

Burnout and Related Demographic Factors- A Pilot Study among Dentists in Bulgaria (Part I)

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Abstract

Aim – To investigate the levels of burnout and related demographic factors – age, gender, and marital status among dentists in Bulgaria. **Material and Methods** – A self-administered questionnaire consisting of 20 items regarding socio-demographic characteristics, work environment factors and lifestyle patterns was piloted on a random sample of 150 dentists (response rate=90.6%, n=136), practicing in the capital of Republic of Bulgaria – Sofia. To assess the levels of burnout aspects – emotional exhaustion, depersonalization and reduced personal accomplishment – the standard instrument MBI-HSS was used. **Results** – Females demonstrated lower levels of emotional exhaustion compared to males. Higher level of emotional exhaustion were registered among 41-55-year olds and single dentists. Very high levels of depersonalization were found in the group of 25-44-year-old dentists and males. Dentists without a partner demonstrated also high depersonalization. Reduced personal accomplishment was registered among 25-44-year olds, males and dentists with a partner. **Conclusion** – Demographic factors do relate to burnout aspects. Further investigation on work engagement factors is needed to outline multidimensional essence and specific etiology of burnout to build effective strategies for coping it.

Key words – burnout, dentistry, socio-demographic factors

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I. Introduction

Professions are vocation, occupation, and social status [1,2,3]. The practice of the dental profession aims to strengthen, maintain, and restore oral health and the functions of the masticatory and speech apparatus. In this sense, the provision of quality dental care is a key prerequisite for the full social realization and quality of life of people [1,4].

In order to accomplish this mission, dental professionals must possess a number of qualities that would help provide affordable and quality dental care. Based on the bio-psycho-social nature of health, in addition to the technical aspects, significant attention in the process of providing quality dental treatment should be paid to its psychological and social characteristics. Essential elements of these characteristics represent the patient's satisfaction with the received treatment, as well as the personal professional satisfaction of the practicing dentists [1,5].

In dental practice, the level of professional satisfaction, resp. dissatisfaction depends on a number of factors - the personal characteristics of workers, factors of the work environment, the specific socio-economic and political situation, etc. From a practical point of view, it is of interest to identify those factors that are associated with achieving a higher degree of professional satisfaction, as well as to identify and eliminate those factors that are a source of dissatisfaction. Comparing the work of a dentist with other medical specialties, it is necessary to note a number of features that determine the specific nature of dental work and make it heavy, mentally stressful, accompanied by a strong emotional component and conducted under the influence of a number of harmful factors of the working environment [6]. A serious group of occupational hazards in dental practice are the daily sources of stress, leading to significant emotional and neuropsychological tension due to the constant sense of responsibility for the health and life of the patient, the special requirements for volume, resilience and switching attention, including to the body's sensory analyzers. The increased requirements to the work of the dentist often lead to pathological deviations in the functional and mental state of his body [6].

The fact is that interest in the psychological characteristics of the work environment of health professionals is growing, as they are at high risk of developing burnout syndrome, role conflicts and occupational dissatisfaction. Burnout syndrome, as an example of a prolonged response to chronic work-related stressors, is of particular importance in healthcare, where staff is exposed to both psycho-emotional and physical stress. Burnout syndrome, as well as other negative aspects of the work of health professionals, has important behavioral and health consequences [1,7].

The dental profession has a wide range of stressors, the action of which can lead to burnout. Dentists should be aware of these risk factors in order to effectively prevent and avoid dissatisfaction with their activity

[8,9]. As health professionals, it is important for dentists to recognize the symptoms and effects of stress on their physical, psychological, and occupational well-being [8,10].

A review of the literature available represents a significant number of studies on burnout levels among dentists and the factors influencing it. They focus on clarifying the phenomenology of burnout syndrome, isolating the main determinants associated with its manifestation in terms of the specific features of the dental profession, as well as analyzing some strategies for effectively dealing with the problem.

Efforts to enrich knowledge about the problems mentioned above are justified, as it would allow to optimize working conditions and the quality of treatment provided in dental practice, as well as to improve the quality of life of dentists.

Burnout syndrome is characterized by severe psycho-emotional and physical depletion of a person's energy resources, in which there is chronic fatigue, feelings of helplessness and hopelessness, a tendency to negative self-perception and attitude to work, life and other people. In essence, burnout syndrome is characterized by three main aspects:

1. Physical and emotional exhaustion;
2. Depersonalization (increased irritability, arrogance, cynicism, neglect);
3. Tendency for negative self-esteem (feeling of dissatisfaction and reduced personal accomplishment) [8,11].

The purpose of this paper is to study the levels of burnout among dentists and the relationship of this phenomenon with some socio-demographic determinants - age, gender, marital status.

Working hypothesis is related to the statement that the three components of burnout (emotional exhaustion, depersonalization and personal accomplishment) are manifested to varying degrees in the study group, due to the peculiarities of their socio-demographic status and because their professional activity is carried out under specific conditions and organization of work, which are determined by the individual characteristics of each dental practice.

II. Material and Methods

Adescriptive questionnaire survey was conducted in the period September-November 2018 in Sofia. A total of 156 questionnaires were distributed, 5 of which were excluded from the survey because they were incorrectly completed. One dentist refused to participate in the study. A total of 136 dentists responded to the study (response rate = 90.6%), practicing in individual or group dental practices for primary or specialized dental care, as well as working in dental or medical-dental centers. For the purposes of the survey, the respondents were divided into three age groups - 25-40 years, 41-55 years and over 56 years; the distribution by sex is 56 (41.2%) men and 80 (58.8%) women - fig.1 and fig.2.

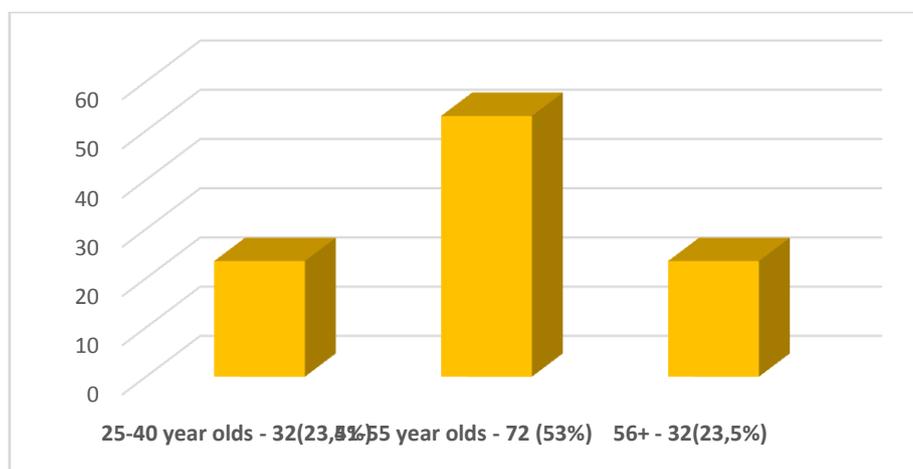


Figure 1. Frequency distribution (n, %) of dentists by age groups.

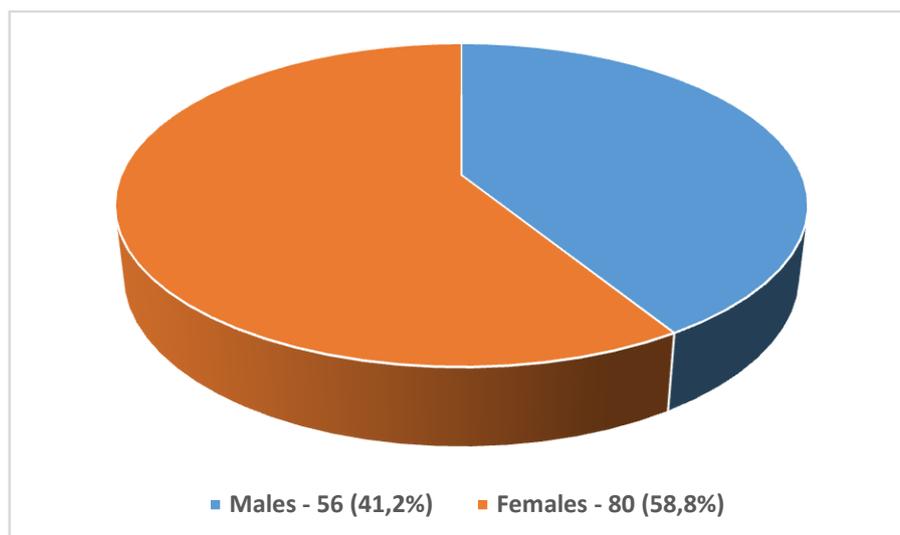


Figure 2. Frequency distribution (n, %) of dentists by gender.

The study was based on a complex methodology of self-administered and standardized instruments. The questionnaire consisted of two parts - socio-demographic profile and characteristics of the workplace; a methodology for studying burnout using the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1996).

The first part of the questionnaire contained 20 items, grouped into three subgroups related to: socio-demographic characteristics of dentists (age, gender, year in practice, marital status). The second group of questions was related to the peculiarities of the workplace - ownership of the dental office, type of dental practice (individual, group or dental center), duration of working hours, type of clinical activities, work with auxiliary staff, working conditions in the dental office (dental equipment and furniture), working schedule planning. The third group of questions was related to dentists' self-assessment regarding their income received from the dental practice as well as the presence of activities not related to dentistry (hobbies or other interests); unhealthy lifestyle stereotypes (smoking, alcohol abuse, sedatives, antidepressants or sleeping pills, as well as insomnia) and issues related to professional planning and the desire to work after retirement.

Maslach Burnout Inventory - The Bulgarian translation of the questionnaire was validated and used by medical staff in Bulgaria by B. Tsenova (1991,2002,2004). The Maslach Burnout Inventory (MBI) questionnaire includes three subscales: Emotional Exhaustion, Depersonalization, and Personal Accomplishment. MBI-HSS consists of 22 items - to measure emotional exhaustion - nine items; depersonalization - five items, and personal accomplishment - eight items.

The frequency with which the respondent experienced each position was assessed on a seven-point Likert scale with codes from 0 to 6 with the following meaning: 0 - no, never; 1 - very rare; 2 - rarely; 3 - sometimes; 4 - often; 5 - very often; 6 - always. Thus, the results varied from 0-54 points for the subscale - emotional exhaustion, 0-30 for the subscale - depersonalization and 0-48 for the subscale - personal accomplishment. To determine the severity of burnout syndrome, average norms were used:

Table 1. Average norms for burnout syndrome

Burn out	Scores			
	Low level	Moderate level	High level	Very high level
Emotional exhaustion (EE)	6-16	17-25	26-34	> 34
Depersonalization (DP)	1-4	5-10	11-13	>14
Personal accomplishment (PA)	48-37	36-28	27-22	21 and<

Statistical confirmation of the questionnaire was approved by Cronbach's alpha coefficient. The data demonstrated a good factor structure and very good reliability coefficients (Cronbach's alpha for the Emotional Exhaustion subscale was $\alpha = 0.91$; for the Depersonalization subscale $\alpha = 0.66$, and for the Personal Accomplishment subscale $\alpha = 0.80$). Cronbach's alpha showed the whole questionnaire to reach acceptable reliability $\alpha = 0.76$ [12].

Prior to completing the questionnaire, each dentist was provided with brief verbal information about the objectives of the study and how the results would contribute to dental practice in general. The questionnaires were distributed in the dental offices of the respondents, who were asked to answer the questions anonymously. Completion of the questionnaire was accepted as a form of individual consent by dentists to participate in the study. As the latter did not include patients or experimental animals, the anonymity of the participants was

guaranteed and they had the right to refuse to participate in the study, it was not necessary to seek approval from the Ethics Committee on the ethical standards of the study.

III. Result

In the present study, descriptive statistics was done by using SPSS (version 20). The analysis of the results showed that 56+ year olds demonstrated low level of emotional exhaustion compared to the other age groups. In the middle age group - 41-55 years - very high levels of emotional exhaustion prevailed. According to the results in the group of women there was a significantly higher share of dentists with low levels of emotional exhaustion compared to the group of men (Table 2).

The results of the survey indicated that the majority of respondents were married (or with a partner) - 112 (82.3%), and the remainder - 24 (17.7%) - single (without a partner or widow/widower). In the first group moderate and very high levels of emotional exhaustion prevailed. Single dentists demonstrated a high level of emotional exhaustion (Table 2).

Table 2. Distribution of dentists (n,%) by age /gender/ marital status and levels of emotional exhaustion

EE	Low level (n,%)	Moderate level (n,%)	High level (n,%)	Very high level (n,%)	Total (n, %)
Age groups					
25-40 year olds	16(28,5%)	8(25%)	8(25%)	0(0%)	32(23,5%)
41-55 year olds	16(28,5%)	24(75%)	16(50%)	16(100%)	72(53%)
56+ year olds	24(43%)	0(0%)	8(25%)	0(0%)	32(23,5%)
Total (n, %)	56(100%)	32(100%)	32(100%)	16(100%)	136(100%)
Gender					
Male	16(28,6%)	16(50%)	16(50%)	8(50%)	56(41,2%)
Female	40(71,4%)	16(50%)	16(50%)	8(50%)	80(58,8%)
Total (n, %)	56(100%)	32(100%)	32(100%)	16(100%)	136(100%)
Marital status					
With a partner	48(85,7%)	32(100%)	16(50%)	16(100%)	112(82,3%)
Without #	8(14,3%)	0(0%)	16(50%)	0(0%)	24(17,7%)
Total (n, %)	56(100%)	32(100%)	32(100%)	16(100%)	136(100%)

Regarding depersonalization, very high level was observed in the first age group (25-44 years); in the group 41-55 years the moderate and high levels of depersonalization prevailed, and in the third age group - the low level of depersonalization prevailed. All of the respondents who demonstrated very high levels of depersonalization were men, and all of those who indicated low levels were women. For the dentists with a partner, depersonalization with a moderate level predominated, and for those without a partner, the low and high levels of depersonalization prevailed (Table 3).

Table 3. Distribution of dentists (n,%) by age /gender/ marital status and levels of depersonalization

DP	Low level (n,%)	Moderate level (n,%)	High level (n,%)	Very high level (n,%)	Total (n, %)
Age groups					
25-40 year olds	0(0%)	8(16,7%)	8(33,3%)	16(40%)	32(23,5%)
41-55 year olds	8(33,3%)	32(66,6%)	16(66,7%)	16(40%)	72(53%)
56+ year olds	16(66,7%)	8(16,7%)	0(0%)	8(20%)	32(23,5%)
Total (n, %)	24(100%)	48(100%)	24(100%)	40(100%)	136(100%)
Gender					
Male	0(0%)	16(40%)	0(0%)	40(100%)	56(41,2%)
Female	32(100%)	24(60%)	24(100%)	0(0%)	80(58,8%)
Total (n, %)	32(100%)	40(100%)	24(100%)	40(100%)	136(100%)
Marital status					
With a partner	16(66,7%)	48(100%)	16(66,7%)	32(80%)	112(82,3%)
Without #	8(33,3%)	0(0%)	8(33,3%)	8(20%)	24(17,7%)
Total (n, %)	24(100%)	48(100%)	24(100%)	40(100%)	136(100%)

Dentists with very low personal accomplishment, resp. a very high risk of developing burnout were registered in the age groups 25-40 and 56+ years. In the age group 41-55 years the moderate level of reduced personal accomplishment prevailed. All dentists that demonstrated very high level of reduced personal accomplishment were males and all respondents that indicated low levels were females. The dentists who had a partner assessed very high level of reduced personal accomplishment, respectively they had a very high risk of developing burnout. Among the respondents who were not married, the relative share of the persons with low and high levels of reduced personal accomplishment prevailed (Table 4).

Table 4. Distribution of dentists (n,%) by age /gender/ marital status and levels of reduced personal accomplishment

Age groups	Reduced PA	Low level (n,%)	Moderate level (n,%)	High level (n,%)	Very high level(n,%)	Total (n,%)
25-40 year olds		8(25%)	8(14,3%)	8(25%)	8(50%)	32(23,5%)
41-55 year olds		8(25%)	48(85,7%)	16(50%)	0(0%)	72(53%)
56+ year olds		16(50%)	0(0%)	8(25%)	8(50%)	32(23,5%)
Total (n, %)		32(100%)	56(100%)	32(100%)	16(100%)	136(100%)
Gender						
Male		0(0%)	32(57,2%)	8(25%)	16(100%)	56(41,2%)
Female		32(100%)	24(42,8%)	24(75%)	0(0%)	80(58,8%)
Total (n, %)		32(100%)	56(100%)	32(100%)	16(100%)	136(100%)
Marital status						
With a partner		24(75%)	48(85,7%)	24(75%)	16(100%)	112(82,3%)
Without #		8(25%)	8(14,3%)	8(25%)	0(0%)	24(17,7%)
Total (n, %)		32(100%)	56(100%)	32(100%)	16(100%)	136(100%)

IV. Discussion

Freudenberger formulated the term "burnout" as a characteristic of a psychological state in healthy people who work in an emotionally stressful work environment. After long observations of professions working mainly with people (the so-called helping professions), he found psychophysical exhaustion in some of them, leading to loss of illusions and a sense of usefulness and satisfaction with the activity. Initially, occupational burnout was found in specialists working in charities and medical institutions. After 1982, the group of high-risk professions expanded to include educators, lawyers, politicians, managers, police officers and social workers. It can be said that burnout is associated with stressful occupations and affects people responsible for the fate, health, and lives of others [13].

In the indicated risk groups of professions the multifactorial etiology of burnout syndrome was described, based on several main prerequisites - individual characteristics (age, sex, education, family), personality traits (neuroticism, introversion/extraversion, locus of control, emotional stability, etc.), the peculiarities of the working environment and conditions, the presence of role conflicts and last but not least - the social values. The modern theoretical framework of burnout syndrome integrates individual and situational factors [14].

If it refers to the dental profession, studies conducted by many authors to determine the nature of dental work defined it as an intense psychomotor, psychosensory and psychoemotional occupation. It leads to a significant load on all organs and systems of the human body and in the first place on the central nervous system, the visual, auditory analyzers, the musculoskeletal system and can cause a number of negative changes in the functional state of the body [6].

A proven fact in a number of studies is that for burnout and other psycho-somatic problems in healthcare workers, the psychological climate and workplace organization, role conflicts and occupational dissatisfaction are leading [7,15,16]. On the other hand, the individual and his personal characteristics could be more important for the development of burnout syndrome than the factors of the work environment [17]. The results of a study [18] conducted in Germany among 389 nurses indicated that the higher risk of developing burnout symptoms was associated with excessive dedication to the profession and a subsequent imbalance between the efforts made and the results achieved. Socio-demographic characteristics, and especially the most used variable - age, are also statistically significantly associated with burnout syndrome. Younger professionals are particularly vulnerable in this regard [19,20]. Interestingly, a study of nurses in Singapore [19] found that staff under the age of 30 with high to very high level of neuroticism were more likely to develop burnout syndrome. In the current study, the representatives of the youngest age group (25-44-year olds) demonstrated very high levels of depersonalization and reduced personal accomplishment.

The socio-demographic and personal characteristics of the practitioners, as well as the specific features of the work environment are of great importance for the emergence of burnout. Alemany Martinez, Berini Aytes & Gay Escoda (2008) outline the profile of the individual most likely to develop burnout syndrome - single, male, average age about 27 years, in his first year of postgraduate study combined with 30 hours of clinical practice and/or other work. Narcissistic or borderline personality types are most common in individuals who have burnout syndrome [21].

One of the main risk groups for the development of burnout among dentists are newly graduated professionals. Gorter et al. (2007) pointed out that issues related to the management of practice were the professional aspect that worried young doctors the most [22]. However, there are some variations in the literature regarding the age of dentists who tend to develop burnout. The same author (Gorter et al., 1999) in another study concluded that middle-aged male dentists (in/around their 40s) are most vulnerable to burnout

[23]. The results from the present study were very similar. Male dentists demonstrated high levels of all burnout aspects – emotional exhaustion, depersonalization and reduced personal accomplishment. Te Brake, Bloemendal&Hoogstraten (2003) reported similar results comparing burnout levels in men and women. They found higher levels of depersonalization in males, explaining this by the fact that they had more patients per week, respectively longer working hours [24].

V. Conclusion

As a result of the study, the following conclusions can be drawn:

1. Dentists in the age group 25-40 years had very high levels of depersonalization and reduced personal accomplishment, respectively the risk of developing burnout syndrome is very high.
2. Men indicated very high levels of emotional exhaustion, depersonalization and reduced personal accomplishment, while women had low levels of all components of burnout.
3. Single dentists were more likely to develop burnout, demonstrating high levels of emotional exhaustion, depersonalization, and reduced personal accomplishment.

Undoubtedly, demographic factors are relevant to burnout syndrome. However, further study of the situational factors, working conditions, lifestyle and personality traits of dentists is needed to build a comprehensive framework of burnout determinants and respectively effective etiology-based strategies to cope with the problem.

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