Burnout, COVID-19, social support and food insecurity in health workers

Burnout, COVID-19, apoio social e insegurança alimentar em trabalhadores da saúde

Burnout, COVID-19, apoyo social e inseguridad alimentaria en trabajadores de la salud

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Abstract

Objective: To evaluate the prevalence of risk for Burnout Syndrome among health professionals in areas of care for patients with COVID-19, as well as to verify possible associations of the syndrome with the perceived social support and food insecurity of these workers.

Methods: Analytical cross-sectional study, with workers from intensive care units (ICU) and wards caring for patients with COVID-19, in a university hospital. Data collection was carried out from September to October 2021, using the instruments: Maslach Burnout Inventory (MBI-HSS), Multidimensional Perceived Social Support Scale and Food Insecurity Experience Scale (FIES). Statistical analysis used Poisson regression models and multiple Poisson regression, considering statistically significant differences and associations if $p<0.05$.

Results: A total of 75 workers from three wards (48%) and from one ICU (52%) participated in the survey, and the professionals are mostly female (89.3%), trained as health care technicians (66.7%). Regarding the risk of Burnout Syndrome, 26.7% of the workers had scores for at least one dimension of the scale, mainly referring to high emotional exhaustion (20%). There was a positive association between the risk of developing Burnout Syndrome and food insecurity (PR = 1.11; 95%CI = (1.04; 1.18); p = 0.002). The number of children was significantly negatively associated with the incidence of Burnout Syndrome (PR = 0.90; 95%CI = (0.83; 0.97); p = 0.008).

Conclusion: Positive associations were observed with a higher risk of BS in professionals with food insecurity and also that the number of children acts as a protective factor against the risk of Burnout Syndrome, which may be directly related to perceived social support.

Resumo

Objetivo: Avaliar a prevalência de risco para a Síndrome de *Burnout* entre profissionais da saúde de áreas de atendimento a pacientes com COVID-19, bem como verificar possíveis associações da síndrome com o apoio social percebido e com a insegurança alimentar desses trabalhadores.

Métodos: Estudo transversal analítico, com trabalhadores de unidades de terapia intensiva (UTI) e de enfermarias de atendimento a pacientes com COVID-19, em um hospital universitário. A coleta de dados foi realizada no período de setembro a outubro de 2021, utilizando os instrumentos: Inventário de *Burnout* de Maslach (MBI-HSS), Escala Multidimensional de Suporte Social Percebido e Escala de Vivência da Insegurança Alimentar (FIES). A análise estatística utilizou modelos de regressão de Poisson e regressão múltipla de Poisson, sendo consideradas diferenças e associações estatisticamente significativas se $p<0,05$.

Resultados: 75 trabalhadores de três enfermarias (48%) e de uma UTI (52%) participaram da pesquisa, sendo que os profissionais são, em sua maioria, do sexo feminino (89,3%), formados(as) como técnicos de

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enfermagem (66,7%). Em relação ao risco de Síndrome de *Burnout*, 26,7% dos trabalhadores apresentaram escores para pelo menos uma dimensão da escala, principalmente à referente a alta exaustão emocional (20%); verificou-se a associação positiva entre o risco de desenvolver Síndrome de Burnout e a insegurança alimentar (RP = 1,11; IC95% = (1,04; 1,18); p = 0,002). O número de filhos associou-se significativamente de forma negativa à incidência de Síndrome de *Burnout* (RP = 0,90; IC95% = (0,83; 0,97); p = 0,008).

Conclusão: Foram observadas associações positivas de maior risco de SB em profissionais com insegurança alimentar e, também, que o número de filhos atua como fator protetivo ao risco de Síndrome de *Burnout*, o que pode estar relacionado diretamente ao apoio social percebido.

Resumen

Objetivo: Evaluar la prevalencia de riesgo de síndrome de *burnout* en profesionales de la salud de áreas de asistencia a pacientes con COVID-19, así como verificar posibles relaciones del síndrome con el apoyo social percibido y la inseguridad alimentaria de estos trabajadores.

Métodos: Estudio transversal analítico, con trabajadores de unidades de cuidados intensivos (UCI) y de enfermerías de asistencia a pacientes con COVID-19 en un hospital universitario. La recopilación de datos fue realizada en el período de septiembre a octubre de 2021, utilizando los instrumentos: Cuestionario Maslach de *Burnout* (MBI-HSS), Escala Multidimensional de Apoyo Social Percibido y Escala de Experiencias de Inseguridad Alimentaria (FIES). En el análisis estadístico se utilizaron modelos de regresión de Poisson y regresión múltiple de Poisson, donde se consideraron diferencias y asociaciones estadísticamente significativas si p<0,05.

Resultados: Participaron del estudio 75 trabajadores de tres enfermerías (48 %) y de una UCI (52 %), donde los profesionales, en su mayoría, eran de sexo femenino (89,3 %), graduados(as) como técnicos de enfermería (66,7 %). Con relación al riesgo de síndrome de *burnout*, el 26,7 % de los trabajadores presentó puntuación en por lo menos una dimensión de la escala, principalmente en la referente al alto agotamiento emocional (20 %). Se verificó una asociación positiva entre el riesgo de padecer síndrome de *burnout* y la inseguridad alimentaria (RP = 1,11; IC95 % = (1,04; 1,18); p = 0,002). El número de hijos se asoció significativamente de forma negativa a la incidencia de síndrome de *burnout* (RP = 0,90; IC95 % = (0,83; 0,97); p = 0,008).

Conclusión: Se observaron asociaciones positivas de mayor riesgo de síndrome de *burnout* en profesionales con inseguridad alimentaria, además de que el número de hijos actúa como factor protector del riesgo de síndrome de *burnout*, lo que puede estar directamente relacionado con el apoyo social percibido.

Introduction

Burnout Syndrome (BS) or professional exhaustion is described as a professional's excessive stress reaction caused by the work environment, presenting a picture with physical symptoms, in addition to emotional exhaustion, often resulting in absenteeism and low productivity.[1,2]

This psychosocial problem gained notoriety and became recurrent during the COVID-19 pandemic, especially among health professionals, and is related to the fear faced with the increase in cases of critically ill patients and deaths, which consequently extended the workday and produced situations of adversity, for example, with the possibility of dealing with a reduced team, with the lack of individual safety equipment and with the fear of contamination.[2,3]

Despite the discomfort and the high risks of developing BS, most of these workers remained on duty, sometimes leading them to extrapolate their limits, promoting concerns beyond the exercise of their jobs, reaching social and economic issues.

Represented by healthy and positive support for the individual, emotional support through social interaction can be a protective factor and mitigate the risks and impacts in relation to professional burnout, providing an active network of support and encouragement, reducing the psychic suffering of these individuals.[4]

However, due to the spread of the pandemic and social distancing, many people found themselves alone, away from family and friends, as a way to protect them from insecurity regarding the potential for transmission of the virus.[3] With health professionals, it was not different, in fact, in view of the protagonism of this sector, when they were on the front line of care, the feelings of apprehension and fear may have been even more intense, since they were more exposed to the virus and more likely to contract the disease and transmit it to their families and friends.[2,3]

Furthermore, social distancing had repercussions on the dynamics and socioeconomic condition of Brazilian families. With activities being interrupted without sufficient protection measures in place, many workers lost their livelihoods. Due to the contingency measures taken by public managers with a view to lessening the spread of the virus, the uncertainties regarding the supply of food in the months that followed may also have compromised the food and nutritional security of these people.

[5,6] The closing of shops and the long periods with reduced economic activities caused distrust in many families, in addition to compromising the food supply and the insufficient supply of some products, ingredients or materials, especially those from family farming.[5]

In this complex scenario, this study aimed to assess the prevalence of risk for Burnout Syndrome among health professionals in areas of care for patients with COVID-19, as well as to verify possible associations with perceived social support and food insecurity of these workers.

Methods

This is an analytical cross-sectional study, guided by the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) tool.[6] Data collection was performed in an ICU and in three wards caring for patients with COVID-19 in a university hospital located in a city in the countryside of Sao Paulo. The survey took place between September and October 2021, a period shortly after vaccination, which still had a high number of intentions due to COVID-19. The choice of location is due to the fact that the hospital is a regional reference in the treatment of COVID-19, in addition to being a space for educational actions in partnership with the university.

The population considered in the study, estimated at 135 workers, included all the institution's professionals who provided services in care units for patients infected with SARS-COV-2, over 18 years old. Incomplete forms and those completed were excluded, but whose Informed Consent Form (ICF) did not contain the proper signature of the professional.[5] Thus, the final sample consisted of 75 workers, with sample homogeneity, confidence level of 95% and margin of error of 5.9%.

Four instruments were used for data collection: a form with sociodemographic and professional variables, the Maslach Burnout Inventory (MBI-HSS), the multidimensional Perceived Social Support Scale (MPSSS) and the Food and Nutrition Insecurity Scale (FIES). As these instruments are widely used in national and international research, pre-tests were not carried out for these instruments.

The sociodemographic and professional variables form was developed for this study and included characteristics such as gender, age, marital status, number of children, income, education, work regime, workload and number of jobs.

To assess the risk of Burnout Syndrome, the Maslach Burnout Inventory- Human Services Survey (MBI-HSS) was used, a specific version for health professionals, translated in Brazil by Lautert (1997), validated for multifunctional sample by Carlotto and Câmara (2007).[9,10]

The scale has internal consistency and satisfactory factorial validity and is composed of 22 questions, divided into three categories: 9 questions related to Emotional Exhaustion (EE) (items 1, 2, 3, 6, 8, 13, 14, 16, 20), 5 questions related to Depersonalization (DP) (items 5, 10, 11, 15, 22) and 8 questions related to Professional Fulfillment (PF) (items 4, 7, 9, 12, 17, 18, 19, 21).[8] The MBI-HSS form follows a scale ranging from 1 (Never) to 5 (Always), with the results classified according to the score and the category to which it belongs.

This means that each of the subscales has a classification according to its score, so that in the end the calculation to be made indicates whether that individual has a high, medium or low rate of Burnout. Thus, EE scores greater than and equal to 27 indicate extreme fatigue, between 19 and 26 indicate moderate fatigue, and less than or equal to 18 indicate a low level of fatigue. SD scores greater than or equal to 10 are classified as high, between 6 and 9 considered medium, and those less than or equal to 6 are indicated as low. PR scores greater than or equal to 40 are considered high, from 34 to 39 are moderate, and less than or equal to 33 are considered low.[9]

Considering that the reading of the MBI-HSS results scores lacks consensus,[9] in this study, we opted for the sum of the total score attributed to the items of each dimension, which divided by the total number of points of the subscales resulted in a score average for each rating. Thus,

mean values for the dimensions of EE and SD ≤ 3 and for the dimension RP < 3 were considered.[10] Thus, participants who presented values above these means in at least one of the dimensions of the MBI-HSS were considered as "Risk for Burnout".

The Multidimensional Scale of Perceived Social Support (MPSSS), developed by Zimet et. al (1998) serves to assess social support by family, friends and significant others. It was translated in Brazil by Souza et. al (2019) and has adequate internal consistency (Cronbach's alpha), greater than 0.90 and good adjustment indicators for the three-factor solution.[11-13] This scale has 12 items that vary according to the support that participants receive and is divided according to the support received, having as a measure from "Totally Disagree" to "Totally Agree" following the seven-point Likert scale. The result of these three subscales is done by adding the four items and dividing each support category by four, that is: family (items 3, 4, 8 and 11), friends (items 6, 7, 9 and 12) and other significant people (items 1, 2, 5 and 10). The final value of the scale is obtained by averaging them, that is, the sum of the 12 items and dividing by 12, with higher scores indicating greater perceived social support.[11,12]

The Food Insecurity Experience Scale (FIES) questionnaire, developed by the Food and Agriculture Organization of the United Nations (FAO), measures access to food at home or individually for different contexts. The instrument consists of eight elaborated questions covering three domains: uncertainty and/or anxiety regarding the possibility of not being able to buy food, changes in the quality of food and the reduction of food consumption. The questions count one point for each, with the highest score being defined as greater food insecurity.[14]

After the authorization of the institution, the workers were invited at the workplace, emphasizing that participation in the study was voluntary. Completing the self-assessment took about 30 minutes, and the forms were collected and coded to preserve the professional's identity and keep the data organized.

For statistical analysis, Poisson regression models and multiple Poisson regression were used. Differences and associations were considered statistically significant if $p<0.05$. The analysis was performed using SPSS v21.0 software.

All ethical aspects foreseen in the legislation were maintained during the conduction of the study. All workers agreed to participate in the research and signed the ICF. This research was approved by the Research Ethics Committee of the Faculdade de Medicina de Botucatu, Universidade Estadual Paulista (UNESP) under opinion nº4.899.485 (Certificate of Presentation of Ethics Appreciation nº 50479721.7.0000.5411).

Results

A total of 75 health workers participated in the survey, 48% from wards and 52% from Intensive Care Units (ICU), with most of them consisting of: nursing technicians (66.7%), women (89.3%) over 36 years old (65.3%) and with income of up to 5 minimum wages (64%). With regard to the risk of Burnout, 26.7% of the workers had scores for at least one dimension of the scale, represented mainly by high emotional exhaustion (20%), as can be seen in Table 1. perceived social support in 12% of the sample and food insecurity in 2.6%.

The bivariate associations of each variable with the risk of Burnout Syndrome are presented in table 2. With regard to sociodemographic data, a higher prevalence of risk was observed among professionals working in ward A and lower among those in the ICU (PR = 0.50; CI95% = (0.20; 1.25); p = 0.136). People with children had a lower risk for BS (PR = 0.50; 95%CI = (0.21; 1.20); p = 0.121), being even lower according to the increase in the number of children (PR = 0.56 ;95%CI = (0.33; 0.95); p = 0.032). The same occurred for professionals with intermediate family income (PR = 0.41; 95%CI = (0.14; 1.19); p = 0.101). Furthermore, a higher prevalence of risk was observed among those with longer working hours (PR = 4.81; 95%CI = (0.59; 39.12); p = 0.142). We found a weak positive as-

Table 1. Distribution of health workers by sociodemographic variables and risk dimensions for Burnout Syndrome, factors for low perceived social support and food insecurity

Variables	n%)
Workplace	
Ward A	8(10.7)
Ward B	14(18.7)
Ward C	14(18.7)
ICU	39(52.0)
Age	
from 21 to 25 years old	8(10.7)
from 26 to 30 years old	9(12.0)
from 31 to 35 years old	9(12.0)
from 36 to 40 years old	17(22.7)
from 40 to 45 years old	21(28.0)
from 46 to 50 years old	5(6.7)
from 51 to 55 years old	6(8.0)
Women	67(89.3)
Marital status - with partner	33(44.0)
With children	50(66.7)
Income	
up to BRL 2,000.00 (approx. 2 minimum wages)	9(12.0)
from BRL 2,000.01 to BRL 5,000.00 (approx. 5 minimum wages)	48(64.0)
from BRL 5,000.01 to BRL 10,000.00 (approx. 10 minimum wages)	15(20.0)
from R$ 10,000.01 to R$ 20,000.00 (approx. 20 minimum wages)	3(4.0)
Time working at the institution	
up to 12 months	11(14.7)
from 1 to 3 years	28(37.3)
from 4 to 5 years	4(5.3)
from 6 to 10 years	16(21.3)
from 11 to 20 years	15(20.0)
from 21 to 30 years	1(1.3)
Function	
Nursing assistant	1(1.3)
nursing technician	50(66.7)
Nurse	24(32.0)
Training time	
up to 12 months	1(1.3)
from 1 to 3 years	18(24.0)
from 4 to 5 years	9(12.0)
from 6 to 10 years	19(25.3)
from 11 to 20 years	23(30.7)
from 21 to 30 years	5(6.7)
Working arrangements at the institution	
Foundation - CLT employee	29(38.7)
Foundation - CLT employee - Contract with a fixed term	26(34.7)
Public Servant - CLT employee	18(24.0)
Two or more regimes	2(2.6)
Weekly workload	
30 hours	10(13.3)
40 hours	44(58.7)
more than 40 hours	21(28.0)
Employment relationships	
1 job	43(57.3)
2 jobs	31(41.3)
3 jobs	1(1.3)
Dimensions for Burnout Syndrome	
Emotional exhaustion	15(20.0)
Depersonalization	4(5.3)
Professional achievement (low)	4(5.3)
General risk index for Burnout Syndrome	20(26.7)
Dimensions for low perceived social support	
Family	14(18.7)
Friend	12(16.0)
Others	4(5.3)
general indicator	9(12.0)
Food insecurity (high)	2(2.6)

Continue...

Continuation.

n- total number; % - equivalent percentage

sociation with a higher risk of BS in professionals with less social support (PR = 0.76; 95%CI = (0.54; 1.08); p = 0.101), mainly family members (PR = 0.76 ;95%CI = (0.54; 1.08); p = 0.127). The occurrence of BS risk increased with the increase in the score referring to food insecurity (PR = 1.28; 95%CI = (0.97; 1.70); p = 0.082).

Table 3 presents the associations analyzed by exploring the variables using multiple Poisson regression. A significant association was observed in relation to the place of work, with a higher prevalence of risk for BS in Ward A - (PR = 2.94; 95%CI = (1.75; 4.94); p = 0.000)) and with longer working time at the institution: from 5 to 10 years (PR = 1.49; CI95% = (1.13; 1.94); p = 0.004) and from 10 to 20 years (PR = 1.36; CI95 % = (1.03; 1.81); p = 0.032). Furthermore, the positive association between the risk of BS and food insecurity was confirmed (PR = 1.11; 95%CI = (1.04; 1.18); p = 0.002). The number of children was significantly negatively associated with the incidence of BS (PR = 0.90; 95%CI = (0.83; 0.97); p = 0.008).

Discussion

This study evaluated the prevalence of risk for the development of Burnout Syndrome in 26.7% of health professionals in areas of care for patients with COVID-19, incorporating important associated factors such as food insecurity and perceived social support, since the num-

Table 2. Bivariate associations by Poisson regression for possible associations of the risk of Burnout Syndrome with factors related to sociodemographic information, low perceived social support and food insecurity

Variable	PR	95%CI		p-value
ICU location	0.24	0.08	0.71	0.010
Location ward C	0.48	0.15	1.56	0.220
Location ward B	0.19	0.04	0.94	0.042
Location ward A	1.00			
ICU/COVID site type	0.50	0.20	1.25	0.136
Type of place / Work situation (Infirmary)	1.00			
Male	0.44	0.06	3.29	0.425
Age	0.99	0.76	1.29	0.951
Marital status: no partner	1.04	0.43	2.51	0.928
With children	0.50	0.21	1.20	0.121
Number of children	0.56	0.33	0.95	0.032
Income - from BRL 10,000.01 to BRL 20,000.00	0.60	0.07	5.14	0.641
Income - from BRL 5,000.01 to BRL 10,000.00	0.36	0.09	1.51	0.162
Income - from BRL 2,000.01 to BRL 5,000.00	0.41	0.14	1.19	0.101
Income - up to BRL 2,000.00	1.00			
Working time (21 to 30 years)	0.00	0.00	0.00	0.00
Working time (11 to 20 years)	2.93	0.33	26.24	0.336
Working time (6 to 10 years)	4.81	0.59	39.12	0.142
Working time (4 to 5 years)	2.75	0.17	43.97	0.474
Working time (1 to 3 years)	2.75	0.34	22.35	0.344
Working time (up to 12 months)	1.00			
Assistant	0.00	0.00	0.00	0.00
Nurse	0.52	0.17	1.56	0.243
Training (Technical)	1.00			
Training time	1.06	0.76	1.48	0.734
Working regime - Public Servant - CLT employee (SC)	1.61	0.52	5.00	0.409
Working regime - Foundation - with. determined time/SC	0.00	0.00	0.00	0.00
Working regime - Foundation - with determined time	1.49	0.52	4.29	0.462
Working regime - Foundation - CLT employee / SC	0.00	0.00	0.00	0.00
Working regime - Foundation - CLT employee	1.00			
Workload - more than 40 hours	0.79	0.19	3.32	0.752
Workload - 40 hours	0.91	0.26	3.22	0.883
Workload - 30 hours	1.00			
Number of jobs	0.71	0.29	1.72	0.443
Social support - family	0.83	0.66	1.04	0.101
Social support – friends	0.88	0.68	1.13	0.321
Social support – others	0.85	0.60	1.21	0.380
Social support – general	0.76	0.54	1.08	0.127
Social support - family - low	1.87	0.72	4.86	0.201
Social support – friends – low	1.31	0.44	3.93	0.627
Social support – others – low	0.00	0.00	0.00	0.00
Social support – general – low	1.83	0.61	5.48	0.278
food insecurity	1.28	0.97	1.70	0.082

PR – prevalence ratio; CI – confidence interval

Table 3. Multiple Poisson regression for possible associations of the risk of Burnout Syndrome with factors related to sociodemographic information, low perceived social support and food insecurity

Variable	PR	95%CI		p-value
(Intercept)	2.94	1.75	4.94	0.000
Workplace - ICU	0.54	0.40	0.72	0.000
Workplace - Ward C	0.56	0.41	0.77	0.000
Workplace - Ward B	0.46	0.33	0.64	0.000
Workplace - Ward A	1.00			
Income - from BRL 10,000.01 to BRL 20,000.00	0.95	0.60	1.52	0.830
Income - from BRL 2,000.01 to BRL 5,000.00	0.97	0.72	1.31	0.833
Income - from BRL 2,000.01 to BRL 5,000.00	0.93	0.71	1.22	0.603
Income - up to BRL 2,000.00	1.00			
Working time (21 to 30 years)	0.49	0.23	1.04	0.062
Working time (11 to 20 years)	1.36	1.03	1.81	0.032
Working time (6 to 10 years)	1.49	1.13	1.94	0.004
Working time (4 to 5 years)	1.38	0.94	2.03	0.104
Working time (1 to 3 years)	1.21	0.95	1.55	0.124
Working time (up to 12 months)	1.00			
Number of children	0.90	0.83	0.97	0.008
Food Insecurity	1.11	1.04	1.18	0.002
Social support - general	0.94	0.87	1.01	0.079

PR – prevalence ratio; CI – confidence interval

ber of children acts as a protective factor against the risk of BS.

Worrying scores in more than a quarter of participants (risk for BS for at least one dimension of the scale), especially considering the indicators of high emotional exhaustion (20%), reinforce that psychosocial working conditions have deteriorated among health professionals who worked with patients with COVID-19.[1] These rates were higher than those found in a study carried out in 31 provinces in Iran, although they were lower than those found in a systematic review that assessed the prevalence of these indicators and the associated risks where emotional exhaustion was 34.1%.[15,16]

A study carried out in Germany revealed that nurses working in COVID-19 wards reported higher levels of stress, exhaustion and depressive mood, in addition to lower levels of professional achievement compared to their colleagues in regular wards.[17] The same occurred in Iran and Spain, where the level of Burnout in frontline nurses was higher than in relation to other nurses.[18,19] However, it is necessary to evaluate other factors that may interfere, since one of the investigated wards showed a higher incidence of risks than the others, including the ICU.

The highest risk among professionals who worked in the wards and the lowest rate among those in the ICU lead us to reflect on the working conditions, which can be different in several aspects. The ICU, with a greater number of professionals per patient, a better prepared and controlled

environment, can also rely on a more technically trained and psychologically prepared team. A place with more complex processes, the increasing hospital pressure due to the increase in hospitalizations of patients with COVID-19 can result in the improvement of work autonomy and emotional demands among health professionals in COVID-19 environments.[20]

On the other hand, the wards had to adapt to a pandemic context, with new and more complex protocols, in addition to greater dependence on patients, restricted staffing, in addition to unforeseen absences. A review of studies showed that the main factors for the development of BS were the inconsistency and complexity of protocols.[21] Thus, it is emphasized that a predominant factor in ICU environments refers to the greater availability of individual safety equipment (PPE), corroborating a study among health professionals from 60 countries, which showed that adequate personal protective equipment (PPE) acted to protect against exhaustion.[22]

Children seem to act as a protective factor against the risk of BS, corroborating a study in Iran, where health professionals without children had the highest SB levels,[15] which may be directly related to perceived social support, confirming that the fact that feeling belonging to social groups, such as family or friends, can act in a protective way in some cases of stress and coping.[23] Our results corroborate the review by Galanis (2021), in which the main risk factors that increased nurses' burnout included a decrease in social support, low readiness from family and colleagues to deal with the COVID-19 outbreak.[16] Social support from family, friends or even pets were pointed out as a source of support by workers to contain the discouragement, tiredness and sadness in facing the pandemic, in addition to improving the relationship between workers and their children.[17,24,25] A study in Saudi Arabia also concluded that the presence of a person dependent and the nurse's family monitoring are significant factors for the quality of work life of these professionals.[26]

In addition to the reduction in food security in Brazilian households already observed in the pre-COVID-19 period in the context of the pandemic, the incidence of residents in a situation of severe food insecurity, that is, those who faced food deprivation and hunger, increased from 9% to 15.5%.[27,28] An international study in 11 countries revealed how a combination of the direct impacts of the pandemic on health and government responses that restricted movement and trade resulted in food insecurity.[29]

Understood as the possibility of compromising food and nutrition security, we found a relationship between this aspect and greater BS risks, corroborating with studies carried out in the USA, which found that the increase in economic stress and food insecurity contributed to the increase in psychological stress.[30,31]

Discussions about the impacts of COVID-19 on health professionals are part of recent debates. Considering the observation of possible factors associated with socioeconomic issues, in a more comprehensive way, and in an epidemiological moment after vaccination, this work contributes to the expansion of understanding on the subject, indicating the still prevalent risk of burnout. So, there is a need for continued attention, through the development of mental health promotion programs aimed at these workers and that include, in addition to labor issues and adequate environments, social and economic dimensions.

As limitations of this study, the cross-section does not allow establishing a cause-effect relationship between all variables. In addition, the cut in a single public hospital may not represent all health workers. Therefore, studies in other realities and with longitudinal follow-up are suggested in order to better understand the relationships between the proposed variables.

Conclusion

The study detected a high prevalence of risks for the development of Burnout Syndrome in health professionals who worked in areas of care for patients with COVID-19, mainly due to indications regarding emotional exhaustion. Positive associa-

tions were also found between food insecurity and BS. In addition, the number of children proved to be a protective factor against the risk of BS, which may be directly related to perceived social support.

Collaborations

Colichi RMB, Bernardo LC, Baptista SCPD, Fonseca AF, Weber SAT and Lima SAM contributed to the design, analysis and interpretation of data, writing and revision, as well as final approval of the version to be published.

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