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Burnout Syndrome in Primary Health Care professionals during the COVID-19 pandemic

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ABSTRACT. Workers in Primary Health Care (PHC) play a key role in coping with COVID-19, which required personal and work-flow changes, causing physical and emotional overload and stress, which could lead to Burnout Syndrome (BS). The objective of this study was to check the prevalence of BS in health professionals working in PHC in the municipality of Curitiba, state of Santa Catarina, Brazil. The research was carried out between November 2020 and May 2021, a sociodemographic questionnaire, and the Brazilian version of the Maslach Burnout Inventory - Human Services Survey (MBI-HSS), which contains 22 questions and three dimensions - Emotional Exhaustion (EE), Depersonalization (DP) and Personal Fulfillment (PF), were applied. Data were collected and analyzed descriptively with subsequent statistical comparison. Participants were 50 volunteers aged 40.1 ± 9.5 years, time in the profession of 10.8 ± 7.9 years. Results of the MBI-HSS showed the prevalence of risk was moderate for EE and high for DP and PF. However, no significant difference was detected between the MBI-HSS dimensions and sociodemographic variables. In conclusion, the prevalence of risk was 17.6 ± 11.4 points in EE (moderate); 6.6 ± 5.0 points in DP (moderate) and 36.8 ± 6.6 points in PF (high), indicating that the evaluated population already demands some need for contingency or preventive care because it has a clear predisposition to BS. However, there was no statistical association with sociodemographic variables.

Keywords: primary health care; health personnel; professional burnout; Covid-19.

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Introduction

Primary Health Care (PHC) in Brazil is a structuring level of care in the Unified Health System (SUS) promoting first contact access to the population, and also a front line in the fight against the pandemic of the new coronavirus, known as SARS-CoV-2 or COVID-19.

At the beginning of the pandemic, the focus was on hospital capacity, which neglected the importance of PHC, especially in Brazil, when considering the sociodemographic and economic characteristics of historical inequities. Therefore, challenges of PHC have increased, bringing risks to the health of professionals in this field, due to the fear of contaminating themselves or their families (Medina, Giovanella, Bousquat, Mendonça, & Aquino, 2020), lack of effective treatments and vaccines until the beginning of 2021, the requirement to maintain the quality of service in the face of the known precariousness of infrastructure, lack of resources and inputs, associated with organizational devaluation and disbelief (Silveira, Câmara, & Amazarray, 2014).

These factors are conditioning for increased stress and can give rise to Burnout Syndrome (BS), defined as professional burnout. BS was first described by clinical psychologist Herbert J. Freudenberger, in 1974, as a set of nonspecific, medical-biological and psychosocial symptoms in the work environment. It is the result of an excessive demand on personal energy and has repercussions mainly on health professionals (Esteves, Leão, & Alves, 2019).

To assess BS, the instrument called Maslach Burnout Inventory (MBI) was developed, validated in several countries, including Brazil, and based on the perception of physical-emotional changes caused by stressful situations in the work environment. The MBI involves three dimensions, which may appear associated, but which are independent: Emotional Exhaustion (EE), Depersonalization (DP) and lack of work involvement or decrease in Personal Fulfillment (PF) (Lima, Farah, & Bustamante-Teixeira, 2018).

EE is defined by a decrease or a feeling of lack of energy associated with a feeling of emotional exhaustion and low energy. Workers realize that they are no longer able to use more energy to provide assistance to their clients and their families. DP can be conceptualized as an emotional insensitivity, workers start to treat colleagues impersonally and the place of service in a distant way, both with a lack of empathy. PF is a dimension in which there is a feeling of personal and professional inadequacy. There is a tendency to carry out a negative self-assessment, which can affect work performance and patient care, as well as worker commitment (Pantoja, Silva, Andrade, & Santos, 2017).

In Brazil, the prevalence of BS is approximately 80% among medical residents (Silveira et al., 2016), which makes it necessary to survey its occurrence in different work contexts. Given the above, the objective of the present study was to check the prevalence of BS in health professionals working in PHC in the municipality of Curitiba, state of Santa Catarina, Brazil.

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Method

This was a cross-sectional, quantitative study with an intentional, non-randomized sample, consisting of health professionals working in PHC, in the municipality of Curitiba, state of Santa Catarina, Brazil. According to the Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística [IBGE], 2021), Curitiba has a territorial area of 949,865 km² and had an estimated population for 2020 of 39,893 people. Information from 2010 showed a population density of 39.79 inhab.Km⁻², 0.721 HDI and 65.5% sanitary sewage. The coverage of Primary Care was 82.12% and the Family Health Strategy, 60.76%, in December 2020 (Brasil, 2021a). During the research period, Brazil accounted for 416,949 deaths (Brasil, 2021b) and Curitiba had 103 accumulated deaths (Brasil, 2021c).

Data were collected between November 2020 and May 2021, during which time the instruments were left for self-completion at 7 (seven) Basic Health Units (BHU), to be later collected by the researcher. The inclusion criteria were working in the PHC and accepting voluntary participation by signing the Informed Consent (IC). In turn, the exclusion criteria were the absence from the workplace to fill the instruments due to sick leave, maternity leave or vacation.

The instruments used were a sociodemographic questionnaire with 19 questions involving general, professional and lifestyle data, and the Maslach Burnout Inventory: Human Services Survey (MBI-HSS), Brazilian version, with 22 questions on a scale, ranging from 0 (no) to 6 points (every day).

For analysis, questions were grouped into dimensions (EE = 9; DP = 5; PF = 8). The score for each dimension was calculated by adding the points for each question. The scores obtained generated a risk classification by intervals and dimensions: EE (low if ≤ 16 and high if ≥ 27); DP (low if ≤ 6 and high if ≥ 13 high); PF (low if ≥ 39 and high if ≤ 31). There is a greater tendency to risk when high scores on EE and DP are associated with low PF scores (Lima et al., 2018).

The MBI-HSS has shown good internal consistency in studies carried out in several countries, such as Spain, Mexico, Chile, Portugal, Colombia and Brazil, ranging from 0.79 to 0.91 for the emotional exhaustion dimension ($\alpha=0.90$ in the original version); from 0.69 to 0.87 for personal fulfillment ($\alpha=0.71$ in the original version) and from 0.42 to 0.66 for the depersonalization dimension ($\alpha=0.79$ in the original version) (Pereira et al., 2021).

Data were tabulated in Microsoft Excel 2016 and statistical analysis was performed using GraphPad Prism 8.0 software. Normality of data distribution was tested by the Shapiro-Wilk test and the unpaired t-test and Mann-Whitney test were applied for statistical comparisons between two groups, and for three or more groups, the Kruskal-Wallis test with Dunn's post-test was used.

The project was approved by the Research Ethics Committee of the Federal University of Santa Catarina (UFSC), under Opinion 4361276 of October 26, 2020.

Results

The sample of this study consisted of 50 volunteers with a mean age of 40.1 ± 9.5 years, mean time in the profession of 10.8 ± 7.9 years. Of these professionals, 19 were married (38%), 4 were divorced (8%), 14 were single (28%) and 13 were in a stable relationship (26%). The number of children ranged from one to

four, and the majority (48%) was not the main source of family income, but six participants had more than one employment bond (Table 1).

Table 1. Socioeconomic and demographic data. Curitiba, state of Santa Catarina, Brazil, 2021.

Variables	n	(%)
Gender		
Female	45	90
Male	5	10
Education		
High school	31	62
Specialization	11	22
Higher education	7	14
Master degree	1	2
Profession		
CHA	22	44
Nursing Technician	11	22
Nurse	7	14
Dentist	2	4
Oral Health Assistant	3	
Nursing Assistant	2	4
Physician	2	4
Oral Health Technician	1	2
Work load		
40 hours	45	90
Over 40	2	4
20 hours	1	2
8 hours	1	2
Preferred not to answer	1	2
Physical activity		
No	34	68
Yes	16	32
Smoking		
No	42	84
Yes	7	14
No answer	1	2
Alcoholism		
No	34	68
Yes	15	30
No answer	1	2

Regarding the results of the prevalence of risk for BS in these professionals, in EE, the mean was 17.6 ± 11.4 points (moderate risk), in DP, the mean was 6.6 ± 5.0 points (moderate risk) and in PF, the mean was 36.8 ± 6.6 points (high risk). There was no statistically significant difference in the comparison between the MBI-HSS results and the sociodemographic variables in any of the three domains (Table 2).

Table 2. Risk for Burnout syndrome in relation to sociodemographic data. Curitiba, state of Santa Catarina, Brazil, 2021.

Dimension/Variable	EE		PF		DP	
	Mean	p	Mean	p	Mean	p
Escolaridade						
High school	17.17 ± 10.95	0.72	36.00 ± 6.91	0.30	6.46 ± 4.81	0.83
Higher education	18.39 ± 12.44		38.05 ± 6.16		6.78 ± 5.36	
Gender						
Male	17.21 ± 11.03	0.58	36.51 ± 6.74	0.34	6.50 ± 4.94	0.94
Female	21.20 ± 15.34		39.60 ± 5.32		7.40 ± 5.94	
Profession						

CHA	15.91±10.17		38.05±5.23		5.52±4.05	
Assistant	22.25±15.86	0.68	33.80±8.58	0.77	8.25±4.50	0.72
Graduate	20.70±14.08		36.36±8.47		7.50±5.98	
Technician	16.67±10.25		36.64±8.47		7.30±6.11	
Physical activity						
No	18.72±10.97		37.03±5.87		6.50±4.66	
Yes	15.44±12.33	0.35	36.43±8.32	0.78	6.84±5.92	0.83
Smoking						
No	17.48±11.43		36.63±6.82		6.15±5.12	
Yes	19.0±12.92	0.84	38.33±5.35	0.49	9.00±3.55	0.07
Alcoholism						
No	16.94±11.29		37.19±5.34		6.38±5.01	
Yes	19.33±12.25	0.51	36.13±8.88	0.61	7.07±5.09	0.67

Importantly, the statistical software automatically excluded groups with only 1 or 2 participants, with no possibility of analysis with groups smaller than 5. It is also complemented that, for this study, there were no confounding factors that influenced the general analysis, mainly due to the small sample size. Finally, the instrument used did not ask about the presence of former smokers.

Discussion

The COVID-19 pandemic has imposed unprecedented challenges on health systems, revealing deficiencies and lack of preparedness. In addition, it demanded from health professionals a great capacity to adapt in the face of various limitations. Such a situation came to be compared to trauma because it involves an intense perception of threat to life, physical integrity, fear, helplessness or horror. These factors are directly related to BS by involving an imbalance between technical skills and occupational demands, lack of control over processes, excessive workload and prolonged stress (Restauri & Sheridan, 2020; Jalili, Niroomand, Hadavand, Zeinali, & Fotouhi, 2021; Silva, Saraiva, Ferreira, Peixoto Junior, & Ferreira, 2020; Dantas, 2021).

Therefore, the present study showed that PHC health professionals in Curitiba presented a moderate risk classification in the EE and DP dimensions, and in the PF dimension, a high risk. In this way, it is understood that the COVID-19 pandemic may have increased the predisposition to BS due to the suffering, anguish and frailty experienced (Almeida, Medeiros, Barros, Martins, & Santos, 2016; Morgantini et al., 2020) during the COVID-19 pandemic.

Overall, a study on 376 participants found that 1 in 3 had a high score for EE, 1 in 4 had a high score for DP, and 15% for PF. Of these, 45% reported some physical symptom in the last 4 weeks, such as irritability, change in eating habits, difficulty falling asleep and increased muscle tension, more prevalent in women and in the nursing profession (Barello, Palamenghi, & Graffigna, 2020).

Following the same reasoning, another study with the participation of 615 professionals identified 50.1% with a high EE score, 13.2% with a high DP score and 85.5% with a low PF score. There was also a predominance of women, with more involvement in nursing professionals and residents, with DP being more prevalent in men aged less than or equal to 36 years (Jalili et al., 2021).

Specifically in the health area, the prevalence of burnout among health workers in PHC during the COVID-19 pandemic was reported at 43% for EE, 5% for DP and 13% for PF, for which professionals with 11-20 years of service were more likely to have burnout (OR: 12.43; CI: 1.13-136.72 (95%); $p < 0.05$) than those with less than one year. On the other hand, in another study, adequacy to work in terms of reward (OR: 0.26; CI: 0.10-0.67 (95%); $p < 0.05$) implied a lower probability of burnout (Apaydin et al., 2021).

The lower probability of burnout was found in a Spanish study, which observed the presence of high scores in EE, but associated with low DP scores and high scores in PF during the COVID-19 pandemic. The study hypothesized that workers felt greater fulfillment when realized the importance of the profession to society (Luceño-Moreno, Talavera-Velasco, García-Albuérne, & Martín-García, 2020).

The female gender (Almeida et al., 2016) seems to be more affected by BS, especially in the EE dimension and with reference to psychosocial factors, extra demands at work and lack of control and social support (Pisanti et al., 2016). Another cross-sectional study conducted in the United States with public health professionals showed that men had fewer symptoms of burnout than women. With fewer symptoms were also older people and Hispanics. However, those with more than 15 years of experience reported more symptoms of burnout, as did those with more education (Stone, Kintziger, Jagger, & Horney, 2021).

The study developed in Curitiba seems to be in line with some of the variables exposed, such as the predominance of women at greater risk for BS, although there is no statistical difference when compared to men. In addition, the CHAs were the most affected with a high weekly workload, unstable employment and sedentary lifestyle (Silva, Lampert, Bandeira, Bosa, & Barroso, 2017; Soares, Melo, Soares, & Noce, 2019).

In conclusion, it is emphasized that PHC also has to be recognized as a pillar in emergency moments, such as in the epidemics of dengue, Zika, yellow fever, and Chikungunya. Knowledge of the territory, access, the link between the user and the health team, comprehensive care, monitoring of vulnerable families and monitoring of suspected and mild cases continue to be fundamental relevant strategies to the entire network.

The limitation of the present study is due to its cross-sectional design, which makes it impossible to establish a direct causal relationship. Although the sample is relatively small, attention is paid to the regional profile, which is important, insofar as the most robust samples tend to be from large centers. The validated MBI-HSS instrument ensures a good assessment, but possibly does not include all factors of the work context and individual scope, such as differences in workflow between locations and the nuances of internal work or family relationships, which can influence the BS outcome. Furthermore, as employees on leaves of absence and vacations were excluded, the prevalence may have been underestimated, in the sense that, in the case of sick leave, the reason may have been the BS.

Conclusion

The risk prevalence was 17.6+11.4 points in EE (moderate), 6.6+5.0 points in DP (moderate) and 36.8+6.6 points in PF (high), which indicates that the population evaluated already presents some contingency or preventive need, because the predisposition to SB is clear. However, there was no statistical association with sociodemographic variables. On the other hand, since the pandemic has been prolonged in Brazil, there is a need to increase worker health programs that include pandemic situations and for the medium and long-term repercussions that have not yet been fully understood.

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