficulty. However, the nursing staff of hospital A seems to be in the greatest difficulty, with a mean score (SD) of 2.82 (0.63) (Table 2).

The logistics functions are also in difficulty in all three hospitals, but more so in hospitals B and C, with a mean SG (SD) of 2.72 (0.72) and 2.88 (0.68), respectively. In hospital C, it is the medico-technical functions (medical imaging or laboratory technologists) that present a high average SG (SD) of 2.92 (0.64). The problem seems to be more widespread across all functions in Hospital C, as almost all functions outside of management, doctors and "others" are in category 2.

Linear Regressions

The linear regression on the overall score with the symptoms as independent variables shows that exhaustion leads to a greater increase in the overall score than the other symptoms (Table 3).

Coefficients ^a					
Model	Non-standardised Coefficients		Standardised Coefficients	t	Sig.
	B	Standard error	Beta		
4 (Constant)	2,551	0,034		75,962	0,000
Hospital_B	-0,058	0,018	-0,088	-3,280	0,001
Logistical department	0,049	0,012	0,109	4,022	0,000
Nursing staff function	0,153	0,039	0,113	3,965	0,000
Missing data function	0,040	0,020	0,057	2,057	0,040

a. Dependent variable : General score

Table 3: Linear regression performed on the symptoms of the general score.

The linear regression with the general score (GS) as the dependent variable shows that the independent variables such as membership of the logistics department, the function "nursing staff" and the function "unknown" have an impact on the growth of this score. However, belonging to the staff of hospital B leads to a decrease in this score (Table 4).

Coefficients ^a					
Model	Non-standardised Coefficients		Standardised Coefficients	t	Sig.
	B	Standard error	Beta		
4 (Constant)	2,109E-15	0,000			
Exhaustion score	0,348	0,000	0,404		
Mental distance score	0,217	0,000	0,278		
Emotional difficulties score	0,217	0,000	0,284		
Cognitive difficulties Score	0,217	0,000	0,222		

a. Dependent variable : General score

Table 4: Linear regression of the overall score on the independent data.

Discussion

As a reminder, the objective of this study was to assess the risk of burnout among hospital staff in three Belgian facilities. With the consequences of COVID-19 on the health sector, this assessment is a prerequisite for the operationalisation of concrete actions supporting the reduction in the emergence of the risk.

Our study has shown strong results for this essential sector in the provision of healthcare. Despite the need for a confirmation of the diagnosis through a professional, 26% of the respondents in our study are in plausible burnout and 22% are at risk of burnout. According to Schaufeli's measurement scales [3], almost 48% of the respondents are therefore at risk of or potentially already in burnout.

Exhaustion seems to play a critical role in the assessment of this risk, with 37% of respondents at the highest risk of burnout. According to our linear regressions, the overall score is strongly influenced by the importance of this dimension. Given the influence of burnout on the other dimensions of this scale, hospital managers should pay particular attention to this one. Indeed, Schaufeli [3] establishes that it is one of the "red-flag" symptoms of burnout that influences the other dimensions, notably emotional and cognitive difficulties.

Within the functions, both nursing staff (nurses + care assistants) and logistics staff (logistics officers + logistics assistants and porters) are at risk of burnout with a mean general score (ET) of 2.65 (0.64) and 2.78 (0.68) respectively. These two job categories also have the highest risk of burnout of all the categories, with a mean score (SD) of 3.31 (0.79) for the logistics functions and 3.13 (0.73) for the care workers. The results for these two job categories are fairly similar across the three hospitals.

The results of our study are consistent with the results of Sciensano who, in June 2021, showed that 59% of the care staff surveyed experienced fatigue and 38% reported sleep deprivation [2]. Shorub et al's [5] study of workers in three psychiatric hospitals in Egypt showed that over 57% of participants had high emotional exhaustion scores. However, this study was carried out with the Maslach Burnout Inventory (MBI) questionnaire, which has slightly different concepts from the Burnout Assessment Tool (BAT). With regard to logistical functions, Stordeur et al [6] have shown that burnout is not limited to the caring professions.

Moreover, the health status of these two populations (carers + logistical staff), which represent the largest number of workers in a hospital institution, is worrying. These two categories of staff are the linchpin of a care organisation by allocating care to patients and arranging the necessary logistics for that care. In terms of safety, quality and efficiency, it is imperative to address the issue of burnout in these populations, to prevent further staff shortages from occurring in a sector which is already hard-hit in this respect [7].

As this is our first attempt to understand the risk of burnout in these hospitals, we have not been able to demonstrate a link between the burnout of care staff and the demands generated by the COVID-19 crisis. However, some studies mention an amplification of the results with the emergence of the pandemic [8].

In this respect, the constant changes in procedure, rearrangement of workstations, closures of services, issues with availability of essential supplies, and the number of deaths caused by COVID-19 may have led to exhaustion in these function categories. Moreover, the frequency of the waves to which the caregivers were subjected potentially led to a repetition of the exposure to risk, and therefore of the experience of exhaustion [8].

In our study, staff in the professional category "doctor" do not seem to be at risk of burnout in any of the three hospitals. In 2020, the study by Vignaud [9] conducted during the COVID-19 pandemic showed that the psychological health of nurses was more affected than that of doctors. The authors justify this by the fact that doctors would have been exposed for less time to close contact with patients. However, in 2014, the Mayo Clinic counted more than 54% (n = 3,680) of doctors who reported at least one symptom of burnout [10].

It should be noted that of the 153 people who did not wish to report their function (all hospitals combined), 61% have an overall score of 2.63 (category 2) and 70% of these are in category 3 with regard to burnout.

In our study, the benchmarking efforts have made it possible to put into perspective a divergence of results between the hospitals concerning the medico-technical functions. These are in the medium category for hospitals A and C, whereas they are in the low category for hospital B. An in-depth analysis should be carried out to understand the positioning of this indicator. As with any good indicator, it is necessary to examine this one to interpret it properly.

The results of the TAO seem to be relatively similar in the three hospitals, even if slight differences could be observed. Thus, in hospital B, 23% of respondents were at plausible risk of burnout, whereas this percentage was higher (30%) in hospitals A and C.

It should also be noted that in hospital A, there is a significant difference between those under 45 and those over 45. The under-45s have a higher overall score. We can observe a slightly higher score for people under 45 compared to people over 45 in hospitals B and C.

Limitations of the Study

Despite the usefulness of this study for these three hospitals, some limitations should be noted. The first concerns the availability of the population to complete the questionnaire. Indeed, people who were coping well at work may not have been interested in answering the questionnaire. On the other hand, at the other end of the scale, some people who were already feeling very bad may not have responded, feeling that it was pointless to do so. These positions may lead to an over- or under-evaluation of the risk of burnout.

Secondly, in the interests of anonymity, the information on position was optional, so that question could be left blank. This provision explains why part of our sample did not indicate their function. Again, that may lead to some results related to certain functions being under- or overestimated.

Finally, some results were not representative (too few respondents) and could not be analysed.

Conclusion

Although nursing staff seem to be in a critical situation, this category of staff does not seem to be the only one at risk of burnout in hospitals. Indeed, staff in logistical functions and those under 45 years of age also show worrying results. At the same time, doctors in the hospitals studied seem to be less at risk of burnout than nurses and care assistants.

While the general score of the three hospitals shows that staff is at risk of burnout, there are slight differences between hospitals (for example, slightly fewer people in plausible burnout in hospital B than in hospitals A and C). It is mainly the “exhaustion” dimension that accentuates the overall average burnout risk score.

In terms of prospects, the impact of the actions carried out in 2021 has been evaluated in June 2022 on this same population. This evaluation will consist of pointing out the progression of the general average score of the 3 hospital structures.

Conflict of Interest

The authors declare that they have no conflict of interest.

Declaration

- **Ethics approval and consent to participate:** Not applicable.
- **Consent for publication:** Not applicable.
- **Availability of data and material:** Not applicable
- There is no potential conflict of interest.
- **Funding:** Not applicable.

Authors' Contribution

Background: EH, AR, BL, FD; **Methods:** EH, AR, BL, FD; **Discussion:** EH, AR, BL, FD; **Conclusion:** EH, AR, BL, FD. All authors have read and approved the manuscript.

References

1. El-Hage W, Hingray C, Lemogne C, Yrondi A, Brunault P, et al. (2020) Health professionals facing the coronavirus disease 2019 (COVID-19) pandemic: What are the mental health risks?. *Encephale*. 46:S73-S80.
2. Demarest S, Doggen K, Drieskens S, Peeters B, Seys D, et al. (2021) Power to care, l'enquête sur le bien-être des personnes et professionnels d'aide et de soin, principaux résultats de la deuxième enquête nationale, mars Sciensano, Bruxelles, Belgique.
3. Chaufeli WB, Desart S, De Witte H (2020) Burnout Assessment Tool (BAT)-development, validity, and reliability. *Int J Environ Res Public Health* 17: 9495.
4. Desart S, De Witte H, Schaufeli WB (2019) Scientific Manual Burnout Assessment Tool (BAT). KU Leuven, Belgium.
5. Shorub E, Saad A, El Sehwawy T, Monzem M, Rabei S (2021) Burnout in Egyptian mental health professionals and its relation to their psychosocial and vocational characteristics. *Egypt J Psychiatry* 42:123-127.
6. Stordeur S, Vandenberghe C, D'hoore W (1999) Prédicteurs de l'épuisement professionnel des infirmières: une étude dans un hôpital universitaire. *Rech Soins Infirm* 59: 57-66.
7. In Bruyne I 7 out of 10 nurses in French-speaking Belgium are at risk of burnout.
8. Van den Heede K, Bouckaert N, Detollenaere J, Kohn L, Maertens de Noordhout C, et al. (2022) Nursing staffing in Belgian intensive care: impact of two years of the COVID-19 pandemic-Synthesis. Health Services Research (HSR). Brussels: Federal Center for Health Care Expertise (KCE).
9. Vignaud P, Prieto N (2020) Impact psychique de la pandémie de COVID-19 sur les professionnels soignants. *Actual Pharm* 59: 51-53.
10. Shanafelt TD, Hasan O, Dyrbye LN, Sinsky C, Satele D, et al. (2015) Changes in Burnout and Satisfaction With Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014. *Mayo Clin Proc* 90:1600-1613.