STRESS AND BURNOUT AMONG HEALTHCARE PROFESSIONALS OF THE **EMERGENCY ROOM DURING THE COVID-19 PANDEMIC**

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ABSTRACT

Objective: to analyze the perceived stress and Burnout Syndrome among health professionals in emergency care units during the COVID-19 pandemic. Method: this is a cross-sectional study conducted with 55 health professionals from two emergency care services located in Paraná (Brazil). Data were collected from September to November 2020, by applying the Perceived Stress Scale, Preliminary Burnout Identification Questionnaire, and sociodemographic questionnaire, which were analyzed using descriptive and inferential statistics. Results: The average perceived stress was 24.1 and the highest level was associated with gender, workload, and perception of physical and mental fatigue. Installed/advanced burnout was identified in 65.5% of the participants and was associated with gender, time since graduation, and specialization in emergency. Conclusion: for the respondents, during the pandemic, Burnout Syndrome and perceived stress were associated with sociodemographic and professional factors.

Keywords: Health personnel. Occupational stress. Coronavirus infections. Emergencies. Pandemics.

INTRODUCTION

The pandemic situation caused Coronavirus Disease (COVID-19) brought global impacts in the health, economy, education, politicsareas, among others. It generated widespread concern about the physical and mental health of health professionals, especially those working in the "frontline", together with more severe patients⁽¹⁾.

Most patients infected with respiratory syndromes such as COVID-19, initially seek an emergency care unit. Consequently, the doctors and the nursing staff are the first health professionals to take care of patients with the disease⁽²⁾. addition, compared professionals from other areas, those who work emergencies routinely already overcrowded sectors, dealing with seriously ill patients and with unpredictable and constantly

changing situations⁽³⁾. This brings daily living with stress at work and professionals experiencing intense exhaustion⁽⁴⁾.

It is important to highlight that the COVID-19 pandemic has the potential to be an exhausting and traumatic event professionals due to the high contagiousness of the virus, the possibility of rapid viral mutation, and the absence of specific treatments. Also, many units are not fully technically and structurally prepared to deal with the new disease and the contingent of patients⁽⁵⁾. Although this generates insecurity and fear in the workplace, research on stress at work during the COVID-19 pandemic, especially in the context of emergency services, is still limited.

The few studies carried out so far have shown that health professionals, in general, are tired and stressed⁽⁵⁻⁷⁾. This is because they are often faced with the need to make difficult

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choices (for example, having to determine which patients will be ventilated or which will be admitted to the Intensive Care Unit), causing intense pressure at work⁽⁶⁾. Acting for a long time in these conditions has triggered symptoms of depression and anxiety^(5,7). In addition to these factors, there are also long working hours, the overload from the sick notes of the team members, psychological suffering, fatigue, stigma/prejudice, physical and psychological violence, and the Burnout Syndrome^(1,8).

Burnout Syndrome is the extreme exhaustion, related to an individual's work. The main signs and symptoms are feeling of exhaustion and fatigue associated with physical symptoms such as headache, tachycardia, vertigo, dyspnea, and changes in the sleep pattern⁽⁹⁾. Also, psychological changes arise including anxiety, agitation, emotional lability, irritability, and difficulties in interpersonal relationships⁽¹⁰⁾. Professionals who work with patients with COVID-19 require special attention regarding measures to protect their physical and mental well-being, in the fight against this pandemic(11). Namely in emergency care units as Burnout Syndrome is a reflection of a continuous process of feeling inadequate at work, which may be present even before the pandemic and potentially worsened by its occurrence⁽¹⁰⁾.

In this sense, managers of these units must attention to the stress of health professionals, associated with the experiences of an epidemic or pandemic outbreak of emerging infectious diseases. This is because, at this time, professionals may face different kinds of problems such as lack of information, of Personal Protective Equipment (PPE)⁽¹²⁾, loss of several patients, fear of personal and family contamination, and colleagues from work and physical and mental exhaustion due to excessive workload⁽²⁾. Thus, in general terms, the findings of this study can provide information for planning interventions that seek to prevent or reduce the level of professional stress while facing the COVID-19 pandemic.

Given the above, the question is: are perceived stress and Burnout Syndrome present among health professionals working in emergency care units during the coping with the COVID-19 pandemic? To answer this question, the objective was to analyze the perceived stress and the Burnout Syndrome in

health professionals from emergency care units during the COVID-19 pandemic.

METHODS

This is a descriptive cross-sectional study with a quantitative approach carried out with a non-probabilistic sample of 55 health professionals working in two emergency care units, located in two small towns in the north of the state of Paraná (Brazil), named in this study ascity A and B.

The two institutions are public and assist patients uninterrupted and are an open door and a reference for all urgent and emergency cases, including patients with respiratory problems during the COVID-19 pandemic. These units have similarities in terms of physical structure, work process, and patient demand, with an average of 150 consultations/day. Each unit has two nurses, two doctors, and seven nursing technicians per work shift. Thus, professionals were eligible; however, eight of them worked simultaneously in the two units and were counted only once.

We considered the following inclusion criteria: being a nursing technician, nurse, or doctor on duty in one of the units participating in the study, and having worked during the COVID-19 pandemic. We excluded those who held positions of head/manager or clinical director of the unit (four cases) and those who were away from work due to maternity leave, sick leave, or vacation during the data collection period (nine cases). Twelve professionals did not accept to answer the questionnaire. Therefore, due to exhaustion, 55 professionals participated in the study.

We collected data from September to November 2020. When data collection began, on September 28, city A had 2,273 reported suspected cases of COVID-19, of which 471 had been confirmed, with eight deaths. City B had 1,916 reported cases, of which 594 had been confirmed, with seven deaths. We used a closed interview as the strategy for data collection, carried out in the unit and conducted by a structured questionnaire with three parts.

The first part contained sociodemographic questions that aimed to characterize the studied population, which included the following variables: gender (male/female); age (≤ 35 years/> 35 years old); graduation (medicine; nursing; nursing technician); specialization (yes/no); specialization in emergency (yes/no);

graduation time (\leq 5 years /> 5 years); length of experience in the emergency care unit (\leq 5 years /> 5 years); weekly working hours (\leq 40 hours; 41 to 60 hours; > 60 hours); main work shift (day/night); the number of institutions working (one; two; three or more); perception of increased workload during the pandemic (yes; no, the same thing; no, less than before); perception of greater physical and/or emotional fatigue during the pandemic (yes; no, the same thing; no, less than before); and receiving family support during the pandemic (always; sometimes; never).

The second part of the instrument consisted of the Perceived Stress Scale (PSS 14), which was translated and validated for the Brazilian context⁽¹³⁾. It consists of 14 items, with response options ranging from zero to four (0 = never; 1 = hardly ever; 2 = sometimes; 3 = usually; 4 = always). Questions with a positive connotation (4, 5, 6, 7, 9, 10, and 13) have their summed score inverted. The total score ranges from zero to 56 points, and the higher the score, the greater the perceived stress.

The third part consisted of the Preliminary Burnout Identification Questionnaire, developed based on the Maslach Burnout Inventory (MBI) and contained 20 questions related to the psychophysical aspects of work. The answers are presented on a five-point Likert-type scale (1- Never, 2- Annually, 3- Monthly, 4- Weekly, 5- Daily). The final sum of the points defines the test result: 0 to 20 points: no sign of Burnout; 21 to 40 points: possibility of developing Burnout; 41 to 60 points: the initial stage of Burnout; 61 to 80 points: Burnout installed; 81 to 100 points: considerable stage of Burnout⁽¹⁴⁾. The instrument used is investigative and does not replace medical diagnosis.

The main researcher typed the information from the questionnaires in a Microsoft Excel® spreadsheet, with subsequent checking by another member of the research group. Initially, the data were analyzed descriptively, and are presented in absolute and relative frequency tables. The chi-square test of homogeneity was applied to verify differences between the different categories/professional classes (doctors, nurses, and nursing technicians), regarding social variables, professional profile, perceptions during the pandemic, including the classification of Burnout syndrome.

The chi-square test was also used to analyze the differences between the proportions of the Burnout syndrome categories according to the independent variables. Therefore, as we identified a small number of individuals with an advanced level of Burnout syndrome (n=2), the "installed" and "advanced" levels of Burnout syndrome were grouped to facilitate the analysis.

The Kolmogorov Smirnov (with Lilliefors correction) and Shapiro Wilk (n < 30) test aimed to verify the approximation of the total numerical data of perceived stress with the normal distribution (when p > 0.05), according to the different independent variables. Subsequently, according to the results of the normality tests and the type of independent variables (dichotomous and multicategorical), Student's t, Mann Whitney, one-factor ANOVA (with Tukey post hoc for comparisons between pairs) and Kruskal Wallis tests were used, adopting 5% as the significance level (p < 0.05).

The research was developed following the ethical aspects contained in Resolution 466/2012 of the National Health Council, and its project was approved by the Standing Committee on Ethics in Research with Human Beings of the State University of Maringá (UEM), under Opinion n° 4,087,225 and CAAE: 3453420.7.0000.0104. All signed the Informed Consent Form (ICF) in duplicate, and collection, the during data biosafety recommendations regarding minimizing the risk of contagion by COVID-19 were considered. For the elaboration of the research report, the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) was used.

RESULTS

Fifty-five health professionals participated in this study: eight (14.5%) doctors, 17 (30.9%) nurses and 30 (54.6%) nursing technicians. Most of them were female (69.2%); between 20 and 35 years old (50.9%); graduated for more than five years (66.5%); worked in emergency care for less than five years (63.6%); worked more than 60 hours a week (52.7%) and had a day working shift (74.5%). The three categories of professionals did not differ under the analysis of social variables and professional profiles (Table 1).

The average perceived stress was 24.18 (maximum 56 points) and installed and advanced Burnout was identified, respectively, in 34 (61.9%) and two (3.6%)

professionals. Regarding the perception of work during the COVID-19 pandemic, we identified that 34 (61.9%) respondents perceived a greater workload; 28 (50.9%) greater physical fatigue, and 33 (60.0%)

greater emotional fatigue. On the other hand, 40 (72.7%) professionals revealed that they had family support during the pandemic (Table 2).

Table 1. Distribution of social characteristics and professional profile of doctors, nurses, and nursing technicians, City A and City B, PR, 2020.

Characteristics	Doctors		Nurses		Nursing Technicians		Total		p-value*
Characteristics	n	%	n	%	n	%	n	%	p-value
Gender	,				,		-		
Male	05	9.0	06	10.9	06	10.9	17	30.8	0.062
Female	03	5.5	11	20.0	24	43.7	38	69.2	0.062
Age									
≤35years old	07	12.7	07	12.7	14	25.5	28	50.9	0.076
>35 years old	01	1.8	10	18.3	16	29.0	27	49.1	0.076
Time since graduation									
Up 5 years	05	9.0	03	5.5	11	20.0	19	34.5	0.083
More than 5 years	03	5.5	14	25.5	19	34.5	36	66.5	
Time working									
Up 5 years	05	9.0	09	16.4	21	38.2	35	63.6	0.504
More than 5 years	03	5.5	08	14.5	09	16.4	20	36.4	
Worked hours									
Up to 40h/week	00	0.0	04	7.4	06	10.9	10	18.3	
41 a 60h/ week	03	5.5	05	9.0	08	14.5	16	29.0	0.684
> de 60h/ week	05	9.0	08	14.5	16	29.2	29	52.7	
Work shift									
Daytime	07	12.7	11	20.0	23	41.8	41	74.5	0.152
Nighttime	01	1.8	06	10.9	07	12.7	14	25.4	0.153

Legend: *Chi-square test.

Perceived stress and Burnout classification are equally distributed among different professional categories/classes. However, the perception of greater workload during the pandemic was distributed differently (Table 2),

and it was proportionally higher among doctors (87.5%) and nurses (76.5%) than among nursing technicians (46.6%) (data not shown in the table).

Table 2. Distribution of perceived stress and Burnout level of physicians, nurses, and nursing technicians, City A and City B, PR, 2020.

Characteristics	Doctors		Nurses		Nursing Technicia	one	Total		p-value
Characteristics	n	%	n	%	n	%	n	%	p-value
Burnout		,,,				, ,			
Early stage	02	3,6	07	12,6	10	18,3	19	34,5	
Installed Burnout	05	9,0	10	18,3	19	34,6	34	61,9	0,587*
Advanced burnout	01	1,8	00	0,0	01	1,8	02	3,6	ŕ
More work									
Yes	07	12,7	13	23,7	14	25,5	34	61,9	
No, same thng	01	1,8	03	5,5	09	16,3	13	23,6	0,035*
No, less	00	0,0	01	1,8	07	12,7	08	14,5	
More physical fatigue									
Yes	05	9,1	11	20,0	12	21,8	28	50,9	
Não, mesmacoisa	01	1,8	05	9,1	13	23,6	19	34,5	0,283*
Não, menos	02	3,6	01	1,8	05	9,1	08	14,5	
Maiscansaçoemocional									
Sim	06	10,9	10	18,2	17	30,9	33	60,0	
No, same thng	00	0,0	06	10,9	10	18,2	16	29,1	0,290*
No, less	02	3,6	01	1,8	03	5,5	06	10,9	
Family support									
Always	06	10,9	11	20,0	23	41,8	40	72,7	
Sometimes	02	3,6	05	9,1	06	10,9	13	23,6	0,883*
Never	00	0,0	01	1,8	01	1,8	02	3,6	
Perceived stress	D	octors			Nurses	N	ursing	Total	
						Techn	icians		
Mean		24,38			24,71		23,47	24,18	
Standard Deviation		13,52			7,33		8,31	9,21	0.893^{\dagger}
Median		25,50			25,00		25,00	25,00	

Legend: *Chi-square test; †One factor ANOVA test.

When analyzing perceived stress, we observed that the highest level was significant in female professionals, those who worked between 41 and 60 hours a week, those who felt more physical fatigue, and those who felt more emotionally tired (Table 3). the complementary descriptive analysis of the independent variables, we found that, among those who worked 41 to 60 hours, the proportion of professionals working in three or more institutions was higher in this category (18.8%) than among those who worked 60 hours or more (13.8%) (data not shown in table).

The proportions of established/advanced Burnout syndrome were more significant in female professionals, with more than five years of graduation and specialization in the emergency area (Table 03). In a complementary analysis, we observed that the perception of family support between "never" and "sometimes" (together) was also higher in professionals with studies in emergency (35.7% versus 24.4%), and also the perception of greater emotional fatigue (78.6% versus 53.7%) (data not shown in table).

Table 3. Comparison of levels of perceived stress and preliminary levels of Burnout, according to sociodemographic and professional variables, City A and City B, PR, Brazil, 2020.

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		29 76,3
Gender Female $26,32$ $7,94$ $26,00$ $10,00$ $0,002*$ 09 $23,7$ 29 Male $18,76$ $8,52$ $18,00$ $13,00$ $0,002*$ 10 $58,8$ 07 Age group $20 - 35$ $24,32$ $10,56$ $25,00$ $12,00$ $0,946^{\ddagger}$ 08 $28,6$ 20 $36 - 60$ $23,63$ $6,64$ $25,00$ $10,00$ $0,946^{\ddagger}$ 11 $40,7$ 16 Time since graduation ≤ 5 years $26,05$ $10,06$ $26,00$ $12,00$ $0,207*$ 02 $10,5$ 17 > 5 years $22,89$ $7,95$ $25,00$ $10,00$ $0,207*$ 02 $10,5$ 17 Time working ≤ 5 years $25,17$ $8,34$ $26,00$ $9,00$ $0,186*$ 07 $35,0$ 13 Specialization Yes $23,44$ $9,31$ <t< th=""><th>76,3 41,2 0,01 71,4 0,34</th><th>29 76,3</th></t<>	76,3 41,2 0,01 71,4 0,34	29 76,3
Male 18,76 8,52 18,00 13,00 $0,002*$ 10 58,8 07 Age group 20 - 35 24,32 10,56 25,00 12,00 $0,946^{\ddagger}$ 08 28,6 20 11 40,7 16 Time since graduation ≤ 5 years 26,05 10,06 26,00 12,00 $0,207*$ 02 10,5 17 $0,000*$ 25 years 22,89 7,95 25,00 10,00 $0,000*$ 77 47,2 19 Time working ≤ 5 years 25,17 8,34 26,00 9,00 $0,000*$ 25 years 21,90 9,35 19,50 15,00 $0,000*$ 12 34,3 23 $0,000*$ 35,0 13 Specialization Yes 23,44 9,31 25,00 11,00 $0,000*$ 11 39,3 17 $0,000*$ No 25,19 7,69 26,00 11,00 $0,000*$ 11 39,3 17 $0,000*$ 19 Emergency Area	71,4 0,34	, .
Male 18,76 8,32 18,00 13,00 13,00 10 38,8 07 Age group 20 - 35 24,32 10,56 25,00 12,00 0,946‡ 08 28,6 20 36 - 60 23,63 6,64 25,00 10,00 0,946‡ 11 40,7 16 Time since graduation \leq 5 years 26,05 10,06 26,00 12,00 0,207* 02 10,5 17 > 5 years 22,89 7,95 25,00 10,00 0,207* 17 47,2 19 Time working \leq 5 years 25,17 8,34 26,00 9,00 0,186* 12 34,3 23 > 5 years 21,90 9,35 19,50 15,00 0,186* 12 34,3 23 Specialization 7,69 26,00 11,00 0,457* 11 39,3 17 No 25,19 7,69 26,00 11,00 0,457* 08 29,6 19 Emergency Area <	71,4	07 41,2
Age group $20 - 35$ $24,32$ $10,56$ $25,00$ $12,00$ $0,946^{\ddagger}$ 08 $28,6$ 20 $36 - 60$ $23,63$ $6,64$ $25,00$ $10,00$ $0,946^{\ddagger}$ 11 $40,7$ 16 Time since graduation ≤ 5 years $26,05$ $10,06$ $26,00$ $12,00$ $0,207^*$ 02 $10,5$ 17 > 5 years $22,89$ $7,95$ $25,00$ $10,00$ $0,207^*$ 02 $10,5$ 17 Time working ≤ 5 years $25,17$ $8,34$ $26,00$ $9,00$ $0,186^*$ 07 $35,0$ 13 Specialization Yes $23,44$ $9,31$ $25,00$ $11,00$ $0,457^*$ 08 $29,6$ 19 Emergency Area	71,4	,
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Time since graduation ≤ 5 years 26,05 10,06 26,00 12,00 0,207* 02 10,5 17 > 5 years 22,89 7,95 25,00 10,00 0,207* 17 47,2 19 Time working ≤ 5 years 25,17 8,34 26,00 9,00 0,186* 12 34,3 23 > 5 years 21,90 9,35 19,50 15,00 0,186* 07 35,0 13 Specialization Yes 23,44 9,31 25,00 11,00 0,457* 11 39,3 17 No 25,19 7,69 26,00 11,00 0,457* 10 08 29,6 19 Emergency Area	,-	
graduation ≤ 5 years 26,05 10,06 26,00 12,00 0,207* 02 10,5 17 > 5 years 22,89 7,95 25,00 10,00 0,207* 17 47,2 19 Time working ≤ 5 years 25,17 8,34 26,00 9,00 0,186* 12 34,3 23 > 5 years 21,90 9,35 19,50 15,00 0,186* 07 35,0 13 Specialization Yes 23,44 9,31 25,00 11,00 0,457* 11 39,3 17 No 25,19 7,69 26,00 11,00 0,457* 08 29,6 19 Emergency Area		,-
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$> 5 \ {\rm years}$	89,5	17 89.5
Time working ≤ 5 years 25,17 8,34 26,00 9,00 0,186* 12 34,3 23 > 5 years 21,90 9,35 19,50 15,00 0,186* 07 35,0 13 Specialization Yes 23,44 9,31 25,00 11,00 0,457* 11 39,3 17 No 25,19 7,69 26,00 11,00 0,457* 08 29,6 19 Emergency Area	52.8 0,000	, .
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> 5 years 21,90 9,35 19,50 15,00 0,186* 07 35,0 13 Specialization Yes 23,44 9,31 25,00 11,00 0,457* 11 39,3 17 No 25,19 7,69 26,00 11,00 0,457* 08 29,6 19 Emergency Area	65,7	23 65.7
Specialization Yes 23,44 9,31 25,00 11,00 0,457* 11 39,3 17 No 25,19 7,69 26,00 11,00 0,457* 08 29,6 19 Emergency Area	65,0 0,95	- , , .
Yes 23,44 9,31 25,00 11,00 0,457* 11 39,3 17 No 25,19 7,69 26,00 11,00 0,457* 08 29,6 19 Emergency Area	05,0	15 05,0
No 25,19 7,69 26,00 11,00 0,457* 08 29,6 19 Emergency Area	60,7	17 60.7
Emergency Area	70,4 0,452	
	70,4	19 70,4
Yes 24,21 10,60 26,50 16,00 0.10x 01 7,1 13	92,9	12 02 0
No 23,90 8,21 25,00 11,00 0,910* 18 43,9 23	56,1 0,013	
	30,1	25 50,1
Number of institutions		
working	C5 1	17 65 4
Ones 26,15 7,74 26,00 11,00 09 34,6 17	65,4	
Two 21,45 7,50 19,50 14,00 0,183\\$ 07 31,8 15	68,2 0,86	,
Three or more 23,86 14,26 25,00 31,00 03 42,9 04	57,1	J4 5/,I
Worked hours	-0.0	
Até 40h/week 27,40 7,21 27,00 9,00 04 40,0 6	60,0	
41 a 60h/week 27,88 8,55 26,50 15,00 0,010 [§] 06 37,5 10	62,5 0,839	- ,-
> de 60h/week [¶] 20,66 8,27 18,00 13,00 09 31,0 20	69,0	20 69,0
Work shift		
Daytime 27,23 6,62 26,00 13,00 0,128* 12 28,6 30	71,4 0,09	,
Nighttime 22,98 9,18 25,00 14,00 0,128 07 53,8 06	46,2	06 46,2
More work		
Yes 24,32 9,63 25,00 11,00 11 32,4 23	67,6	23 67,6
No, same thing 22,18 7,46 25,00 15,00 0,748\stract{\gamma}{0} 03 27,3 08	72,7 0,500	08 72,7
No, less 24,80 7,42 25,50 12,00 05 50,0 05	50,0	05 50,0
More physical fatigue		
Yes^{\neq} 27,64 8,44 26,50 12,00 09 32,1 19	67,9	19 67,9
No, same thing 22,21 6,67 25,00 $15,00 0,003^{\parallel}$ 06 31,6 13	68,4 0,609	13 68,4
No, less 15,38 7.63 18.00 12.00 04 50.0 04	50,0	04 50,0
More emotional fatigue	•	,-
Yes 25,70 8,47 26,00 10,00 10 30,3 23	69,7	23 69.7
No, same thing $24,63$ $7,37$ $25,50$ $12,00$ $0,003^{\$}$ 06 $37,5$ 10	62,5 0,619	- , , .
No, less** 12,83 6,37 14,50 13,00 03 50,0 03		
Family support	50.0	7.3 10.0
22.25 0.26 24.00 12.00 14 25.0 26	50,0	0.5 50,0
Always 25,25 9,26 24,00 12,00 0,604 05 33,3 10	50,0 65,0 0,900	,

Legend: *Student t-test; †Chi-square test; ‡Mann Whitney Test; §ANOVA one factor; ||Kruskal Wallis; ¶Category that differs from any other category; **Category that differs from the others.

DISCUSSION

Sociodemographic characteristics have long been considered predictors of job stress. In this study, we found that levels of perceived stress were significantly higher in female respondents. Women who work in the health area are the most mentally affected because a large part of the professional staff, especially in nursing, are women. In addition to working in the health area, they often need to play a relevant role in the housework and education of their children⁽¹⁴⁾. Also, care for family members is closely linked to the female gender and, in the context of the COVID-19 pandemic, this care makes the concern and the resulting mental suffering to be accentuated. This overlapping of functions has been described as a risk factor for mental health in women⁽¹⁵⁾.

Furthermore, a study carried out with 88 nursing professionals (equally divided between nurses and nursing technicians), who worked on the "frontline" against COVID-19, in a Brazilian university hospital, found that, although there was no significant difference between the groups, anxiety predominated in women (49.4% versus 44.4%), people between 31 and 40 years old, compared to people over 40 years old (62.5% versus 31.5%) and married people (56.3% versus 45.0%)(7). This fact was also identified in an investigation carried out in Wuhan, the epicenter of COVID-19, in China, with twice as high levels of anxiety and other symptoms related to mental health observed in hospital nurses working to fight the pandemic (for example, on the Generalized Anxiety Disorder scale, women achieved an average of 4.0 points and men 2.0 points; p < 0.001)⁽¹⁶⁾.

Another important characteristic is the weekly working hours. In this study, 52.7% of respondents performed more than 60 hours of work per week. However, curiously, professionals who worked 41 to 60 hours had higher levels of stress. On the other hand, as a result of the complementary analysis described above, in this sample, there is an important relationship between the workload and the number of institutions to which the professional was linked, and the professionals who had a weekly workload of 41 to 60 hours had a higher number of employment contracts.

The workload associated with the number of jobs can interfere with the perception of stress. In addition to the excessive number of hours worked, the professionals also had additional stress from the time spent commuting between home and workplaces and possible divergences in terms of structure, hierarchy, routines, and work processes, which place them in a situation of constant pressure and overload⁽¹¹⁾.

In this sense, a study carried out with 47 nurses in a federal public hospital in the city of Rio de Janeiro, identified that considering multiple jobs, 72.9% had a workload above 50 hours per week, with physical and mental exhaustion intensified by displacements, night work, and difficulty in reconciling household activities, leisure and health care⁽⁸⁾. A literature review identified that work stress during the COVID-19 pandemic was exacerbated, especially as a result of some factors: work overload (44%); inadequate working conditions (32%); conflicting interpersonal relationships (19%); lack professional expectations (13%);lack autonomy and ambiguity of functions (9%); wage dissatisfaction (4%) and lack of training $(3\%)^{(17)}$.

The factors identified in the aforementioned literature review can also influence the perception of greater physical and emotional fatigue, expressed by the professionals surveyed in this especially in stress. Given study, circumstances produced by the COVID-19 pandemic, the professionals' physical and emotional capacities were required at scales above the usual⁽⁶⁾. Thus, it appears that stress in the workplace is complex and multi-determined. especially in public health emergency contexts, in which the professionals need to deal with multiple adversities related to the availability of material and human resources, uncertainties about therapeutic options, and forecasts, and the high demand for care.

Among the three professional categories, there was a high average of perceived stress and signs of Burnout Syndrome, although the levels did not show any statistical difference among the graduations. Both doctors and the nursing staff have important attributions in patient care in and emergency care units, they share responsibilities and care resultsas multidisciplinary team (18). A study with 5,417 health professionals carried out in Portugal,

showed that, in particular, doctors and nurses had high levels of Burnout (59.6% and 63.4%, respectively), during the initial phase of the COVID-19 pandemic than other professionals such as management (51.9%) and other categories (operational assistants, with 53.7%, and diagnostic and therapeutic technicians, with 47.5%)⁽¹⁹⁾. This fact may be related to fear from greater exposure to situations of possible contamination and also the need to make decisions in scenarios of uncertainty and work overload⁽²⁰⁾.

We found higher levels of Burnout Syndrome among professionals with specific training in the emergency area. Professionals with specific training can act with greater criticality in the care protocols and routines. In a public health emergency, driven by a contagious disease and surrounded by the constant risk of collapse of health services due to the great demand for resources and supplies, we believe that these professionals end up suffering more intensely by possible barriers to implementing quality health care in critically ill patients. However, there may be a confounding factor in this analysis, as professionals with training in emergencies perceived less support from their families during the pandemic.

In this sense, 72.8% of the professionals revealed that they had family support during their work in the pandemic. Although family support is not related to significant differences in levels of stress or Burnout Syndrome, social support from friends and family can reduce the stress experienced at work⁽¹⁹⁾. A study carried out in China showed that the quality of sleep and family support had a positive impact on the mental health of professionals who were in the "frontline" in the fight against COVID-19⁽²¹⁾. Thus, sources of social support — formal or informal — can act as a moderator of occupational stress⁽¹⁹⁾.

In general, it is essential to understand how stress is perceived and how the Burnout Syndrome development process is established among health professionals working in emergency care units during the pandemic. This is because a situational diagnosis can cooperate to support the development of intervention strategies for the promotion and protection of workers' health in the context of work arrangements.

As a limitation, we found that data collection took place at the workplace, during the working period, which may have influenced participants' responses about work stress and also because they were concerned about returning to their activities. However, this strategy was chosen to expand the participation of professionals. Furthermore, the fact that the sample is small and the sampling is non-probabilistic circumscribes the results found, not allowing comparability with other contexts and limiting the possibility of multivariate analyses. In this sense, we need further studies that detail in greater depth, under multiple analyses, the individual organizational factors that influence workers in emergency care units when dealing with the COVID-19 pandemic.

CONCLUSION

From the results, we could identify that during the COVID-19 pandemic the average perceived stress was 24.18 among health professionals in the emergency care units and that the installed and advanced Burnout Syndrome was identified, respectively in 61.9% and 3.6% of the interviewed professionals. The sociodemographic and professional factors were associated with the outcome. Gender, workload, and perception of physical and emotional fatigue were significantly associated with higher levels of perceived stress. In the installed/advanced Burnout Syndrome, there was an association with the variables: gender, time since graduation, and specialization in the emergency area.

Despite the limitations, the results found that women are more vulnerable to stress and Burnout Syndrome, and also the association of these results with longer training, in which having a specialization course and perceiving a greater workload during pandemiccontribute to the health of workers in emergency care units. We suggest intervention strategies at work and implementation of preventive measures that enableminimizing the labor impacts on workers' health, including professional psychological follow-up, continuing education, and refresher courses on how to deal with occupational stress, providing less stressful work environment during the COVID-19 pandemic.

ESTRESSE E BURNOUT ENTRE PROFISSIONAIS DE SAÚDE DE PRONTO ATENDIMENTO DURANTE A PANDEMIA DA COVID-19

RESUMO

Objetivo: analisaro estresse percebido e a Síndrome de Burnout entre profissionais de saúde de unidadesde pronto atendimento durante a pandemia da COVID-19. **Método**: estudo transversal, realizado com 55 profissionais de saúde dedois serviços de pronto atendimento localizados no Paraná (Brasil). Os dados foram coletados desetembroa novembro de 2020, mediante aplicação da Escala de Estresse Percebido, Questionário Preliminar de Identificação da Burnout e questionário sociodemográfico, que foramanalisados comauxílio da estatística descritiva e inferencial. **Resultados**: a média de estresse percebido foi de 24,1 e o nível mais elevado esteve associado ao sexo, carga horária de trabalho e percepção de cansaço físico e mental. A Burnout instalada/avançadafoi identificada em 65,5% dos participantes e associou-se ao sexo, tempo de formação e especialização em emergência. **Conclusão**: para os entrevistados, durante a pandemia, a Síndrome de Burnout e o estresse percebido estiveram associados a fatores sociodemográficose profissionais.

Palavras-chave: Pessoal de saúde. Estresse ocupacional. Infecções por coronavírus. Emergências. Pandemias.

ESTRÉS Y BURNOUT ENTRE PROFESIONALES SANITARIOS DE ATENCIÓN DE URGENCIA DURANTE LA PANDEMIA DEL COVID-19

RESUMEN

Objetivo: analizar el estrés percibido y el Síndrome de Burnout entre profesionales sanitarios de unidades deurgencia durante la pandemia del COVID-19. **Método**: estudio transversal realizado con 55 profesionales sanitarios de dos servicios de urgencias ubicados en Paraná (Brasil). Los datos fueron recogidos de septiembre a noviembre de 2020, mediante la aplicación de la Escala de Estrés Percibido, el Cuestionario Preliminar de Identificación del Burnout y un cuestionario sociodemográfico, los cuales fueron analizados mediante estadística descriptiva e inferencial. **Resultados**: la media de estrés percibido fue de 24,1 y el nivel más alto se asoció con el sexo, la carga de trabajo y la percepción de fatiga física y mental. El Burnout instalado / avanzado se identificó en el 65,5% de los participantes y se asoció con el sexo, el tiempo desde el grado y la especialización en urgencia. **Conclusión**: para los encuestados, durante la pandemia, el Síndrome de Burnout y el estrés percibido se asociaron con factores sociodemográficos y profesionales.

Palabras clave: Personal de salud. Estrés ocupacional. Infecciones por coronavirus. Urgencias. Pandemias.

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