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THE STUDY OF BURNOUT SYNDROME IN MEDICAL INTERNSHIP IN BELÉM-PARÁ

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ABSTRACT

Objective: to verify the presence of Burnout Syndrome or signs and symptoms that precede the medical internship students in Bethlehem in the State of Pará, Brazil and Meet the demographic profile of the students of the boarding school doctor (of 9th even to 12th semester) of the medical courses of three institutions of the city of Belém in the State of Pará. **Methodology:** this is an observational, descriptive, transversal research and quantitative character which aims to point out through field research, the amount of internal students in medicine (ninth to twelfth semester) that present the Burnout Syndrome or any sign or symptom of this syndrome. **Resulted:** They pointed to sharp professional stress between the participants, taking into account that in spite of exhaustion and fatigue in which the majority is, none of the participants alleged the lack of interest for his studies, not even the possibility of giving up. Conclusion: the mental health of students deserves defensive strategies, identifying sources of stress and relief tension. The findings show the need for clearer instruments that address the relationship between occupational stress and aspects considering the relevance of these psychosocial factors in the lives of these professionals.

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INTRODUCTION

The term burnout is treated as the elevated level of stress to which the professionals suffer in his work places, leading to the emotional exhaustion, to the affectionate distancing and the low professional realization (Trigo, Teng and Hallar, 2007). Meantime, this syndrome stretches out also to that what will be the future professionals of the health, with worrying incidence and shortage of studies on this subject directed to this target audience (Marques, Torres and Magalhães, 2016).

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According to Carlotto and Câmara (2008); Costa *et al.*, (2013) and Batista *et al.*, (2010) in their reviews of the literature points to the incidence of burnout in students from several courses of the health area, emphasize the hard confrontation of these students through situations of physical and mental exhaustion, which affects them socially, in recent years of the undergraduate program, and is considered a public health issue. The course of medicine, according to Bampi *et al.*, (2013) has always been surrounded by several factors that leverage and trigger stress and may influence ungracefully on the quality of life of the students. Even if it is of course more competed throughout the Brazilian territory, being considered stressful for students who get the approval. Professional stress cases in medical students are very frequent in the boarding

school and in residency, when the mental and physical health of these is vulnerable due the intense workload of shifts of 12 hours a day of work, but now, with very more responsibilities (Carlotto and Câmara, 2006). These young people begin to feel the effects of burnout in the internship and residency, however do not give due importance its initial characteristics, usually emotional exhaustion may be chronic for all your professional period and achieve the most diverse stages of the syndrome (Tarnowski and Carlotto, 2007). In view of the scarcity of Brazilian studies with this inventory, this article aims to verify the presence of Burnout Syndrome or signs and symptoms that precede students from boarding school doctor in the city of Belém in Pará State, Brazil.

MATERIALS AND METHODS

It is an observational, descriptive, transversal research and quantitative character which aims to point out, through field research, the amount of internal students in medicine (ninth to twelfth semester) that present the Burnout Syndrome or any sign or symptoms of this syndrome. Was approved by the Research Ethics Committee (CEP), with opinion of 2,139,136 number. The data collection was carried out in the year of 2016 through the Questionnaire of Burnout de Maslach for Students (MBI-SS) with questions closed for internal students of the courses of Medicine (of the 9th one to the 12th semester) of three Superior Institutions of Teaching, when public two are a Federal University of the Pará, University of the State of the Pará, and a toilet, the University Center of the State of the Pará. To evaluate the Burnout Syndrome was used the version in Portuguese of the Maslach Burnout inventory-Student Survey (MBI-SS) translated and validated by Fonte, (2011) in your dissertation in Health Economics and management at the University of Coimbra, Portugal, entitled Adaptation and validation for Portuguese questionnaire Copenhagen Burnout Inventory (CBI), page 138. The sampling trend assessment of qualitative variables was performed by Chi-square test was previously fixed the significance level $\alpha = 0.05$ (margin of error of the survey shall be at the rate of 5%) for rejection of the hypothesis of invalidity. Statistical processing was performed on the software BioEstat version 2.0 and Graf Table 5.3 version.

RESULTS

The results of this study are presented in two times: at first it was sociodemographic and economic profile and the risks of stress during the course; the second time, was held a presentation of the analysis of the presence of the Burnout Syndrome among students of medical school of three educational institutions surveyed in the city of Belém in the State of Pará.

Sociodemográfico and economic profile of the boarding schools of medical school of educational institutions participating in the survey : The profile of the students of the participating institutions, was presented and interpreted based on gender, age, marital status, living alone (financial independence), studying in public or private school and if makes use of medicines. It happens in Table 1 that most participants in the survey have age between 21 and 23 years (40.67%) and 109; 24 to 26 years (104; 38.81%), and this is a significant trend among students ($p < 0.05$), as well as the predominance of the female (169; 63.06%). Most participants

are single (233; 86.94%) ($p < 0.05$), and doesn't live alone (219; 81.72%). As for the question about the type of college that evolves, it turns out that there is no significant difference between the respondents ($p > 0.05$). When asked if ever need to take any kind of medication due to studies, it appears that the difference is not significant, however, points out that most say not to take any type of medication (150; 55.97%).

Table 1. Distribution of participants in the research, according to sociodemographic profile

Variable	N	%	P-Value ⁽¹⁾
Age Group			
18-20 years	1	0,37	<0.0001**
21-23 years	109	40,67	
24-26 years	104	38,81	
27-29 years	29	10,82	
More of 30 years	25	9,33	
Gender			
Feminine	169	63,06	0.0004**
Masculine	109	40,67	
Marital Status			
Not married	233	86,94	<0.0001**
Married	31	11,57	
Stable Union	2	0,75	
Separated	0	0,00	
Widower	0	0,00	
Does it live alone?			
Yes	49	18,28	<0.0001**
Not	219	81,72	
Faculty			
Public	139	51,87	0.5825ns
Private	129	48,13	
Does it use medicine?			
Yes	118	44,03	0.0506 ⁽²⁾
Not	150	55,97	

Source: data arising from the research(2016).

(1) Pearson's Chi-square test for trend/grip (p -value < 0.05). ** Highly significant Values; * Significant Values; NS-not significant Values; (2)-significant value at the level of $p < 0.10$. H1: is there significant trend between the observed frequencies ($p < 0.05$).

Presentation of the analysis of the presence of the Burnout Syndrome: According to the proposal of the research, is evident in table 2 which in all matters there is significant trend ($p < 0.05$) between the frequencies with emphasis on the issues flagged in green. Considering the issues 1. My studies leave me emotionally exhausted; 2. I feel exhausted at the end of a day at the University; 3. I feel tired when I get up in the morning and I think I have to face another day at the University; 4. Study or watch a lesson makes me tense and 5. My studies leave me completely sold out. It turns out that Q1 issues (63%) and Q2 (23.51; 43; 16.04%) most of the participants answered few times a week. Issue Q3, it turns out that most of the responses was every day (14.93%) and 40; question Q4 the predominant response was few times a year (27.99%) and 75; question 5 the predominant response was few times a week (37; 13.81%). Is evident in table 3 that all issues there is significant trend ($p < 0.05$) between the frequencies with emphasis on the issues flagged in green. Considering the issues 6. I've been threatening me for my studies since I enrolled in University; 7. I'm a little excited about my studies; 8. I feel increasingly cynical regarding the potential utility of my studies and 9. I have doubts about the meaning of my studies. It turns out that for matters Q6 (81; 30.22%), Q8 (30.22%) and 81; Q9 (109; 40.67%) most of the participants answered none time. On question Q7, it turns out that most of the responses was once a month (60; 22.39%). In table 4, shown all the issues there is significant trend ($p < 0.05$) between the frequencies with emphasis on the issues flagged in green. Considering the issues 10.

Table 2. Standard answers to diagnosis of the dimensions of burnout syndrome by Maslach Burnout Inventory (MBI), emotional exhaustion dimension

Reply	Emotional Exhaustion									
	Q1		Q2		Q3		Q4		Q5	
	n	%	n	%	N	%	n	%	n	%
None time	10	3,73	0	0,00	1	0,37	27	10,07	1	0,37
Few ones times a year	40	14,93	15	5,60	13	4,85	75	27,99	15	5,60
Once a month	23	8,58	3	1,12	6	2,24	40	14,93	5	1,87
A few times a month	47	17,54	14	5,22	23	8,58	54	20,15	25	9,33
Once a week	49	18,28	16	5,97	9	3,36	31	11,57	18	6,72
A few times a week	63	23,51	43	16,04	36	13,43	8	2,99	37	13,81
Every day	36	13,43	37	13,81	40	14,93	33	12,31	27	10,07
P-Value ⁽¹⁾	<0.0001**		<0.0001**		<0.0001**		<0.0001**		<0.0001**	

Source: data arising from the research (2016). ⁽¹⁾Pearson's Chi-square test for trend/grip (p-value < 0.05); ** Highly significant Values; * Significant Values; NS-not significant Values; (2)-significant value at the level of p < 0.10. H1: There is a significant trend between the observed frequencies (p < 0.05).

Table 3. Standard answers to diagnosis of the dimensions of burnout syndrome by Maslach Burnout Inventory (MBI), to dimension Disbelief

Reply	Disbelief									
	Q6		Q7		Q8		Q9			
	n	%	n	%	N	%	n	%		
None time	81	30,22	48	17,91	81	30,22	109	40,67		
Few ones times a year	74	27,61	43	16,04	74	27,61	54	20,15		
Once a month	32	11,94	60	22,39	22	8,21	23	8,58		
A few times a month	30	11,19	34	12,69	27	10,07	29	10,82		
Once a week	8	2,99	35	13,06	14	5,22	13	4,85		
A few times a week	23	8,58	22	8,21	33	12,31	15	5,60		
Every day	19	7,09	25	9,33	27	10,07	25	9,33		
P-Value	<0.0001**		0.0002**		<0.0001**		<0.0001**			

Source: data arising from the research (2016). ⁽¹⁾Pearson's Chi-square test for trend/grip (p-value < 0.05); ** Highly significant Values; * Significant Values; NS-not significant Values; (2)-significant value at the level of p < 0.10. H1: There is a significant trend between the observed frequencies (p < 0.05).

Table 4. Answers standard for diagnosis of the dimensions of the syndrome of burnout for Maslach Burnout Inventory (MBI), for the dimension professional Efficiency

Reply	Professional Efficiency											
	Q10		Q11		Q12		Q13		Q14		Q15	
	n	%	n	%	N	%	n	%	n	%	n	%
None time	3	1,12	8	2,99	5	1,87	2	0,75	0	0,00	3	1,12
Few ones times a year	5	1,87	20	7,46	17	6,34	11	4,10	6	2,24	6	2,24
Once a month	20	7,46	14	5,22	15	5,60	3	1,12	3	1,12	12	4,48
A few times a month	43	16,04	35	13,06	37	13,81	27	10,07	26	9,70	36	13,43
Once a week	27	10,07	44	16,42	47	17,54	25	9,33	26	9,70	44	16,42
A few times a week	94	35,07	101	37,69	99	36,94	72	26,87	87	32,46	110	41,04
Every day	74	27,61	46	17,16	47	17,54	129	48,13	120	44,78	57	21,27
P-Value	<0.0001**		<0.0001**		<0.0001**		<0.0001**		<0.0001**		<0.0001**	

Source: data arising from the research (2016). ⁽¹⁾Pearson's Chi-square test for trend/grip (p-value < 0.05). ** Highly significant Values; * Significant Values; NS-not significant Values; (2)-significant value at the level of p < 0.10. H1: There is a significant trend between observed frequencies (p<0.05).

I can solve effectively the problems that result from my studies; 11. I think I participate positively in class that I watch; 12. I feel that I am a good student; 13. I feel stimulated when I reach my educational goals; 14. I have learned many interesting materials for my course and 15. During class, I feel I can keep up the materials effectively. Proves that Q10 (issues 94; 35.07%), Q11 (37.69%), 101; Q12 (36.94%), 99; Q15 (110; 41.04%) most of the participants answered a few times a week. In question and if Q13 Q14 confirms that most of the responses was every day (149; 92.91%).

DISCUSSION

The discussion of the analysis of the results of this research was carried out in the profile of the students established boarding school of medicine who are between semesters 9° it 12°, followed about analysis of perception and professional performance and the level of stress in the Middle academic and your relationship with the presence of Burnout Syndrome. According to research data, 268 participants, 71 students are in 9th semester (26.49%); 69 students are in 10th semester

(25.74%); 65 students are in 11th semester (24.25%) and 63 students are senior semester (23.50%).

The Profile of the medical students of Belém-Pará-Brazil:

From the study it is possible to point out that among the students, the dominance of young people aged 21 to 26 (213; 79,48%), confirming with the author Campos (2016) from his research, claims to have currently more young trainees than at any other time, and despite the euphoria (characterized by the author) by profession, many complain of lack of time and fatigue to meet and study internship in hospitals, feeling in much of the time, exhausted, however, do not think of giving up their professions. Most of these young academics, are composed of women, having an index of 63.06% colleges surveyed, according to Benevides-Pereira and Gonçalves (2009) what also did a number much more elevated of women obtain in his inquiries in the medicine course, where it affirms also to have realized that the students had more dedication with the disciplines. So also, Cunha *et al* (2017)) they found that female students or those who do not live with the family, or that are at boarding school or which do not have free time for leisure activities for better quality of life in physical and

mental aspect, as well as students whose families reside in other town and students without religion, feature worst indices of quality of life and should be monitored by special programmers to improve the welfare, with emphasis on students from other cities. With respect to marital status of participants, there has been no data registered with divorced or widowed, mainly students, firstly with 86.94% presence of students singles, followed by 11.57% married, and only internal 0.75% are in union stable (index considered low). When approached if the respondent lives alone, only 18.28% say having this independence, the other 81.72% live most of the time, with their parents, uncles, friends (splitting rent) or with partners. Research conducted by Moreira *et al* (2006) says it was representative the number of students who have highlighted financial independence as a motivator of professional choice, especially when it comes to origin students from families with lower purchasing power. In their studies Cardoso, Caniço and Silva (2013) Verify that the students away from your residence at origin, see stress levels significantly higher than those not away, lose your social support network and need to create new adaptive strategies, which can be perceived as stressful. About study in public or private colleges, there were no differences in substantial on the search. A limitation of this research is cross-sectional character and have been held only in the city of Bethlehem, which makes the generalization of the results, as they may be assigned at particular characteristics of this group. On the issue of not using medication to relieve tensions of daily life or solve problems from academic activities, Silva *et al* (2016), declares that the use of forms as research instruments can be flawed by virtue of hiding the truth and masking of answer, besides the possibility of memory bias, inherent in cross-sectional studies.

Analysis of professional perception and stress level: This study intends to collaborate in some respects with other field research carried out in Brazil and in the world, to the professional exhaustion (or Burnout Syndrome) suffered by health professionals, which may start from the boarding school doctor and become most evident in medical residency. It is known that the Burnout is supported by a tripod, which corresponds: a) emotional exhaustion; b) disbelief and c) professional effectiveness, which can meet in a group or in a single subject, causing psychic disorders and other disorders (Benevides-Pereira and Gonçalves, 2009). In this case, what you can analyze from the study is that the in mates who participated in this research, don't feature the Burnout Syndrome, but one aspect of it already affects the emotional exhaustion. Among the results of emotional exhaustion, a few times a week, 23.51% of the respondents feel emotionally exhausted; 16.04% of pupils already feel exhausted at the end of the day a few times a week, as well as 13.81% of these, they are completely exhausted at the end of each day in College, totaling 58% of students showing emotional exhaustion. Souza, Caldas and De Antoni (2017), found in his studies that more advanced semesters would be protection factors since soften the impact of stressors agents, since students would have been through mechanisms of adaptation to the stress factors and already know how to deal with them. However, disagreeing that given, Maslach, Schaufeli and Leiter (2001) high values of emotional exhaustion are the first indication of the development of burnout syndrome in the future according to the procedural model of Maslach Burnout. When you deal with Disbelief, note that students surveyed didn't have, as it can be observed that never stopped by 30.22% studies since

joined in College; 30.22% of the students never felt unmotivated about your studies; the survey also reveals that 40.67% never had doubts about the meaning of his studies, however, 22.39% a few times per year they feel low enthusiasm for his studies. Second Campos (2016) a study conducted in young interns points similar characteristics between the cases, in which despite the fatigue of the daily routine of study and work, the inmates do not feel unmotivated or uninterested by the studies and for your profession. As for the last question of the Professional Effectiveness research to be answered by the students, through the data you're looking at everything in a positive way, by what 35.07% of students, a few times a week can solve problems related to their studies of very effective; so, in this way 37.69% believe that a few times a week can attend school in a positive way; 36.94% self they are considered good students a few times a week (the issue of fatigue and often lack of attention); 48.13% of students surveyed feel stimulated daily to achieve their goals in the study (whether by good score, works, performances or performance in the field); 41.04% of the students already claim that can accompany a few times a week the materials effectively. Students of the last years of health courses are more exposed to stress and, therefore, the changes in your physical and psychological health, due to the overhead of academic activities, not only theoretical and practical classes, as well as field research and expertise in Alloys academic, who joins to high demand emotional (the care practice, deals with the death of routinely, the failure with the losses (Souza, Caldas and De Antoni, 2017). In these courses of high academic workload, is also a big competition between students for results, which gives many hours of study at the expense of leisure activities, which can lead to anxiety, depression and panic (Serinolli, Oliva and El-Mafarjeh, 2015). Campos (2016) that it affirms in his comments that the medicine course is a course that causes physical and mental exhaustion in the pupils of the last years, but with the entry of younger and younger doctors, with all free time in order that they devote themselves to the studies, the phase of the boarding school has not been so difficult how much previously, though for Benevides-Pereira and Gonçalves (2009). This period of the course still come causing disorders in many students and medical residents.

Conclusion

This study with the medical students of the boarding school of three institutions in Belém-Pará-Brazil, who researched the existence of Burnout Syndrome among them, managed to see through the data obtained from the Maslach Burnout inventory of (MBI-SS), the presence of emotional exhaustion (EE), with strong points of stress, one of the tripods of SB, since no stress there is no Burnout. At the end of the work, the questions that remain are: what will result all this stress evidenced in academics? Who's going to pay for this account: the future professional, the patient, the system or all share a part of that prejudice? At what point in this journey, the stress can become a psychological disorder? In order to answer such questions if it makes necessary new studies looking for those answers. The population studied by this is very young students and for the most part, dependent on their families, featuring all your time to study and devote themselves exclusively to study medicine without having concerns, external factors ultimately weigh little in your routine. In this research there were no students who wish to withdraw from the course or who are unmotivated in their studies, despite consistent answers that some students feel exhausted at the end of the day. Most have a satisfactory

performance, without losses in your school performance. Regarding the use of drugs because of problems arising from their studies, they do not make use. The importance of sensitizing the faculties to these problems, in order to implement initiatives of information and prevention of stress by identifying and guiding students at risk is very important, since several researches agree that the course of medicine is a stressor, once the medical training is long and the student is exposed to a stressor for a long time, and may have a negative impact on your health. Know how to handle these stressful situations and conflicts that are part of life in smaller or larger scale, is of fundamental importance in order to circumvent these obstacles, can turn on the journey of these young people who dreamed of with this profession. So, the mental health of the students deserves defensive strategies, identifying fountains of stress and relief of the tensions of day by day, as soon as the education process was associated the psychological suffering, however it breaks pupils of the Apprenticeship Based on Problems, which also told bigger approximation of his teachers and realization of the tasks, than in the group of methods of traditional studies. Thus, research on Burnout among health care students and resident doctors are scarce in Brazil and in the world, most of them deals with anxiety, depression or about factors that interfere in the quality of life of University students. The findings show the need for clearer instruments that address the relationship between occupational stress and psychosocial aspects, considering the relevance of these factors in the lives of these professionals.

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