

Prevalence of burnout syndrome in gynecology and obstetrics residents at the Maternal-Infant University Hospital of São Luís-MA.

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Keywords— Burnout. psychological stress. quality of life. resident physicians.

Abstract —Objective: Characterize and evaluate the prevalence of SB in physicians residing in the specialty of Gynecology and Obstetrics at the University Hospital Materno Infantil, Federal University of Maranhão, in São Luís, linking the epidemiological characteristics in order to identify risk factors. Method: Epidemiological questionnaires were used to define the variables and the Maslach Burnout Inventory (MBI), the most used instrument to evaluate SB. Results: From this, it was observed that the prevalence of SB among the above-mentioned residents is 80.8%; individuals who have renumbered activity outside the home have a higher personal achievement than those who do not have it; 2nd and 3rd year has a higher personal achievement level than first year residents. Conclusion: No significant differences were found in any of the SB variables in relation to age, marital status, gender, whether or not to have a child, whether or not to have pain / discomfort in the last 6 months, in relation to CH of weekly work outside the residence and the time of medical performance before entering the PRM (Medical Residency Program).

I. INTRODUCTION

In professional practice, several psychosocial stressors are present, some related to the nature of their functions, others related to the institutional and social context in which they are performed. These stressors, if persistent, can lead to Burnout Syndrome (BS).[1]

The first research on BS is the result of studies on emotions and ways of dealing with them, developed with professionals who, due to the nature of their work, needed to maintain direct contact with other people.[2]

BS is directly related to the decrease in quality of life, it can be observed that the international scientific literature

shows many controversies about the concept and the term "quality of life", from synonyms such as "health conditions" and "social functioning" ", even about its own definition.[3]

Currently, a range of instruments has been established for the quantification and study of quality of life, with several semantic divergences, however, both adopt a biometric, psychometric and economic view of health.[3]

Economic changes, work accumulation, overtime and difficulties with technology potentiate health, emotional and interpersonal relationship problems within

organizations. These factors cause a decrease in productivity and compromise the motivation to work, having an impact on the very image of the organization.[4]

Therefore, the importance of analyzing the behavior of quality of life scores, as well as the formation of ideals that adapt the organizational conditions of work to the needs of workers, in this case, medical specialists in training.[4]

Medical residency as a model of internationally applied specialization, is the moment in which the young doctor - recently graduated, most of the time, is faced with more intense adverse situations than at any previous moment in his life.[5]

It is subjected to an excessive workload (officially with an upper limit of 60 hours per week - extrapolated in several situations), compared to most regular workers (which cannot exceed 40 hours), combined with insecurity in relation to their education and training in service, the tension of the hierarchy between residents of different years, preceptors and other employees of the hospital staff, not to mention the need for working hours outside the teaching hospital to supplement the income.[5]

BS is a chronic stress reaction, which causes indisposition and discomfort in the individual, resulting from a work situation. It can be easily observed when individual expectations related to professional practice are revealed through a non-corresponding reality, giving rise to a feeling of failure and impotence.[1]

The syndrome has a high prevalence in professionals in direct contact with people and exposed to an overload of work, presenting greater depletion of energy, lack of professional fulfillment, emotional exhaustion, depersonalization and reduced professional fulfillment or a feeling of incompetence.[1]

The implementation of Quality of Life at Work occurs when the work unit and the people involved in it as a whole are looked at, what he calls the biopsychosocial approach, which represents the differential factor for carrying out diagnoses, campaigns, creating services and implementation of projects aimed at the preservation and development of people while working at the company. This justifies the performance of behavioral analysis to quantify this measure in search of improving labor parameters.[5]

The objective of the study was to evaluate the prevalence of Burnout Syndrome in resident physicians of the Gynecology and Obstetrics specialty at the University Hospital Materno Infantil, Federal University of Maranhão, in São Luís.

II. METHOD

A descriptive, observational, cross-sectional study was carried out with a quantitative approach with an epidemiological study type. This model was chosen because it encompasses, among other advantages, low cost, speed, objectivity in data collection and the ease of obtaining a representative sample of the population. [6]

The study population included resident physicians regularly enrolled in the Gynecology and Obstetrics specialty at the Hospital Universitário Materno Infantil, of the Federal University of Maranhão, in São Luís, regardless of gender, being over 18 years of age and being active in their particular position. in the study period.

Exclusion criteria were resident physicians of the Gynecology and Obstetrics service who are licensed, on leave due to illness or health problems, and residents absent during the research period.

According to data collected through data collected from the Department of Medical Residency in Gynecology and Obstetrics, the number of officially registered residents who fit the population studied was 26 (twenty-six), which constituted the sample for the study, considering that none were excluded after applying the criteria.

Data were collected through interviews and the application of an epidemiological questionnaire from the Maslach Burnout Inventory (MBI), a survey used to measure nuances in the pathological process of Burnout syndrome.

Residents are distributed in all sectors of the hospital, however, data collection and completion of research forms were carried out in the auditorium of the Hospital Materno Infantil, where they meet weekly to carry out theoretical activities, in such a way, that there is no harm in their daily practical activities. This action took place in July 2018.

The interview was applied after submission and approval on Plataforma Brasil and the research participants signed the Free and Informed Consent Term.

Participants initially answered the questionnaire with questions of a sociocultural approach, organized by the authors, which will address information such as: demographic, social, labor characteristics, opinion about working conditions, assistance services and physical and mental health care provided to these workers, level of personal engagement, mood peculiarities, ways of working and number of hours worked, followed by the most used instrument to assess BS, the MBI – Maslach Burnout Inventory, developed by Christina Maslach Susan Jackson in 1978.[7]

It is a questionnaire containing 22 items with 5 response options (Likert-type scale 1 to 5) which assesses the feelings and attitudes of professionals in their work on the following subscales: Emotional Exhaustion, Depersonalization and Decreased Personal Fulfillment. Each of these dimensions encompasses a certain group of questions that together represent its quantification. The Emotional Exhaustion and Depersonalization subscales indicate greater wear in the highest scores, while the Decreased Professional Achievement has the opposite direction, indicating greater wear in the lowest scores.

The MBI instrument is used to assess how workers experience their work, according to the three dimensions mentioned above, and uniquely identifies the Burnout Syndrome indices according to the scores of each dimension.[2]

To analyze the prevalence of the syndrome as a whole (the three dimensions grouped together), the criteria by Grunfeld et al. (2000), in turn, consider the diagnosis of burnout when the individual scores a high level in emotional fatigue or depersonalization, or a low level in personal fulfillment.[8]

The inventory is self-applying totaling 22 items. This questionnaire has its American version, in which the frequency of the response is evaluated through a scoring scale that varies from 0 to 6.[2]

Robayo and Tamoyo (1997 apud Borges et al., 2002) translated and adapted the MBI into Portuguese, in which individuals must respond according to a scale from 1 to 5.[9]

This Portuguese version was formulated due to the difficulty that certain people encountered in answering many items in the inventory, due to the high specificity of the original scale criteria. The version adapted to

Portuguese, despite considering only a five-item scale, uses the same type of frequency categories as the American version, that is, 1 for never, 2 for a few times a year, 3 for a few times a month, 4 to indicate a few times a week and 5 for daily.[10]

Data were evaluated using the IBM SPSS Statistics 20 (2011) program. Initially, descriptive statistics were applied, that is, graphs and frequency tables of all variables to obtain a demographic profile of the sample of the interviewed resident physicians. Then, ordinal variables related to Burnout Syndrome were calculated, they are: Emotional fatigue, Depersonalization and Personal fulfillment. Then, descriptive statistics of these ordinal variables were performed. And to assess the association of sociodemographic variables with these Burnout variables, the chi-square test of independence was used.

Then these three ordinal variables were evaluated by the nonparametric tests of Mann Whitney and Kruskal Wallis, when in the evaluations, of two groups or more than two groups, respectively. In all tests, the level of significance for rejecting the null hypothesis was 5%, that is, a value of $p < 0.05$ was considered statistically significant.

In addition, graphs and tables made in Microsoft Excel 2010 software were used, and Microsoft Word 2010 software was used to produce and format the text.

III. RESULTS

Regarding the year of residence, age, gender, having or not having children, exercising a paid activity in addition to the residence, working hours outside the weekly residence, time of medical practice before the residence and presence of pain or discomfort in the last 6 months, with presence or absence of absence, table 1 was obtained:

Table 1 - Frequency distribution of socio-demographic variables (N=26)

Sociodemographic	N	%	sociodemographic	n	%
Year of residence			Weekly extra residence hours (n=19)		
R1	10	38,5	6 a 10	3	15,8
R2	7	26,9	11 a 15	2	10,5
R3	9	34,6	16 a 20	4	21,1
			21 a 30	7	36,8
Age			31 a 40	2	10,5
20 – 25	5	19,2	> 40	1	5,3
26 - 30	15	57,7			
> 30	6	23,1	Time of medical practice before residency		
			< 1	12	46,2

Gender			1 a2	8	30,8
Female	18	69,2	3 a 4	5	19,2
Male	8	30,8	≥ 5	1	3,8
Marital status			Type of contract Overtime hours extra (n=19)		
Single	18	69,2	Administrative contract	10	52,6
Married	7	26,9	Verbal Contract	9	47,4
Outro	1	3,8			
			Pain/discomfort 6 months		
Sons			Yes	24	92,3
Yes	19	73,1	No	2	7,7
No	7	26,9			
			He took time off work to take care of his health		
Paid activity outside the residence			Yes	7	26,9
Yes	19	73,1	No	19	73,1
No	7	26,9			
Which one?					
Duty	18	94,7			
Nursery	1	5,3			
Total	26	100,0	Total	26	100,0

Source: Research Protocol, 2019.

The general distribution of SB variables among residents is shown in Table 2:

Table 2 - Frequency distribution of Burnout Syndrome variables in all residents.

Síndrome de Burnout	n	%
Emotional fatigue		
Medium	10	38,5
High	16	61,5
Despersonalização		
Low	2	7,7
Medium	6	23,1
High	18	69,2
Realização pessoal		
Low	19	73,1
Medium	6	23,1
High	1	3,8
Total	26	100

Source: Research Protocol, 2019.

Table 3a - Frequency distribution of S. Burnout questionnaire variables

Quiz	n	%	Quiz	n	%
1. I feel emotionally drained from my work.			6. Working with people all day takes a lot of effort.		
Nº/year	4	15,4	Never	7	26,9
Nº/month	10	38,5	Nº/year	5	19,2
Nº/week	7	26,9	Nº/month	5	19,2
Daily	5	19,2	Nº/week	5	19,2
			Daily	4	15,4
2. I feel tired at the end of the workday.			7. Effectively deal with people's problems.		
Nº/ year	2	7,7	Never	1	3,8
Nº/ week	12	46,2	Nº/year	2	7,7
Daily	12	46,2	Nº/month	4	15,4
			Nº/week	12	46,2
			Daily	7	26,9
3. When I get up in the morning and go to another workday, I feel tired.			8. My work leaves me exhausted.		
Nº/year	3	11,5	Nº/year	3	11,5
Nº/month	4	15,4	Nº/month	6	23,1
Nº/week	10	38,5	Nº/week	10	38,5
Daily	9	34,6	Daily	7	26,9
4. I can easily understand how people feel.			9. I feel that through my work I positively influence the lives of others.		
Nº/ year	2	7,7	Nº/year	2	7,7
Nº/ week	10	38,5	Nº/month	3	11,5
Daily	14	53,8	Nº/week	3	11,5
			Daily	18	69,2
5. I believe I treat some people as if they were impersonal objects.			10. I've become more insensitive to people since I've been doing this job.		
Never	5	19,2	Never	6	23,1
Nº/year	11	42,3	Nº/year	6	23,1
Nº/month	4	15,4	Nº/month	6	23,1
Nº/week	5	19,2	Nº/week	2	7,7
Daily	<u>1</u>	<u>3,8</u>	Daily	<u>6</u>	<u>23,1</u>
Total	26	100,0	Total	26	100,0

Source: Research Protocol, 2019.

Table 3b - Frequency distribution of the variables of the S. de Burnout questionnaire

Quiz	n	%	Quiz	n	%
11. I am concerned that this job is hardening me emotionally.			15. I don't really care what happens to the people I serve.		
Never	5	19,2	Never	16	61,5
Nº/year	5	19,2	Nº/year	4	15,4
Nº/month	6	23,1	Nº/month	4	15,4
Nº/week	2	7,7	Nº/week	1	3,8
Daily	8	30,8	Daily	1	3,8
12. I feel very vital.			16. Working directly with people causes me stress.		
Never	4	15,4	Never	2	7,7
Nº/year	3	11,5	Nº/year	6	23,1
Nº/month	9	34,6	Nº/month	9	34,6
Nº/week	7	26,9	Nº/week	5	19,2
Daily	3	11,5	Daily	4	15,4
13. I feel frustrated in my work.			17. I can easily create a relaxed atmosphere for people.		
Never	7	26,9	Never	2	7,7
Nº/year	10	38,5	Nº/year	5	19,2
Nº/month	4	15,4	Nº/month	5	19,2
Nº/week	3	11,5	Nº/week	8	30,8
Daily	2	7,7	Daily	6	23,1
14. I think I'm working too much.			18. I feel stimulated after working with people		
Nº/year	4	15,4	Never	1	3,8
Nº/month	8	30,8	Nº/year	3	11,5
Nº/week	5	19,2	Nº/month	4	15,4
Daily	9	34,6	Nº/week	14	53,8
			Daily	4	15,4
Total	26	100,0	Total	26	100,0

Source: Research Protocol, 2019.

Table 3c - Frequency distribution of variables from the S. de Burnout questionnaire

Quiz	n	%
19. I have achieved many achievements in my profession.		
Never	1	3,8
Nº/month	8	30,8
Nº/week	12	46,2
Daily	5	19,2

20. I feel at the limit of my possibilities.

Never	5	19,2
Nº/year	7	26,9
Nº/month	5	19,2
Nº/week	6	23,1
Daily	3	11,5

21. I feel I know how to properly handle emotional problems in my work.

Never	1	3,8
Nº/year	2	7,7
Nº/month	8	30,8
Nº/week	7	26,9
Daily	8	30,8

22. I feel that people somehow blame me for their problems.

Never	6	23,1
Nº/year	6	23,1
Nº/month	8	30,8
Nº/week	3	11,5
Daily	3	11,5
Total	26	100,0

Source: Research Protocol, 2019.

IV. DISCUSSION

The study showed that the group of residents evaluated at the University Hospital of the Federal University of Maranhão - Maternal-Infant Unit is composed mostly of the female profile, single, aged between 26 and 30 years, attending the first year of residency, with children, exercising paid outside the residence in the form of a shift, with a weekly workload outside the residence between 21 and 30 hours, with a medical practice time of less than 1 year before the beginning of the medical residency and who report pain or discomfort in the 6 months before the pushing.

These results show that our study is in line with the literature since Fabichak et al. (2014), mentions that in the studied group it was noticed that the sociodemographic profile was composed mainly of female residents, young, single, without children and recently graduated.[11]

As for Lima et al. (2007), the highest frequency was recorded in male residents, with a mean age of 27.2 years and single marital status. [12] According to Martins et al. (2011), the author describes that the sociodemographic profile of his study group is formed mainly by female residents, average age of 27.3 years, without children and attending the first year of residency.[13]

The prevalence of BS among GO residents is 80.8%, surpassing the finding by Martini et al (2010), who found a rate of 75% among resident physicians of the same specialty.[14]

Such prevalence can be justified by the fact that this syndrome mainly affects professionals who deal directly with people, and whose work requires high doses of dedication and involvement, in addition to strenuous working hours and night and weekend shifts.[15]

Regarding the distribution of BS variables, our study shows that the main evidence of residents are emotional fatigue (61.5%), depersonalization (69.2%) and professional fulfillment (73.1) are classified as high.

For Paredes et al. (2008), the BS variables evidenced (emotional fatigue - 47.1%, depersonalization - 55.9% and professional fulfillment - 68.1%) in their study are classified predominantly as low. According to Lima et al. (2007), when specifically evaluating each dimension of the BS, it was observed that emotional fatigue (65.0%) and depersonalization (61.7%) are classified as high by residents, however professional fulfillment (30.0%) is classified as low.[16]

As for Fabichak et al. (2014), the dimensions of DS considered high are emotional exhaustion as well as depersonalization, both with 75%. However, levels of professional achievement were low in 70.8% of residents.[11]

In view of the records in the literature, our results converge with the experiments of other researchers with regard to the variables/dimensions emotional fatigue and depersonalization, however, with regard to professional fulfillment, our study showed that 73.1% of resident physicians reported having high professional achievement, differing from the data found in the literature.

Significant statistical differences were evidenced in this research protocol, taking into account the dimensions of BS in relation to: paid activity outside the residence, those who exercise it and those who do not exercise it, with regard to the dimension of professional achievement resulting in p-value: 0.049, defining that individuals who have extra paid activity have greater achievement than those who do not.

Among the residents who presented pain/discomfort in the last 6 months before the survey, in relation to the dimensions emotional fatigue and professional fulfillment resulting in p-values, respectively: 0.026 and 0.042, it appears that those who left work had a median of greater emotional fatigue and lesser personal fulfillment than those who did not walk away.

Regarding the year of residence, between being in the 1st, 2nd or 3rd year, in relation to the dimension of professional achievement, a significant p-value difference was found: 0.042, demonstrating that 2nd and 3rd year residents have a level of achievement higher than 1st year residents.

In this study, no significant differences were found ($p > 0.05$) in the variables: emotional fatigue, depersonalization and personal fulfillment in relation to age, marital status, sex, having or not having a child, having or not having pain/discomfort in the last 6 months, in relation to the weekly work HC outside the residence and the time of medical practice before joining the MRP.

According to Gouveia et al. (2017), their study identified that the statistically significant differences were: marital status regarding being married or not, with regard to the dimension of professional achievement, revealing the p-value: 0.04; whether or not to have children, with regard to the dimension of professional achievement with p-value: 0.04; having or not having a specialization in the surgical area, sensitizing the emotional fatigue dimension with p-value: 0.03; having pain/discomfort in the last 6 months before the survey, in relation to the emotional tiredness and depersonalization dimensions, with p-value

respectively: < 0.01 and 0.02 ; regarding having adequate supervision during the residency, in relation to the dimension of emotional fatigue, with p-value: 0.04 . [17]

As for Martini et al. (2004), the data identified by the authors were organized according to the global quantitative for BS dimensions, and the authors identified the following statistically significant differences: year of residence in terms of being in the first or other years, with p-value: < 0.01 ; satisfaction with the residency service in terms of being satisfied or not, with p-value: < 0.01 ; family stress and whether or not to present recent episodes, with p-value: < 0.05 ; marital status in relation to being married or not, with p-value: < 0.01 . In their findings, they indicate that the first year of residence and being single are independent factors that contribute to BS and there is no direct association with having children or not. [14]

According to Martins et al. (2011), their intervention study for SB divided residents into two groups, one experimental and the other control, in which residents were evaluated at two different times, one before the intervention applied, only to the experimental group with information about the SB, and another after the intervention. The global assessment of BS revealed a statistically significant difference with p-value: 0.031 in the depersonalization dimension of the experimental group. [13]

For Paredes et al. (2008), the study identified that the statistically significant differences for p-value $< 5\%$ were: acceptance and control, with regard to the dimension of depersonalization, revealing the p-value: 0.023 ; whether or not to have professional bonds, with regard to the dimension of depersonalization. [16]

Zis et al. (2014), indicates that the statistically significant differences were: regarding gender, in the depersonalization dimension with p-value: < 0.001 ; age according to age group, in the dimension of professional achievement with p-value: < 0.05 ; marital status regarding being married or not, in the dimensions of emotional fatigue and depersonalization, with p-value: < 0.05 ; working time in the case of the study according to European guidelines, in the dimension of professional achievement, with p-value: < 0.05 ; as for having adequate supervision during the residency, in relation to the dimension of emotional fatigue, p-value: < 0.05 ; intellectual demand, in relation to the dimensions of depersonalization and professional achievement, with p-value, respectively: < 0.05 and < 0.01 ; management of family conflicts, in relation to the dimensions of emotional fatigue and depersonalization, with p-value: < 0.001 ; autonomy, in relation to the dimensions of depersonalization and professional accomplishment, with

p-value, respectively: < 0.05 and < 0.01 ; paid activity, in the dimensions of emotional fatigue and professional fulfillment, with p-value: < 0.001 . [18]

In view of the previously expressed results, it is possible to evidence that the literature has a wide range of BS associations with different parameters, giving researchers freedom to evaluate several factors that may interfere with the manifestation of BS.

V. CONCLUSION

In 80 years of history, since the implementation of the first medical residency program in Brazil, there have been no subsidies that discredit the supervised internship model as the gold standard of medical specialization, through which the physician acquires practical experience and applied specialized theoretical knowledge. in service.

It is also observed that this is the moment of professional initiation for the vast majority of physicians, considering the hypothesis that the current level of technical and scientific development in the general training of physicians at graduation is not capable of ensuring the necessary level of training. in the practical activities of all areas, the fact that the medical residency is concentrated in a single area, which in itself, already reduces the scope of the learning area, still offers the opportunity of contact with patients that, sometimes, can be prove insufficient so far.

Allied to all these benefits, it must be considered that this phase of the doctor's life is full of insecurities, fears, demands, lifestyle changes and volatility. It is the moment when the doctor undergoes exhausting working hours, with remuneration below the desired standard and sometimes, the lack of professional recognition and the absence of support from preceptors and/or management, depending on the hospital, may also be added. in which they are inserted.

Within this context, the ideal environment for the development of BS is presented, from which an intoxicating cycle begins to emerge between the increase in emotional fatigue, depersonalization with a consequent decrease in professional fulfillment and the fall in the use of learning and quality. of life of the authors involved, including patient care.

This study, as well as many others, clearly points to the high prevalence of BS in a certain group of resident physicians. It is true to say that Gynecology and Obstetrics shows signs of having a strong association with BS in several studies, however, it should be taken as a warning, in an attempt to minimize stressors, in order to reduce its incidence among residents, improving their quality of life

so that they can provide their best for joint development with the institution that welcomes them.

The exact form of these interventions should be carefully studied, combining representatives of the entity and administrators of the medical education system.

BS is a disease, sometimes with catastrophic losses, and must be managed as such, with the adoption of prevention measures and treatment strategies.

The Medical Residency is probably the moment that most strongly marks the professional profile of young doctors. Medical education institutions are directly responsible for the professionals they train, and results of studies like this one show a delicate situation that residents are going through and raise the discussion of where the problems are and how to change them.

The medical specialization model is far from ideal, it is clear that alternatives must be sought to improve the quality of life of resident physicians. At first, it is up to the managers of the hospitals in which these professionals are inserted, to listen to them, establish desires and main needs, in order to promote their relief, stimulate professional recognition and collaborate for their well-being, so that both learning, when serving the public is done in a pleasant and effective way.

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