

Original Research Article

Burnout syndrome: evaluation in dentists in the city of Fortaleza, Brazil

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Received for publication: February 12, 2013. Accepted for publication: April 24, 2013.

Keywords: Burnout syndrome; dentists; occupational disease.

Abstract

Objective: The objective of this study was to assess the occurrence of burnout syndrome in dentists in the city of Fortaleza. **Material and methods:** By means of an analytical-descriptive research of quantitative character through the application of a MBI (Maslach Burnout Inventory) and a socio-cultural questionnaire. **Results:** The sample of 100 respondents was equally divided into female and male (50%), with a mean age of 38.09 years, 60% married, 34% single and 6% divorced. Most of the participants had between one and 20 years of tenure (62%), with a predominance of weekly working hours from 21 to 40 hours (44%). **Conclusion:** Burnout syndrome was diagnosed in 32% of respondents, without statistical significant differences in the relationship among gender and working hours, marital status and years of tenure (Mann Whitney $p < 0.005$).

Introduction

The occupational stress is an issue gaining attention worldwide. Because of the technological advancements and innovations occurring in countless managements of institutions, the requirements and

demands for a trained professional that have an excellent working development are indispensable every day. With all responsibility to be executed and the constant requirements of the modern life, the stress in the working environment is every time

more common, which can result in diseases such as the Burnout syndrome.

In 1974, the psychologist Herbert J. Freudenberger observed that the employees of a clinic for drug addicts in the United States were unstimulated to help the patients, because these did not make any effort to follow the treatment. Therefore, it could be observed that the employees showed some symptoms that had been associated with the Burnout syndrome [7].

Freudenberger, in its first definition, affirms that: "The Burnout is the result of exhaustion, disappointment and loss of interest in work activity, which appears in the professions that work in direct contact with people providing services such as the consequence of this daily contact in its work" [23]. Although Freudenberger was not the first author to report on the Burnout syndrome to refer to the physical and mental exhaustion and to the behavioral disorders, his studies are the keystones on this issue and they accounted for other studies that increase the concept of Burnout [2].

Sometime later, Maslach and Jackson [15] defined Burnout as being a syndrome of emotional distress, depersonalization and low personal accomplishment, in which the emotional distress is considered the initial symptom and the most obvious sign of Burnout syndrome is characterized by mental and physical exhaustion in which the person is without energy and willingness to work. The depersonalization occurs just after the tiredness, characterized by a certain distancing from people to whom they work for and from coworkers, acquiring many times snarling, cynical, inhuman behaviors without affection. The low personal satisfaction is characterized by the loss of satisfaction in working and consequently in lack of efficiency so that the work becomes a burden to the person, [8, 11, 13, 16, 17]. This process occurs sequentially, that is, first the emotional exhaustion appears and this will conduct to the development of the depersonalization; on the other hand, low personal satisfaction is developed separately [14].

Since then, several authors such as Codo and Vasques-Meneses [5], Murofuse *et al.* [18], among others, exposed their definitions on Burnout.

According to Accioly [1], although the Burnout syndrome is the result of a prolonged stress,

it cannot be considered as stress because this later involves excess in which the person falls under pressure, demanding both physical and psychological effort. Notwithstanding, the person cares about the work and when he/she solves the problem he/she becomes to feel good. On the other hand, the Burnout comprises absence, that is, lack of motivation, the hope that something could change his/her situation. The author cited among the causative factors of Burnout: professionals who feel criticized, misunderstood, underpaid, who dedicated their time to take care for people; who defined unreal goals for themselves, where there is excessive working demand; when they work in something that frequently violates their personal values; who work repetitively, among others. Therefore, if the working days were considered as bad; the worry with the work considered as waste of energy; and the tasks considered as boring or unpleasant, this can be a sign of the beginning of Burnout syndrome.

The dentists are part of a profession which is characterized by showing great working hours and has direct and daily contact with patients, who are many times tense and anxious regarding to the treatment they would be submitted, because there is an idea that the dental treatment causes pain. Thus, the Dentistry is a profession that would be prone to develop the aforementioned syndrome. The aim of this study was to determine the prevalence of Burnout syndrome in dentist in the city of Fortaleza and its relationship with gender, years of tenure, marital status, and the weekly working hours.

Material and methods

This was a cross-sectional study of quantitative character, comprising two questionnaires aiming to identify and classify the level of Burnout syndrome in dentists. The sample was composed of 100 professionals working in the city of Fortaleza (Ceará, Brazil).

The following questionnaires were applied:

- Social-cultural: with questions related to work and the health of the participant; age; gender; marital status; years of tenure; and working hours per week.
- Maslach Burnout Inventory (MBI): used in its adapted version and validated in Portuguese

by Tamayo and Tróccoli [24]. It comprises 22 questions, with 5 response options (Likert scale from 1 to 5), which include the three fundamental aspects of the Burnout syndrome. The emotional exhaustion was evaluated by nine items (questions 1, 2, 3, 6, 8, 13, 14, 16 and 20); the depersonalization by five (questions 5, 10, 11, 15 and 22) and personal fulfillment (questions 4, 7, 9, 12, 17, 18, 19 and 21).

Datum tabulation, processing and analysis were performed by using Epi Info software version 3.4.3.

Criteria for the interpretation of the results

MBI comprises three dimensions: the emotional exhaustion, the depersonalization, and the decreased personal fulfillment (disappointment). The responses are the frequency with which the participant either perceives or experiences the feeling or attitude: never (1), occasionally, less than once per week (2), almost frequently, once or twice per week (3), frequently, three or four times per week (4) and daily (5).

Considering to the emotional exhaustion, a score greater or equal to 27 indicates high level; from 19 to 26, moderate level; and smaller than 19, low level. For depersonalization, scores greater or equal to 10 indicates high level; from 6 to 9, moderate level; and smaller than 6, low level. The score related to the personal fulfillment is the opposite, with scores from 0 to 33 indicating high level; from 34 to 39, moderate level and greater or equal to 40, low level.

The patients showing high scores for either emotional exhaustion or depersonalization; or low scores for personal fulfillment were considered with Burnout syndrome.

All ethical aspects – beneficence, non-maleficence, justice and equity – were strictly observed. The participant had to sign a free and clarified consent form where they were informed regarding the purpose of the research. The participants had the right to abandon the research at any time. The participants in the research were instructed regarding to the prevention of occupational diseases with the knowledge of their actual state in relation to the professional stress.

A descriptive analysis of the distributions, verification of data consistency and categorization of continuous or discrete variables were performed.

Results

One hundred questionnaires were sent back, with a response rate of 100% because all dentists agreed in responding the questions. The sample comprised an equal number of female (n = 50; 50%) and male (n = 50; 50%). Concerning to the marital status, 60 (60%) participants reported to be married; 34 single (34%); and 6 (6%) divorced. In relation to the years of tenure and working hours, most of the respondents had between 1 and 10 years of tenure and worked from 21 to 40 hours per week, corresponding to 40% and 44% of the total, respectively (table I).

Table I - Social-cultural data from 100 dentists interviewed

Gender	
Female	50 (50%)
Male	50 (50%)
Marital status	
Single	34 (34%)
Married	60 (60%)
Divorced	6 (6%)
Age	
	mean = 38.09
19 to 39 years	60 (60%)
40 to 59 years	37 (37%)
60 to 80 years	3 (3%)
Working hours per week	
Up to 20 hours	16 (16%)
21 to 40 hours	44 (44%)
More than 40 hours	40 (40%)
Years of tenure	
1 to 10 years	40 (40%)
11 to 20 years	32 (32%)
More than 20 years	28 (28%)

In the sample studied, the Burnout syndrome was diagnosed in 32 participants (32%) out of 100 respondents. Sixty-eight (68%) did not show the syndrome. By individually analyzing each dimension of the syndrome, the following means were obtained: emotional exhaustion – 19.5 points; depersonalization – 7.4 points, both representing the moderate level; and personal fulfillment - 32 points, representing the high level. Concerning to the gender, in each dimension, the following means were obtained: female – emotional exhaustion - 20 points; depersonalization – 7.5 points; and personal fulfillment - 31.7 points; male – emotional exhaustion - 18.9 points; depersonalization - 7.4 points; and personal fulfillment - 32.4 points (table II).

Table II - Results of the Maslach Burnout Inventory (MBI) from the 100 dentists interviewed

Burnout Syndrome		
Diagnosed	32 (32%)	
Undiagnosed	68 (68%)	
Grunfeld <i>et al.</i> [10]	32	
Ramirez <i>et al.</i> [20]	0	
Female	Mean	SD
Emotional exhaustion	20	± 7.6
Depersonalization	7.5	± 2.7
Personal fulfillment	31.7	± 5.2
Male	Mean	SD
Emotional exhaustion	18.9	± 5.7
Depersonalization	7.4	± 2.3
Personal fulfillment	32.4	± 5.5
Total	Mean	SD
Emotional exhaustion	19.5	± 6.7
Depersonalization	7.4	± 2.5
Personal fulfillment	32	± 5.3

By analyzing the data regarding to the 32 respondents showing the Burnout syndrome, it was observed that 17 (53.1%) were female and 15 (46.9%) were male. Concerning to the years of tenure, 11 (34.4 %) had between 1 and 10 years; 11 (34.4%) had between 11 and 20 years and 10 (31.2%) had more than 20 years. The analysis of the week hours showed that only 3 (9.4%) worked up to 20 hours, 12 (37.5%) from 21 to 40 hours and 17 (53.1%) more than 40 hours. Concerning to the marital status, 18 (56.3%) were married, 11 (34.4%) were single and 3 (9.4%) were divorced (table III).

Table III - Result of MBI from the 32 dentists exhibiting the Burnout syndrome

Gender	
Female	17 (53.1%)
Male	15 (46.9%)
Marital status	
Single	11 (34.4%)
Married	18 (56.3%)
Divorced	3 (9.4%)
Working hours per week	
Up to 20 hours	3 (9.4%)
21 to 40 hours	12 (37.5%)
More than 40 hours	17 (53.1%)
Years of tenure	
1 to 10 years	11 (34.4%)
11 to 20 years	11 (34.4%)
More than 20 years	10 (31.2%)

The analysis of the influence of the variables years of tenure, hours of work, marital status between male and female with Burnout syndrome through Mann Whitney test with level of significance of 5% ($p < 0.05$) did not show any statistical significant difference.

Discussion

The research on Burnout has been increasingly growing and the main investigation tool worldwide is the Maslach Burnout Inventory (MBI).

Because the literature lacks consensus on the interpretation of MBI, the studies show different criteria to classify and diagnose the Burnout. To assess the dimensions grouped, the criteria exhibited by Ramirez *et al.* [20] and Grunfeld *et al.* [10] have been the most used. Ramirez *et al.* define Burnout when there are high scores for emotional exhaustion and depersonalization and low scores for personal fulfillment. Grunfeld *et al.*, on the other hand, considered the Burnout diagnosed when the individual scored high level for emotional exhaustion or depersonalization or low level for personal fulfillment.

In this present study, considering the parameters of Grunfeld *et al.* [10], 32% of the dentists exhibited the syndrome, which was a significant percentage. According to the criteria by Ramirez *et al.* [20], none was diagnosed with the syndrome; these authors used a stricter classification, as aforementioned. Low Burnout rates were also found in other studies [25] employing the criteria by Ramirez *et al.*

According to Gil-Monte and Peiró [9], the levels of the dimensions of the syndrome tend to vary in relation to the gender. These authors believe that for the emotional exhaustion and lack of personal fulfillment the women score higher; for depersonalization, the men score higher. In this present study, the women exhibited a higher emotional exhaustion mean (20 ± 7.6 points) than that of men (18.9 ± 5.7 points). For the personal fulfillment, the women showed a smaller mean (31.7 ± 5.2 points) than that of men (32.4 ± 5.5 points), confirming the reports of Gil-Monte and Peiró. In relation to depersonalization, the difference between the values for male and female did not show statistical significant differences. By analyzing the marital status, Bianchini-Matamoros [3] affirmed that single people are more prone to develop the syndrome. In this present study, of the 32 dentists exhibiting Burnout syndrome,

18 (56.3%) were married, 11 (34.4%) were single and 3 (9.4%) were divorced, a result different from that observed by Bianchini-Mataramoros [3]. This author suggests that married people would be more resistant against the syndrome because they feel familial responsibility, with greater ability to face emotional problems [3].

Concerning the working hours per week, 17 (53.1%) worked more than 40 hours, 12 (37.5%) worked from 21 to 40 hours and only three (9.4%) worked up to 20 hours per week. According to Bloise [4], in a study conducted to analyze the sources causing the Burnout syndrome in a group of teachers, the longest working hours are which cause pressure on the professionals, making them susceptible to develop the syndrome. By associating the Burnout syndrome with the years of tenure, we observed that 11 (34.4%) worked between 1 and 10 years and 11 worked between 11 and 20 years (34.4%), while 10 (31.2%) worked for more than 20 years. Thus, more than half of the 32 individuals with the syndrome worked for less than 20 years. The professionals with less years of tenure tend to idealize expectations for daily practice that not even can be achieved as expected [12].

The analysis of the dentists presenting Burnout syndrome ($n = 32$) revealed a significantly high value because a little less than a third of them exhibited at least one of the syndrome dimensions at critical levels. Moreover, some authors such as Faber [6] and Benevides-Pereira [2], believe that the respondents may not be responding truthfully what is happening with them because of the content of the questions ("I believe that I treat some people as if they were impersonal objects", for example). Consequently, these questions may cause certain impact on the respondent, who feel some difficult in assuming certain attitudes that disagree with which is expected from a good professional. Thus, some respondents in this present research may have answered untruthfully, which could create a bias and mask the Burnout syndrome in some cases. Notwithstanding, this bias can occur in any type of study taking into consideration the subjectivity and self-criticism.

Other important factor to be observed is that although the Burnout syndrome is considered as a consequence of the chronic occupational stress, that is, the pressure suffered in the working environment, each person exhibits a different reaction against the stress [22]. According to

Prata *et al.* [19], for a long time, individual differences have been observed regarding to resistance to stress. For these authors, some people has a personality type that increases the effects of the stress in working; others has a personality type that makes them worried as time goes by and they can relax more. The authors also cited that there are two types of stress: eustress (good stress), which is healthy by helping the person to execute good things; and distress (bad stress), which is unhealthy, causing undesirable symptoms and diseases. Based on this aforementioned information, it could be noted that the Burnout syndrome depends on the type and intensity of the stress, constancy, the mode of reaction of the person against the stress, among other factors.

Conclusion

This present study verified a significant amount of dentists exhibiting Burnout syndrome (32%) among the 100 respondents. There were no statistically significant differences regarding to gender in relation to working hours, marital status and years of tenure. Because the prevalence of the Burnout syndrome has been relatively high and increasingly frequent, mainly in professionals taking care of people with closer contact, such as dentists, there is certainly the need of further studies because despite of the higher interest on this issue, it is still unknown by most of the professionals. Thus, a comprehensive divulgation is necessary to enable the professionals to seek effective treatment, as well as prevention and intervention.

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