

# The burnout syndrome and associated personality disturbances. The study in three graduate programs in Dentistry at the University of Barcelona

Aurelia Alemany Martínez <sup>1</sup>, Leonardo Berini Aytés <sup>2</sup>, Cosme Gay Escoda <sup>3</sup>

(1) Resident of the Master of Oral Surgery and Implantology. University of Barcelona Dental School

(2) Assistant Professor of Oral Surgery. Subdirector of the Master of Oral Surgery and Implantology. Dean of the University of Barcelona Dental School

(3) Chairman of Oral and Maxillofacial Surgery. Director of the Master of Oral Surgery and Implantology. University of Barcelona Dental School. Oral and maxillofacial surgeon of the Teknon Medical Center, Barcelona

## Correspondence:

Prof. Cosme Gay-Escoda

Centro Médico Teknon

C/ Vilana 12

08022 - Barcelona. Spain

E-mail: [cgay@ub.edu](mailto:cgay@ub.edu)

Received: 27/10/2007

Accepted: 29/12/2007

## Indexed in:

-Index Medicus / MEDLINE / PubMed  
-EMBASE, Excerpta Medica  
-SCOPUS  
-Indice Médico Español  
-IBECS

Alemany-Martínez A, Berini-Aytés L, Gay-Escoda C. The burnout syndrome and associated personality disturbances. The study in three graduate programs in Dentistry at the University of Barcelona. *Med Oral Patol Oral Cir Bucal*. 2008 Jul 1;13(7):E444-50.  
© Medicina Oral S. L. C.I.F. B 96689336 - ISSN 1698-6946  
<http://www.medicinaoral.com/medoralfree01/v13i7/medoralv13i7p444.pdf>

## Abstract

**Objective:** Determine the presence of “burnout” syndrome and characteristic personality patterns in the students and faculty of three graduate programs in Dentistry at the University of Barcelona: Department of Oral Surgery and Implantology, Department of Orthodontics and Department of Integrated Dentistry. **Materials and Methods:** The study was carried out in 78 dentists. The level of “burnout” was evaluated using the Maslach Burnout Inventory, socio-demographic variables and, finally, the personality test. **Results:** Oral surgeons constituted the group of high-level “burnout”. The profile of an individual with a propensity to “burn out” is a single man, with a median age of 27, that is in the first years of the graduate program and that combines studies with 30 hours of clinical practice and/or other work ( $p < 0,05$ ). Narcissistic and borderline are the types of personality most frequently found in the individuals that present “burnout” syndrome ( $p < 0,05$ ). **Conclusions:** In general, no high levels of “burnout” were registered in the studied population, only 2-3%, if applying strict definition of “burnout”, and 10% if these criteria were amplified. We believe it is necessary to identify the individuals with a tendency towards “burnout”, in order to establish preventive measures and avoid future negative behaviour at work as well as at the personal level.

**Key words:** Burnout syndrome, occupational stress, personality disturbances.

## Introduction

The “burnout” syndrome is also known as a “syndrome of being burned”. It is characterized by three essential components: physical and/or psychological tiredness, denominated by emotional exhaustion (EE), depersonalisation (D) that is seen as a negative change of attitude towards patients, and lack of personal realization (PR) that is associated with feelings of being inadequate or lacking personal accomplishments. The term “burnout” was coined for the first time in 1974 by a German psychiatry resident in the US, Herbert J. Freudenberger, referring

to “a state of emotional, physical and mental tiredness as a result of work conditions”. However, this term has already been used by Graham Greene in 1961, who wrote a novel titled “A burn-out case”. The main character is a disillusioned and spiritually tormented person who finds a solution to his illness by working in a camp with leprosy patients.

Interest in this topic emerged from the work of the psychologist Cristina Maslach in 1976, who introduced the word “burnout” into public view at the Annual Congress of American Psychology Association (APA), referring to

an increasingly frequent situation of work- and study-related stress observed in people dedicated to professions that require constant, direct and intense interpersonal relations. These relations become the cause why, after months and years of work, these professionals end up “burning themselves”. The most accepted definition of the “burnout” syndrome was written by Maslach and Jackson in 1981. These authors believe that “burnout” is an abnormal response of an individual to chronic emotional stress, and it is characterized by three components: emotional tiredness, depersonalisation and low personal realization (1).

-Physical and/or psychological tiredness is known as emotional exhaustion. It is referred to a sensation of extra physical effort, progressive loss of energy and emotional wasting, all of which are generated as a consequence of continuous interpersonal interactions that certain professionals maintain among themselves as well as with clients. It is a central element of the “burnout” syndrome and is characterized by an increasing sensation of exhaustion at work, “not being able to give more of oneself” at a professional level. To protect him/herself against this negative feeling, the subject tries to isolate him/herself from others, developing an impersonal attitude, dehumanising the relationships with other people and becoming distant, cynical and condescending with colleagues.

-The depersonalisation is characterized by a negative attitude and cynical responses towards the clients, reaching a point where the latter ones are considered as simple objects. This attitude of isolation that is adopted by a subject with “burnout” appears as a way to protect him/herself from exhaustion.

-The feeling of personal inadequacy or lack of personal accomplishments is a consequence of reduced personal realization, associated with loss of self-confidence, development of negative self-concept and low self-esteem, all of which lead to a decrease in productivity on a job and poor or complete absence of personal realization. In general, health professionals that are affected by the “burnout” syndrome tend to feel irritated, miss work, provide low quality services/patient attention, look sleepy/sad and show other similar symptoms, which could lead to alcohol consumption, auto medication and consumption of illegal drugs. This problem is not limited to work place and is manifested in a family environment and other interpersonal relations.

## Objetives

### General:

-To determine the presence of “burnout” syndrome and identify characteristic personality patterns in the students and faculty of the three graduate programs in Dentistry at the University of Barcelona: Oral Surgery and Implantology, Orthodontics and Integrated Dentistry.

### Specifics:

-Assess whether the levels of “burnout” differ between the three graduate programs in Dentistry.

-Analyse whether personality patterns influences “burnout” in professional individuals.

-Identify socio-demographic variables associated with the “burnout” syndrome.

-Observe and compare personality types that are characteristic in dentists participating in this study.

## Materials and Methods

During April and May of 2005, a total of 78 dentists participated in this study; 32 were men and 46 were women with ages ranging between 23 and 66 years (median age = 30 years). Dental professionals included in this study were the students and faculty of one of the three graduate programs in Dentistry at the University of Barcelona; the duration of each program is generally three years. The instrument assessing “burnout” was the Maslach Burnout Inventory (MBI) of Maslach and Jackson (1981). It is a questionnaire that presents a study subject with a series of statements on feelings and thoughts in regard to his/her interest in work (1). The questionnaire is comprised of 22 items that measure the three “burnout” components: emotional exhaustion (EE), depersonalisation (D) and personal realization (PR). The subscales (EE, D, and PR) have to be kept separate and the scores on each subscale are classified according to percentile of each scale. The relationship between “burnout” and socio-demographic variables, including age, sex, marital status, living conditions, number of children, presence of toxic habits and frequency of alcohol/cigarette consumption, if applicable, were measured; finally, the amount of time dedicated to leisure/entertainment and sports was also assessed. Besides determining the correlation of dental profession and “burnout”, this study also evaluated the influence of the number of years and the number of hours per week dedicated to practicing dentistry. The subjects were also asked whether they were faculty or doctoral students. The last part of the questionnaire consisted of a personality test (International Psychologic Disturbance Exam, IPDE), which categories correspond with the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), permitting classification of an individual into one of the 10 different personality patterns. This questionnaire is not a valid tool for diagnosis; if the subject’s evaluation is positive for a personality disturbance, then he/she should be attended by a clinician. The DSM-IV is a scientific, standardised and clinically valid classification system of mental disorders that require treatment. According to diagnostic criteria of DSM-IV, distinct personality types can be identified: obsessive-compulsive, avoidant, narcissistic, borderline, dependent, paranoid, schizoid, schizotypal, histrionic and antisocial personality.

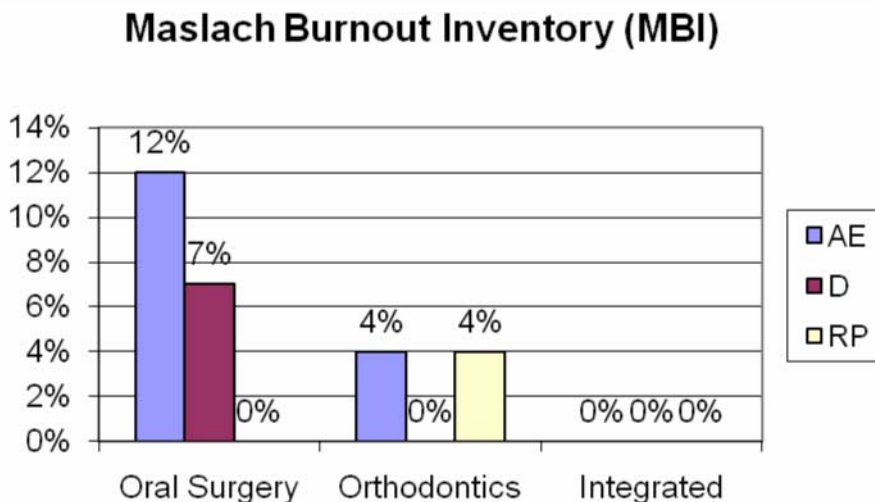
**Statistical Analysis**

The statistical analysis was conducted using SPSS version 11.5. Descriptive univariant analysis of percentages and frequencies was performed (see Table 1). For multivariant analysis, frequency distributions (chi-square test) and contingency tables were calculated to see the relations between various categories. Statistical significance for all values was set at  $p < 0.05$ .

**Results**

In the present study, 59% of participating dentists were women, of which 73.1% were single and 82.1% without children. The sample population consisted of dentists from three graduate programs: 55.1% belonged to Oral Surgery and Implantology, 32.1% to Orthodontics and 12.8% to Integrated Dentistry. Graduate students constituted 64.1% of the sample population, 7.7% were participants that have already finished the program and 28.2% were faculty. 65.4% of participants dedicated between 30 and 50 hours per week to clinical practice. Less than 10 hours per week were dedicated to studying by 50% of participants. The median work experience was 6.5 years. Only 16.7% of the subjects smoked, averaging 4 cigarettes a day, and 61.5% consumed alcohol, of which the majority (93.8%) did so on weekends or occasionally; only 6.3% reported to consume alcohol on a daily basis. Sports were practiced by 59% of participants – 54.3% practiced sports several times a weeks and 45.7% only once a week. Less than one hour a day was dedicated to leisure and entertainment by 47.4%, while 52.6% reported that weekends and holidays were their only time for leisure and entertainment (see Table 1). While on the subscales of emotional exhaustion

(EE) and depersonalisation (D) high scores correspond to increased levels of feeling “burned out”, on the personal realization (PR) subscale, low scores indicate increased levels of feeling “burned out”. In the studied population of dentists no high levels of “burnout” were registered (2-3%), however, oral surgeons represented a group with most cases of “burnout” syndrome. Applying the criteria of “burnout” syndrome definition, which takes into consideration 25 and 75 percentiles, the total number of individuals with “burnout” was 10%, of which 6% had high EE scores, 3% had high D scores and 1% showed low PR score. In the MBI analysis, subjects above the 65 percentile were included into “high risk” category and below 35 percentile into “low risk” to develop and suffer from “burnout”. 12% of dentists from the graduate program of Oral Surgery and Implantology scored high on EE, of which 7% also showed high D scores in the area of patient attention; nevertheless, none demonstrated low scores on PR. 4% of dentists from the graduate program in Orthodontics displayed EE and lack of PR, while none of the participants from this program scored high on D. Finally, dentists in the graduate program of Integrated Dentistry were not “burned”. Figure 1 illustrates the percentages obtained for three subscales. The profile of an individual with a risk of “being burned” (see Table 2) is a 27-year-old male, single, no children, in the first years of the graduate program in Oral Surgery and Implantology. All individuals identified as “burned” had less than 5 years of work experience, and the majority combined studying with more than 30 hours of clinical practice and/or weekly work ( $p < 0.05$ ), dedicating less than 10 hours per week to studying. As for toxic habits, the individuals



**Fig. 1.** Results of the MBI. Questionnaire. - AE: Emotional exhaustion. - D: Depersonalization. - RP: Personal realization.

**Table 1.** Descriptive statistics.

Variable	N° of participants	Percentage	Variable	N° of participants	Percentage
Sex			Marital Status		
Male	32	41,0%	Single	57	73,1%
Female	46	59,0%	Married	19	24,4%
			Devorced	2	2,6%
Living conditions			N° of Children		
Couple	28	35,9%	0	64	82,1%
Parents	21	26,9%	1	5	6,4%
Roomates	17	21,8%	2	7	9,0%
Independent	12	15,4%	3	2	2,6%
Specialty			Year		
Surgery	43	55,1%	1 year	20	25,6%
Orthodontics	25	32,1%	2 year	18	23,1%
Integrated	10	12,8%	3 year	12	15,4%
			collaborator	6	7,7%
			Professor	22	28,2%
Professor			Doctoral Degree		
YES	22	28,2%	YES	19	24,4%
NO	56	71,8%	NO	59	75,6%
Clinical Practice			Study		
<30 hours	22	28,2%	<10 hours	39	50,0%
From 30 to 50	51	65,4%	from 10 to 20	30	38,5%
>50 hours	5	6,4%	>20 hours	9	11,5%
Tabacco			Alcohol		
Not smoker	38	48,7%	YES	48	61,5%
Passive smoker	27	34,6%	NO	30	38,5%
Smoker	13	16,7%			
Sports			Leisure/Entertainment		
YES	46	59,0%	Weekends	41	52,6%
NO	32	41,0%	Daily	37	47,4%

**Table 2.** The burnout syndrome.

Variable	N° of Participants	Burned out	Variable	N° of participants	Burned out
Sex			Marital Status		
Male	32	4	Single	57	5
Female	46	2	Married	19	1
			Divorced	2	0
Living conditions	28	2	N° of children		
Couple	21	2	0	64	5
Parents	17	1	1	5	0
Roomates	12	1	2	7	0
Independent			3	2	1
Graduate Program			Year		
Surgery	43	5	1st year	20	2
Orthodontics	25	1	2nd year	18	2
Integrated	10	0	3rd year	12	0
			Graduated	6	1
			Professor	22	1
Professor			Doctoral Degree		
YES	22	5	YES	19	2
NO	56	1	NO	59	4
Clinical Practice			Study		
<30 hours	22	1	<10 hours	39	5
from 30 to 50	51	3*	from 10 to 20	30	1
>50 hours	5	2*	>20 hours	9	0
Tabacco			Al Alcohol		
Non smoker	38	3	YES	48	5
Passive smoker	27	3	NO	30	1
Smoker	13	0			
Sports			Leisure/Entertainment		
YES	46	4	Weekends	41	3
NO	32	2	Daily	37	3

\*Statistically significant difference (p< 0,05)

**Table 3.** Personality tipos.

Obsesive-compulsive	74,4%	Dependent	20,5%
Avoidant	51,3%	Paranoid	19,2%
Narcissistic	46,2%	Schizoid	16,7%
Histrionic	34,6%	Schizotypal	11,5%
Borderline	32,1%	Antisocial	6,4%

**Table 4.** Narcissist personality.

	Score	Not Burneo	Burned	Total	Chi-square Pearson (p)	Fisher Test
<b>Narcissist</b>	less than 3	41	1	42	0,057	0.090
	from 3 to 9	31	5	36		
<b>Total</b>		72	6	78		

**Table 5.** Borderline personality.

	Score	Not Burneo	Burned	Total	Chi-square Pearson (p)	Fisher Test
<b>Borderline</b>	less than 3	52	1	53	0,005	0.012
	from 3 to 9	20	5	25		
<b>Total</b>		72	6	78		

with a higher tendency to “burn” were those who did not smoke and consumed alcohol habitually. Likewise, in the studied sample, a higher tendency to “burn” was seen in subjects who frequently practiced sports. Table 2 demonstrates the relations between all these factors and the “burnout” syndrome. 74.4% of participants displayed obsessive-compulsive type of personality, 51.3% showed features of avoidant personality and 46.2% of narcissistic type. Narcissistic and borderline personality types are the most frequent ones in “burned out” individuals ( $p < 0,05$ ); (see Table 3).

**Discussion**

The results of our study coincide with Humphris et al. (2) in that low levels of “burnout” (10%) are present in graduate students. The authors observed significantly higher levels of “burnout” in the specialties of Conservative Dentistry and Oral Surgery, as a consequence of high scores on the depersonalisation (D) subscale. In the study by Pohlmann et al. (3) carried out in students during their fifth year in Dental School, 28% presented symptoms of depersonalisation (D), with D being a predictive variable of deficiency in social integration, causing difficulties when treating/attending patients. In the present study, the increased levels of D were observed only in 3% and emotional exhaustion was seen in majority (7%) of individuals with “burnout”. Another study by Humphris et al. (4) performed in first-year Dental students at seven European Universities deduced that higher than expected levels of EE were found among the study participants. In general, the previous studies suggest that the levels of “burnout” are higher in resident students due to inexperience and high demands in the work environ-

ment, possibly associated with depression and problems when dealing with patients (5). Factors most frequently mentioned by newly qualified dentists, to be responsible for being unprepared for practice are: law and insurance matters, practice organisation and staff management (6). The socio-demographic variables related to professional decline were marital status, cultural level, years practicing the profession and the number of days per week dedicated to clinical practice (7).

The study by Gorter et al. concluded that males in their 40s are more vulnerable to “burnout”(8). In our study carried out in graduate students and faculty, men were also found to have tendency to “burnout”, however, the average age of such individuals was 27 years. The possible reason for “burnout” to occur more frequently in men than in women could be the fact that, in general, women are more likely to look for peer and family support.

Analogous to the study by Myers and Myers (9), we observed a higher tendency to “get burned” in individuals that habitually consume alcohol. Other studies affirm that unhealthy habits and behaviours, such as alcohol consumption, are related to stress at the work place (10,11). It has been observed that personality and temper have a significant impact on stress perception. Independent people with high self-esteem possess self-confidence and affability to resolve problems as well as to make decisions. Strong optimistic individuals that know how to relax from mental and emotional pressures are also more apt when faced with stress, able to open and receive the help of others (12).

In our study, obsessive-compulsive personality, characterized by anxiety for order, perfectionism and mental and interpersonal control, was generally common in dentists

and no differences were registered between the three specialties studied. The pattern of unstable and impulsive personality and necessity for excessive admiration, which are typical of narcissist personality (see Table 4), distinguished those dentists with a propensity to “get burned”. Various authors affirm that narcissistic and perfectionist type of personality predispose to “burnout”. Likewise, the need to compete, to rapidly achieve objectives and appreciation for performed work makes individuals more vulnerable to suffer from this syndrome (13).

The narcissistic type of personality is characterized by a general pattern of grandiosity (imaginative or behavioral), a need for admiration and a lack of empathy. The borderline type of personality (see Table 5) is characterized by a general pattern of instability in interpersonal relations, autoimage, productivity and notable impulsivity.

On a daily basis, dentists are faced with an ample array of stress factors and, as a consequence, are susceptible to symptoms of stress that need to be identified and controlled at the initial stages, before producing physical and psychological damage (14).

Oral surgeons who are professionally worn out due to negative work conditions and whose efficiency is affected should be made aware of their condition, since it requires urgent changes in work dynamics in order to prevent health problems. Work environment and conditions under which oral surgeons are practicing need to be analyzed in order to identify surrounding factors/demands that threaten his/her health, forcing him/her to develop the “burnout” syndrome. There have been few published studies describing interventions to reduce the stress of dental practitioners, Newton y cols argue the need of research in this area (15). Certain strategies to modify work conditions are: recognize the alarming signs of professional tiredness, establish priorities in compromises and work goals, control the behaviour, acquire organizational habits/skills, prepare and adhere to daily agenda without waiting for deadlines and recognize and correct mistakes instead of trying to hide them. Other means to prevent “burnout” would be not to wait for a crisis to take place but instead use the free time to the things we like (travel, read, sports), take time to rest after work, avoid taking work home, spend sufficient time alone and with people we love and care about, have personal and professional relationships, not to “isolate” from society and express our feelings to others (16).

## Conclusions

1. The levels of “burnout” in the studied population are not high, only 2-3% if strict definition of “burnout” is applied, and 10% if more ample criteria are used.
2. More cases of “burnout” were identified in dentists in the graduate program of Oral Surgery and Implantology, with high levels of emotional exhaustion; however, their level of professional realization was high.
3. In the graduate program of Orthodontics, certain den-

tists were also found to suffer from “burnout” but they did not display depersonalization when attending patients. Dentists belonging to the Department of Integrated Dentistry did not suffer from “being burned out”.

4. Obsessive-compulsive type of personality was observed in 75% of participating dentists. The pattern of instable and impulsive personality and the need for excessive admiration, which are typical of narcissist personality, characterized the dentists susceptible for “getting burned”.

5. We believe it is necessary to identify individuals with a tendency to “burnout”, in order to establish preventive means and avoid negative behaviour both at work as well as at the personal level.

## References

1. Maslach C, Jackson S E. Maslach Burnout Inventory. Palo Alto: Consulting Psychologist Press, 1981.
2. Humphris G, Lilley J, Kaney S, Broomfield D. Burnout and stress-related factors among junior staff of three dental hospital specialties. *Br Dent J.* 1997 Jul;183(1):15-21.
3. Pohlmann K, Jonas K, Ruf S, Harzer W. Stress, burnout and health in the clinical period of dental education. *Eur J Dent Educ.* 2005 May;9(2):78-84.
4. Humphris G, Blinkhorn A, Freeman R, Gorter R, Hoad-Reddick G, Murtomaa H, O'Sullivan R, Splieth C. Psychological stress in undergraduate dental students: baseline results from seven European dental schools. *Eur J Dent Educ.* 2002 Feb;6(1):22-9.
5. Thomas NK. Resident burnout. *J Am Med Assoc.* 2004 Dec;292(23):2913-5.
6. Gorter RC, Storm MK, te Brake JH, Kersten HW, Eijkman MA. Outcome of career expectancies and early professional burnout among newly qualified dentist. *Int Dent J.* 2007 Aug;57(4):279-85.
7. Osborne D, Croucher R. Levels of burnout in general dental practitioners in the south-east of England. *Br Dent J.* 1994 Nov;177(19):372-7.
8. Gorter RC, Albrecht G, Hoogstraten J, Eijkman MA. Professional burnout among Dutch dentists. *Community Den Oral Epidemiol.* 1999 Apr;27(2):109-16.
9. Myers HL, Myers LB. “It’s difficult being a dentist”: stress and health in the general dental practitioners. *Br Dent J.* 2004 Jul;197(2):89-93.
10. Winwood PC, Winefield AH, Lushington K. The role of occupational stress in the maladaptive use of alcohol by dentists: a study of South Australian general dental practitioners. *Aust Dent J.* 2003 Jun;48(2):102-9.
11. Kenna GA, Wood MD. The prevalence of alcohol, cigarette and illicit drug use and problems among dentist. *J Am Dent Assoc.* 2005 Sep;136(9):1023-32.
12. Rada RE, Johnson-Leong CH. Stress, burnout, anxiety and depression among dentists. *J Am Dent Assoc.* 2004 Jun;135(6):788-94.
13. Grosch WN, Osen DC. Clergy burnout: an integrative approach. *J Clin Psychol.* 2000 May;56(5):619-32.
14. Alaujan AH, Alzahem AM. Stress among dentists. *Gen Dent.* 2004 Sep-Oct;52(5):428-32.
15. Newton JT, Allen CD, Coates J, Turner A, Prior J. How to reduce the stress of general dental practice: the need for research into the effectiveness of multifaceted interventions. *Br Dent J.* 2006 Apr;200(8):437-40.
16. James P. Why some dentists burn out?. *J Am Dent Assoc.* 1991 Jun; 122(6):73-76.