

BURNOUT SYNDROME AMONG UNIVERSITY WORKERS AT THE BRAZILIAN FREE FRONTIER

Síndrome de Burnout entre trabalhadores de uma universidade na fronteira franco brasileira

Síndrome de Burnout entre trabajadores de una universidad en la frontera franca brasileña

Fernanda Matos Fernandes Castelo Branco¹, Carlos Augusto Sampaio Córrea², Carlos Manuel Sanchez Dutok³, Tancredo Castelo Branco Neto⁴

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ABSTRACT

Objective: to estimate the prevalence of Burnout Syndrome among university workers at the Brazilian Free Frontier and to verify the associated factors. **Method:** a cross - sectional and descriptive study carried out with 53 workers from a university located on the French - Brazilian border, using electronic forms (google docs). **Results:** Male (56.6%), 30 to 39 years old (64.2%), single (47.2%), brown (49.1%), specialists (34%) and without children (75.5%). Of these, 26,4% individuals have the possibility to develop the syndrome, 37,8% are in the initial phase of the syndrome, 22,6% the syndrome begins to settle and 13,2% are in an advanced phase of the syndrome, having as predictor the gender variable ($p = 0.01$). **Conclusion:** none of the interviewees scored in the category (no evidence of Burnout), which makes the conditions of work analyzed worrisome, with preventive measures essential to delay or prevent mental illness among the population investigated.

Descriptors: Occupational health; Universities; Professional Burnout.

RESUMO

Objetivo: estimar a prevalência da Síndrome de Burnout entre trabalhadores de uma universidade na fronteira franco brasileira e verificar os fatores associados. **Método:** estudo transversal e descritivo realizado com 53 trabalhadores de uma universidade localizada na fronteira franco brasileira, através de formulários eletrônicos (google docs). **Resultados:** Predomínio do sexo masculino (56,6%), faixa etária de 30 a 39 anos (64,2%), solteiros (47,2%), se declaram pardos (49,1%), especialistas (34%) e sem filhos (75,5%). Destes, 26,4% indivíduos tem a possibilidade de desenvolver a síndrome, 37,8% estão em fase inicial da síndrome, 22,6% a síndrome começa a se instalar e 13,2% estar em uma fase considerável da síndrome, tendo como preditor a variável sexo ($p=0,01$). **Conclusão:** nenhum dos entrevistados pontuou

1 Nurse. Post-Doctorate in Nursing. Assistant Professor. Federal University of Amapá / UNIFAP. Oiapoque (AP), Brazil.

2 Nurse. Graduated in Nursing. Federal University of Amapá / UNIFAP. Oiapoque (AP), Brazil.

3 Biochemical. Doctor of Biodiversity. Assistant teacher. Federal University of Amapá / UNIFAP. Oiapoque (AP), Brazil.

4 Lawyer. Master student in Family Health. Assistant professor. Federal University of Amapá / UNIFAP. Oiapoque (AP), Brazil.

na categoria (nenhum indício de Burnout), o que torna preocupante as condições de trabalhos que estão submetidos, sendo imperativo medidas preventivas que retardem ou impossibilitem o adoecimento mental dentre a população investigada.

Descritores: Saúde do trabalhador; Universidades; Esgotamento profissional.

RESUMÉN

Objetivo: estimar la prevalencia del Síndrome de Burnout entre trabajadores de una universidad en la frontera franca brasileña y verificar los factores asociados. **Método:** estudio transversal y descriptivo realizado con 53 trabajadores de una universidad ubicada en la frontera franca brasileña, a través de formularios electrónicos (google docs). **Resultados:** predominio del sexo masculino (56,6%), grupo de edad de 30 a 39 años (64,2%), solteros (47,2%), se declaran pardos (49,1%), especialistas (34%), y sin hijos (75,5%). De estos, 26,4% individuos tienen la posibilidad de desarrollar la síndrome, 37,8% están en fase inicial del síndrome, 22,6% a síndrome comienza a instalarse y 13,2% estar en una fase considerable de la síndrome, teniendo como predictor la variable sexo ($p = 0,01$). **Conclusión:** ninguno de los entrevistados puntuó en la categoría (ningún indicio de Burnout), lo que hace preocupante las condiciones de trabajos que están sometidos, siendo imperativo medidas preventivas que retarden o imposibilitem el enfermo mental entre la población investigada.

Descritores: Salud laboral; Universidades; Agotamiento profesional.

INTRODUCTION

Nowadays, the world has been undergoing several technological transformations and accelerated dynamics that influence the life and health of the worker, because competitiveness and professional qualification impact work activities demanding more and more efficiency, higher productivity and performance. This leads to rise in pathologies of the modern world that directly affect mental health of the worker.

Within this context, the Burnout Syndrome (BS) stands out, described as an excessive stress and exhaustion, to which the professional is submitted in relation to his or her work. It usually affects professionals who have direct contact with the public and for a long time. It manifests itself through a physical and mental strain, which may be due to the consequences of multiple tasks, low self-esteem where the professional believes that he can no longer perform his tasks competently, manifesting itself through apathy and social isolation⁽¹⁾.

The first studies on BS took place in the 1970s and had as their main research targets education and health workers, considering the highly hierarchic nature, work colleagues and their relationships within a functional and professional context, that is, factors that were once the main causes for developing BS⁽²⁾.

Among the main causes of illness among education professionals are: very high workload, because in addition to the professionals exercising their normal working hours, they also expected to performed activities outside the classroom, as is the case of the teaching staff, which besides teaching classes, are expected to review student assignments, develop lesson plans, follow up their students on their coursework among other activities, which are often carried out during rest period⁽³⁾.

Therefore, professionals affected by this condition usually are easily irritated, exhibit excessive anxiety and low self-esteem, which is why they are usually very frustrated and suffer from insomnia, changes in blood pressure levels that can lead to the use of decompensated psychoactive substances, psychotropic drugs and alcohol, with illicit drugs appearing to a smaller extent. It is worth remembering that some professionals may become dependent on such substances, as they lead to momentary relief of the symptoms of BS⁽⁴⁾.

Professionals affected by this syndrome may cause disagreements in the professional environment, because poor quality of work / teaching makes student learning ineffective and professional behavioral changes resulting from exhaustion and fatigue lead to changes in the teacher-student relationship. Thus, this decrease in working capacity also causes conflicts among professionals in the group, generating more stress within the work environment.

Identifying BS in a timely is of paramount importance to teachers, as according to the International Labor Organization (ILO) teachers are the second most affected by the pathologies caused by the syndrome group of professionals⁽⁵⁾.

However, even though BS is related to the occupational environment, the factors may vary from individual to individual. Some of the factors responsible for triggering BS may be low remuneration, lack of recognition of their work, organizational environment, among others⁽⁶⁾.

In this way, BS tends to make the professionals feel less comfortable doing their jobs and limits their interest in social and family life. Therefore, it is very important to identify and intervene, because besides being highly harmful to the sufferer of the syndrome, it can bring losses to those around them, that is affect teacher-teacher, teacher-student and family relationships aggravating them and thus leading to reduced learning and harmony⁽⁷⁾.

Therefore, due to the lack of research among professionals on the Brazilian-French border, employees of a higher education institution located in the region were chosen so that based on the data collected appropriate measures can be identified and implemented in order to avoid further damage. In addition to the lack of studies with this subject group the need for adequate action justified this research.

This study aimed to estimate the prevalence of BS among workers of a university in the Brazilian French border area and to identify the underlying factors.

METHODOLOGY

This cross-sectional and descriptive study was conducted at a federal university located in the far north of Brazil, in the Brazilian French border area with 126 active workers. The data collection took place from September to November of 2017. The study included administrative technicians and teachers who have been working on the binational campus for at least 6 months, of both sexes, and who voluntarily agreed to participate in the study. Those excluded were teachers absent from campus due to maternity leave, vacation, legal leave for professional qualification or sick leave and who refused to participate in the study.

From the total of 126 workers, only 53 voluntarily accepted to participate in the study, being 12 technicians and 42 teachers.

Initially, a survey of the number of workers on campus was conducted together with the human resources department and all workers who met the inclusion criteria were invited to participate.

To avoid losses and doubts, the researcher sent an explanatory email to all involved, as well as an invitation letter via the e-mail and existing social networks to ensure greater participation of those involved. Invitation letter detailed the entire process and objectives of the research in order to clarify the researched to the target audience. Personal contact was also made in order to answer the questions. This approach was used due to the structural changes and differentiated supply regime (RDO) in the campus leading to reduced physical permanence of the teachers in the location where research was carried out.

Those who voluntarily agreed to participate, responding positively to the e-mail, were sent an Informed Consent Form signed by the researcher in charge along with the link to access the questionnaire. Participants received the electronic questionnaire in the form of Google Docs sent by electronic mail (e-mail) and those who agreed to participate voluntarily responded. From the responses a database was generated to ensure the privacy of participants.

The Burnout assessment instrument used was the *Maslach Burnout Inventory - Educators Survey*, a teacher-specific version adapted in Brazil by Carlotto and Câmara in 2004. It consists of 22 items, indicating the frequency of responses, with responses ranging from 1 to 5 points (1- never, 2-yearly, 3-monthly, 4-weekly and 5-daily) with the maximum of 100 points. The Brazilian version has internal consistency and factorial validity necessary for its application for the evaluation of BS in teachers in Brazilian context⁽⁷⁾.

Excel software was used for data analysis as it allows identifying and correcting typing errors. Statistical analysis was performed using SPSS version 20.0 statistical software (SPSS Inc., Chicago, IL, USA). Initially, the univariate analysis of socio-demographic and labor data was performed, where data were presented as frequency tables. Next, Fischer Exact Test was applied, at a significance level of 5%, with p value <0.05, to test the significance level between the study variables and the SB.

Subsequently, the variables were selected to compose the logistic regression model with the p-value prefixed at the maximum of 0.20. Odds Ratio (OR) values and 95% Confidence Interval (CI) were obtained to evaluate the odds ratio between the selected variables in the logistic regression.

The project was submitted for consideration by campus management requesting clearance for data collection in the field. The objectives of this study were explained for collaborators that provided support in implementing the project. The project was submitted to Plataforma Brasil and forwarded to the Ethics and Research Committee (CEP)

of the Federal University of Amapá and was approved as detailed in CAAE 69870217.7.0000.0003 and Decision 2.155.685.

Workers' participation was voluntary, upon reading and signing the informed consent form, based on Resolution 466/2012 of the National Health Council, and participants could disengage from the research at any time without prejudice. Confidentiality and anonymity of the participants were guaranteed to avoid any damage to those involved.

RESULTS

Even though the research was thoroughly disseminated and explained to the university workers, clarifying the purpose and importance of the survey, specifically through e-mails and in person, the participation was low, with only 53 workers responding to the questionnaires, as can be evidenced in the distribution of sociodemographic variables in table 1:

Table 01 - Sociodemographic data of the workers of the University at the Franco Brazilian Frontier. Oiapoque, AP, Brazil, 2017

		N	%
Gender	Male	30	56,6
	Female	23	43,4
Age group	20 to 29 yrs	14	26,4
	30 to 39 yrs	34	64,2
	40 to 49 yrs	4	7,5
	50 to 69 yrs	1	1,9
Marital status	Single	25	47,2
	Married	17	32,1
	Domestic partnership	9	17,0
	Separated	2	3,8
Declared race	Yellow	1	1,9
	Black	5	9,4
	White	19	35,8
	Brown (<i>Parda</i>)	26	49,1
	Other	2	3,8
Educational level	Highschool	2	3,8
	Undergraduate	5	9,4
	Graduate (specialization)	18	34,0
	Masters	17	32,1
	Doctorate	9	17,0
	Post-doctorate	2	3,8
Children	Yes	13	24,5
	No	40	75,5

The majority of respondents were male 30 (56.6%), aged 30 to 39 years 34 (64.2%), single 25 (47.2%), self-declared as brown (*pardo*) 26 (49.1%), specialists 18 (34%), and childless 40 (75.5%).

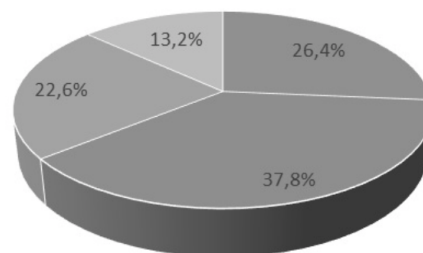
Regarding employment data, 37 (69.8%) of respondents work full time (40 hour weeks/ exclusive dedication regime). No part-time (20-hour) worker answered the questionnaire. Out of 53 participants, 12 (22.6%) were technicians and 41 (77.4%) teachers, and there was a tie in terms of years of work in the institution with 34% of respondents working from 1 to 2 years and 34% for over 3 years, as seen in Table 2.

Table 02 - Employment data of university workers at the Franco Brazilian Border. Oiapoque, AP, Brazil, 2017

		N	%
Full/ part-time	40 hours	16	30,2
	40 hours (Exclusive)	37	69,8
Professional category	Technician	12	22,6
	Teacher	41	77,4
Duration of employment at institution	<1 year	2	3,8
	1-2 years	18	34,0
	2 - 3 years	15	28,3
	>3 years	18	34,0

As far as BS is concerned none of those interviewed scored between 0 and 20 points (no BS symptoms), 14 individuals (26.4%) demonstrated possibility of developing BS, 20 (37.8%) are at an initial stages of the syndrome, 12 (22.6%) BS is beginning to establish itself, and 7 (13.2%) are at an advanced stage of BS (see Figure 1 below).

Figure 1 - Prevalence of Burnout Syndrome among workers at a university on the Brazilian French Border. Oiapoque, AP, Brazil, 2017



- 1) Possibilidade de desenvolver a SB(14)
- 2) Fase inicial da SB(20)
- 3) Começa a se instalar a SB(12)
- 4) Fase considerável da SB(7)

Those interviewed in a considerable phase of SB, all are male, aged 30 to 39 years, single, brown, people with specialization and have no children. Among the sociodemographic variables surveyed, based on Fischer test, at a significance level of 5% and adopting p value (<0.05), only the Burnout index and gender (p = 0.01) demonstrated a significant correlation between variables. We speculate that male gender was significant due to the higher number of male respondents, as shown in Table 3.

Table 03 - Association of workers' sociodemographic factors with the Burnout index. Oiapoque, AP, Brazil, 2017

	Burnout Index								P-value
	Probability to develop Burnout		Initial stage of Burnout		Burnout begins to install itself		Advanced stage of Burnout		
	n	%	N	%	N	%	N	%	
Gender									
Male	9	30,0	13	43,3	2	6,7	6	20,0	0,012
Female	5	21,7	7	30,4	10	43,5	1	4,3	
Age group									
20 to 29 yrs	2	14,3	6	42,9	5	35,7	1	7,1	0,637
30 to 39 yrs	9	26,5	13	38,2	6	17,6	6	17,6	
40 to 49 yrs	2	50,0	1	25,0	1	25,0	-	-	
50 to 69 yrs	1	100	-	-	-	-	-	-	
Marital status									
Single	7	28,0	8	32,0	6	24,0	4	16,0	0,958
Married	4	23,5	7	41,2	3	17,6	3	17,6	
Domestic partnership	3	33,3	4	44,4	2	22,2	-	-	
Separated	-	-	1	50,0	1	50,0	-	-	
Declared colour									
Yellow	-	-	1	100	-	-	-	-	0,122
Black	-	-	2	40,0	2	40,0	1	20,0	
White	5	26,3	6	31,6	7	36,8	1	5,3	
Brown (Parda)	9	34,6	11	42,3	2	7,7	4	15,4	
Other	-	-	-	-	1	50,0	1	50,0	

	Burnout Index								P-value
	Probability to develop Burnout		Initial stage of Burnout		Burnout begins to install itself		Advanced stage of Burnout		
	n	%	N	%	N	%	N	%	
Education									
Highschool	1	50,0	-	-	1	50,0	-	-	0,051
Undergraduate	1	20,0	2	40,0	-	-	2	40,0	
Graduate (specialization)	2	11,1	6	33,3	8	44,4	2	11,1	
Masters	4	23,5	10	58,8	2	11,8	1	5,9	
Doctorate	5	55,6	2	22,2	1	11,1	1	11,1	
Post-doctorate	1	50,0	-	-	-	-	1	50,0	
Children									
Yes	5	38,5	4	30,8	4	30,8	-	-	0,280
No	9	22,5	16	40,0	8	20,0	7	17,5	

Due to the sample size some treatments were equal to 0 and / or smaller than 5, we used Fisher's exact test at a significance level of 5%. Based on the data, we did not verify significance ($p < 0.05$) between any of the employment variables, so there is no statistical association between these variables and the Burnout index.

Table 4 considered male gender and the index "may be in a considerable phase of burnout" as a reference for the calculation of the OR, by p-value < 0.2 ($p = 0.011$) we consider that females have 97% less chance ($OR = 0.033$) of having the index at which Burnout begins to settle, that is, the men in this study indicated a higher rate of BS, and 30% have the possibility of developing BS with 43.3% in the initial phase, 43.5% in the state where SB begins to install itself and 20% in advanced phase of SB.

Table 04 - Logistic Regression between Sex and Burnout Index. Oiapoque, AP, Brazil, 2017

Variables	OR	IC (95%)		P
		Inferior	Superior	
Burnout Index				
Possibility to develop Burnout	0,300	0,028	3,250	0,322
Initial stages of Burnout	0,310	0,031	3,111	0,319
Burnout begins to install itself	0,033	0,002	0,451	0,011
May be in an advanced stage of Burnout	1	-	-	-

DISCUSSION

In this research men are more likely to develop BS, but it is worth noting that with the reduced sample of this study we cannot make the mistake of generalizing, because other studies showed that women are the main ones affected by BS. One study⁽⁷⁾ shows that women are more likely to develop BS due to the multitasking workload and concludes that women are more likely to develop emotional exhaustion.

Therefore, our conclusions contradict those of the study that analyzed BS in nursing technicians in a public hospital in the state of São Paulo that says the prevalence of BS is higher in women (84.6%)⁽⁶⁾. Another study that compared teachers in public and private schools corroborates previous research, since it concludes that women are more likely to acquire BS⁽³⁾. Yet another study also found severe cognitive overload among female respondents (58%) as compared to men, with critical evaluation (50%), besides greater professional burnout when faced with criticism (44%).

The workers who work full time (exclusive dedication) for the institution, have greater job security and are in more comfortable situation than those employed part-time. The latter need to look for additional jobs thus being more likely to develop BS due to physical exhaustion. In this regard, the study carried out on the campus of the Federal Institute of Rio de Janeiro (IFRJ) shows that out of 49 teachers who participated, 12.2% had mild SB level, 12.2% moderate level and 6.1 % high level of the syndrome⁽⁵⁾.

Another survey interviewed 72 teachers in care programme to evaluate for BS. Of these, 48 (66.7%) were male and 24 (33.3%) were female. According to the dimensions of BS emotional exhaustion was the most prevalent⁽⁹⁾.

Scientific research conducted with 4055 teachers in 187 secondary schools using a school climate questionnaire found that 26% of the sample had exhibited disruption, especially depersonalization and emotional exhaustion⁽¹⁰⁾.

A study that evaluated BS and associated risk factors among teachers in a higher education institution revealed that they are predominantly female, aged 31 to X, married and with family income between six and ten minimum salaries. 54% of respondents demonstrated intermediate level of BS (41 to 60 points) that indicates initial phase of the syndrome⁽¹¹⁾.

It was observed that teacher-student relationship has a significant effect on each of the three dimensions of the syndrome (exhaustion, cynicism and ineffectiveness), and the teacher-supervisor and teacher-co-worker relationships show a moderate effect on these dimensions.

These conclusions were based on data collected on the influence of interpersonal relationships on the development of burnout syndrome in a sample of 794 high school teachers from the Community of Madrid⁽¹²⁾.

Thus, BS is a reaction to work-related stress. A survey carried out among public elementary school teachers that verified the prevalence and factors associated with the professional exhaustion syndrome (SEP) showed that 24% were in the initial stages of SEP and 4.5% were at a critical stage of the syndrome and findings also showed association with low pay, dedication to the teacher's career and employment time over 11 years⁽¹³⁾.

Research that investigated strategies for coping with stress developed by teachers identified leisure activities as means of reducing tensions, which, however, are not carried out, thus suggesting that greater institutional support and individual commitment to development of strategies that promote the well-being of workers are necessary⁽¹⁴⁾.

Thus, work related activities can trigger BS, but there are always those that are more impactful. For example, in the case of the present study that investigated Burnout in university professionals, university environment was pointed out as conducive for developing BS and professions that require psychological and emotional engagement, in other words intensive contacts with the public, increase the likelihood of acquiring such disease⁽²⁾.

The results of the present research supported the diversity of variables that influence Burnout and its dimensions. After an exhaustive scientific review of the subject, and considering the results obtained, the need to continue investigating Burnout in this professional group is confirmed. The results obtained are expected to help in the development of future screening, early care and reduction of this syndrome in this professional group⁽¹⁵⁾.

BS is an evil that is present in our social environment and anyone is susceptible to it. Although this study had a limited adherence of the professional staff, this representing the main challenge to the study, it was extremely important to research the sociodemographic and employment characteristics of professionals from the Brazilian border university.

We speculate that the methodology employed led to limited engagement as internet access is precarious in the location of data collection and some participants did not "trust" to answer electronically, but as already mentioned, it was the most appropriate methodology due to the changes in employment adopted at the institution at the time of data collection.

CONCLUSION

We conclude that none of the interviewees scored in the category "no evidence of Burnout", which leads to question the conditions of work in the university on the Brazilian French border. Due to the lack of previous research among the target population, the present study contributed with pioneering data.

It is worth stressing that the samples were very limited and may have distorted the results, but with the data obtained we can demonstrate to the university the risks that its workers face due to inadequate service conditions, so that the university can provide better conditions of work to those professionals avoiding the loss of quality of service due to manifestations of BS and also support those who may develop the syndrome.

In addition, it is important to emphasize the relevance of subsequent studies, in order to compare the results and make the data on the context of the university campus investigated more reliable.

Studies in the area of nursing, health care as means of broadening our understanding of this occupational disease are necessary, as we need more than imperative measures to prevent injuries and outline actions that delay or prevent mental illness among the population investigated.

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Corresponding author

Fernanda Matos Fernandes Castelo Branco

Address: Amapá Federal University (*Campus* Binacional)

Rodovia BR 156, 3051, Km 01

Oiapoque/AP, Brazil

Zip code: 68980-000

E-mail address: fmfernandescb@gmail.com

Telephone number: +55 (86) 99412-8071

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