



## Burnout syndrome in dentistry, difficulties and search for solutions. A critical review.

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### ABSTRACT

Burnout syndrome (BOS) is defined as a gradual exhaustion of the individual that appears on people whose occupation requires direct contact with other people and providing them a helpful service. BOS tends to be associated with somatic and behavioral alterations, as well as emotional disorders. Dentists present an important workplace risk, since they are the most prone to suffer from BOS. Likewise, dentistry students present a varied prevalence of stress, generally due to the students' attitudes, which are mostly aimed at perfection and excellence, as well as academic, social and institution-related factors. The aim of this review is to identify factors involved in BOS in dentistry and preventive measures in educational and professional contexts. BOS is characterized by being a persistent negative mental state showing fatigue, exhaustion and disappointment. The main physical reaction generated by academic stress in dentistry students was sleepiness with 10.8%, followed by increase in food consumption with 6.4%, and restlessness and despair with 5.2%. Students might be severely affected according to the adaptive response that they present, which is individual. On the one hand, they might face the challenges in a positive manner, managing to learn from them. On the other hand, they might lose control and not be able to face difficulties, thus being likely to develop pathological states of depression, anxiety, suicidal ideation, and dependency on alcohol or other hallucinogenic substances. Education agents are particularly relevant, since they contribute to the configuration of the students' way of thinking and acting. Therefore, the integration of critical thinking and socioemotional abilities must be promoted and reinforced among the educational community. It is important to realize that the presence of BOS is not due to an individual weakness, but is a symptom that something is wrong with the educational institution.

**Keywords:** dentistry, student, dental education, stress, burnout.

### INTRODUCTION

Nowadays, in order to be recognized as a good professional there is a high level of demands and requirements, which causes that young people are trained in competitive and demanding university environments (*Peralta-Ayala & Moya, 2013; Bazalar & Balarezo, 2016*). Due to the excess of work and responsibility, people are prone to suffer from stress. Continuous exposure to stressor agents might exceed the individual's adaptive mechanisms, producing long periods of stress, which will result in a psychological disorder: Burnout syndrome (*BOS*). This is defined as a gradual exhaustion of the individual that appears on people whose occupation requires direct contact with other people and providing them a helpful service. BOS tends to be associated with somatic and behavioral alterations, as well as emotional disorders (*Peralta-Ayala & Moya, 2017; Picasso-Pozo et al., 2012; Brake et al., 2001; Martos et al., 2018; Pérez et al., 2016*).

BOS is defined by three dimensions. First, emotional fatigue, which is produced when individuals feel that they cannot give more of themselves, that is, their emotional resources are drained. Then, there is depersonalization or cynicism (*Atalayin et al., 2015*), which is expressed in the negative and distant attitude of the individual towards their work. By maintaining this state of cynicism, the professional starts feeling less effective in daily practice, thus causing lack of self-realization, bad perception of themselves and feeling less capable at work. Depersonalization seems to be an

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attempt at protecting themselves against emotional fatigue. The individual feels that is safer to be indifferent about work and daily situations (Awa et al., 2010; Huayhua, 2017; Montero-Ma-rín et al., 2014; Brake et al., 2008; Campos et al., 2017).

Dentists present an important workplace risk, since they are the most prone to suffer from BOS (Peralta-Ayala & Moya, 2017; Bazalar & Balarezo, 2016; Macaya et al., 2018; Pérez et al., 2016). Likewise, dentistry students present a varied prevalence of stress, generally due to the students' attitudes, which are mostly aimed at perfection and excellence, as well as academic, social and institution-related factors (Bazalar & Balarezo, 2016; Muñoz et al., 2017; Alzahem et al., 2014). The presence of this variation might be due to the different questionnaires, diagnostic criteria, results interpretation, sociocultural factors and characteristics of the health service (Picasso-Pozo et al., 2012; Loayza-Castro et al., 2016).

The aim of this review is to identify factors involved in BOS in dentistry and preventive measures in educational and professional contexts.

## **BURNOUT SYNDROME IN DENTISTRY STUDENTS**

Students entering dentistry programs are likely to have a high cognitive ability and good academic records, which are then overshadowed by the level homogeneity of the students at the program. This might lead to unfulfilled expectations, which will influence self-assessment, self-concept and self-efficacy, thus producing an effect on the effort, perseverance and amount of time invested on studying. Maintaining this view of oneself might lead to emotional fatigue and, therefore, more likeliness of suffering from BOS (Muñoz et al., 2017). Particularly, those students whose first option wasn't dentistry suffer from higher levels of stress than those who had dentistry as first option (Pérez & Cartes-Velásquez, 2015; Mafla et al., 2015).

This stress is reinforced by the obstructing role that educational institutions sometimes play. Students need to make big adaptive efforts to face lack of resources, negative work dynamics, excessive requirements and criticism derived from the relationship with the supervisor on clinical and academic work (Picasso-Pozo et al., 2012; Loayza-Castro et al., 2016; Macaya et al., 2018; Arbildo-Vega et al., 2014; Flores et al., 2016; Díaz et al., 2014; Misrachi-Launert et al., 2015).

Some of the main stress sources are: a) related to the faculty, b) associated to studying and c) those strictly related to the student. In general, students are faced to these stressor factors without the necessary preparation that allows them to develop in a comprehensive manner (Gorter et al., 2008; Rada & Johnson-Leong, 2004; Kumar et al., 2009).

The academic factors that reinforce the development and extension of BOS are: academic burden, exhausting exams, authoritarian teaching, failing courses, student's expectations about the program and university, problems of adaptation to university, insufficient time for doing homework or lab work, patients lacking resources for treatment, patients' abandonment, high cost of dental material, among others (Muñoz et al., 2017; Atalayin et al., 2015; Díaz et al., 2014; Sarrazola-Moncada et al., 2017).

The student's context plays a key role in this sense, including situations such as family dependents, having a free union with their couple and doing extracurricular work (Peralta-Ayala & Moya, 2017). Recent independence from the family, large academic burden and uncertainty of the professional future promote behaviors that are harmful for the health, which are considered adaptation mechanisms and escape behaviors (consumption of alcohol, drugs, tobacco, etc.) (Bazalar & Balarezo, 2016; Campos et al., 2017; Dávila et al., 2011; Casan et al., 2017; Arrieta-Vergara et al., 2017).

During the course of the program, different stress sources have been identified, according to the year of study. In the first year, the main stress sources were the grades, exams, fear of failing, lack of time to relax and difficulties in understanding the lessons, similarly to second-year students. In the third year of the program, in addition to the previous factors, there are difficulties in developing manual dexterity, negative environment created by clinical supervisors and high number of classes. In the fourth year, at the start of the clinical stage, there is also fear to assume responsibility in the attention of patients, learning clinical procedures, fear to possible delay from dental laboratories in the delivery of work and fears associated with the absence of supervising professors during clinical practice. The fourth year is the most stressful year, due to the change in learning strategies, the increase of practical knowledge and the development of soft skills (Huayhua, 2017; Misrachi-Launert et al., 2015; Casan et al., 2017; Gil & Cruz, 2018). Due to the large amount of external stressor agents during the last courses, anxiety levels are increased (Macaya et al., 2018; Díaz et al., 2014; Casan et al., 2017).

High levels of BOS are related to poorer performance and less satisfaction with studying, which might provoke a tendency to abandon the program, which usually takes place in the first university years. This is influenced by the student's previous characteristics, such as: previous academic performance and university admission tests (Muñoz et al., 2017; Casan et al., 2017).

Due to the multifactorial etiology of stress, an alteration in the students' performance is produced, since there is a decrease in the student's concentration, interest and motivation

towards their environment and themselves, which is reinforced by social and family factors (Huayhua, 2017; Muñoz et al., 2017; Martos et al., 2018; Misrachi-Launert et al., 2015; Sarrazola-Moncada et al., 2017; Dávila et al., 2011; Arrieta-Vergara et al., 2017; Gil & Cruz, 2018). If the student's family environment is hostile and does not work as a barrier to stress, the study habits and the quality of academic activities will decline (Atalayin et al., 2015; Díaz et al., 2014).

BOS is characterized by being a persistent negative mental state showing fatigue, exhaustion and disappointment (Loayza-Castro et al., 2016). The main physical reaction generated by academic stress in dentistry students was sleepiness with 10.8%, followed by increase in food consumption with 6.4%, and restlessness and despair with 5.2% (Díaz et al., 2014). Students might be severely affected according to the adaptive response that they present, which is individual. On the one hand, they might face the challenges in a positive manner, managing to learn from them. On the other hand, they might lose control and not be able to face difficulties, thus being likely to develop pathological states of depression, anxiety, suicidal ideation, and dependency on alcohol or other hallucinogenic substances (Picasso-Pozo et al., 2012; Campos et al., 2017; Flores et al., 2016; Sarrazola-Moncada et al., 2017; Dávila et al., 2011; Arrieta-Vergara et al., 2017; Deeb et al., 2018; Bathla et al., 2015).

In the academic context, the prevalence of BOS varies between 8% and 56.9% on the studied populations (Loayza-Castro et al., 2016). Furthermore, high levels of this syndrome's characteristics have been reported in dentistry students: 10% suffers from severe states of emotional fatigue, 17% showed serious levels of lack of self-realization and 28% reported acute symptoms of depersonalization (Atalayin et al., 2015; Kumar et al., 2009).

BOS can drastically affect certain aspects of a professional's life, their work quality, professional relationships and, especially, personal well-being (Brake et al., 2008). Some of the difficulties faced by recent graduates are the complex reality of the profession, with scarce opportunities, limited work and high competitiveness in the environment. All of this is confronted with increased, and often unrealistic, expectations prior to graduation and the need for social approval, resulting in a "reality shock" (Rada & Johnson-Leong, 2004; Kulkarni et al., 2016).

The risk of suffering BOS increases over time during professional practice, since there are many aspects of a dentist's work where there is no room for error. The management of the daily practice produces concern and a high amount of stress (Arbildo-Vega et al., 2014; Kulkarni et al., 2016). There are only a few studies that have tried to provide tools for managing stress derived from these sources, most of which were developed during the 1980s and with limited clarity of their benefits (Rada &

Johnson-Leong, 2004; Elani et al., 2014).

## PROPOSING POSSIBLE SOLUTIONS

The students' physical and psychological well-being is manifested through a positive attitude towards their educational activities, which is why, they do not tend to leave the program. Consequently, prevention measures should be aimed at those who are more susceptible of suffering from any type of psychological disorder, either by external or own factors (Muñoz et al., 2017; Casan et al., 2017).

Due to the existence of educational programs that are inflexible, overloaded and promote memorization over evidence and critical thinking, students become upset, which prevents them from enjoying their learning experience. Better curricular and administrative planning might solve the high stress levels during clinical training (Macaya et al., 2018; Misrachi-Launert et al., 2015; Dávila et al., 2011). Regarding the possibilities of changes in the curriculum, in clinical programs based on the patient's requirements, students present lower stress levels than in those that favor the fulfillment of established requirements (Alzahem et al., 2014).

The intervention programs might be aimed either at the individual or at the organization or institution. Those aimed at individuals are generally focused on improving their competences at work and adaptive mechanisms. Those aimed at institutions or organizations are usually changes applied to the procedures, reorganization of tasks, and form of evaluation of the work done (Awa et al., 2010).

On a study of BOS prevention strategies, 90% of the programs achieved positive effects on reducing BOS, or at least some of its dimensions, which lasted between 6 months and 1 year after being applied. A counselling intervention and cognitive therapy on 171 dentists with high levels of BOS managed to significantly reduce the syndrome's levels for up to one year. The favorable results of the strategies studied on organizational level, combined with those specific for the individual, lasted longer than those focused only on individuals, especially in programs that included maintenance courses (Awa et al., 2010).

Another possible solution for decreasing BOS in students is to anticipate contact with the patients. This means initiating the students in clinical practices from the first years of study, in order to promote an adaptive response to stress, thus acting as a protection factor (Alzahem et al., 2014; Misrachi-Launert et al., 2015).

Due to the problems caused in the relationship with professors and, given their big influence in the attitude assumed by the student, it is advisable to develop strategies that impro-

ve teaching performance and allow an optimization of the teaching-learning process, so that professors and students achieve excellence (Dávila et al., 2011; Casan et al., 2017).

## DISCUSSION

The students' mental health should be a priority within dentistry programs. Education agents are particularly relevant, since they contribute to the configuration of the students' way of thinking and acting. Therefore, the integration of critical thinking and socioemotional abilities must be promoted and reinforced among the educational community. This might be achieved through training courses that provide skills for emotional perception and stress management, especially for students that are prone to develop common mental disorders. This may improve the ability of developing effective adaptive mechanisms to face the environment's demands. These preventive measures must be applied during the academic training process, in order to lower the risk of suffering from emotional disorders and guaranteeing a stable performance of the future health professionals.

Healthcare students must become aware of ensuring mental and physical well-being, as this will have a direct effect on the patients' attention and health. Although certain levels of anxiety are necessary, so that individuals reach the proposed goals and increase their motivation for them, increased levels might result in students losing real interest in the program, as well as in their patients. It is important to realize that the presence of BOS is not due to an individual weakness, but is a symptom that something is wrong with the educational institution.

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