v. 1, n. 4, 2021

International Journal of Health Science

BURNOUT SYNDROME: AN ANALYSIS OF DOCTORS AT THE FRONT LINE OF COVID-19 IN SERGIPE

Bruno José Santos Lima
Universidade Tiradentes, Aracaju
http://lattes.cnpq.br/6158584238563073

Mariana Alma Rocha de Andrade
Universidade Tiradentes, Aracaju
http://lattes.cnpq.br/2272348219459394

Matheus Todt Aragão
Universidade Tiradentes, Aracaju
http://lattes.cnpq.br/5208980094866667

Felipe Meireles Dória
Universidade Tiradentes, Aracaju
http://lattes.cnpq.br/9830785262951302

Marina Maria Gonzaga Moreira
Universidade Tiradentes, Maceió
http://lattes.cnpq.br/9543869466454009

Alícia Calinne Melo Santos
Universidade Tiradentes, Aracaju
http://lattes.cnpq.br/3583652855161857

Raúl Adame Paredes
Anáhuac Mayab Universidad, Mérida – México

Oswaldo Neguib Cervera Suárez
Universidad Autónoma de Yucatán, Mérida – México

Evlyn Karolayne Bispo Andrade
Universidade Tiradentes, Aracaju
http://lattes.cnpq.br/4212541502033086

Victor Fernando Costa Macedo Noronha
Universidade Tiradentes, Aracaju
http://lattes.cnpq.br/6121552204494832

Natália Araújo Barreto
Universidade Tiradentes, Aracaju
http://lattes.cnpq.br/0553473986481540

Abstract: Introduction: Data from the teams of doctors on the front lines of treating COVID-19 cases show physical and mental exhaustion. In Sergipe, doctors experience the different types of burden in dealing with the pandemic. This note alerts to the Burnout Syndrome (SB) in the state. Objective: The current research estimates the impacts on elucidative aspects of BS in the group of medical professionals that fight the pandemic in Sergipe. **Methodology:** It is a descriptive, quantitative and cross-sectional study. A sample of 86 doctors working in the public and private services of Sergipe on the COVID-19 front line was used. For data collection, a self-administered online questionnaire was used, through the Maslach Burnout Inventory General Survey. All questions are composed of a Likert scale that were scored by the Maslach Burnout Inventory. The presence of a high level in at least one of the three dimensions evaluated was used as a definition of SB. Categorical variables were described using absolute and percentage relative frequency. The hypothesis of independence between categorical variables was tested using Pearson's Chi-Square or Fisher's Exact tests. Results: 59.8% of respondents had positive symptoms for the syndrome, with a predominance of high emotional exhaustion (42.5%), low cynicism (71.3%) and low efficiency at work (58.6%). 61.3% aged 35 years or less, although both age groups were positive. 63.2% in men and 57.1% in women. 60.8% in singles and 55.9% in married people. 67.9% in doctors who are already fathers or mothers. 93.8% among those with 5-10 years of professional experience, being also positive in physicians with less than 5 years of experience (53.8%), but negative in those with more than 10 years of career (52.6 %). Finally, BS was positive in 68.2% of those who work in the public network and was not decisive for doctors who work in a private network. Conclusions: The

survey results reveal levels of Burnout in a significant number of professionals: 59.8% of Sergipe physicians on the front lines fighting the pandemic showed positive symptoms for the syndrome. These findings lead us to believe that the mental illness of health workers in Sergipe, in the current health context, is more related to male gender, age equal to or less than 35 years, length of professional experience of less than 10 years and work in the public service of health. These findings point to a psychological illness among physicians in Sergipe more related to male, young, with recent professional experience and working in the public health service. The Ministry of Health (2001) indicates, as a treatment for BS, psychotherapeutic, pharmacological and psychosocial interventions, which can be divided into individual and organizational, which must be considered in these cases, especially within a new health situation brought about by the pandemic by SARS-CoV-2.
Keywords: COVID-19, Physicians, Burnout Syndrome.

INTRODUCTION

Doctors suffer from stigma and social expectations. If, on the one hand, they can be the object of adoration and recognition by those who immediately enjoy their benefits, on the other, they are required to never make mistakes and always make people live longer or not let anyone die, as if the very gift of life were within their reach. (BARBOSA, 2001). From all of this, it appears that medical professionalism aspires to professional competence, but also sincerity, altruism, honor, responsibility, integrity and respect for others (REZENDE, 2003). Therefore, the physician's physical and mental well-being is necessary to exercise the responsibilities assigned to them. Associated, the COVID-19 pandemic caused by the new coronavirus (SARS-CoV-2) has presented itself as one of the greatest health challenges on a global scale of this century. By the end of March 2021, more than 1 year after the epidemic began in China at the end of 2019, there had already been more than 126 million cases and 2 million deaths worldwide from COVID-19, and many cases are still expected and deaths in the coming months (JHU CSSE, 2021). In Brazil, in July, there were around 20 million confirmed cases and 558,000 deaths by COVID-19 (Secretarias Estadual de Saúde - Brazil, 2021). Health professionals are particularly susceptible to infection. In Brazil, as well as in other countries, thousands of health professionals were removed from professional activities for having acquired the infection and many died as a result of COVID-19. The country accounts for one third of all deaths due to SARS-COV-2 infection among professionals in the category globally (COFEN, 2021). Although important, ICU beds and respirators are not the only weapons to face the current pandemic – in fact, they are of little value without qualified health professionals to use them. Physicians already report overwork, mainly due to the growing staff shortages. As in every infectious-contagious disease epidemic, not even constant preventive care prevents the group that works on the front lines from being one of the hardest hit (CAIRES, 2020).

Data from teams of doctors on the front line of care for COVID-19 cases show physical and mental exhaustion, difficulties in decision making and anxiety due to the pain of losing patients and colleagues, in addition to the risk of infection and the possibility of transmission to family members (MEDEIROS, 2020). This note alerts to the Burnout Syndrome (BS), which this referral of professionals on the front lines of the pandemic can identify. There is no single concept for BS, however, the most accepted definition conceives the syndrome as a reaction to the individual's

chronic emotional tension, for dealing excessively with people (MASLACH, 1981). According to Benevides-Pereira (2002), this syndrome, conceptualized as chronic work stress, has as its main characteristics emotional exhaustion, depersonalization and reduced personal satisfaction or the worker's feeling of incompetence, which occurs when the individual no longer has strategies for coping with work situations and conflicts. In Sergipe, doctors experience different types of exhaustion in dealing with the pandemic, many of them related to extensive work hours, death and illness of co-workers and family members, frequent bad news transmission, miraculous work and the absence of life support resources minimum, isolation from friends and family, delays in wages, among others. All these items are required to deal with lives at a time of global fragility – that is, many give up the right to time off, leave or demand better working conditions at that time. Along the peaks of the COVID-19 pandemic, Sergipe was highlighted on the advance in the number of suspected and confirmed cases for the number of inhabitants. The State Department of Health (SES) reported, in August 2021, that Sergipe had accumulated 275,000 confirmed cases of COVID-19 and 5,922 deaths from the disease. In confrontation, field hospitals and other flow and referral services for flu syndromes increased the workload of health professionals. This project, therefore, serves the valuation of components of the BS that can both be avoided – and, thus, favoring work performance in the pandemic itself –, and treated whenever alarming. Therefore, the impacts on physical and/or mental exhaustion of the workday, the cynicism and efficiency in the work of the group of medical professionals that fight the pandemic in Sergipe were estimated.

METHODOLOGY

This is a descriptive, quantitative, cross-sectional study, involving physicians who work directly with COVID-19 in Sergipe. Non-probabilistic, consecutive and convenience sampling was used, consisting of 86 professionals working in public and private services in the state, communicated remotely via telephone or e-mail, and selected via the knowledge network at work. For data collection, an objective, anonymous and self-administered online questionnaire was used (https://forms.gle/xuf6h3EXpwo9EU2d9), answered voluntarily by physicians who agreed to participate in the study at the time of their availability, with no need for follow-up In real time. The questionnaire has three parts: the first, exposure of the Informed Consent Form; the second, 06 questions comprising epidemiological, professional and quality of life data; the third, 16 questions that comprise the multidimensional assessment of the SB. Average response time is 5 minutes. To assess BS, the Maslach Burnout Inventory General Survey was used, translated and adapted by Legal (2007), which assesses the 3 dimensions of the syndrome: Emotional Exhaustion (EE), 6 variables, Cynicism (CI), 4 variables, and Work Effectiveness (ET), 6 variables. All questions are composed of a Likert scale ranging from 0 to 6, ranging from "never" to "every day". The scale is originally calculated by counting the score obtained in each subscale, however, in Brazil, these subscales have not yet been submitted for analysis and validation. Therefore, an adaptation of the interpretation of the Maslach Burnout Inventory (MBI) was made, considering: for Emotional Exhaustion (EE) > 19 points as a high level, 12-18 as a moderate level and < 11 low level; for Cynicism (CI) scores > 9 indicate high level, 5-8 moderate and < 4 low level; for Work Effectiveness (ET) scores 0-22 indicate high level, 23-27 level moderate and low > 28.

Although there is no consensus in the literature for the diagnosis of Burnout syndrome, the presence of high level in at least one of the three dimensions was used as a definition. Categorical variables were described using absolute frequency and percentage relative. they were described using mean and standard deviation. The hypothesis of independence between categorical variables was tested using Pearson's Chi-Square or Fisher's Exact tests. The software used was the R Core Team 2021 (Version 4.1.0) and the significance level adopted was 5%. The results were expressed in absolute, relative and percentage terms, represented through tables and graphs. In addition, the research was conducted based on the resolutions established by the National Health Council (CNS 466/12), and submitted to Plataforma Brasil.

RESULTS

As shown in Table 1, 59.8% of respondents had positive symptoms for the syndrome, with a predominance of high emotional exhaustion (42.5%), low cynicism (71.3%) and low effectiveness at work (58.6%).

As for age and sex, in the cut-off of physicians from Sergipe in Table 2, the relative predominance was for individuals aged 35 years or less (61.3%). Individually, both age groups investigated presented positivity for Burnout as prevalent. Furthermore, more men (63.2%) had positive symptoms for SB than women (57.1%), proportionally. In terms of marital status and number of children, 60.8% of single individuals with positive symptoms for SB and 55.9% of married individuals stood out. In addition, the relative assessment concludes a greater manifestation of Burnout in physicians who are already fathers or mothers (67.9%).

About time of experience, 93.8% fulfilled symptoms for SB among physicians with 5-10 years of professional experience. This is the highest proportional value in the analyzed categories of the variable, being also positive for physicians with less than 5 years of experience (53.8%), but negative for those with more than 10 years of career (52.6%). Finally, BS was positive in 68.2% of those who work in the public network and was not decisive in doctors who work in a private network, dividing 50% of positive symptoms against 50% of negative symptoms.

DISCUSSION

GENERAL

Among the components of physical and mental exhaustion, cynicism and effectiveness at work, items such as living with pain and suffering, exposure to risks, lack of infrastructure, decisions on palliative care, availability for leisure, work overload, time for experience, among many others. These items in times of pandemic, however, were simultaneously affected by the high transmissibility and important virulence of COVID-19.

In a war scenario, doctors and other health professionals were practically called upon to donate themselves in full while science gained time to create ways to overcome these areas of the virus. In this sense, if in times prior to COVID-19, physicians were already part of a prevalent group of professionals affected by BS, it was expected that, in the new situation, this would intensify.

RELATIONSHIP WITH AGE AND SEX

Regarding the "age" variable, results presented by Gil-Monte or even more current, such as those by Morales, Guevara and Ordenes mention that this association is not yet conclusive. While Atance is an author who points out significant differences in the emotional exhaustion dimension with people over 44 years old; other studies, such as Garnier's, report that younger individuals

	n	%	Average	DP
Emotional exhaustion			17,2	9,3
Low	27	31,0		
Moderate	23	26,4		
High	37	42,5		
Cynicism			4,1	5,3
Low	62	71,3		
Moderate	9	10,3		
High	16	18,4		
Effectiveness at work			25,9	9,1
Low	51	58,6		
Moderate	8	9,2		
High	28	32,2		
Positive symptomatology for Burnout				
Yes	52	59,8		
No	35	40,2		

Table 1. Result of Burnout Syndrome (SB) in the different evaluation criteria.

	Emotional exhaustion			
	Low n (%)	Moderate n (%)	High n (%)	p-value
Age:				
<=35	14 (22,6)	17 (27,4)	31 (50,0)	0,018*
>35	13 (52,0)	6 (24)	6 (24)	
Gender:				
Female	12 (24,5)	16 (32,7)	21 (42,9)	0,223
Male:	15 (39,5)	7 (18,4)	16 (42,1)	
Marital status:				
Single	12 (23,5)	14 (27,5)	25 (49)	0,345
Married	14 (41,2)	8 (23,5)	12 (35,3)	
Widow	1 (50)	1 (50)	0 (0)	
Do you have kids?				
Yes	12 (42,9)	6 (21,4)	10 (35,7)	0,259
No	15 (25,4)	17 (28,8)	27 (45,8)	
Professional experience time:				
Less than 5 years	17 (32,7)	16 (30,8)	19 (36,5)	0,010*
Between 5-10 years	2 (12,5)	1 (6,3)	13 (81,3)	
Over 10 years	8 (42,1)	6 (31,6)	5 (26,3)	
Public				
Yes	17 (25,8)	16 (24,2)	33 (50)	0,037*
No	10 (47,6)	7 (33,3)	4 (19,0)	
Private				
Yes	19 (31,7)	19 (31,7)	22 (36,7)	0,165
No	8 (29,6)	4 (14,8)	15 (55,6)	

Caption: n – absolute frequency. % – percentage relative frequency. Pearson's Chi-Square Test. * p<0.05.

Table 2. Result of Burnout Syndrome (BS) in different epidemiological aspects.

have higher syndrome scores. Some studies mention that the high average age is an important factor for the development of mental or occupational disorders, due to the reduced ability to adapt to stressful conditions at work.

Furthermore, most studies do not usually highlight a statistically significant difference in BS according to sex either. Based on Canetto's theories, the scenario of greater male involvement may be linked to the fact that men are discouraged from expressing their distress, which tends to compromise their mental health in order to present higher rates of antisocial behavior, use of substances and suicide - contributing cycle to the development of the syndrome in the pandemic.

RELATIONSHIP WITH MARITAL STATUS AND NUMBER OF CHILDREN

Regarding the marital status, the current results need an in-depth study regarding the implications of marital status, since the literature is still incipient in this regard. Some authors understand marriage as a contributing factor to the disorder, while others define it as a protective factor. The same is true for the number of children.

RELATIONSHIP WITH TIME OF PROFESSIONAL EXPERIENCE

In this variable, Atance assumes that the less experience (< 2 years), the greater the probability of developing the syndrome; Morales and Ordenes reported a negative relationship between this and Burnout. Although the current study demonstrates a predominance between 5 and 10 years, it shows itself in accordance with the reduction in the incidence of the disorder over the years of work, ending up in inverting the prevalence of diagnosis.

RELATIONSHIP WITH THE PUBLIC OR PRIVATE LABOR NETWORK

The workload can vary according to the hospital, as the service can be provided in hospitals affiliated to private networks or to the Unified Health System, each with its own culture and organizational characteristics.

Regarding the type of work network, the literature shows higher rates of illness in public institution workers (SANTOS et al., 2017). According to Santos, these professionals also had significantly higher rates of depression, alcohol consumption and in two of the three dimensions of SB: emotional exhaustion and depersonalization. Corroboratingly, when this association was investigated in the present study, higher rates of positive symptoms for Burnout were found in workers belonging to the public health system.

In this sense, it must be considered that health professionals working in public hospitals may suffer more from the lack of adequate resources and conditions, such as medicines, basic materials and a well-structured team, compared to those working in the private sector (SOUZA & SCATENA , 2014).

CONCLUSION

The survey results reveal levels of Burnout in an expressive contingent of professionals: 59.8% of Sergipe physicians on the front lines in combating the pandemic showed positive symptoms for the syndrome. These findings lead us to believe that the mental illness of health workers in Sergipe, in the current health context, is more related to male gender, age equal to or less than 35 years, length of professional experience of less than 10 years and work in the public service of health.

The negative impacts of the disorder on their well-being and its implications for patient care show the urgency of interventions aimed at this population, aiming to reduce

levels of occupational stress, encourage self-care, develop self-esteem and structure a healthy work environment. The Ministry of Health (2001) indicates, as a treatment for BS, psychotherapeutic, pharmacological and psychosocial interventions, which can be divided into individual and organizational.

In the first case, individual intervention is based on learning adaptive coping strategies to stressors. It refers to the training of cognitive and behavioral skills in meditation, physical activity (Moreno, Gil, Haddad and Vannuchi, 2011) and self-care, such as ensuring adequate rest, balance between profession and other dimensions of life, and valuing hobbies (Moss et al ., 2016; Swensen, Strongwater and Mohta, 2018). In the second aspect, organizational intervention is aimed at changing the context in which work activities are carried out, aiming to improve communication and teamwork. This includes training employees, restructuring tasks and modifying physical and environmental conditions, such as flexible working hours, participation in decision-making, career planning and work autonomy (Garrosa et al., 2002; Melo and Carlotto, 2017).

Therefore, this study aimed to contribute to the update of the existing literature on BS and promote understanding of the nuances involved in its triggering among health professionals, alerting to the importance of analyzing preventive interventions, especially within a new health situation brought with the pandemic by SARS-CoV-2.

REFERENCES

1. ALMEIDA KM; SOUZA LA; CARLOTTO MS. Síndrome de Burnout em Funcionários de uma Fundação de Proteção e Assistência Social. **Revista Psicologia: Organizações e Trabalho.** Florianópolis, v.9, n. 2, p.86-96, 2009.

2. ARANDA BELTRÁN, Carolina. Diferencias por sexo, Síndrome de burnout y manifestaciones clínicas, en los médicos familiares de dos instituciones de salud, Guadalajara, México. **Revista costarricense de salud pública**, v. 15, n. 29, p. 1-7, 2006.

3. BARBOSA, Regina Helena Simões. Mulheres, reprodução e AIDS: as tramas da ideologia na assistência à saúde de gestantes HIV+. [Doutorado] **Fundação Oswaldo Cruz**, Escola Nacional de Saúde Pública; 2001.

4. BENEVIDES-PEREIRA AMT. **Burnout: quando o trabalho ameaça o bem estar do trabalhador.** 1ed. São Paulo: Casa do Psicólogo, 2002. 282p.

5. CARLOTTO, Mary Sandra; PALAZZO, Lílian dos Santos. Síndrome de burnout e fatores associados: um estudo epidemiológico com professores. **Cad. Saúde Pública**, Rio de Janeiro, v. 22, n. 5, p. 1017 1026, May 2006.

6. CFM (2007). **CONSELHO FEDERAL DE MEDICINA.** A saúde dos médicos no Brasil. / coordenação de Genário Alves Barbosa et alli. – Brasília, 2007. 220p.

7. FRANÇA, Flávia Maria de; FERRARI, Rogério. Síndrome de Burnout e os aspectos sócio-demográficos em profissionais de enfermagem. **Acta Paulista de Enfermagem**, v. 25, p. 743-748, 2012.

8. MEDEIROS, Eduardo Alexandrino Servolo. A luta dos profissionais de saúde no enfrentamento da COVID-19. **Acta paul. enferm.,** São Paulo, v. 33, e-EDT20200003, 2020.

9. MOREIRA, Hyan de Alvarenga; SOUZA, Karen Nattana de; YAMAGUCHI, Mirian Ueda. Síndrome de Burnout em médicos: uma revisão sistemática. **Revista Brasileira de Saúde Ocupacional**, v. 43, 2018.

10. SANTOS, Anelise Schaurich dos et al. Contexto hospitalar público e privado: impacto no adoecimento mental de trabalhadores da saúde. **Trabalho, Educação e Saúde**, v. 15, p. 421-438, 2017.

11. SCHAUFELI WB, Greenglasa ER. Introduction to special issue on burnout and health. **Psychology and Health.** 2001;16: 501-10.

12. MASLACH C; SCHAUFELI WB; LEITER MP. **Job burnout. Annual Review of Psychology.** 2001; 52:397-422.

13. PERNICIOTTI, Patrícia et al. Síndrome de Burnout nos profissionais de saúde: atualização sobre definições, fatores de risco e estratégias de prevenção. **Rev. SBPH, São Paulo**, v. 23, n. 1, p. 35-52, jun. 2020.

14. RABASQUINHO, Cidália; PEREIRA, Henrique. Género e saúde mental: Uma abordagem epidemiológica. **Análise Psicológica**, v. 25, n. 3, p. 439-454, 2007.

15. RDC Nº 7 – MINISTÉRIO DA SAÚDE. **AGÊNCIA NACIONAL DE VIGILÂNCIA SANITÁRIA.** Resolução ANVISA – Regulamenta as Unidades de Terapia Intensiva. Norma do MS de 24 de fevereiro de 2010 publicada no DOU: 25. 02. 2010. Brasil.

16. SIMCHEM E. et al. "Survival of critically ill patients hospitalized in and out of intensive care under paucity of intensive care unit beds". **Crit. Care Med.** 2004; 16: 54-61.