

Relationship between financial well-being and Burnout Syndrome in anesthesiologists

Summary

Burnout syndrome and problems in personal financial life can have negative effects on mental health. Given this similarity between the two, the question is whether there is a correlation between financial well-being and the risk of developing the syndrome. In this study a questionnaire was applied to analyze this relationship. The results show that the lower the financial well-being, the higher the risk of *Burnout*. The prevalence of the syndrome in the sample was 28.6%. Furthermore, age and time in the job market showed a negative correlation with this risk, while the weekly work load showed a positive correlation. Despite not demonstrating causality between the variables, this study presents new data in the literature. Future studies in the area are necessary to aid in the prevention and treatment of *Burnout* Syndrome.

Keywords: *Burnout* Syndrome, Financial Well-Being, Anesthesiologists

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Dr. Eduardo Schuch Reimann, Dr. Airton Bagatini

Sane Education and Training Center, Ernesto Dornelles Hospital, Brazil

Correspondence: Dr. Eduardo Schuch Reimann Sane Education and Training Center, Ernesto Dornelles Hospital, Porto Alegre, RS, Brazil, Tel +5551999712280, Email Baga2020@gmail.com

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Introduction

The concept of *Burnout* Syndrome was created by psychologist Cristina Maslach in the seventies. It is characterized as a type of long lasting stress, linked to work situations, which is highly prevalent among healthcare professionals.¹ The syndrome is composed of three dimensions of symptoms: emotional exhaustion, depersonalization and reduced personal accomplishment. Currently, there are no consensual criteria to define the diagnosis of *Burnout*. Some authors consider its presence when one of the dimensions is severely affected.² It is a condition with international relevance and significant prevalence in healthcare professionals, mainly physicians. Data from a Canadian oncology sector show prevalence of a high level of emotional exhaustion in 53% of the physicians, 37% of other healthcare professionals and 30% of the support staff. At national level, a 2007 study indicates that 57% of the Brazilian physicians manifest some worrisome degree of *Burnout* Syndrome, 23% being severe and 10% extreme.³ Similar results were found in countries such as Australia, Mexico, Romania, France and Spain.⁴

The syndrome results from constant and repetitive emotional pressure associated with intense interpersonal involvement for long periods of time in the work environment.⁵ Work overload has been demonstrated as one of its most important antecedents.⁶ In a survey carried out by the *Medscape* site, the causes most often mentioned by physicians were: too many bureaucratic activities, too many hours worked and not enough pay.⁷ Anesthesiology is a specialty with characteristics that contribute differently to *Burnout*.⁸ Further, the weekly workload of an anesthesiologist may be extensive, as reported in a study carried out in Recife that found a weekly average of 15.5 shifts worked.⁹

Among the symptoms presented by a person with Emotional Exhaustion are feelings of anger, irritability, impatience, and hopelessness. Physical symptoms such as low energy, chronic fatigue, muscle tension, and headache may be present. The individual with Depersonalization may manifest feelings of alienation in relation to others, as they are viewed negatively and avoid contact in the work environment. Finally, the individual with Reduced Personal Accomplishment has a perception that nothing they do is worthwhile or produces meaningful results.⁸ Besides the deleterious

consequences at individual level, *Burnout* also brings damages at the organizational level. It is associated with negative outcomes such as absenteeism, high personnel *turnover* and reduced productivity.⁶

Regarding the financial issue, debts can be evaluated in a dichotomous manner, being negative when they occur due to lack of financial control, or positive when planned aiming at ventures and acquisition of productive assets.¹⁰ When the individual loses control of his/her financial life, he/she may present reduced quality and life expectancy and develop symptoms of emotional stress, anxiety, and depression.¹¹⁻¹⁷ One study analyzed 52 papers and showed a direct relationship between the size of a debt and the level of concern and stress of the debtor.¹⁵ These data demonstrate the impact that finances can have on mental health. Despite this, a World Bank survey points out that only 10.9% of the Brazilian population has the habit of saving money thinking about their future for when they are old.¹⁸

Preventing *Burnout* Syndrome can be difficult. Establishing a limit on working hours, practicing regular physical activities, taking frequent vacations, taking breaks during work and adopting a healthy diet are recommended protective strategies.^{19,20} Considering that the weekly workload of an anesthesiologist can be extensive, the execution of preventive measures can be difficult.^{8,9}

Despite the vast literature on the prevalence, prevention, and consequences of *Burnout* Syndrome, little is discussed about the possible reasons that lead professionals to submit themselves to exhaustive workloads. In this sense, it is hypothesized that the desire to obtain greater financial returns is one of these motivators. Meanwhile, works related to financial life are focused on the effects of debt on mental health. However, no studies were found that relate a *Burnout* score and a financial well-being score. Given the similarities between these variables and the potential synergism of their effects on a professional's mental health, the existence of a correlation between them is questioned. The objective of this study is to analyze the correlation between financial well-being and *Burnout* Syndrome and its prevalence among Anesthesiologists working in Rio Grande do Sul. Besides, with the data collected, we can outline a profile with characteristics of the professional at greater risk of developing the syndrome.

Materials and methods

This was a cross-sectional study carried out with the anesthesiologists who work in the state of Rio Grande do Sul and are members of the Anesthesiology Society of Rio Grande do Sul (SARGS). Anesthesiologists with *e-mail* registered at SARGS received an invitation to participate in the study via *mail*, and those who agreed were included in the convenience sample of this study. Data was collected from June 29 to July 30, 2020 via an anonymous, self-applied, self-explanatory questionnaire designed on the *Google Forms* platform containing three sections of questions: personal data, financial well-being, and *Burnout Syndrome*.

The sociodemographic variables contained in the first section were: age, sex, marital status, years as an anesthesiologist, number of financial dependents, and how they work in the labor market. The analysis of financial well-being used the questionnaire designed and validated by Norvilitis, Szablicki, and Wilson, which is composed of eight questions with answers in a five-point *Likert* format: I feel uncomfortable with the amount I owe; I worry constantly about paying my debts; I feel financially satisfied; I believe I am in a good financial situation; I think a lot about my debts; I have had arguments with other people (parents, friends, spouse, others) because of my debts; In one year from now I intend to have no debts (financing, loans, credit card, etc.); In five years from now I intend to have no debts (financing, loans, credit card, etc.).²⁰

To evaluate the *Burnout Syndrome*, the *Maslach Burnout Inventory* (MBI), translated and adapted by Tamayo, was used.²¹ The MBI, considered the standard tool to evaluate the syndrome, contains 22 items, divided into three fundamental domains: Emotional exhaustion, Depersonalization and Professional involvement or accomplishment, with nine, five and eight items, respectively, with responses in *Likert* format from 0 to 6 points. The score is classified as low, medium, and high risk for developing the syndrome. For the Emotional Exhaustion domain, a score < 14, medium between 15 and 24, and high, a score > 25 is considered low. In Depersonalization, score < 3 means low, between 4 and 9 medium, and > 10, high. Finally, for professional involvement or fulfillment, scores >40 indicate low, between 33 and 39 points is medium, and <32, high.

Statistical analysis was performed using SPSS v. 20.0. Categorical variables were described as frequencies and percentages and quantitative variables, according to the Kolmogorov Smirnov test, with symmetrical distribution, were described by the mean and standard deviation and those with asymmetrical distribution, by the median and the interquartile range. Quantitative variables were correlated with each other using the Pearson or Spearman correlation coefficient, according to their distribution. Quantitative variables with normal distribution were compared by Student's *t* test for independent samples and those with asymmetric distribution by the Mann Whitney test. A 5% significance level was considered for the established comparisons.

The study was approved by the Research Ethics Committee under protocol CAAE n° 30235620.3.0000.5304 and the participants were presented with the Informed Consent Form, via *e-mail*, prior to completing the questionnaire.

Results

Among the 1359 anesthesiologists registered in the Anesthesiology Society of Rio Grande do Sul (SARGS), 234 (17.2%) answered the questionnaire. Mean age was 44.7 years. Male professionals (63.2%),

married (56.8%), and working in private anesthesiology teams (63.7%) were predominant. The mean weekly workload was 47.6 hours. The median number of years working in the labor market was 14.0, and the median number of financial dependents was 1.0 (the median was used due to the asymmetrical distribution of the data). Other results of the general characteristics of the sample are shown in Table 1. As for the financial score, a mean and standard deviation of 29.5 ± 6.5 was found (its score ranges from 8 to 40 points). The internal consistency was acceptable (Cronbach's $\alpha = 0.76$), while in the original work its value was 0.74.

Table 1 General characteristics of the sample

Age in years*	44,7 ± 12,4
Sex (%)	
Male	63,2
Female	36,8
Marital Status (%)	
Married	56,8
Single	18,4
Stable Union	17,5
Divorced	5,6
Widow(er)	0,9
Main form of action (%)	
Private anesthesiology team	63,7
Self-employed ("Freelancer")	15,8
Anesthesiology Resident	11,5
Work contract with hospitals and/or clinics	4,7
Civil Servant	4,3
Weekly workload*	47,6 ± 19,9
Years in the job market#	14,0 (5,0 - 25,0)
Number of financial dependents#	1,0 (0,0 - 2,0)

Variables with normal distribution described by the mean ± standard deviation;

Variables with asymmetric distribution described by the median (interquartile range: P25-P75);

% Categorical variables described by the percentage of n

Regarding the *Burnout* score, the answers were grouped into three categories (low risk, moderate risk, and high risk) according to the risk of a participant developing symptoms of each of the three dimensions. Among the participants, 23.5% were at high risk for developing symptoms of emotional exhaustion, 9.0% were at high risk for depersonalization, and 8.5% were at high risk for reduced personal accomplishment. Thus, 28.6% of the participants presented high risk in at least one of the dimensions. The prevalence of responses is shown in Table 2.

Table 2 Prevalence of risks of developing Burnout symptoms

	Low risk (%)	Moderate risk (%)	High risk (%)
Emotional Exhaustion	49,1	27,4	23,5
Depersonalization	76,9	14,1	9,0
Reduced personal fulfillment	73,5	17,9	8,5

In analyzing the relationship between the score of the financial score and each dimension of the *Burnout score* we found the result as shown in Figures 1, 2 and 3. The participants who presented low risk in the “Emotional Exhaustion” sphere presented a mean and standard deviation in the financial score of 30.7 ± 6.0 , while those at high risk presented 26.9 ± 6.3 ($p=0.001$). After adjusting for age and weekly workload (ANCOVA, analysis of covariance), there continued to be

a statistically significant difference in the financial score between participants at low and high risk ($p<0.001$). When analyzing the sphere “Depersonalization”, the low risk group presented a financial score of 29.8 ± 6.3 , while the high risk group presented a score of 28.3 ± 6.8 ($p=0.480$). In the dimension “Reduced personal accomplishment” the low risk group obtained a financial score of 29.9 ± 6.2 , while the high risk group 28.3 ± 7.2 ($p=0.191$).

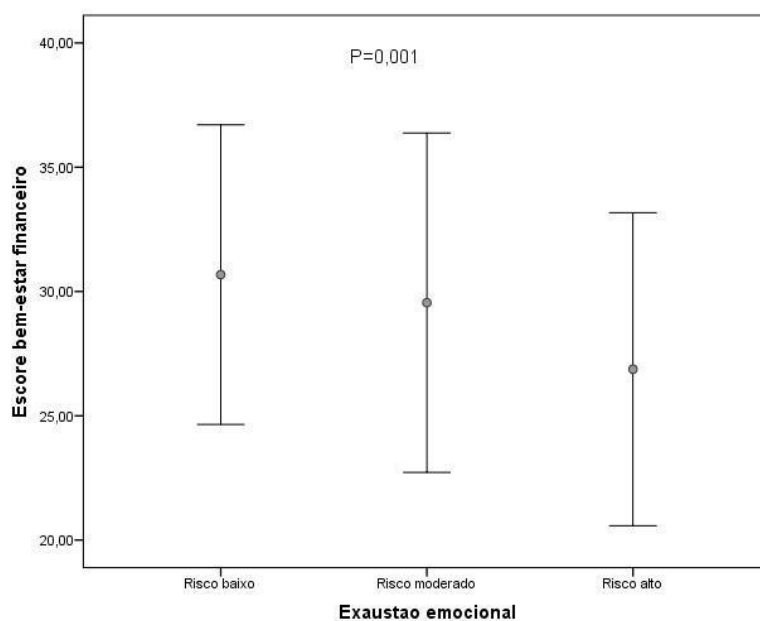


Figure 1 Relationship between emotional exhaustion and financial well-being.

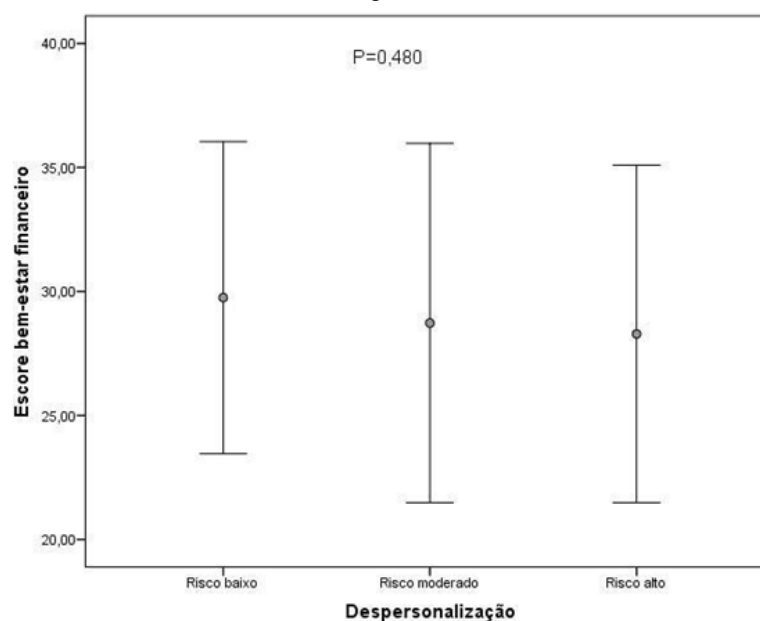


Figure 2 Relationship between Depersonalization and financial well-being.

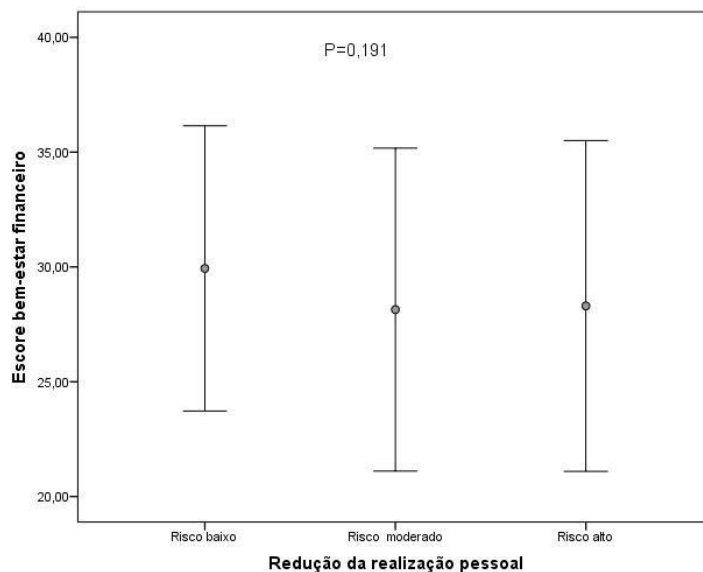


Figure 3 Relationship between Reduced personal fulfillment and financial well-being.

The other variables analyzed and their relationship with the risk of developing *Burnout Syndrome* symptoms are presented according to each dimension in Tables 3, 4 and 5. The variables “Age”, “Years of work” and “Weekly workload” obtained statistical significance and demonstrated similar behavior for the three spheres. The high-

risk group presents professionals with lower age, fewer years of experience, and higher weekly workload. In addition to these variables, the “Number of financial dependents” obtained statistical significance only for the sphere Reduction of personal accomplishment.

Table 3 Relationship between variables and emotional exhaustion

Emotional Exhaustion	Low Risk	Moderate Risk	High Risk	p
Financial well-being score*	30,7 ± 6,0 ^a	29,5 ± 6,8 ^{ab}	26,9 ± 6,3 ^b	0,001
Age in years*	47,9 ± 13,7 ^a	43,2 ± 10,9 ^b	39,8 ± 8,8 ^b	<0,001
Sex (%)				
Male	67,0	59,4	60,0	0,511
Female	33,0	40,6	40,0	
Marital status (%)				
Married or in a stable union	75,4	79,4	69,1	0,758
Single	18,4	14,3	23,6	
Divorced or widowed	6,1	6,3	7,3	
Way of acting (%)				
Private Team	58,3	76,6	60,0	
Autonomous	21,7	9,4	10,9	
Resident	9,6	9,4	18,2	0,072
Contract with hospitals or clinics	7,0	1,6	3,6	
Civil Servant	3,5	3,1	7,3	
Weekly workload*	43,9 ± 18,9 ^a	46,8 ± 19,8 ^a	56,2 ± 20,0 ^b	0,001
Years in business#	20,0 (6,0 -30,0) ^a	12,0 (5,3 - 22,8) ^{ab}	8,0 (2,0 -18,0) ^b	<0,001
Financial Dependents#	1,0 (0,0 - 2,0)	2,0 (0,0 - 2,0)	1,0 (0,0 - 3,0)	0,544

*Variables with normal distribution described by mean ± standard deviation and compared by ANOVA test followed by Tukey;

#Variables with asymmetric distribution described by median (interquartile range: P25-P75) and compared by Kruskal Wallis test

% Categorical variables described by the percentage of n and compared by the Chi-square test

^{ab} different letters represent different categories statistically

Table 4 Relationship of variables with depersonalization

Depersonalization	Low risk	Moderate risk	High risk	p
Financial well-being score*	29,8 ± 6,3	28,7 ± 7,2	28,3 ± 6,8	0,480
Age in years*	46,2 ± 12,9 ^a	39,6 ± 8,3 ^b	40,2 ± 10,1 ^{ab}	0,004
Sex (%)				
Male	61,7	63,6	76,2	0,425
Female	38,3	36,4	23,8	
Marital status (%)				
Married or in a stable union	77,0	66,7	71,4	0,723
Single	16,9	24,2	23,8	
Divorced or widowed	6,2	9,1	4,8	
Way of acting (%)				
Private Team	65,6	51,5	66,7	
Autonomous	16,1	18,2	9,5	0,533
Resident	9,4	18,2	19,0	
Contract with hospitals or clinics	4,4	9,1	0,0	
Civil Servant	4,4	3,0	4,8	
Weekly workload*	46,0 ± 18,8 ^a	55,9 ± 22,9 ^b	48,4 ± 22,0 ^{ab}	0,032
Years in business#	18,0 (5,0 - 28,0) ^a	8,0 (3,0- 18,0) ^b	8,0 (2,5 - 18,5) ^b	0,003
Financial Dependents#	2,0 (0,0 - 2,0)	1,0 (0,0 - 2,0)	2,0 (0,0 - 2,0)	0,246

*Variables with normal distribution described by mean ± standard deviation and compared by ANOVA test followed by Tukey;

#Variables with asymmetric distribution described by median (interquartile range: P25-P75) and compared by Kruskal Wallis test

% Categorical variables described by the percentage of n and compared by the Chi-square test

^{ab} different letters represent different categories statistically

Table 5 Relationship of variables with personal accomplishment

Personal fulfillment	Low risk	Moderate risk	High risk	p
Financial well-being score*	29,9 ± 6,2	28,1 ± 7,0	28,3 ± 7,2	0,191
Age in years*	46,2 ± 12,7 ^a	41,8 ± 10,4 ^{ab}	37,7 ± 10,3 ^b	0,003
Sex (%)				
Male	61,6	71,4	60,0	0,474
Female	38,4	28,6	40,0	
Marital status (%)				
Married or in a stable union	76,6	73,2	65,0	0,767
Single	17,0	22,0	25,0	
Divorced or widowed	6,4	4,9	10,0	
Way of acting (%)				
Private Team	66,3	61,9	45,0	
Autonomous	16,3	14,3	15,0	
Resident	9,3	14,3	25,0	0,323
Contract with hospitals or clinics	5,2	2,4	5,0	
Civil Servant	2,9	7,1	10,0	

Table Continued...

Personal fulfillment	Low risk	Moderate risk	High risk	p
Weekly workload*	45,7 ± 19,8a	53,9 ± 19,0b	51,4 ± 20,3a,b	0,039
Years in business#	18,0 (6,0 - 25,8) ^a	10,0 (3,0 - 20,0) ^{ab}	6,0 (2,0 - 12,5) ^b	0,001
Financial Dependents#	2,0 (0,0 - 2,0) ^a	1,0 (0,0 - 2,0) ^{ab}	0,5 (0,0 - 1,8) ^b	0,028

*Variables with normal distribution described by mean ± standard deviation and compared by ANOVA test followed by Tukey;

#Variables with asymmetric distribution described by median (interquartile range:P25-P75) and compared by Kruskal Wallis test

% Categorical variables described by the percentage of n and compared by the Chi-square test

^{ab} different letters represent different categories statistically

Discussion

If we consider one of the three severely affected dimensions as a criterion to have *Burnout Syndrome*, we found a prevalence of 28.6% in our sample. As for the correlation between the syndrome and financial well-being, we found a statistically significant relationship between high risk for emotional exhaustion and a lower score in the financial well-being score (30.7 ± 6.0 in the low risk group; 26.9 ± 6.3 in the high risk group). After adjusting for age and weekly workload, this result remained statistically significant. Regarding the other dimensions of *Burnout*, no statistical significance was reached.

The author of the financial questionnaire used the sum of all answers as a parameter, without defining a cut-off point to classify the participants into different categories. Thus, we cannot classify financial well-being as bad or good, only quantify its score and compare it in a linear fashion. Despite this difference of only 3.8 points, it is important to emphasize the tendency of points to decrease concomitantly with the increased risk of Emotional Exhaustion as shown in Figure 1. It should be noted the importance of the statistical significance after adjusting for age and weekly workload, because they are variables that also obtained statistical significance in their comparisons.

The prevalence of the syndrome shows great variability in the literature, and the rate of our sample diverges from other studies. A study conducted by the Federal Council of Medicine in 2007 found a prevalence of 57% in physicians.³ Data from 2012 in the United States presented 45% of the physicians with high scores in the dimensions Emotional Exhaustion and Depersonalization, and the rate of anesthesiologists was slightly higher than that of physicians in general.²² A survey carried out by the *Medscape* website and published in December of 2020 demonstrated a prevalence of 22% in professionals between 25 and 39 years of age.⁽²³⁾ Studies with anesthesiologists in Brazil also found variable data. Data from Distrito Federal showed 10.4% of the interviewees with the syndrome,²⁴ while another carried out at Faculdade de Medicina do ABC (Santo André) showed that 79.4% had medium to high risk to develop it.⁵

Emotional Exhaustion is considered the first stage of the syndrome and plays a central role in the *Burnout*² experience, being directly related to high levels of demand at work.^{6,25} In our sample, Emotional Exhaustion presented higher prevalence of high risk in relation to the other dimensions (Emotional Exhaustion: 23.5%; Depersonalization: 9.0%; Reduced personal achievement: 8.5%). These results are divergent from other Brazilian studies that found a higher proportion of high risk in the dimension Depersonalization. Data from the Distrito Federal indicate prevalence of Emotional Exhaustion 23.1%; Depersonalization 28.3% and Reduced personal accomplishment 13.4%²⁴ and from ABC Santo André of Emotional Exhaustion 30.5%; Depersonalization 33.9% and Reduced personal accomplishment 25.4%.⁵

The mean score of the financial well-being score was 29.5 ± 6.5, while the original work found a mean of 24.8 ± 5.9.²⁶ It should be noted that their sample is composed of students, while that of our study comprises only Anesthesiologists and Anesthesiology Residents. In the 2020 survey on the *Medscape* website, professionals were asked what would help reduce *Burnout* in their opinion. Increased pay to avoid financial stress was the most common response (53%). The second most frequent response was more paid time off (37%).²³ Still, several studies show the negative impact of debts on mental health, with increased risk of depression and anxiety symptoms.¹¹⁻¹⁴ Our results also follow this trend. Thus, we observe the clear importance of financial well-being on the mental health of a professional. Several risk factors for *Burnout* are related to personal life and work environment. One should consider that low financial well-being has a correlation with the syndrome and, possibly, is also a risk factor for its development.

Some characteristics also showed a statistically significant correlation with higher risk in the three dimensions: age, weekly workload and years of experience. All showed the same trend among the dimensions: the younger the age, the fewer the number of years of work, and the higher the weekly workload, the higher the risk. Similar data were found in the 2020 *Medscape* survey, which shows a higher prevalence of the syndrome in the younger age group,²³ and in the study from Distrito Federal which shows a lower mean age in professionals with the syndrome.²⁴ Other variables studied, such as gender, marital status and type of work were not statistically significant, even though there was a predominance of males (63.2%), married (56.8%) and working in private anesthesiology teams (63.7%).

The response rate to the study (17.2%) is similar to other national studies involving the prevalence of *Burnout Syndrome* in physicians.^{27,28} However, it is considered low and is one of the limitations of our work. In addition, it is important to stress that the results do not indicate a causal relationship, only a correlation between the variables. We can suppose that financial problems add to other risk factors to which an anesthesiologist is exposed, such as excessive workload and few leisure activities, leading the professional to develop *Burnout Syndrome*. Another hypothesis is that professionals with symptoms of burnout pay less attention to their personal finances and present lower financial well-being. Despite the difficulty in establishing a causal relationship, it is known that the variables mentioned above are correlated. This may help identify individuals who present a risk of developing the syndrome and thus enable its prevention.

As a contribution of this study, we could sum the characteristics that presented statistically significant correlation with high risk for *Burnout Syndrome* and outline a profile of characteristics of the anesthesiologist most susceptible to develop it. This professional presents lower financial well-being, younger age, shorter time of

practice, and longer workload. It is worth mentioning that financial well-being is not related to higher or lower nominal values, it only reflects the feeling and subjective sensation in relation to the subject. Thus, this study makes it possible to reflect on the healthy balance between workload and mental health.

Conclusion

This study found a statistically significant relationship between a lower financial well-being score and a higher risk of emotional exhaustion (one of the three dimensions of *Burnout*). The prevalence of the syndrome in the sample was 28.6%. Other variables analyzed such as age, time of work and workload also showed a statistically significant correlation with higher risk.

Works correlating the variables *Burnout* and financial well-being were not found in the researched platforms. The data presented in this work are of great importance to help understand which behaviors may be behind the development of the syndrome. Given the negative consequences of the syndrome and dysfunctional financial behavior, more studies are needed to elucidate the complex relationship between these important variables.

Acknowledgments

None.

Conflicts of interest

None.

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