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BURN OUT SYNDROME IN DENTISTRY

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SUMMARY

Introduction: Dentistry without a doubt is a high-stress job and if one lacks the ideal coping mechanism intending to manage the extreme demands or if resources are deficient, burnout is likely. Burnout is the distinctive psychological response to a disbalance between stressors and resources on the job, and the disinterest in work following prolonged occupational stress. It describes the personal agony one experiences when an initial inflame of motivation, commitment and dedication to success burns out to leaving feelings of extreme emotional exhaustion, diminished personal accomplishment and depersonalization.

Objectives: This work aims to explore the factors closely associated with burnout syndrome, particularly in dentists and their effects on professional relationships. Additionally, the ways in which individuals can prevent burnout from occurring to seek the highest level of well-being, physically and psychologically.

Methods: A literature review was carried out to review articles and studies from all over the world, using online databases such as Medline, Pubmed and Science direct via the Universidad Europea de Madrid CRAI library online access. Keywords such as “burnout”, “dentists”, “dental students”, “factors”, “stress”, “resources”, “prevention” and “stress” were selected to find the most relevant information.

Discussion: Factors such as increased job demands, unfavourable professional relationships, lack of experience, negative job attitudes and certain personality factors where all identified as being possible causative factors of burnout syndrome. To prevent and manage this health crisis personal and organizational interventions are to be put in place, as dentists are highly susceptible to suffer from burnout due to the characteristics of their work.

Conclusion: Burnout syndrome if not managed correctly can have equally adverse effects on the dentist, the workforce and patient. It is important that we can recognise the stressors that can cause burnout and educate ourselves on the resources available to avoid this mental health crisis from occurring.

RESUMEN

Introducción: La odontología sin duda es un trabajo de alto estrés y si uno carece del mecanismo de afrontamiento ideal para manejar las demandas extremas o si los recursos son deficientes, es probable que se queme. El agotamiento es la respuesta psicológica distintiva a un desequilibrio entre los factores estresantes y los recursos en el trabajo y el desinterés en el trabajo después de un estrés ocupacional prolongado. Describe la agonía personal que uno experimenta cuando una explosión inicial de motivación, compromiso y dedicación al éxito se apaga y deja sentimientos de agotamiento emocional extremo, logros personales disminuidos y despersonalización.

Objetivos: Este trabajo tiene como objetivo explorar los factores estrechamente asociados con el síndrome de burnout, particularmente en odontólogos y sus efectos en las relaciones profesionales. Además, las formas en que las personas pueden evitar que se produzca el agotamiento para buscar el mayor nivel de bienestar, física y psicológicamente.

Métodos: Se realizó una revisión de la literatura para revisar artículos y estudios de todo el mundo, utilizando bases de datos en línea como Medline, Pubmed y Science directo a través del acceso en línea de la biblioteca CRAI de la Universidad Europea de Madrid. Se seleccionaron palabras clave como “burnout”, “dentistas”, “estudiantes de odontología”, “factores”, “estrés”, “recursos”, “prevención” y “estrés” para encontrar la información más relevante.

Discusión: Factores como el aumento de las demandas laborales, las relaciones profesionales desfavorables, la falta de experiencia, las actitudes laborales negativas y ciertos factores de personalidad, todos identificados como posibles factores causantes del síndrome de burnout. Para prevenir y gestionar esta crisis de salud se deben poner en marcha intervenciones personales y organizativas, ya que los odontólogos son altamente susceptibles de sufrir burnout por las características de su trabajo.

Conclusión: el síndrome de Burnout, si no se maneja, puede tener efectos igualmente adversos en el dentista, la fuerza laboral y el paciente. Es importante que podamos reconocer los factores estresantes que pueden causar agotamiento y educarnos sobre los recursos disponibles para evitar que ocurra esta crisis de salud mental.

INDEX

INTRODUCTION

Burnout is described as a psychological syndrome related to an abnormal feeling of overwhelming emotional exhaustion (EE), depersonalization (DP) related to negative and cynical feelings and reduced personal accomplishment (RA), which refers to the tendency to evaluate one's work negatively (1).

WHO describes burnout as "a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed" and a factor influencing one's state of health. Workplace burnout has been listed as a syndrome in the most recent edition of the *International Classification of Diseases*, suggesting that burnout, in fact, is a serious issue within our overstressed society that needs to be managed adequately (2).

Professional burnout results from a process of emotional deterioration whereby motivated individuals lose their interest and determination to work in their respected fields. It is considered a potential repercussion of chronic occupational stress, which although can be experienced by anyone over a wide range of industries; it is prevalent in dentistry. This profession is accompanied by various possible stressors that, if not appropriately managed, long-lasting exposure to these stressors can lead to physical and mental debilitation, which successively can result in burnout (3). This build-up of stress can be induced by many different factors ranging from the working environment, i.e. workplace conflicts, financial or practice management issues, and the individual's personality traits (4). According to the Maslach Burnout Inventory (MBI), the most commonly used psychological instrument to assess the three compositions of the burnout experience, there are 22 symptom elements

believed to be related to burnout (5) that can be used for diagnosis of occupational burnout. Each element is rated in terms of frequency, 0 (never) to 6 (every day), depending on how often one felt the experience, emotion, or feeling. Although the elements do not directly specify stress, emotional exhaustion, fatigue, frustration, all the symptoms found within the instrument, have been shown to arise following a period of excessive stress (6). A high level of burnout is characterized by a high score on the dimension level "emotional exhaustion" and " depersonalization", and associated with a low score in the dimension "personal accomplishment."

Emotional exhaustion is attributed to physical and psychological fatigue as a consequence of excessive physical and mental effort following a continual loss of energy and severe fatigue, that is not improved by rest. It is characterized by various manifestations such as the feeling of “emptiness” and emotional saturation leading to the inability to react to any emotion. The lack of motivation affects work relationships, obligating negative interactions and behaviours with clients and colleagues such as bitterness, anger and even distress. (7,8)

To oppose this extreme exhaustion sensation, one may disconnect themselves from others, becoming distant, desensitized and eventually cynical. This negative behaviour of isolation is known as depersonalization and is expressed as unprofessionalism, and the inability to sympathize. Pessimism and cynicism lead the dentist to begin considering their patient as an object or file, dehumanizing the patient, forcing a sense of frustration on the relationship. (8,9).

The third characteristic of burnout, a consequence of the previous two, is reduced personal accomplishment or the feeling of personal incompetence. It appears later and is one's tendency to lose self-confidence, evaluate work negatively, and a general development of low self-esteem. The professional experiences feelings of no longer being beneficial to patients, not knowing how to help them, lacking the ability to form authentic relationships, feeling incompetent and useless. This perception of self-doubt and demotivation trigger other symptoms that may leave one feeling frustrated, irritated, uneasy, or anxious, leading to unproductiveness and an inability to feel content (1).

Absenteeism, lack of stability, neglect of work and frequent professional errors are the main consequences when faced with the many difficulties preceding burnout (10).

As a profession, dentistry demands total physical and mental effort to ensure delivery of the best clinical work possible, for satisfaction from patients (1). Prolonged exposure to specific stressors in addition to constant adverse pressures can lead to burnout (7), which can also be characterized as a gradual disintegration of oneself. Stressors identified in the dental field are distinctive compared to those experienced in other medical fields. They can vary given the career stage, considering that manifestations of burnout among dental students have also been witnessed (9). Experiencing burn-out can have detrimental consequences on one's health, which in turn could negatively affect the quality of treatment provided to the patients due to reduced work performance; hence it can be recognized as an occupational hazard that needs to be dealt with accordingly (2). Therefore, finding methods of preventing the risk of burnout with the aim to overcome and avoid this disorder would be beneficial to

the professional and everyone involved in their life, including patients, colleagues, family, and friends.

OBJECTIVES

The objectives of this work are:

1. Determine the connection between burnout syndrome and stress especially to discover the similarities and differences between them.
2. To justify the direct and indirect causes of burnout syndrome in dental professionals and evaluate how these risk factors affect their work and professional relationships.
3. Investigate the measures required to be taken to avoid the risk of burnout and discover possible treatment options.

MATERIALS AND METHODS

To analyse and review articles and published studies related to burnout syndrome, I carried out a systemic literature review; there was a requirement to deal with human subjects; therefore, there were no issues of ethics involved. Via online databases such as Medline, Pubmed and Science direct via the Universidad Europea de Madrid CRAI library online access references were found. The inclusion criteria included keywords such as “burnout”, “dentists”, “dental students”, “factors”, “stress”, “resources”, “prevention” and “stress” which were elected to ensure that the articles found were most relevant to this study. Ideally the sources found were limited to articles published in 2005 or later, with the exception of relevant intelligence of distinct origins with importance.

DISCUSSION

Stress Vs Burnout

Burnout is commonly mistaken for stress; even though they are different states of mind, there is a fine line between the two and often it is difficult to distinguish when one ends, and the other begins. We need to be aware to assess the degree of burnout to differentiate it from stress and anxiety in order to correctly diagnosis sufferers of burnout and provide appropriate treatment techniques, although this can be difficult as many of the symptoms can be resembling.

Stress itself is defined as a biological reaction to physical, mental, or emotional stimuli that tends to disrupt one's natural state of homeostasis. It is an adaptive reaction of the body to maintain the balance of the multiple psychological or environmental stimuli that may require too much mentally and physically as per the perceiver. Characterized by an over engagement of work, it can lead to a loss of energy, an overaction of one's emotions, and produces a sense of urgency and hyperactivity (11). The disturbance of psychological wellbeing at work occurs when an imbalance prevails between the requirements of the job and the dentist's response competence which prompts emotional distress, furthermore, the beginning of occupational stress. Under stress, one temporarily struggles to cope with work pressures, but it is a day-to-day experience that is eventually manageable. Stressed people endure the pressures knowing that in the end, they can control their circumstances. The perception of responsibilities and circumstances at work, professional and personal relationships, the surrounding environment, and the ability to cope with certain situations at

work can differ from person to person. Identical work may be seen as a nuisance for some, yet an engaging opportunity for others who feel like they can handle the situation (12). When complex tasks are perceived as engaging challenges, we can identify this as good stress. Coping with stress in a 'good' way indicates more loyalty, job efficacy, understanding, and control. On the other hand, negative stress, is following a high level of strain as a result of the accumulation of stress and a low-stress tolerance whereby the professional's ability to perform and cope is decreased, creating a stressful environment. However by implementing practical strategies, stress can be overcome (13).

Contrary to stress, burnout can be characterised as a sane individual's response to continual emotional strain and an inadequate reaction to stress accumulation over time. With burnout, rather than the physical outcomes of this chronic exposure, the emphasis is more on the development of mental erosion and its psychological and social outcomes. As burnout is a prolonged response to stress, chronic interpersonal factors at work tend to be relatively stable over time. However, if this long-term stress is left unregulated or unmanaged for an extended period it can build up and increase the risk of suffering burnout. Individuals suffering burnout feel helpless and weakened, lacking any replacement source. They lack the necessary energy to confront any problems and have a general depressing outlook on life, feeling as if they can't keep going anymore. Experiencing high levels of constant stress is the primary cause of burnout. Due to the duties dentists have in extensively managing the wellbeing of other people, especially a person in great pain or generally troubled, the ongoing occupational stress a dentist may experience due to these many obligations of being a healthcare professional, coupled with a lack of resources, mean

the prospect of burnout in dentists is fairly high (1). Unlike stress where one can see the light at the end of the tunnel, burned-out individuals cannot see the possibilities of positive changes to their situation as their emotions are blunted and are devoid of motivation (11). Even the most minor tasks can seem strenuous and professionals can experience a deep sense of hopelessness and detachment; leading to disengagement with the job and progressive erosion of emotional energy (14).

Resources and Stressors

When talking about stress and consequently burnout, it is vital that we establish the relationship between the distinct possible stressors that may provoke burnout and the resources that can act as potential buffers.

Resources are considered as health protective factors; they function as buffers that oppose stress and are related to the cognitive wellbeing of an individual, whereas stressors are associated with tension variables for instance emotional exhaustion, psychosomatic disorders or anxiety. Coping strategies are examples of resources that act as defence mechanisms that can moderate occupational stressors' psychological impact. These stress adjustment strategies correspond to cognitive and behavioural efforts intended to manage specific perceived internal and external requirements as threatening or overwhelming a person's resources (15). An imbalance between the extent of stress factors and a lack of personal resources heavily influence the risk of burnout.

Stressors such as work overload, professional and personal conflict, and increased demands

may lead to the professional becoming unable to psychologically manage the job requirements once the emotional resources are depleted; this may provoke feelings of extreme exhaustion followed by depersonalization and cynicism, which are described as the main symptoms related to burnout. Physical exhaustion can also be caused by the uncomfortable physical working conditions that can contribute to back pain and influence job satisfaction (16).

The occupational requirements mustn't exceed the abilities, demands or resources of an individual; else there can be a detrimental effect on one's wellbeing (17). However, contrastingly it has been shown that organizational cynicism can have some possible positive effects as some people use this kind of behaviour as a coping mechanism, a way of expressing frustrations at work and preventing the more cynical susceptibilities of burnout (13). Job resources can play a significant role in reducing the effect of job demands. They have a critical role that moderates the relationship between job demands and work engagement and are particularly advantageous under stressful situations (18). Since burnout can be defined as an inadequate reaction to work stress, the way of stress management will have an impact on the different components of burnout.

To stay committed to their work, dentists should be able to balance their work demands with sufficient job resources. Examples of job resources include receiving continual education, which can widen knowledge and encourage personal growth and development. Building their skill portfolio and increasing the versatility of one's dental skills it can allow the professional to be more confident in their work and provide patients with

advanced and high-quality treatments. Other job resources such as open communication channels promote a cooperative relationship with colleagues; subsequently, there will be fewer workplace conflicts and the ability to navigate demanding challenges successfully, allowing a smooth-running practice and more efficient care given to patients.

Unfortunately, research into burnout within the dental field has been focused primarily on the job stressors present, neglecting the possible buffering factors or job resources such as social support, performance appraisal or favourable patient acquaintance. The reduced ability to cope, blunted emotions, autonomy, and absence of decision involvement have all been linked to a lack of resources. There is a strong correlation between lack of resources and an increase in demands leading to burnout (19). Burned-out professionals maybe a potential safety threat to patients if essential resources are deficient (20).

Factors That Contribute To Burnout

Work related factors

Numerous studies describe dentistry as a stressful career. The amount of stress a person can tolerate varies greatly depending on many factors, including the accumulation of the stressors, fatigue, personal situation, age, and past experiences (21). These determinants may interact with several environmental and work risk factors that can either exacerbate or act as buffers contra to their effects. They can impact the likelihood of suffering from work stress and, consequently, burnout; these include personality traits, effort-reward imbalance,

work demands, and lack of social support. The following work-related stress-inducing factors that consequently contribute to burnout were initially highlighted by Maslach (8):

- ***Job demands***

Job demands refer to the elements of a job that require a sustained psychological or physical effort. Within dentistry, they are due to the nature of a healthcare job. This includes the necessity to process large amounts of information constantly due to the daily developments in dental technology and the many interactions with numerous different patients means increased pressure for the need for a high level of concentration. Complex tasks may require a larger capacity of concentration and this relentless processing of information and the need for increased memory load can have harmful effects on a cognitive level.

Moreover, to meet the strain of everyday new challenges such as a growing ageing population, new economizing strategies, a declining workforce, high expectations of patients for quality treatments, dentists need to enhance the their work quality and increase productivity (22). Burnout is due to the prolonged exposure to interpersonal stressors within the working environment (5). The intense demands and constant interactions with people in need of emotional and physical help and the obligation to show constant empathy, provide healing, protection and precise advice to the patients can become overwhelming for the dentist. Eventually feeling like more of a burden rather than a desire to help people. Research has even demonstrated that absenteeism, lower performance at work and even the desire to quit can result from the hindered efficiency at work due to burnout, because of an absence of resources and the dentist's inability to accommodate the excessive demands

(23). As a result of taking on too much responsibility than one can handle, failure can lead to high stress levels. Excessive workload under a time pressures, without taking time out to socialise or relax, unfortunately something many dentists and dental students do due to increasing competition can cause excessive strain, and emotional exhaustion, a symptom of burnout.

Dentists spend most of their work life restricted in small, occasionally windowless operatory while performing intricate and meticulous procedures in a small oral space. This intense way of working can also have an adverse impact on one's mental well-being as over time this work can also become monotonous and unchallenging, therefore decreasing job satisfaction, an essential factor to keep motivated (24).

Dental professionals are deemed as not only clinicians but as academics, therapists and in some cases, business managers. These complementary jobs, as well as factors related to personal life, patient anxiety, patient-professional relations, work load, the stress of perfection, compromised treatments, physical posture, and other issues that dentists are often unprepared to handle (25) have been reported as hazardous to dental practise. When any of these engagements are defined as inferior, they can be characterized by an anxious state that may instigate burnout if not handled correctly (26,27).

Healthcare professionals are expected to acknowledge the demands within the dental practise and to constantly interact with colleagues and patients in a sympathetic and caring

manner. Yet there seems to be a lack of resources to be able to cope with the constant mental pressure to be able to behave this way (28).

- ***Professional relationships***

Insufficient control over many resources within the dental practise as well as the lack of social support from supervisors or colleagues can make it difficult to gain control or have confidence in difficult times. Patient-dentist and colleague relationships are crucial and should be characterized by support and trust so that effective ways to work out conflicts or disagreements can be put in place in order to avoid the risk of a distressing atmosphere, which if maintained can lead to feelings of resent.

A close and optimistic contact between the professionals and recipients must always be respected. The nature of this kind of relationship is very delicate and should be built on a mutual trust and understanding, to form high quality-relationships that can satisfy the basic psychological needs for autonomy, competence, relatedness and validation (29).
One of the critical stressors highlighted in many studies (10,30) was a negative relationship between dentist and patient. Nowadays, the dental treatment model has become more patient-focused rather than disease-focused. The immense burden to meet the specific desires and persistent demands of the patient can leave the dentist feeling frustrated and shameful if the therapeutic goals are not achieved, since the unsatisfaction and disappointment of the patient are notable stress factors for dentists (31,32).

Dental professionals should also consider that their own moods, stress levels and work attitudes may be triggering to a patient, who may already have been difficult to handle. Therefore, it is imperative that dental professionals are aware of their behaviour as it can have a significant impact on the patient (33). If patients feel as if they are getting the best dental experience and can wholly trust their healthcare provider, it can consequently lessen professional's pressure. However, if the patient perceives a situation as intimidating or an adequate relationship has not been formed, patient behaviour can become difficult to manage as they may display a manipulative and non-compliant demeanour or feelings of anger as well as anxiety, which could consequently cause stress to the dentist if these reactions are taken personally.

Anxious patients usually are an economic risk and unreliable provoking uncertainty and stress. These factors can implicate the dentist's technical quality to provide the best oral health to the patient (34). A burned-out dentist will go from trying to make their best effort to only doing the minimum, often belittling their accomplishments in front of their patients even if the work is impeccable. Move-over depersonalization due to burnout will cause cynical behaviour towards the patient and a distrust in their own. An intense detachment and little concern about the treatment will lead patient to lose trust in the professional, worsening the dentist-patient relationship (35). Also, burnout causes a steep decline in productiveness and cognitive performance, reducing treatment safety and integrity due to the lack of commitment the dentist may feel towards their work.

Effective communication skills, knowing how to recognize problematic issues, and showing empathy towards the patient's feelings dentists can enhance the patient's compliance and collaboration, which can help comfort an apprehensive patient consequently improving the patient and dentist experience; therefore, the dentist must display positive emotions (17,36).

High-quality relationships with colleagues are positivity related to work motivation. Professionals can benefit from a boost of motivation following words of satisfaction from their colleagues, which can sustain one's optimal functioning, help adapt to tough work endeavours, manage work stress, and maintain a mental well-being. Social support and work resources appear to reduce the chances of the disengagement component of burnout i.e. depersonalization and reduced personal accomplishment. People are more receptive to environmental cues such as, acceptance, approval from others and tangible rewards. Moreover, being able to confide in someone about certain issues can lift the load off one's mind therefore decreasing the possibility of mental exhaustion (37). Poor-quality relationships are positively associated to emotional exhaustion, which could indicate maladaptive consequences such as burnout.

- ***Experience***

The evolution of burnout within dentist ensues in many phases over a long period of time. After many long years of studying, newly graduated professionals are captivated by the new socio-professional status they have achieved, which can boost one's self-esteem. They are willing to invest a lot more time and effort into their work and are at first delighted with the

new responsibilities. The commitment to these responsibilities seems exciting thus the young dentist is willing to go above and beyond the strict professional framework. However, the significant change in life after graduating requires a slow adaption hence throwing oneself into the work, as many of these young professionals do, is a poor way of accommodating to the new system. Furthermore, they are unequipped with the necessary resources, experience, or perspective in order to do so. This inadequate manner of adjusting oneself to the new environment can lead to physiological changes that young graduates do not feel in the moment and cannot foresee the possible threatening negative impacts in the future following this way of working (4,38)

Newly qualified dentists will not have the expertise nor the methods of satisfactory patient management to execute their job to a high standard which can be disheartening. Moreover, expectations of these young professional following graduation, into a world seemingly exciting, are often unmet with the harsh reality, that everything will not always run smoothly, leading to a “reality shock”, consequently prompting detachment and emotional deflection from a career that was once identified as inspiring (38,39). Being new, one may lack the necessary organisational skills, the ability to prioritize and the ability to say “no’, which can lead to an undesired overload of work. The number of poor patient interactions is also higher among younger dentists due to the lower experiences levels and lower skills (40).

During the second phase when the work routine is finally established the dentist does the same monotonous work, day in day out, and as one begins receiving less recognition than originally hoped for, the reality that their hard work again doesn’t live up to all expectations,

which becomes frustrating. They get tired, bored, lose concentration, self-confidence, and start to question their practice, values, and effectiveness on their work. A change of attitude may emerge leading to possible conflicts with one's patients or colleagues as they begin to put into place certain coping mechanisms that although maybe a way to deal with the frustration, negative behaviour exhibited as a coping strategy in some cases can project negativity to the surrounding people (22).

Slowly the dentists' condition may deteriorate, and they begin to suffer from chronic fatigue, stress, negative behavioural disorders, general dysfunction, and intense symptoms of pessimism. An overall decline in personality and a deterioration of professional and personal relationships has been witnessed in these cases (41,42). In many instances more experienced dentists suggested that a significant part of their professional life was occupied by having to handle occupational responsibilities such as intense work pressures, staff management or administrative work, therefore they felt as if they couldn't give as much attention to the more stimulating and satisfying features of the job (41). Professionals who usually have more clinical responsibility and an obligation to make crucial decisions are more susceptible to being burnout, seeing as numerous dental procedures are irreversible, therefore intensifying the pressure suffered by the dentist (31). Over time they may even overlook what originally motivated them to select dentistry as a profession (43).

These work-related factors explain the cause of at least half of the overall stress experienced in a dentist's professional life (44). Other factors that stimulate a greater risk for experiencing burnout are detailed further.

Other factors

- ***Personality traits***

A direct relationship between burnout and personality has been established. Firstly, perfectionism is an ideal personality trait for dentists. It refers to professionals who provide uncompromising clinical standards and flawlessly execute treatments. However, the persistent pursuit for perfection can also be a significant cause of distress and frustration (45).

Low levels of hardiness, an external locus of control, and low self-esteem are traits of an unstable and impulsive personality that are also characterized by anxiety, vulnerability, and the need for excessive praise and recognition. These individuals are more prone to psychological distress and depersonalization, a factor strongly related to burnout (8,46). Usually those suffering from burnout deal with stressful events passively and defensively, these confrontational coping styles are associated with less effective management techniques. However, it is important to keep in mind that everyone's response to stressful events leading to burnout is different (45).

A coping mechanism is defined as a cognitive reaction that allows the ability to adapt to environmental stressors by making conscious or unconscious judgments that can reinforce control over certain behaviours or provide psychological comfort especially during high-stress situations. Personality can either act as a coping mechanism and be resourceful or contrarily put one in a compromising position.

Response to stressful dilemmas relies upon the person's individual evaluation of an event and depends on many different factors including one's own working environment, how individuals deal with certain situations, and notably, their personality traits. One's reaction to a stressor can extend from insignificant to major depending on specific personality characteristics and the presence of restraints or controls that hinder behaviour. Professionals that possess the desirable traits such as openness, emotional stability, honesty, self-confidence, receptivity, empathy, or extroversion handle challenging circumstances with more capability and prevent organisational loss (47). In these circumstances' personality is able to be recognized as a resource. Open-minded people tend to be more understanding, reasonable, have a flexible attitude and can listen effectively to diverse opinions, all qualities which are highly beneficial in a job like dentistry. Patients tend to be more attracted to professionals with this friendly demeanour (42,45). Those with the desirable traits may even interpret environmental demands as exciting challenges rather than stressors. They are more capable of altering the problem or directly dealing with the problem (48). The desirable characteristics are negatively correlated to depersonalization and emotional exhaustion, and positively correlated to increased personal accomplishments; hence these dentists with these traits are less likely to suffer burnout (49).

Psychological phenomena such as depression, emotional vulnerability, and susceptibility to anxiety have been positively associated with introversion. Introverted individuals tend to suppress their emotions and avoid seeking emotional support encouraging one to distance themselves from surrounding stressors and rely on disengagement as a way to handle the situation. Although this method of escapism permits temporary relief from negative

emotions, it prohibits one to tackle the problem (50). We can establish people prone to suffering personal distress, are introverted or emotionally unstable, and are likely to develop maladaptive behaviours such as anxiety and depression that correspond to stress-related diseases such as burnout (51).

- ***Job attitudes***

Although stress and anxiety are inevitable in every individual, the experiences each person may encounter can differ depending on how one reacts using distinctive strategies to combat these negative emotions. Job attitudes are multifaceted factors that include personal expectations, job satisfaction, high expectations, involvement, organisational support, and commitment. A negative attitude to one's work is one of the symptoms highlighted by burnout (16). High expectations occasionally can be unrealistic and additional effort is required to achieve the expected results; however, a relentless manner of work can lead to people working too hard and doing too much, which can often lead to cynicism if the anticipated effects from the work are not attained.

Job satisfaction is an emotional state of pleasure proceeding from the judgment that one makes of own his work based on their personal values and own physiological needs, security, self-esteem and work rewards. During burnout one can observe a strong dissatisfaction with their work (38) especially following a significant investment of one's time and emotion on a situation there an expectation of an outcome that, is not met, can leave one emotionally devasted.

One of the critical outcomes of burnout is job withdrawal and its various forms, which include diminished work productivity, absenteeism, and desire to quit the job. Another key element associated with burnout is a cynic attitude which is identified as a distrust in others and a generally distant behaviour towards one's work and the people around. This pessimistic attitude can have one feeling as if one's job has little value; they feel as if the work force lacks integrity and their frustrations regarding the workplace increase. Additionally as mentioned prior, a reduced commitment to a dentist's work can negatively burden one's colleagues because of increasing personal conflict and a general withdrawal from social situations (8). Nevertheless, dentists with committed attitudes, who are content with their jobs are more engaged with their work, which relates to increased mental health, healthy proactive behaviour and additional motivation, leading to a lower turnover of burnout and better patient dentist as well as colleague relationships (52,53).

Effects Of Burnout On A Dentist's Health.

Burnout syndrome is deemed a public health issue. It can be a threat to the organizational work force but most importantly it can be a personal tragedy affecting the psychological, physical, and the physiological health of an individual. Physical symptoms can include musculoskeletal disorders, following work related back pain, muscle pain and fatigue, high blood pressure, experiencing frequent headaches, digestive issues or changes in sleep habits, particularly insomnia, and an overall weaker immune system (8). Excessive strain from work can cause the professional to feel extreme exhaustion and fatigue. Memory problems and overall mental dysfunction following burnout may trigger negative mental

health issues including low self-esteem, depression, anxiety, and even present signs of self-destructive behaviours.

Work overload, long working hours and occupational stress have detrimental effects on one's psychological well-being and can affect essential relationships as copious amounts of work cause the dentist to run behind schedule, work late hours, skip lunch, and interfere with private life. These unreasonable consequences of work overload mean professionals have less time to think about themselves and their mental health (12). Additionally, professionals working longer hours struggle to keep a good work-life balance, damaging their lifestyle and private life. This eventually may provoke job dissatisfaction, demotivation, absenteeism and overall cynical mannerisms that additionally correspond to poor mental health (31).

Increased alcohol consumption, and drug abuse was also found to be frequent amongst dentists in the later stages of their career. Suicide rates in dentists are known to be notoriously high (54). The risk factors and stressors as mentioned above for burnout may correlate to the factors found to be evident in professionals who suffer depression and, therefore may have a great tendency to be at risk for suicide (55–57).

Prevention And Management Of Burnout

Fundamentally the key to managing burnout syndrome is prompt recognition and efficient intervention (5). Factors associated to burnout are required to be acknowledged by dentists

and dental students alike. Leaving them unnoticed and enduring work under stressful conditions it could make matters worse, leading to burnout which can have damaging effects. The ideal burnout management measures should prevent burnout from occurring altogether, thus should act on the factors leading to burnout. The prevention interventions also are to be focused on the availability of job resources. Freeing oneself from a negative problem is not the same as achieving a positive alternative thus for the treatment to reduce burnout to be successful one needs to identify a desirable goal state. To be able to identify burnout in its early stages it's imperative to allow adequate multidisciplinary prevention measures to be put in place. Occupational balance and participation, relaxation techniques, stress management and efficacious time-use can be useful to enhance the quality of dental services offered as well as reduce the occurrence of degrading mental health issues and burnout amidst dental professionals (58). Burnout is best prevented following organizational and personally directed interventions. Addressing burnout also demands a focus on the positive goal of promote engagement, and not simply trying to reduce burnout. These measures aim to provide professionals with a safe working environment so that they can regain leadership, re-establish control over possible stressors and increase engagement. The goal of promoting work engagement will have a powerful motivating effect on professionals and likely improve energy and resilience to ensure dedication and success at work (5).

Personal interventions

Accepting the situation of burnout and being active to seek and accept professional help is the essential priority to treating burnout. Stress management can be achieved by finding effective strategies to improve their coping skills to stressors and increase stress resistance.

Most personal interventions are personalised and unique to each individual. The main goal is to improve personal skills and develop techniques that change one's mind-set to be able to manage and cope with different circumstances. Some effective personal strategies to prevent are highlighted below.

- **Time off work** is ideal to rejuvenate and allows the professional to reflect on the reasons for becoming a dentist, making it possible implement these satisfying and stimulating aspects of work, again (43).
- Dentists should be able to **recognize their own needs** so that they can set ideal boundaries, say no to excessive work, and know when to stop working to preserve oneself.
- **Identifying new fields of interest outside of the workplace**, developing new hobbies and taking part in mindfulness-based programs (59).
- **Relaxation** allows the professional to maintain control over their behaviour. The basic idea is to release the tension muscle to reduce physiological stress in order to obtain a feeling of calmness while keeping the mind alert.
- **Mindfulness and meditation** has been shown by studies to reduce the chance of burnout (60). It involves a set of techniques or exercises that generate a higher level of concentration, inner peace, contentment, empathy, acceptance and overall physical and mental relaxation (32). These are all the qualities required for a positive dentist-patient relationship, thus improving the quality of life not only for the professional but also the patient.

- **Cognitive and behavioural therapy** can help develop gratitude, increase work skills, overcome weakness and improve coping strategies (61). Work-related commitment characterised by energy and dedication is a direct measure of psychological well-being according to Schaufeli and Bakker (19). By maintaining a positive attitude developed during therapy, one can bring hope and commitment to work.
- **Self-evaluation** can also encourage one to look at their accomplishments, motivating them to work (62). Regular assessment of one's professional goals can help identify their strengths and weaknesses, clarify their reasoning for doing dentistry, and redefine their needs and priorities.
- **Continual self-care and attention** to one's well-being are the best ways to protect oneself from burning out. Practising regular physical exercise, a balanced nutritious diet and getting enough sleep are all simple but effective lifestyle measures. Professionals who take care of themselves demonstrated to have superior practises and better mental well-being (63).

Organizational interventions

Burnout is not only the problem of an individual but of the social work environment. The structure and organization of the workplace can define the way professionals interact with others and how they do their job (8). Casting the problem as only a personal issue can drive the professional to pursue solutions that although are personally favourable can be damaging to the team (64). Even though many preventative measures and treatment options are aimed at the individual themselves, for effective results to reduce the possibility of burnout and promote a positive work engagement, a combined effort between the

individual dentist and the healthcare organization is crucial. Dentistry is a practise that involves great teamwork from each member of the team. Neglect in team effort is a possible stressor causing burnout. The purpose of organizational interventions is for the organization of the practice to be improved to ensure success within the dental practise to make progress, and to provide sustainable safeguarding of the professional's mental well-being. Even the most modest interventions can have big impacts.

- **Identify the risk factors** causing stress early on, as a team, in order to develop targeted interventions to halt the possibility of burnout. Dental associations can implement regular check-ups to ensure their wellbeing. For example, 'The Dutch Dental Association' introduced a 'stress and burnout thermometer' that allowed dentists to assess their own risk of stress and burnout by answering a few questions. Although it is an objective self-evaluation it can be helpful to know which areas one should improve on, it is an intervention coordinated by the organization (38).
- **Professional guidance and regular monitoring** of students who experience early signs of burnout or who are more vulnerable to suffering burnout due to specific personality traits would be beneficial (38), since soon following graduation there are many changes and additional pressures that must be quickly adapted to, and young dentists may find it overwhelming to adjust in such a short amount of time.
- **Continuous education programs** and further practical help should be provided to dental students and even to an actively practicing dentist as due to the nature of this job, there is constant possibility to improve oneself and learn new techniques (31).

These programs enable the professional to feel more confident in their work and meet their expectations to provide the best possible treatment.

- **Adjustment of work patterns,** including working less hours, avoiding overtime and taking routinely breaks (62). An improvement in working time management should be encouraged by management teams. A well-planned schedule will help avoid feeling overwhelmed or late and therefore avoid unnecessary stress. This also prevents patients waiting too long before their appointments, dreading the treatment and being afraid, or having negative feelings that can successively be burdensome for the dentist
- **Programs and seminars** to understand burnout and its consequences should be a requirement in dental schools as well as throughout professional life, so that individuals know how to manage their emotions and pessimistic attitudes early on before burnout occurs (65).
- **Regular meetings** assist to allow the workforce to express themselves, highlight problems and solve issues together, evading possible feelings of loneliness or dissatisfaction. Managers can propose educative interventions focused on helping workers to understand the important value of quality colleague relationships (37). This way there can be an improvement of an interpersonal understanding, recognition and respect for each individual (3,41).

Limitations

Unfortunately, reviewing studies from different countries decreased the validity of the study as the findings were from dentists and dental students from many different cultures and backgrounds, of whom may react differently to the possible factors that can cause burnout syndrome due to their social or economic circumstances. Inter-varibiltiy exists between different individuals of the entire populations. Additionally, the burnout assessment is a multifactorial measure based on self-reporting indexes that evaluates the psychological symptoms and feelings of a professional therefore they may be a possibility of bias. Although it may be difficult to generalise the causes of burnout and how it affects each individual, ultimately a strong relationship was found between the possible work stressors and lack of resources within dentistry across all populations.

CONCLUSION

1. Due to the complex interaction of social and individual factors such as increasingly fast paced schedules, longer hours, more competition in addition to constant social pressures endured in dentistry, it makes it a highly vulnerable industry to workplace burnout, so it is imperative that we recognize it and distinguish it from stress. Stress refers to a temporary over engagement to pressures, whereby professionals will feel better once their situation is under control, whereas burnout is a more intensified state of mind where dentists feel detached and generally helpless.
2. It has been made clear that burnout syndrome particularly in dentists is multifactorial. Many factors are work related for example increased job demands and

stressors, others are personal. Personality traits and general attitudes to the job depend on the professional themselves. Following burnout the detrimental effects on one's work, mental health and dentist-patient relationships is clear. Once in a burned-out state, dentists may perceive near impossible or agonising to handle certain stressful situations leading to procedural delays, disorganized management, and failure to maintain the high ethical standards of the dental practise which consequently increases the risk of dental negligence and malpractice, directly influencing the quality of care given and patient safety.

3. The prevention and management approaches to burnout should not only be personal but also organizational. Personal intervention programs incorporate cognitive behavioural alterations using an introspective and psychological approach, trying to balance one's emotions from the workplace stressors and resources through relaxation methods. On the contrary organizational interventions are usually directed at changing work procedures. A committed workforce and social support are essential to achieving the established objectives of a successful life withing the dental field.

RESPONSIBILITIES

This work has great social responsibility, due to the fact that although dentistry is an extremely stable and rewarding career that has the opportunity to make significant improvements to a patients' life, if the consequences of dental professional burnout are not taken seriously or treated accordingly, it can put patients in distressing situations, as it has been presented that burnout threatens the level of care and professional consideration given to patients. The deleterious effects of burnout on physical and mental health can also be immensely damaging to one's general well-being therefore it is important to dedicate time and energy at a work as well as personal level to prevent professionals with a tendency from suffering burnout and avoid negative actions. In my study I have analysed of the origins of burnout which can be used to support intervention initiatives and promote early prevention, ensuring the health and safety of not only the dentist themselves, but also those around them.

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ANNEX

Maslach Burnout Inventory

Third Edition

Christina Maslach, University of California at Berkeley
Susan E. Jackson, New York University
Michael P. Leiter, Acadia University

■ Instrument names

Maslach Burnout Inventory*
MBI
MBI—Human Services Survey (MBI-HSS)
MBI—Educators Survey (MBI-ES)
MBI—General Survey (MBI-GS)

■ Developers

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Description and History of the Instrument

Staff members in human services and educational institutions are often required to spend considerable time in intense

World Health Organization

Burn-out an "occupational phenomenon": International Classification of Diseases

28 May 2019 | Departmental news | Reading time: Less than a minute (180 words)

Burn-out is included in the 11th Revision of the International Classification of Diseases (ICD-11) as an occupational phenomenon. It is **not** classified as a medical condition.

It is described in the chapter: 'Factors influencing health status or contact with health services' – which includes reasons for which people contact health services but that are not classed as illnesses or health conditions.

Burn-out is defined in ICD-11 as follows:

"Burn-out is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions:

- feelings of energy depletion or exhaustion;
- increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and
- reduced professional efficacy.

Burn-out refers specifically to phenomena in the occupational context and should not be applied to describe experiences in other areas of life."

Burn-out was also included in ICD-10, in the same category as in ICD-11, but the definition is now more detailed.

The World Health Organization is about to embark on the development of evidence-based guidelines on mental well-being in the workplace.

Yuval Vered

Professional burnout: Its relevance and implications for the general dental community

Yuval Vered, DMD, MPH[1]/Yonit Zaken, DMD[2]/Hilla Ovadia-Gonen, DMD[2]/Jonathan Mann, DMD, MSc[3]/Avraham Zini, PhD, DMD, MPH[4]

As very few studies regarding dentists' professional burnout have been published, we provide an updated review and recommendations with regards to the published dental literature of this phenomenon, which is relevant to the general dental community around the world. Professional burnout has been found to be prevalent among dentists and dental students. The challenge lies in early recognition and developing intervention programs specifically for the dental profession. Attention to realistic career expectation and the type of dentist one prefers to be, attention to practice management skills and the stressfulness of work, as well as longitudinal monitoring of newly qualified dentists on burnout development are recommended. Learning about professional burnout and its potentially serious consequences, as well as increasing knowledge about how to prevent and treat it are crucial. It is not only a caregiver problem, but also a public health problem. *(Quintessence Int 2014;45:87–90; doi: 10.3290/j.qi.a30763)*

Key words: burnout level, dental education, general dentistry, specialist dentistry

Burnout is the end result of a process of attrition wherein motivated individuals lose their spirit. It is a state of physical, emotional, and mental exhaustion.[1] Professional burnout is considered as being one of the possible consequences of chronic work-related stress. It consists of emotional and mental exhaustion, depersonalization and cynicism, and diminished personal accomplishment.[1-3] Dentistry is a profession with a wide range of possible stressors, and professional burnout can be considered a risk to the dental profession.[3-5] The phenomenon has been found to be prevalent among trained dentists and dental students.[3-10] Early recognition, efficient coping strategies, and valuable prevention of professional burnout are strongly and urgently recommended.[4,5,10] The dental profession in Israel has gone through deep and extreme organizational changes in the last decades, including the inclusion of a dental component in the national health insurance service.[11-13] In 2010, we conducted an initial professional burnout survey among a purposive sample of 320 dentists. The professional burnout level was measured by the validated BMS (Burnout Measure Short Version) questionnaire, comprised of 10 items.[14] Our findings indicated that 45% of the participating dentists experienced burnout, with 3% of them demon-

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J Int Soc Prev Community Dent. Nov-Dec 2016;6(6):535-541. doi: 10.4103/2231-0762.195509.

Stress and professional burnout among newly graduated dentists

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Abstract

Background: Dentists encounter numerous professional stressful situations, beginning from education to day-to-day practice. The resulting stress tends to have a negative impact on their personal as well as professional lives.

Objectives: To measure daily burnout, and to investigate the extent of expectations from dental career and the feeling of being unqualified new dental practitioner.

Materials and methods: A close-ended questionnaire, i.e., "the Copenhagen Burnout Inventory," was utilized for evaluation. A total of 121 dentists with an experience ranging between 6 months and 5 years were included. The period was considered initiating from graduation to dental practicing in urban or rural areas. Ninety-seven dentists replied with filled questionnaires (80.16%). The multivariant analysis was done using SPSS 11.0 ver. (Chicago, USA).

Results: Using measures analysis, the mean scores for dentists on the basis of age and sex (n = 97) were calculated. The factors most commonly considered responsible for professional burnout were emotional exhaustion (39.27%), frustrations (47.83%), feeling worn out at the end of the day (35.05%), feeling worn out at the end of the working day (46.80%), exhaustion in the morning at the thought of another day at work (35.05%), feeling that every working hour is tiring (46.80%), less energy and less time for family and friends (47.83%). The most common cause for stress was professional burnout that was recorded commonly in females in the age range of 26-28 years.

Conclusions: Dentists are more prone for professional burnout, anxiety, and depression. The main reason for this is the nature of their practice and their personality traits, especially while pursuing dentistry as a carrier. Stress may lead to negative impact on dentists' personal as well as professional lives.

Keywords: Burnout; practice management; psychology.

frontiers in Psychology

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The Relationship Between Burnout, Depression, and Anxiety: A Systematic Review and Meta-Analysis

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Background: Burnout is a psychological syndrome characterized by emotional exhaustion, feelings of cynicism and reduced personal accomplishment. In the past years there has been disagreement on whether burnout and depression are the same or different constructs, as they appear to share some common features (e.g., loss of interest and impaired concentration). However, the results so far are inconclusive and researchers disagree with regard to the degree to which we should expect such overlap. The aim of this systematic review and meta-analysis is to examine the relationship between burnout and depression. Additionally, given that burnout is the result of chronic stress and that working environments can often trigger anxious reactions, we also investigated the relationship between burnout and anxiety.

Method: We searched the online databases SCOPUS, Web of Science, MEDLINE (PubMed), and Google Scholar for studies examining the relationship between burnout and depression and burnout and anxiety, which were published between January 2007 and August 2018. Inclusion criteria were used for all studies and included both cross-sectional and longitudinal designs, published and unpublished research articles, full-text articles, articles written in the English language, studies that present the effects sizes of their findings and that used reliable research tools.

Results: Our results showed a significant association between burnout and depression (r = 0.520, SE = 0.012, 95% CI = 0.492, 0.547) and burnout and anxiety (r = 0.460, SE = 0.014, 95% CI = 0.421, 0.497). However, moderation analysis for both burnout–depression and burnout–anxiety relationships revealed that the studies in which either the MBI test was used or were rated as having better quality showed lower effect sizes.

Conclusions: Our research aims to clarify the relationship between burnout–depression and burnout–anxiety relationships. Our findings revealed no conclusive overlap between burnout and depression and burnout and anxiety, indicating that they are different and robust constructs. Future studies should focus on utilizing more longitudinal designs in order to assess the causal relationships between these variables.

Keywords: burnout, depression, anxiety, meta-analysis, systematic review

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Emotional exhaustion, burnout, and perceived stress in dental students

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Abstract

Objective: As in other health sciences, a career in dentistry is associated with numerous stressors in practitioners. The main objective of this research was to examine the prevalence of emotional exhaustion, burnout, and perceived stress among dental students in Mexico.

Methods: A cross-sectional study was conducted among 73 dental students attending a private university in Northern Mexico. Three scales were administered to students to identify emotional exhaustion, burnout, and perceived stress, and parametric data analysis was performed.

Results: Among participants (mean age 19.7 years), the proportion with emotional exhaustion, perceived high stress, and burnout was 52.0%, 42.3%, and 17.8%, respectively. All students with perceived stress also had burnout.

Conclusions: We found that emotional exhaustion and perceived stress are experienced by a large proportion of dentistry students enrolled in the third semester at this private university in Northern Mexico. The proportions were independent of age and sex.

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JOB BURNOUT

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Key Words work stress, organizational behavior, job engagement, stress management, job-person fit

■ **Abstract** Burnout is a prolonged response to chronic emotional and interpersonal stressors on the job, and is defined by the three dimensions of exhaustion, cynicism, and inefficacy. The past 25 years of research has established the complexity of the construct, and places the individual stress experience within a larger organizational context of people's relation to their work. Recently, the work on burnout has expanded internationally and has led to new conceptual models. The focus on engagement, the positive antithesis of burnout, promises to yield new perspectives on interventions to alleviate burnout. The social focus of burnout, the solid research basis concerning the syndrome, and its specific ties to the work domain make a distinct and valuable contribution to people's health and well-being.

CONTENTS

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Stress and burnout in postgraduate dental education

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Keywords
stress; burnout; postgraduate students; dental students; residents.

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Abstract

Introduction: High levels of stress and burnout have been documented among dental students and practicing dentists, but evidence among dental residents and postgraduate students is lacking.

Materials and methods: Ninety-nine postgraduate students enrolled in clinical, non-clinical and PhD programmes in the Athens University School of Dentistry completed the Graduate Dental Environment Stress (GDES) questionnaire and the Maslach Burnout Inventory. Perceived stress was measured in two domains, academic (GDES-A) and clinical (GDES-C) and burnout was measured using the scales of emotional exhaustion (EE), depersonalisation (DP) and personal accomplishment (PA). Analyses relied on descriptive, univariate and multivariate methods based on ANOVA and generalised linear models.

Results: Participants' mean age was 30 years; two-thirds were women and practised dentistry independently of their graduate studies. Residents in clinical programmes reported significantly higher levels of perceived stress compared to non-clinical and PhD students ($P < 0.05$). There were no gender differences in perceived stress. Forty per cent of respondents were burnout 'cases' on the EE scale, while this proportion was 38% for reduced PA and smaller, 13% for DP. Perceived stress was positively correlated with all burnout dimensions, whereas independent dental practice and higher age had a protective effect.

Conclusions: High rates of burnout manifestations were detected among this sample of Greek postgraduate dental students. Perceived stress correlated with burnout and was more pronounced among those enrolled in clinical residency compared to non-clinical and PhD programmes.

Introduction

The examination of sources, correlates and consequences of stress has become a popular area of research in dental education and has been the focus of numerous recent investigations (1). It is now well established that both dental students and practitioners perceive and experience high levels of stress. Although some stress is inherent in dentistry and education and is likely beneficial as a learning stimulus (2), there is a concern that high levels of stress and prolonged stress exposure may precipitate burnout, a term that describes the experience of long-term work-related exhaustion and diminished interest (3). Although burnout among practicing dentists is typically considered a 'professional syndrome' (4–10), some evidence indicates that manifestations of burnout may be prevalent and can be detected among dental students (11–15).

Postgraduate dental studies are a defining career stage for many dental practitioners and academicians and are becoming increasingly popular and available in all areas of the world (16–18). Graduate-level dental programmes are typically

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Burnout as a clinical entity — its importance in health care workers

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Burnout, viewed as the exhaustion of physical or emotional strength as a result of prolonged stress or frustration, was added to the mental health lexicon in the 1970s, and has been detected in a wide variety of health care providers. A study of 600 American workers indicated that burnout resulted in lowered production, and increases in absenteeism, health care costs, and personnel turnover. Many employees are vulnerable, particularly as the American job scene changes through industrial downsizing, corporate buyouts and mergers, and lengthened work time. Burnout produces both physical and behavioural changes, in some instances leading to chemical abuse. The health professionals at risk include physicians, nurses, social workers, dentists, care providers in oncology and AIDS-patient care personnel, emergency service staff members, mental health workers, and speech and language pathologists, among others. Early identification of this emotional slippage is needed to prevent the depersonalization of the provider–patient relationship. Prevention and treatment are essentially parallel efforts, including greater job control by the individual worker, group meetings, better up-and-down communication, more recognition of individual worth, job redesign, flexible work hours, full orientation to job requirements, available employee assistance programmes, and adjuvant activity. Burnout is a health care professional's occupational disease which must be recognized early and treated.

Key words: Burnout; health care workers; health professionals; stress; stress management.

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INTRODUCTION

It was only 20-odd years ago that a behavioural entity was added to the medical lexicon — 'Burnout', as a clinical complex, was given recognition in the psychosocial literature. The term was originally applied around 1940 to the cessation of operation of a jet or rocket engine. The designation was adapted to humans in the mid-1970s by Freudenberger,[1,2] replacing in part such loosely-applied terms as 'depression' and 'nervous breakdown'.

While occupational medicine (OM) is concerned primarily with the prevention of work-related disease in the physical sense, no illness can present without emotional concomitants. Observers and planners in human services, particularly at the federal level, have given emphasis in their health promotional efforts to psychological disorders. In a 1985 conference sponsored by the National Institute for Occupational Safety and Health (NIOSH) and the Association of Schools of Public Health (ASPH), strategies for 10 leading work-related diseases and injuries were developed and published in 1988, including a *Proposed National Strategy for the Prevention of Psychological Disorders.* Included among 'Disorders of Current Interest' were affective disturbances such as anxiety, depression, and *job dissatisfaction* [emphasis added]. A recommendation was made to integrate mental health services into the overall occupational health (OH) care programme, whether on-site or external to the organization.[3]

With century's end as a road mark for improvement in all human endeavours, the Public Health Service aligned the thoughts of some 10,000 knowledgeable individuals in an agenda for the year 2000. In the document produced, mental health was considered as referring 'to an individual's ability to negotiate the daily challenges and social interactions of life, without experiencing undue emotional or behavioural incapacity'.[4] The stated objective in this area was to reduce the adverse effects of stress to less than 35% of people, an 18% decrease. Specifically stated was the need for

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Burnout Syndrome in Dental Profession

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Abstract:
Dentistry is a profession demanding physical and mental efforts as well as personal contacts, which can result in a condition known as "burnout". This is true for all stages of dental career and even dental students. This may have negative effects on their personal and professional life and well-being. Burnout is characterized by 3 key aspects: Emotional Exhaustion (mental fatigue) Depersonalization (psychological distancing from others) and Reduced personal accomplishment or inefficiency. The aim of the review the to provide the clinician with information to recognize the onset of burnout ,the psychological and physiological effects ,the effect on the dentists and the provision of practical methods to address the problem.

Key Word*: Burnout, Emotional Exhaustion, Depersonalization, Diminished Personal Accomplishment*

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I. Introduction

In the past decade epidemiological studies have found a high prevalence of professional stress syndrome of burnout in the developing countries.[1] Burnout is a public health issue due to its physical and mental health, and social implications for individuals. Many researchers have pointed out that burnout is a occupational health issue of a psychological nature which is one of the most important work related problems in today's society.[2]

Dentistry considered as an inspiring, awarding and challenging profession because of the physical and mental diversity it produces on dentists. And hence has reputation of being a stressful occupation.[3,4,] Burnout is a public health issue due to its physical and mental health, and social implications for individuals.[5]Salanova and lorens stated that burnout is a occupational health issue of a psychological nature which is one of the most important work related problems in today's society.[6]

Dentists experience numerous professional stressful situations, as they take intricate work on patients who are frequently in a highly anxious state. In addition to that, usually excessive prolonged working hours - beginning from education to clinical practice build up and academics, all the way through their professional carrier , lead to emotional ,mental and physical exhaustion. Such high levels of stress tend to have a negative impact on their professional as well as personal lives, eventually resulting in professional burnout.[7,8]

Burnout is a accumulative, gradual and continuous process that occurs over an extended period of time. It does not happen overnight, but it can creep up on the individual if he or she is not paying attention to the warning signals, which are subtle at first but the get worse as time goes on.[7]thus /so Burnout syndrome is a malady, putting person into downward spiral from which it is hard to recover.[1]

The term Burnout was first coined by the American psychologist Herbert Freudenberger.[9,10]Many researchers have tried to define Burnout as a response of a "normal individual" to the chronic emotional strain of dealing extensively with other human beings ,particularly when they are troubled or having problems and he rephrased "BURNOUT "as an "erosion of engagement with the job.[11]

Burnout "is a persistent, negative work related state of mind of "normal individuals" primarily characterized by emotional exhaustion and accompanied by distress, a sense of reduced effectiveness ,decreased motivation and the development of dysfunctional attitudes and behaviors at work.[12]

But the most acceptable definition was written by Maslach and Jackson in 1981 as a working environment syndrome ,characterized by a process of chronic response to occupational stress ,when coping methods fail or are insufficient ,thus having negative consequences, both at the individual and the professional level, and further affecting the family and social interactions.[13]

Maschlach and Leiter 1997,stated that ,"Burnout" is the index of the dislocation between what people are and what they have to do. It represents erosion in value, dignity, sprit, and will.[5]

Burnout among dentists: Identification and prevention

Gorter, R.C.

Publication date
2000

LOCATING BEHAVIORAL CYNICISM AT WORK: CONSTRUCT ISSUES AND PERFORMANCE IMPLICATIONS

Pamela Brandes and Diya Das

ABSTRACT

In this article, we situate organizational cynicism at the nexus of the related constructs of burnout, stress, and antisocial behavior. We expand Dean, Brandes, and Dharwadkar's (1998) notion of behavioral cynicism to include cynical humor and cynical criticism. We also propose that cynical behavior has important, non-linear effects on employee work performance. Finally, we suggest that cynical behavior may act as a coping mechanism for employees and that such behavior moderates the stress–performance relationship.

INTRODUCTION

Envision a flier, posted on a corkboard in a well-trafficked area in a corporate workplace. Printed on the flier is a graphic of a flock of geese flying in

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ORIGINAL ARTICLE

Burnout syndrome among undergraduate clinical dental students in Sudan

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ABSTRACT

Background: Burnout syndrome is characterized by emotional exhaustion, depersonalization and decreased personal accomplishment.

Objective: To investigate the level of burnout syndrome among fourth and fifth year clinical dental students in Sudan.

Materials and Methods: A total of 259 selected males and females of fourth and fifth years, using stratified random sampling technique from 10 universities and Medical Colleges in Sudan. Burnout was assessed by Maslach burnout inventory scale. 22 items concerning the measurement of the three burnout components: Emotional exhaustion (EE) (9 items), depersonalization (D) (5 items) and personal accomplishment (PA) (8 items). A high risk of burnout was considered present, when the respondent scored high in both (EE) and (D) and low in (PA).

Results: Revealed that 57.1% of the students suffering from high levels of emotional exhaustion, only 3.1% had severe lack of personal accomplishment and 8.9% had severe depersonalization. Students from private universities showed significant higher levels in personal accomplishment than their counterparts in the public ones (P = 0.003). There was no significant difference between the means scored of EE, PA and D among males and females, fourth and fifth years students.

Conclusion: Emotional exhaustion was the main component affecting Sudanese dental students. Burnout components affected the students in a same manner regarding male and female, fifth and fourth year students. Selection of dentistry as first career did not affect the level of burnout.

Key words: Burnout syndrome, dental students, maslach burnout inventory

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Introduction

Dentists suffer a lot as their profession demands, physical and mental effort as well as personal contact which can result in condition known as burnout. It is a syndrome of being burned or nervous breakdown. Burnout syndrome is defined as "a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do "people-work" of some kind.[1] It is a psychological term for the experience of long-term exhaustion and diminished interest. It is characterized by three key aspects: Emotional exhaustion (mental fatigue), depersonalization or dehumanization (psychological distancing from others) and reduced personal accomplishment. [2,3]

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Interest in this topic emerged from the work of the psychologist Cristian Maslach [4] in 1976 and the most acceptable definition of the "burnout syndrome" was written by Maslash and Jackson [5] in 1981. Dental students or Dentists who experience burnout are unable to continue working, find the interaction with patients unbearable and withdraw from contact with staff and colleagues.[6] Stressful work or too many requirements are not merely contributing factors to burnout, but lifestyle and certain personality traits could have an effect. Burnout is accumulative and gradual process that occurs over an extended period of time. It does not happen overnight, but it can creep up on the individual if he or she is not paying attention to the warning signals. There are physical, emotional and behavioral signs and symptoms of burnout which are subtle at first, but they get worse and worse as time goes on.[7] Many researches had investigated the existence of burnout, its rate and its effects on the lives among dental students.[5,8,9] It was found that, female students

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Systematic review: factors contributing to burnout in dentistry

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Background	Dentists and dental students have been reported to be at high risk of burnout and risk factors have been identified. Despite research into burnout in dentists, only a few papers have identified significantly associated factors.
Aims	To identify the most significant factors associated with burnout in dentists and dental students in published literature.
Methods	We systematically searched MEDLINE, EMBASE and HMIC electronic databases to source literature on the factors associated with burnout in dentists. We critically appraised and themed papers using the Critical Appraisal Skills Programme to find the most significant factors.
Results	From 115 studies identified by the search string, we deemed 33 papers to be relevant for review. The most prevalent and significant factors associated with burnout were: younger age, male gender, student status, high job-strain/working hours, those enrolled in clinical degree programmes and certain personality types. However, only a limited amount of literature explored the directional relationship between these factors and burnout.
Conclusions	This review identified several significant factors contributing to burnout in dentists and dental students. Further longitudinal and prospective studies are required to assess causation. Burnout should be considered a multifactorial phenomenon that can develop early in a dental career. Screening programmes and coping strategies might help to identify and prevent it.
Key words	Burnout; dentist; depersonalization; emotional exhaustion; personal accomplishment.

Introduction

Burnout is 'a syndrome of emotional exhaustion (EE) and cynicism that occurs frequently among individuals who do "people-work" of some kind' [1]. In 2014, a systematic review by Amoafo *et al.* [2] investigated the significant factors associated with burnout in doctors. Since medicine and dentistry are similar in terms of practice and patient involvement, it is sensible to assume that dentists may burn out due to many of the same factors.

Burnout is described through three dimensions: increased EE (feeling of fatigue by the stress of work), increased depersonalization (DP; development of negative and cynical attitudes) or reduced levels of personal accomplishment (PA; decline in one's feelings of competence and self achievement) [3]. The Maslach Burnout Inventory (MBI) is a widely used tool for measuring burnout [1]. It is a 22-item questionnaire that assesses EE, DP and PA [4]. However, the MBI has been critiqued by many including Kristensen *et al.* in 2005 [5], and there are newer methods of measuring burnout including the self-score Professional Quality of Life (ProQOL9) [6].

The prevalence of burnout in dentists has been thoroughly investigated [7]. In 2014, Gorter and Freeman [8] reported that >26% of dental staff were at severe risk of burnout. In 2011, Lee *et al.* [9] published a systematic review, which looked specifically at the risk factors for burnout in dentists. Our literature review was designed to update the findings of this review, to explore the factors contributing to burnout in dentists and to extend the review to include undergraduate dental students.

SCIENTIFIC RESEARCH REPORT

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Working conditions, job satisfaction and challenging encounters in dentistry: a cross-sectional study

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Objectives: The aim was to evaluate job satisfaction, challenging encounters and work-related outcomes in dentistry and their association with the work-related outcomes scales 'burnout inventory', 'general life satisfaction' and 'cognitive stress symptoms'. **Methods:** This cross-sectional study was based on the results of a questionnaire administered to a sample of 1,811 dentists in the German federal state of Schleswig-Holstein. Besides sociodemographic data and practice characteristics, topics such as challenging patient traits and job satisfaction, and three work-related outcome scales, were evaluated. Descriptive statistics and linear regression analyses were computed to explore potential associations with the three work-related outcome scales. **Results:** A response rate of 35.2% (638/1,811 participants) was observed for this study. Dentists described that 25% of their patients were challenging. The highest rate was found for 'aggressive patients' and the lowest rate for 'anxious patients'. The proportion of challenging patient traits was significantly correlated with the three work-related outcomes whereby the highest significant correlation was observed for 'burnout inventory'. **Conclusions:** As shown by our results, the higher perception of the proportion of anxious patients, the higher the risk of burnout. Therefore, special management of the treatment of anxious patients is necessary, which could have a positive implication on the perceived work-related stress. A crucial aspect for well-being at work as a dentist (besides job satisfaction and work-related aspects) is the evaluation of what kind of patients result in a challenging encounter.

Key words: *Aggressive behaviour, anxious behaviour, burnout, challenging encounter, dentistry*

INTRODUCTION

In recent years, close attention has been paid to health professionals' well-being at work and this was described as a missing quality indicator with serious consequences for patients[1]. Indeed, the combination of unpleasant working conditions and work-related stress can lead to poor quality of care and can affect patient safety[2]. It is well known that stress factors at work have an effect on health complaints[3]. However, not only a stressful psychosocial working environment leads to discomfort at work. Further factors, such as patient traits, also influence job perception. For primary care physicians it was found that different patient traits can be perceived as challenging and it was observed that general practitioners report lower job satisfaction if they have a large number of challenging encounters[4,5]. However, the association between patient traits and job satisfaction of dentists, as well as burnout, has not yet been the focus of much research. Moreover, there is a lack of research on what type of patients are perceived as challenging for dentists and how this is interconnected with job satisfaction and work-related outcomes.

Over 70% of the German population visits 'their' dentist regularly[6]. According to the German Dental Association, 71,425 individuals were employed as dentists in 2015 and nearly 60% of the dentists work in a solo practice[7]. As dentists are an important professional group for healthcare, the consideration of factors that influence their well-being at work is crucial for recruitment and retention. A former study of German dentists showed that intrinsic aspects have a positive impact on job satisfaction[8]. International studies show that job satisfaction is linked to the level of stress, working time, as well as productivity[9–11].

The aim of this study was twofold: (i) to evaluate challenging patient traits, job satisfaction and work-related outcomes of dentists; and (ii) to explore potential associations with three work-related

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EMOTION WORK AND JOB STRESSORS AND THEIR EFFECTS ON BURNOUT

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(In final form 15 January, 2001)

This article reports research on emotion work, organizational as well as social variables as predictors of job burnout. In burnout research, high emotional demands resulting from interactions with clients are seen as a core characteristic of service jobs. However, these emotional demands were seldom measured in a direct manner. It was only recently that emotional demands were included in studies on burnout referring to the concept of emotion work (emotional labor). Emotion work is defined as the requirement to display organizationally desired emotions. A multi-dimensional concept of emotion work was used to analyze the relations of emotion work variables with organizational and social variables and their joint effect on burnout in five samples including employees working in children's homes, kindergartens, hotels, banks and call centers. Emotion work variables correlated with organizational stressors and resources. However, hierarchical multiple regression showed a unique contribution of emotion work variables in the prediction of burnout. Moreover, the analysis of interaction effects of emotional dissonance and organizational and social stressors showed that for service professionals, the coincidence of these stressors led to exaggerated levels of emotional exhaustion and depersonalization.

KEY WORDS: Emotional labor, job stressors, burnout.

Burnout is a phenomenon which was first investigated in the health care professions (Maslach, 1982; Schaufeli and Enzmann, 1998; Schaufeli *et al.*, 1993). The management of emotions comprising the control and adequate expression of one's emotions are considered a central part of work in these jobs. The interaction with patients, clients or children demands empathy and emotional involvement which many employees consider more and more difficult as time goes by. Burnout is an indication of the employees' growing inability to adequately manage their emotions when interacting with clients.

Interestingly, however, most empirical studies on burnout did not directly measure emotional demands at work, such as: how often do employees have to show or control certain emotions? Rather, they analyzed organizational and social variables as potential predictors of burnout. This is shown, for example, in the meta-analysis of Lee and Ashforth (1996) who analyzed the effects of various predictors on emotional exhaustion, depersonalization and personal accomplishment, the components of burnout suggested by Maslach and Jackson (1986). Organizational job stressors such as role conflict, role stress, stressful events, workload and work pressure showed the strongest associations with emotional exhaustion. Similar results occurred for depersonalization. For personal accomplishment, job stressors were not predictive. Rather, the number of work friends was a strong predictor here. However, among the predictor variables of burnout listed by Lee and Ashforth, there

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COMMUNITY DENTISTRY AND ORAL EPIDEMIOLOGY

Positive engagement and job resources in dental practice

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Abstract – *Objectives:* The aim of this study is to determine the level of engagement among dentists, and subsequently, to investigate which dental job resources are positively correlated with engagement. *Methods:* By stratifying on gender, age, and region, a representative sample of 848 general dental practitioners was drawn at random, plus an extra group of 95 female dentists for gender comparison purposes. *Engagement* was assessed using the Utrecht Work Engagement Scale (UWES), consisting of three subscales: Vigor, Dedication; and Absorption. *Job resources* were measured using the Dentists' Experienced Job Resources Scale (DEJRS). *Results:* Six hundred and thirty two dentists (67%) responded, 76% male and 25% female. Mean age: 44.6 years (SD = 9.0). *Engagement:* Dedication and Absorption mean scores were higher among dentists when compared with manual norm scores, based upon a variety of professions, whereas Vigor mean scores were comparable to manual norm scores. *Job resources:* 'Immediate results / Aesthetics' and '(Long term) Patient results' showed highest mean scores among all dentists. Gender differences were found on '(Long term) Patient results' and 'Patient care'. *Engagement and job resources:* All DEJRS subscales and the full scale showed statistically significant positive correlations (pmcc) with the UWES subscales. *Conclusion:* Dentists showed relatively high mean scores on an engagement measure when compared with manual norm scores. No gender differences in mean scores were found. Job resources most valued were 'Immediate results / Aesthetics'. The job resources, 'Idealism/Pride' and 'Patient care', showed most predictive value with regard to engagement among dentists. In order to prevent burnout, it is recommended to raise dentists' awareness of the importance to create sufficient time and space for stimulating aspects in their work.

Key words: job satisfaction; positive engagement; practice management; professional burnout; work stress

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Working in a dental practice is recognized to be a both physically and mentally demanding activity. Occupational stress among dentists has regularly been topic of research (1–4). When reviewing empirical studies, the following categories of job demands among dentists emerge: Work Pressure, Financial Aspects, Patient Contacts, Work Contents, Career Aspects, Team Aspects, and Work and Private Life Interference (4, 5). Apparently, dentistry is a profession with a wide range of possible stressors.

One of the possible consequences of chronic occupational stress is professional burnout (6). The most commonly used definition of professional burnout consists of three dimensions: mental or emotional exhaustion, the development of a negative or cynical attitude towards one's patients or clients, and the tendency to evaluate oneself negatively (7). Factors closely associated with burnout among dentists are: difficult patient contacts, staff and management worries, work pressure and lack of career perspective (5).

Indeed, burnout can be considered a serious risk to the dental profession, causing both a threat to the work force and a tragedy to the individual dentist. At the same time, it should be understood that the majority of dentists does not suffer from burnout. Dentists at a certain risk of burning out are usually estimated to make up 11–15% of the population (8–11). Whereas a minority of dentists

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Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study

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Summary This study focuses on burnout and its positive antipode—engagement. A model is tested in which burnout and engagement have different predictors and different possible consequences. Structural equation modeling was used to simultaneously analyze data from four independent occupational samples (total $N = 1698$). Results confirm the hypothesized model indicating that: (1) burnout and engagement are negatively related, sharing between 10 per cent and 25 per cent of their variances; (2) burnout is mainly predicted by job demands but also by lack of job resources, whereas engagement is exclusively predicted by available job resources; (3) burnout is related to health problems as well as to turnover intention, whereas engagement is related only to the latter; (4) burnout mediates the relationship between job demands and health problems, whereas engagement mediates the relationship between job resources and turnover intention. The fact that burnout and engagement exhibit different patterns of possible causes and consequences implies that different intervention strategies should be used when burnout is to be reduced or engagement is to be enhanced. Copyright © 2004 John Wiley & Sons, Ltd.

Introduction

Positive states are not popular in psychology. Based on an electronic search of *Psychological Abstracts*, Myers (2000) calculated that negative emotions outnumber positive emotions by a ratio of 14 to 1. The same is true for occupational health psychology: a simple count of articles that appeared from 1996 onwards in the *Journal of Occupational Health Psychology* reveals that negative work-related outcomes outnumber the positive outcomes by a comparable ratio of 15 to 1. So, it is not surprising that the emerging *positive psychology* proposes a shift from this traditional focus on weaknesses and malfunctioning towards human strengths and optimal functioning (Seligman & Csikszentmihalyi, 2000). A similar switch from burnout towards its opposite—engagement—has recently been put forward by Maslach, Schaufeli, and Leiter (2001). In the current article we propose

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ORIGINAL RESEARCH

Burnout in the NICU setting and its relation to safety culture

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ABSTRACT

Background Burnout is widespread among healthcare providers and is associated with adverse safety behaviours, operational and clinical outcomes. Little is known with regard to the explanatory links between burnout and these adverse outcomes.

Objectives (1) Test the psychometric properties of a brief four-item burnout scale, (2) Provide neonatal intensive care unit (NICU) burnout and resilience benchmarking data across different units and caregiver types, (3) Examine the relationships between caregiver burnout and patient safety culture.

Research design Cross-sectional survey study.

Subjects Nurses, nurse practitioners, respiratory care providers and physicians in 44 NICUs.

Measures Caregiver assessments of burnout and safety culture.

Results Of 3294 administered surveys, 2073 were returned for an overall response rate of 62.9%. The percentage of respondents in each NICU reporting burnout ranged from 7.5% to 54.4% (mean=25.9%, SD=10.8). The four-item burnout scale was reliable (α=0.85) and appropriate for aggregation (intra-class correlation coefficient-2=0.95). Burnout varied significantly between NICUs, p<0.0001, but was less prevalent in physicians (mean=15.1%, SD=19.6) compared with non-physicians (mean=26.9%, SD=11.4, p=0.0004). NICUs with more burnout had lower teamwork climate (r=−0.48, p=0.001), safety climate (r=−0.40, p=0.01), job satisfaction (r=−0.64, p<0.0001), perceptions of management (r=−0.50, p=0.0006) and working conditions (r=−0.45, p=0.002).

Conclusions NICU caregiver burnout appears to have 'climate-like' features, is prevalent, and associated with lower perceptions of patient safety culture.

INTRODUCTION

Burnout describes a process beginning with high and sustained levels of stress resulting in feelings of irritability, fatigue, detachment and cynicism.[1] In service professions, stress originates from frequent intense interactions with clients with complex problems.[2] These high demands, combined with lack of support, result in burned-out employees.[3] Hallmark features of burnout include a combination of emotional exhaustion, depersonalisation and a reduced sense of personal accomplishment.[4]

In healthcare, various causes of burnout have been described, and include chronic stress from working with patients suffering from complex physical, psychological and social problems[2 4]; unsupportive or inadequate work environments that lack support for following traumatic events; conflict with colleagues; and long or irregular shifts.[5] Healthcare workers in the neonatal intensive care unit (NICU) setting may particularly struggle to balance work and personal lives amidst an onslaught of new rules and technologies, as well as high expectations for the seamless delivery of empathic, high-quality care.[6 7]

Burnout is pervasive throughout healthcare, with one out of three nurses and physicians meeting criteria.[8 9] Reports of the prevalence of burnout among groups of healthcare workers vary widely, ranging from 27% to 86%.[9–11] Burnout is of particular concern to healthcare because of adverse effects on the quality of patient care and potentially tragic consequences for patients, especially fragile preterm infants.[12 13]

We define resilience here as a combination of abilities and characteristics that interact dynamically to allow an individual to bounce back, cope successfully and function above the norm in spite of significant stress or adversity. Although there are many valid constructs that interface with the concept of resilience, that

Stress, burnout, anxiety and depression among dentists

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ABSTRACT

Background. Dentists encounter numerous sources of professional stress, beginning in dental school. This stress can have a negative impact on their personal and professional lives.

Conclusions. Dentists are prone to professional burnout, anxiety disorders and clinical depression, owing to the nature of clinical practice and the personality traits common among those who decide to pursue careers in dentistry. Fortunately, treatment modalities and prevention strategies can help dentists conquer and avoid these disorders.

Practice Implications. To enjoy satisfying professional and personal lives, dentists must be aware of the importance of maintaining good physical and mental health. A large part of effective practice management is understanding the implications of stress.

Dentistry can be a stressful profession. This statement undoubtedly would invoke a great deal of discussion, illustrated with personal experiences, from many practicing dentists. Dentists encounter numerous sources of stress beginning in dental school. On entering clinical practice, they can find that the number and variety of stressors often grow. Clinicians experience numerous workplace, financial, practice management and societal issues for which they often are unprepared. For some dentists, these issues may significantly affect their physical health, mental health or both. Clinical disorders such as burnout, anxiety and depression may result. These disorders may have certain negative effects on dentists' personal relationships, professional relationships, health and well-being. Fortunately, treatment modalities and prevention strategies can help dentists conquer and avoid these disorders. The only limitation is their willingness to take care of themselves.

Stress can have a negative impact on dentists' personal and professional lives.

Stress can be defined as the biological reaction to any adverse internal or external stimulus—physical, mental or emotional—that tends to disturb the organism's homeostasis. If the compensating reactions are inadequate or inappropriate, they may lead to disorders. However, stress is not all bad. Certain stressors inspire people to make a greater effort; for example, a particularly demanding patient may motivate a dentist to work at an exceptionally high level, resulting in the creation of a highly esthetic and natural-looking restoration. Some stressors can stimulate people to grow professionally and personally, learn or improve. Stress is really an essential part of our lives.[1]

"Stress" is a term that often is used in a negative sense. The same stressors that are stimulating or challenging in a positive sense also may be debilitating if they accumulate too rapidly. It is believed that setting unrealistic goals generates much of the negative stress people feel. These goals may include the need for a particular standard of income or technical perfection. Although setting lofty goals and high standards is a noble theory, how people do this can create a load that often becomes unbearable.[1]

How much stress a person can tolerate comfortably varies not only with the accumulative effect of the stressors, but also with such factors as personal health, amount of energy or fatigue, family situation and age. Stress tolerance usually decreases when a person is ill or has not had an adequate amount of rest. During major life changes (birth of a child, serious accident to family member or oneself, divorce, death, geographic relocation), people's ability to tolerate stress also is reduced. Past experience enhances people's ability to manage stress and develop coping skills. After several similar experiences, people normally learn a standard way to cope with a particular stressor.

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Engaged or exhausted—How does it affect dentists' clinical productivity?

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ABSTRACT

This cross-sectional study examines whether job burnout (exhaustion) and work engagement are associated with the clinical productivity of dentists measured by the amount of paid procedure fees in a single month. We conducted an OLS regression analyses of data on dentists working at municipal health centers in Finland ($N = 269$; response rate 37%). The results indicated that work engagement was positively associated with the amount of procedure fees and consequently with dentists' pay level after several work-related and demographic background variables were controlled for. However, exhaustion was not related to productivity after controlling for the impact of other factors.

1. Introduction

Health care providers, and dentistry more specifically, are facing enormous challenges due to today's aging population, shrinking workforce, cost cutting strategies in the public sector, and growing public expectations for the quality of services. At the same time, competition and business logic have spread to health care, and the productivity of work has become a highly important issue for the producers and funding bodies of health services [1]. To meet these challenges, dentists, like other health care professionals, should be able to maintain or even raise the level of high quality job performance and productivity.

Productivity has always been a central topic for economics and management science. In macro-economics, the growth of productivity has traditionally been linked to technological development and innovations [2] whereas at the organizational level the focus has been on (re)organizing work processes and incentive systems, such as pay-for-performance, which is seen as one "possible tool for improving productivity" [3]. Labor productivity is a revealing indicator of several economic factors as it offers a dynamic measure of economic growth, competitiveness, and living standards within an economy [4].

In this article, productivity is investigated from the viewpoints of occupational health psychology and the 'happy-productive worker' hypothesis. According to this hypothesis [5,6], happy and satisfied employees are more productive than their less happy and stressed colleagues. However, to our knowledge, no studies have simultaneously investigated the role played by negative (exhaustion) and positive (work engagement) work-related states in employee productivity and pay level. In the present study, we examine a sample of Finnish dentists to determine whether work engagement – a positive state of feeling vigorous, dedicated, and absorbed at work, and its conceptual opposite, exhaustion – a core dimension of job burnout – are related to clinical productivity after controlling for several professional and demographic background variables.

1.1. Burnout and its relationship with job performance and productivity

Burnout, a consequence of chronic work-related stress, is a syndrome that is characterized by high levels of exhaustion, negative attitudes toward work (cynicism), and reduced professional efficacy [7]. Burnout is particularly seen among human service and

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COCHRANE REVIEW SUMMARY

WILEY RESEARCH IN NURSING & HEALTH

Preventing occupational stress in healthcare workers

1 | BACKGROUND

The National Institute for Occupational Safety and Health (NIOSH) defines occupational stress as "the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker" (NIOSH, 2008). Healthcare workers have been identified as being at high risk for occupational or work-related stress due to exposure to stressors at work. For example, in the United Kingdom, the healthcare sector has the highest estimated prevalence of work-related stress (Health and Safety Executive, 2013). This stress is a consequence of organizational factors and a mismatch between demands, skills, and social support at work, or any combination of these. Factors that have been shown to increase the risk of stress include increasing workload, emotional response to contact with suffering and dying patients and organizational problems and conflict (McNeely, 2005; Payne & Firth-Cozens, 1987). A European survey on working conditions revealed that the healthcare sector rated highest on two significant causes of stress: hiding ones' own emotions and adverse social behavior (Eurofound, 2012).

The consequences of occupational stress on healthcare workers include severe distress, burnout, or psychosomatic diseases and a corresponding decline in quality of life and their quality of care or service provision (Weinberg and Creed, 2000). There is also an economic impact of occupational stress on healthcare organizations through increased rates of absenteeism and turnover (Jacobson et al., 1996; Raiger, 2005) and compensation claims (Williamson, 1994).

Three strategies to combat occupational stress are acknowledged (Ruotsalainen, Verbeek, Marine, & Serra, 2015). First, cognitive-behavioral training (CBT) provides new ways for the person to feel, think, and act in stressful situations. Second, mental or physical relaxation techniques work by diverting attention away from unpleasant and stressful thoughts and feelings and help to foster resilience in the person. Third, organizational interventions, in which work practices are adjusted to match and make better use of workers' capabilities, help to prevent stressful events from occurring.

2 | OBJECTIVE

The review's objective is to determine the effectiveness of work and person-directed interventions compared to the control of no intervention or alternative passive or active interventions in preventing occupational stress in healthcare workers.

3 | METHODS

This review (Ruotsalainen et al., 2015) included randomized controlled trials (RCTs) of interventions aimed at preventing psychological stress in healthcare workers. Interrupted time-series and controlled before-and-after studies also were included when evaluating organizational interventions. Participants in included studies were healthcare workers officially employed in any healthcare setting as well as student nurses or physicians on clinical placements.

The primary outcome measures considered in this review were all validated self-report questionnaires measuring occupational stress or burnout, for example the Maslach Burnout Inventory. The secondary outcomes assessed included measures of the detrimental effects of stress or burnout as well as the cost effectiveness of interventions. Two types of detrimental effects were included: psychological symptoms, for example, anxiety and depression; and physical symptoms or physiological parameters, for example, hormone levels such as corticosteroids. The effects were considered over three time periods: up to 1 month; from 1 to 6 months; and more than 6 months.

4 | RESULTS

In total, 58 studies were included in this review, which included 3,592 participants in the intervention groups and 3,296 in the control groups. There were 42 RCTs, eight cluster-randomized trials, four cross-over studies and four controlled before-and-after studies of a work-directed intervention. Review authors judged 40 of the included studies to have a high risk of bias and only one to have a low risk of bias overall.

The review authors report low-quality evidence that CBT interventions, with or without relaxation techniques, reduce the levels of burnout symptoms in healthcare workers when compared to no intervention at one to 6 months (eight studies with 549 people) and more than 6 months follow up (two studies with 157 people). There is no significant difference at less than 1 month. The reductions translate to a decrease in stress levels of 13%, which the review authors rated as a modest effect. The review authors found no significant differences when comparing CBT with other active interventions.

The reductions in stress levels achieved with relaxation techniques were comparable to those of CBT. There is low-to-moderate level evidence that stress levels remain lower at up to 1 month (four studies with 97 people), one to 6 months (12 studies with 521 people), and at more than 6 months (one study with 40 people). The review authors identified no significant differences between physical relaxation methods, fox example massage, or mental relaxation such as mindfulness meditation.

The Factors that Affect the Work Environment of a Dentist inside the Dental Clinic

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Abstract

In a globalized world of cut throat competition the survival of any dental clinic depends on the performance of the dentists. This requires designing enriched forms of occupational environment for increasing the job satisfaction and improving ergonomics. Effective practices of improving the work environment have a positive influence on the occupational health, performance and job satisfaction of the dentist. Work environment can be identified as the place that one works. Setting up the dental clinic in an appropriate environment is bound to influence the work life of the dentist and hence the work spot must be located in an apt and conducive environment. The work place should help free flow of work and free movement of the dental staff. If there is no sufficient work space, there will be unnecessary movement of staff and cause delay in completion of work schedule, resulting in crowded and cramped work space creating an adverse psychological impact on the dentist. The dental staff must be routinely reviewed on how important professionalism and demeanor is to a patient's perception of the dental clinic. Dental instruments must be stored in sealed paper pouches and kept in a storage area which contains a separate enclosed storage for sterile items and single-use disposable items. Instruments and dental supplies must never be stored under sinks or in wet areas. Holders must be used to insert and remove sharp instruments to minimize the risks of self-injury. The dental practitioner must be constantly aware of the risk of exposure to blood-borne infections during dental procedures with needles and drilling instruments and tools such as burs and drills. The dentist a pivotal personality in the dental sector organization performs his dental procedures within the context of his relevant environment. This study is exploring the various factors that are going to influence the occupational environment of the dental professional inside his dental clinic like locality, ambience, dental staff, instruments, dental chair, noise, ventilation and lighting which will eventually have an impact on his improved performance and job satisfaction.

Key words: **Environment, Health, Ergonomics, Postures, Hearing loss, Work performance, Job satisfaction.**

Introduction

An ideal work environment inside a dental clinic shall be one in which the job done within are required to fit the dentist as well as technology. It is humanization of work which is most advantageous when it comes to providing the best fit among the factors which have an influence on the physical work environment of the dentist.

The work environment consists of all the factors which have direct or indirect bearing on the mind and body of the dentist. All the varied factors together form the physical work environment of the dentist. These conditions are stimuli that can cause good, bad or indifferent responses irrespective of whether these are found to be consciously acceptable or objectionable. They are definitely factors that breathe life into the performance of the dentist.

A good physical work environment increases his efficiency and ultimately leads to bolster productivity and meticulously maintained physical work environment leads to improved commitment and maximized output.

Factors affecting the Physical work environment of the dentist

The physical work environment of a dental professional consists of conditions such as

PRACTICE OBSERVED

Mental health, job satisfaction, and job stress among general practitioners

Cary L Cooper, Usha Rout, Brian Faragher

Abstract

***Objective*—To identify sources of job stress associated with high levels of job dissatisfaction and negative mental wellbeing among general practitioners in England.**

***Design*—Multivariate analysis of large database of general practitioners compiled from results of confidential questionnaire survey. Data obtained on independent variables of job stress, demographic factors, and personality. Dependent variables were mental health, job satisfaction, alcohol consumption, and smoking.**

***Setting*—National sample of general practitioners studied by university department of organisational psychology.**

***Subjects*—One thousand eight hundred seventeen general practitioners selected at random by 20 family practitioner committees in England.**

***Interventions*—None.**

***End point*—Determination of the combination of independent variables that were predictive of mental health and job satisfaction.**

***Measurements and main results*—Women general practitioners both had job satisfaction and showed positive signs of mental wellbeing in contrast with other normative groups. Conversely, male doctors showed significantly higher anxiety scores than the norms, had less job satisfaction, and drank more alcohol than their women counterparts. Multivariate analysis disclosed four job stressors that were predictive of high levels of job dissatisfaction and lack of mental wellbeing; these were demands of the job and patients' expectations, interference with family life, constant interruptions at work and home, and practice administration.**

***Conclusions*—There may be substantial benefit in providing a counselling service for general practitioners and other health care workers who suffer psychological pressure from their work.**

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Introduction

As early as 1968 Mechanic stated that "the average doctor responds to his growing practice and increasing demands on his time . . . by practising at a different pace and style. Such a pattern of work requires doctors to practise on an assembly line basis, which diminishes the unique satisfaction possible in general practice."[1] Since that time there has been a growing amount of published work on job dissatisfaction and stress among general practitioners.[2]

Murray found that the rate of first admissions for alcohol dependence was two to seven times higher among doctors than among controls of comparable social class.[3] In the United States 13 000-22 000 doctors were alcohol dependent at some stage in their career.[4] The General Medical Council reported that of 51 general practitioners investigated between September 1980 and August 1981, 19 were classified as drug addicts or alcoholics. Allibone *et al* estimated that there may be as many as 3000 practising general practitioners who are alcoholics and that many others may show other signs of stress.[5] The Registrar General's mortality figures showed that medical practitioners have a higher risk of dying from three causes frequently linked to stress—namely, suicide (standardised mortality ratio 335), cirrhosis (standardised mortality ratio 311), accidental poisoning (standardised mortality ratio 818), and accidents (standardised mortality ratio 180).[6] Rose and Roscow reviewed death certificates in California from 1959 to 1961 and found that general practitioners were twice as suicide prone as the general population.[7] In addition, the incidence of and mortality from myocardial infarcts was about twice as high in general practitioners (aged 40-60) as in other members of the profession of comparable age.[8]

These mortality and morbidity statistics show that general practitioners may indeed be at considerable risk of illnesses and other manifestations related to stress. Though much has been written about the possible causes of this stress—for example, heavy workload, dealing with the terminally ill, excessive paperwork, and so on—little large scale empirical work is available. Our investigation was aimed at highlighting the sources of stress in general practitioners that are predictive of high levels of negative mental wellbeing and job dissatisfaction.

The investigation was done in three parts. Firstly, an in depth interview was carried out on a pilot sample of general practitioners (n=42). Secondly, a job stress inventory for general practitioners was formulated on the basis of these interviews. This inventory, together with other measures, was then piloted on a sample of over 100 general practitioners in the north west of England. Thirdly, a finalised set of instruments was prepared for distribution to a national sample of general practitioners. This battery of tests included two dependent variables—namely, a mental health measure (Crown-Crisp experiential index[9]) and a job satisfaction measure (Warr-Cook-Wall job satisfaction scale[10])—and three independent variables—namely, a set of personal and job demographic items, a personality measure (Bortner type A questionnaire[11]), and the general practitioner job stress inventory. Two items on smoking and drinking were also included. The ultimate purpose of the study was to assess which combination of independent variables—that is, personal and job demographic factors, type A behaviour, and job stressors—was predictive of each of the two dependent variables—that is, mental health and job satisfaction.

Methods

SAMPLE

The package of questionnaires was sent to a random sample of 4000 general practitioners through-

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Original Article

Dentistry Section

Burnout and Work Engagement Among Dental Practitioners in Bangalore City: A Cross-Sectional Study

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ABSTRACT

Introduction: Burnout is a job-related stress reaction; a potential hazard for personal, professional lives of dentists. Work Engagement (WE) is the antithesis of Burnout and they can co-exist.

Aim: This study was taken up to know the prevalence of Burnout and WE among dentists in Bangalore, India.

Matreials and Methods: In a cross-sectional study, all (n=116) dentists practicing in Bangalore East Zone were randomly selected. A structured, self-administered questionnaire revealing dentists' demographics, practice characteristics, Burnout level [6-item from Maslach Burnout Inventory] and WE [4-item from Utrecht Work Engagement Scale] was used. Ethical clearance and informed consent was obtained. The data was analyzed using SPSS version 15.0.

Results: With a response rate of 58.6%, high burnout was seen in 5.15% dentists. Personal Accomplishment was significantly associated with dentists in older age-group (p=0.002), married (p=0.014), MDS qualified (p=0.038), having long working hours (p=0.009) with assistants (p=0.024), more years into practice (0.007), travelling more distance from residence (p=0.021). Significance was also seen for dedication among dentists with assistants (p=0.006), emotional exhaustion among dentist with long working hours (p=0.009), and driving own vehicle (p=0.028). Finally absorption was found significant in dentists practicing solo.

Conclusion: Higher WE were found but still burnout persisted. Thus, burnout and WE were found to co-exist.

Keywords: Emotional exhaustion, Oral health care professionals, Practice characteristics

INTRODUCTION

Burnout is a particular type of job-related stress reaction. It is a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that can occur among individuals who do 'people work' of some kind. It is defined as a response to the chronic emotional strain of dealing extensively with other human beings, particularly when they are troubled or having problems [1]. Thus, burnout is rephrased as an erosion of engagement with the job [2].

As dentists undertake intricate work on patients who are frequently in a highly anxious state, burnout could well be a type of stress response for which they are particularly at risk [1]. Chronic work stress and burnout are recognized as potential hazards for both the professional and personal lives of dentists [3,4]. It appears to be a factor in job turnover, absenteeism and low morale [5]. Studies have shown that personal time, patient and professional relations, work organizations and work load to be critical and often hazardous area of dental practice [6].

How the stress is processed determines how much stress is felt and how close the person is to burnout. Maslach and her colleague, Michael Leiter defined the antithesis of burnout as engagement, which is characterized by energy, involvement and efficacy [7]. The introduction of Work Engagement (WE) has led to a new arena of work related stresses. The focus is on strengths and optimism in work thus directing the emphasis on a 'positive psychology' rather than weaknesses. Thus, engagement is defined as positive, fulfilling, work-related state of mind that is characterized by vigour, dedication and absorption [2].

Burnout and WE are thus two sides of the same coin depicting complete polarized ideologies. However, this empiric relationship between burnout and engagement is of great interest. Burnout forms the negative pole whereas Engagement becomes the positive pole. In positioning burnout and engagement as the end points of one and the same dimension, the assumption is made that the two opposites are complementary. The inference is that every dental practitioner lies somewhere on the continuum, few might be more burnt out whereas few might process their stressors and might be more engaged in the profession. Thus, it is not unlikely that some level of engagement and burnout can co-exist. This article thrives on finding the co-existence of two polarized concepts of Burnout and WE among dental practitioners.

Many studies have been done on 'burnout of dentists' in India and other countries [8,9]. But none relate the burnout and WE of Indian dentists. Thus, finding the relationship between burnout and WE of dentist in Indian scenario in diversified population would be essential. In India, there are 344 dental colleges, of which 46 are in Karnataka state and 17 itself in Bangalore city [10]. Further, India has one dentist for 10,000 urban and 250,000 rural populations [11,12]. Thus, three fourth of the total number of dentists are clustered in urban areas. So, in a metropolitan city of Bangalore, where commuting, price hike and job-insecurity lead to more exhaustion, a study to know the prevalence of burnout in dentists and it's relation to work engagement need to be sought.

MATERIALS AND METHODS

A cross-sectional study in Bangalore city was conducted to determine the level of Burnout and WE among dental practitioners. The data regarding the practicing dentists in Bangalore city was obtained from The Karnataka Dental Directory, conceived, complied and published by Info-Dentinova System Private Limited [13]. This directory consisted of 468 registered and practicing dentists. Further, Bangalore city was divided into four zones-East, West, North and South. A lottery method was employed to choose one of these zones. Bangalore east zone was included in the study accordingly which comprised 116 dentists. All dentists (n=116) practicing in this zone and who gave their consent to participate in the study were included in this study.

A structured self-administered questionnaire was used to collect data from the participants. It consists of two sections. First section consists of variables to allow investigation of possible

REVIEW

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General health of dentists. Literature review

Alina Puriene, Vilija Janulyte, Margarita Musteikyte, Ruta Bendinskaite

SUMMARY

The studies show a dental practitioner as a subject of a wide variety of physical and psychological ailments. It is induced or aggravated by the work specificity and greatly affects the health of dental professionals. Therefore, general health of dentists, especially effect of dental activity on it, is present-day, important and as a matter of fact not well documented subject.

The aim of our review is to summarize and ascertain dental practice-related disorders influencing the physical and psychological health of practitioner. Also we would like to highlight the most vulnerable systems of the dental professional and to survey the best methods to overcome these ailments.

Results. There is growing body of evidence that suggests surprisingly high vulnerability within the dental profession to certain disorders and afflictions that can be categorized as practice-related.

Conclusions. In different countries dentists reported having poor general health and suffer from various health-related problems. To enjoy and be satisfied with their professional and personal lives, dentists must be aware of the importance to maintain good physical and mental health.

Key words: dentist's general health, physical disorders, psychological disorders.

INTRODUCTION

Dentists always knew the dentistry is not an easy job. However until recently not many would classify their profession as hazardous. This job is a social interaction between helper and recipient in their limited job setting and with personal characteristics. A healthy dentist is one of the most important components in a successful dental practice. Despite the fact, that even 88 percent of dentists report good or excellent health [47], some studies show one out of ten dentists reports having poor general health, and three out of ten dentists report having poor physical state [29]. Many were feeling unhealthy, worse than other high-risk-groups in a human service working situation [39]. Dentists can and do experience illnesses and problems that can disrupt or impair a practice. Yet there is a growing body of evidence that suggests increased vulnerability within the profession to certain disorders and afflictions that can only be categorized as practice related. It is especially seen after we have gained our independence. The work character and amount of health care workers and dentists has changed a lot.

The dentist is a subject to a wide variety of physical and psychological ailments that are induced or aggravated by the work environment and they greatly affect the health of dental professionals.

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PHYSICAL DISORDERS

When talking about physical disorders we have to take into account musculoskeletal problems, dermatoses, allergies and possible cross-infection.

The prevalence of musculoskeletal complaints among dentists like among other health care workers is high and well documented [2,20,39,73, 76,89,94]. Most of dentists (87.2 percent) reported at least one symptom of musculoskeletal diseases in the past 12 months [51]. A big study in Greece showed: 62 percent of dentists reported at least one musculoskeletal complaint, 30 percent chronic complaints, 16 percent spells of absence and 32

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Psychological stress in undergraduate dental students: baseline results from seven European dental schools

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Objectives: To determine the degree of psychological distress, the experience of emotional exhaustion, and the extent of stress associated with course work in dental students and to compare these measurements among seven European dental schools.
Design: Multi-centred survey.
Setting: Dental Schools at Amsterdam, Belfast, Cork, Greifswald, Helsinki, Liverpool and Manchester.
Participants: 333 undergraduate first-year dental students.
Measures: General Health Questionnaire (GHQ12), Maslach Burnout Inventory (MBI), Dental Environment Stress Questionnaire (DES), demographic variables.
Procedure: Questionnaire administered to all students attending first year course. Completed questionnaires sent to central office for processing.
Results: Seventy-nine percent of the sampled students responded. Over a third of the students (36%) reported significant psychological distress (morbidity) at the recommended cut-off point (>3 on GHQ). These scores were similar to those reported for medical undergraduates. Twenty-two percent recorded comparatively high scores on emotional exhaustion. A wide variation in these 2 measurements was found across schools (p's<0.001). Stress levels indicated by the DES were less variable ($p>0.5$). Some evidence showed that contact with patients and the level of support afforded by living at home may be protective.
Conclusion: Higher than expected levels of emotional exhaustion were found in a large sample of first-year undergraduate dental students in Europe.

Key words: stress; burnout; dental students; mental health.

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THE DENTAL profession has been considered the most stressful of all the health professions (1). Documented evidence for this claim is required (2), although it is known that dentists may experience occupational stress from their interaction with patients and staff, fears of physical violence or litigation from their patients, concerns about the financial viability of their practice resulting from defective materials and equipment (3–6). Occupational stress can be defined as a state of physical and mental tension resulting from excessive demands or lack of resources (after Lovallo, 1997) (7). In chronic or extreme circumstances occupational stress can precipitate a state of 'burnout' in the susceptible practitioner. Maslach and Jackson (8) have described burnout as a unique response to frequent and intense clinician-patient contacts consisting of three components: emotional exhaustion (mental fatigue), depersonalisation (psychological distancing from others) and reduced personal accomplishment. Dentists who experience burnout are unable to continue working, find the interaction with patients unbearable and withdraw from contact with staff and colleagues (9–11).

While occupational stress and burnout is well-recognised in qualified dentists, little is known about the influence of dental undergraduate training on the evolution of occupational stress and burnout in students. Many studies (12–16) have examined occupational stress in dental undergraduates and have shown that the concerns of clinical students mirror those of qualified practitioners. However, many of these previous investigations were cross-sectional in nature and could neither identify susceptible individuals, nor associate the development of occupational stress and/or burnout with undergraduate training. Some investigators examined the association of environmental factors over a period of time with stress levels reported by students. An interesting study com-

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Self-Determination Theory: A Macrotheory of Human Motivation, Development, and Health

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Self-determination theory (SDT) is an empirically based theory of human motivation, development, and wellness. The theory focuses on types, rather than just amount, of motivation, paying particular attention to autonomous motivation, controlled motivation, and amotivation as predictors of performance, relational, and well-being outcomes. It also addresses the social conditions that enhance versus diminish these types of motivation, proposing and finding that the degrees to which basic psychological needs for autonomy, competence, and relatedness are supported versus thwarted affect both the type and strength of motivation. SDT also examines people's life goals or aspirations, showing differential relations of intrinsic versus extrinsic life goals to performance and psychological health. In this introduction we also briefly discuss recent developments within SDT concerning mindfulness and vitality, and highlight the applicability of SDT within applied domains, including work, relationships, parenting, education, virtual environments, sport, sustainability, health care, and psychotherapy.

Keywords: self-determination theory, autonomous motivation, personality development, wellness

As a macrotheory of human motivation, self-determination theory (SDT) addresses such basic issues as personality development, self-regulation, universal psychological needs, life goals and aspirations, energy and vitality, nonconscious processes, the relations of culture to motivation, and the impact of social environments on motivation, affect, behavior, and well-being. Further, the theory has been applied to issues within a wide range of life domains.

Although the initial work leading to SDT dates back to the 1970s and the first relatively comprehensive statement of SDT appeared in the mid-1980s (Deci & Ryan, 1985), it has been during the past decade that research on SDT has truly mushroomed. Basic research expanding and refining motivational principles has continued at a vigorous pace, but the huge increase in the volume of published SDT studies has been most apparent in the applied fields—in sport, education, and health care, for example. Indeed, the diversity of topics covered in the papers of this special issue, along with the amount of research cited in each paper, make clear how extensive the literature has become.

Earlier this year we published an article in *Canadian Psychology* presenting an overview of SDT (Deci & Ryan, 2008). Here we present a much briefer introduction to the theory that will provide a structure to help focus readers as they begin the series of papers. It is particularly appropriate that this special issue appears in *Canadian Psychology* insofar as a substantial portion of the contributions to SDT has been accomplished by Canadian scholars, beginning with the work of Vallerand (e.g., Vallerand, 1983). Since then SDT has been extended and applied by scholars across Canada, to which the papers in the current volume clearly attest.

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Differentiating Motivation

Whereas many historical and contemporary theories of motivation have treated motivation primarily as a unitary concept, focussing on the overall amount of motivation that people have for particular behaviours or activities, SDT began by differentiating types of motivation. The initial idea was that the type or quality of a person's motivation would be more important than the total amount of motivation for predicting many important outcomes such as psychological health and well-being, effective performance, creative problem solving, and deep or conceptual learning. Indeed, an abundance of research has now confirmed that the initial idea was sound.

The most central distinction in SDT is between autonomous motivation and controlled motivation. *Autonomous motivation* comprises both intrinsic motivation and the types of extrinsic motivation in which people have identified with an activity's value and ideally will have integrated it into their sense of self. When people are autonomously motivated, they experience volition, or a self-endorsement of their actions. *Controlled motivation*, in contrast, consists of both external regulation, in which one's behavior is a function of external contingencies of reward or punishment, and introjected regulation, in which the regulation of action has been partially internalized and is energized by factors such as an approval motive, avoidance of shame, contingent self-esteem, and ego-involvements. When people are controlled, they experience pressure to think, feel, or behave in particular ways. Both autonomous and controlled motivation energize and direct behavior, and they stand in contrast to amotivation, which refers to a lack of intention and motivation.

An enormous amount of research, some of which is reviewed in the papers of this special issue, has confirmed that, across domains,

RESEARCH

A survey of stress, burnout and well-being in UK dentists

V. Collin,*[1] M. Toon,[2] E. O'Selmo,[1] L. Reynolds[2] and P. Whitehead[1]

Key points

- Shows that high levels of self-reported stress and burnout were found in UK dentists.
- Highlights that the top stressors reported by UK dentists relate to regulation, with fear of litigation reported as the most stressful aspect of practising dentistry.
- Suggests future interventions should not solely focus on individual solutions such as stress management, but also look at global solutions such as changing aspects of the working environment.

Introduction It is well established that dentistry is a stressful profession, primarily due to the nature and working conditions in the dental surgery. With dramatic changes taking place in the profession in recent years it is important to establish the impact this has on dentists' well-being. **Aims** To determine the levels of stress and burnout in UK dentists and how this relates to well-being and identify the sources of work-related stress dentists report in different fields of practice. **Materials and method** An online survey comprising of validated measures examining stress, burnout and well-being in dentists was administered to British Dental Association (BDA) members and non-members. **Results** Valid responses were received from 2053 respondents. Dentists working in the UK exhibit high levels of stress and burnout and low well-being. General dental practitioners (GDPs) seem to be particularly affected. Issues relating to regulation and fear of litigation were deemed to be the most stressful aspects of being a dentist. **Conclusions** The findings from this study build upon existing research showing that dentistry is a stressful profession. The sources of this stress appear to have shifted over the years, highlighting the changing landscape of dentistry. Interventions should focus on addressing these stressors by making changes to the working conditions of dentists.

Introduction

Stress in dentistry is well-established.[1,2] Although stress or pressure in a job can have a positive influence by increasing motivation, if it exceeds an individual's ability to cope it can have a negative impact on mental health and well-being and potentially could lead to burnout. Key dimensions of burnout include psychological exhaustion or a loss of feeling and concern, a negative shift in response to others (depersonalisation), and reduced productivity and capability.[3] Determining the prevalence of burnout among dentists is difficult to establish due to the variations of the measures used and different ways of categorising burnout. Recent estimates put the prevalence rate between 8–36%.[4,5] Denton *et al.*,[5] in their study of UK dentists, found that 8% exhibited scores in the severe range, while a further 18.5% were considered to be at risk of burnout. With regard to emotional exhaustion, 42.2% scored in the highest category. Those working as general dental practitioners (GDPs), particularly with a high NHS commitment, displayed the highest levels of burnout.

Despite the body of evidence relating to high levels of occupational stress in dentists, relatively few studies have looked at psychological distress in dentists. Baldwin *et al.*[6] reported that 30% of their sample of young dentists was showing symptoms of psychological distress, as measured by the General Health Questionnaire (GHQ). Similarly, Myers and Myers,[2] in their study looking at GDPs in the UK, reported that the prevalence of those scoring above the threshold and exhibiting minor psychiatric symptoms or 'caseness' measured by the GHQ was high at 32%. This is comparable with that typically found in research on medical doctors.[7]

Work undertaken by the British Dental Association (BDA)[8] found that there is a 'well-being gap' between UK dentists and the general population, with dentists reporting lower well-being. Higher levels of occupational stress in dentists than typically seen in the general population were put forward to explain this well-being gap.

High levels of stress can have detrimental consequences for not only individuals in the case of decreased well-being, but also in terms of the profession. The Health and Safety Executive reports that stress accounted for 40% of all work-related ill health cases, and 49% of all working days lost in 2016/17.[9] This equates to 12.5 million working days and is estimated to cost society 5.2 billion per year.[10] Importantly for the dental profession are the implications this has on patient care. Previous research has shown that stress and burnout in dentists can lead to self-reported 'diminished professional standards.'[11]

Different stressors have been put forward to account for occupational stress in UK dentists.

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RESEARCH ARTICLE Open Access

Correlation of occupational stress with depression, anxiety, and sleep in Korean dentists: cross-sectional study

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Abstract

Background: This study aimed to investigate the degree of occupational stress and the clinical mental state of dentists. In addition, we investigated the correlation of occupational stress with depression, anxiety, and sleep among dentists in Korea.

Methods: A cross-sectional survey on 231 dentists was conducted using the Doctor Job Stress Scale, Center for Epidemiologic Studies Depression Scale (CES-D), State-Trait Anxiety Index (STAI), and Pittsburgh Sleep Quality Index (PSQI). Correlation of occupational stress with mental health was investigated by adjusted multiple regression analysis.

Results: The scores of CES-D, STAI, and PSQI revealed a significant correlation with the Doctor Job Stress Scale ($t = 3.93$, $P < 0.0001$; $t = 4.05$, $P < 0.0001$; $t = 4.18$, $P < 0.0001$, respectively). In particular, patient factors and clinical responsibility/judgment factors were significantly associated with depression ($t = 2.80$, $P = 0.0056$; $t = 4.93$, $P < 0.0001$, respectively), anxiety ($t = 2.35$, $P = 0.0195$; $t = 5.11$, $P < 0.0001$, respectively), and sleep ($t = 3.78$, $P = 0.0002$; $t = 4.30$, $P < 0.0001$, respectively), whereas work factors were not associated with any mental health state.

Conclusions: This study confirms that dentists as professions experience more severe mental states. For successful mental health care among dentists, stress management focusing on interpersonal relationship with patients and responsibility as an expert rather than the intensity of work should be considered.

Keywords: Occupational stress, Sleep, Depression, Anxiety, Dentist, Mental health

Background

Stress is a state of human psychological conflict arising from external threats that are constantly above or beyond the ability to manage, and an indispensable survival factor for individuals with limited resources in modern life [1]. Work-related stress promotes a successful role, and a certain degree of stress is a natural phenomenon experienced by humans and is a part of their survival and well-being. However, excessive chronic stress could adversely affect the physical and mental health states [2, 3].

Occupational stress negatively affects the quality of life and health, resulting in social and economic costs [4, 5]. The relationship between occupational stress and depression has been also previously reported [6–8]. Given that depression is closely associated with suicide, the relationship between occupational stress and suicide needs to be considered. Indeed, several studies have reported that occupational stress, such as excessive workload or working time, was closely related to suicide [9–11].

Professional occupational stress is high, particularly in physicians due to requirements such as high vocational consciousness and moral standards, and medical knowledge and skills through hard training [12, 13]. Physicians are recognized as social authorities because of their expertise. However, they are exposed to high levels of stress because of excessive workloads, relationships

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Letter Open Access

Management and Prevention of Burnout in the Dental Practitioner

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Abstract

The aim of this article is to review the available literature to provide the clinician with information to recognize the onset of burnout, the psychological and physiological effect, the effect on the dentist-patient interaction and the provision of practical methods to address the problem. Emotional exhaustion, depersonalisation and diminished personal accomplishment comprise the three dimensions of burnout which affect the well-being of both the dentist and the patient-dentist relationship. Engagement is the direct opposite of burnout. The three dimensions of engagement, namely, energy, involvement and efficacy may be viewed as the opposites of the three dimensions of burnout. Burnout is the result of chronic interpersonal work related stressors. The high incidence of burnout among dentists can be ascribed to the interpersonal context of the occupation. Various interacting psychosocial factors are involved in the aetiology of burnout in dentists, namely, work related stressors, dentist-patient interaction, perception of stress and the personality traits of the clinician. It is clear how detrimental burnout is to the dentist-patient relationship and that the maintenance of a stance of engagement is of paramount importance. In addition to maintaining the well-being of the clinician, dental health service delivery can therefore be improved by early recognition and treatment of burnout.

Keywords: Mindfulness; Burnout; Prevention; Dentist; Stress

Introduction

While the restoration of oral health and maintenance of the patient's well-being is of prime importance in the dental profession, the well-being of the service-provider should not be neglected. According to Maslach et al. [1] the experience of burnout comprises three core dimensions. The aim of this article is to review the available literature to provide the clinician with information to recognize the onset of burnout, the psychological and physiological effect, the effect on the dentist-patient interaction and the provision of practical methods to address the problem.

Definition of Burnout

Burnout is the result of chronic interpersonal work related stressors. Emotional exhaustion (stress dimension), depersonalisation (interpersonal dimension) and diminished personal accomplishment (self-evaluation dimension) comprise the three dimensions of burnout which could lead to depression, reduced work performance and fatigue [2]. A study by Ahola and Hakanen [3] found a reciprocal relationship between burnout and depressive symptoms. Depersonalisation can be considered a self-protection mechanism against emotional exhaustion, resulting in a negative and cynical attitude toward the patient as well as an attitude of detachment. Chronic exhaustion with consequent emotional and cognitive distancing leads to a perception of inefficacy [1,4]. According to Burke and Richardson [5] burnout often develops into a chronic condition, thus posing a significant threat to good dental care [6,7].

Incidence of Burnout among Dentists

Several studies have reported a high prevalence of burnout among dentists [7-10]. This can be largely ascribed to the interpersonal context of the job. As health care provider the dentist is subject to interpersonal stressors due to the demanding nature of the occupation and close proximity to the patient. Work-stress and long working hours may have a negative effect on the dentist's psychological well-being and family life [11]. Peterson et al. [12] study on service workers (including dentists) showed an association between burnout and depression, anxiety, alcohol consumption, sleep and memory problems as well as musculoskeletal complaints.

Stress Inducing Factors

The following factors were considered to contribute to burnout in dentistry:

Work-related stressors

Workload [1]: A high patient load and time pressure leads to exhaustion, the stress dimension of burnout.

Lack of sufficient control [1]: Insufficient control over resources for effective service provision could be a factor in community-based dentistry.

Lack of recognition and appropriate reward [1]: The skill and quality of workmanship provided by the dentist is often not appreciated by the patient because it is often not visible, e.g. in the case of a root-canal procedure or restorations in the anterior of the oral cavity. Feelings of inefficacy may result due to lack of reward [7].

Lack of social support: According to the "buffering hypothesis" the interaction between job stress and burnout is moderated by social support [1].

Quality of working life: This factor was primary in the prediction of stress [13]. Felton [7] also noted that problems involving the physical environment and poor working posture contributed significantly to burnout.

Occupational hazards: Exposure to the human immune deficiency virus (HIV), tuberculosis (TB) and the hepatitis B virus (HBV) could also be considered as a stressor. Additional hazards are ocular problems (noise of hand pieces, etc.); eye injuries (blood-borne pathogens,

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RESEARCH ARTICLE

Crossover of Exhaustion between Dentists and Dental Nurses

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Abstract

The aim of this study was to investigate the conditions under which job-related exhaustion may transmit (cross over) from dentists to dental nurses and vice versa. We conducted a cross-sectional survey study among 470 Finnish dentist–dental nurse dyads and used moderated structural equation modelling analyses. We found no support for the direct crossover of exhaustion from one work partner to the other. Instead, we found that exhaustion transferred from dentists to dental nurses only when collaboration was frequent and dental nurses perceived the collaboration as friendly or consisting of mutual feedback. In contrast, dentists were not affected by dental nurses' exhaustion. These results indicate that exhaustion can be contagious in work dyads and may be fuelled by positive and frequent interpersonal relationships when the partner who is higher in the hierarchy has high (versus low) levels of exhaustion. Thus, interpersonal and hierarchical relationships among work partners may play an important role in the crossover process. Limitations and implications are mentioned. Copyright © 2013 John Wiley & Sons, Ltd.

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Keywords
crossover; burnout; cooperative behaviour; dentistry; exhaustion

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Introduction

Job burnout is a severe problem in human service professions, especially among healthcare professionals (Schaufeli, 2007; Westman & Bakker, 2008). The risk of burnout (particularly exhaustion) has also been noted in the dental practice (Hakanen, Schaufeli, & Ahola, 2008; Te Brake, Bouman, Gorter, Hoogstraten, & Eijkman, 2008). In dentistry, as in many other healthcare professions, burnout may result from various job demands, such as emotional (meeting a fearful patient), cognitive (choosing the right procedure), physical (difficult work postures) and quantitative (limited time for each patient) demands (e.g. Gorter, 2000; Hakanen et al., 2008). Still another potential source of burnout is an exhausted work partner, because dentists and dental nurses typically collaborate as a dyad.

Smooth, positive collaboration is vital for efficient job performance and is presumably also important for both work partners' well-being (Chang, Ma, Chiu, Lin, & Lee, 2009). However, in daily trustful and open collaboration work, partners may also affect each other's workload and exchange negative emotions and moods. Indeed, some recent studies suggest that close collaboration may actually facilitate the transfer of burnout from one professional to the other (e.g. Westman, Bakker, Roziner, & Sonnentag, 2011).

The process that occurs when job strain transfers from one person to another in face-to-face contact is called *crossover* (Bolger, Delongis, Kessler, & Wethington, 1989; Westman, 2001, 2011). In the present study, we aim towards a better understanding of the role of positive interpersonal relationships in the crossover of exhaustion in dentist–dental nurse working dyads. On the basis of the results of studies conducted in teams (Totterdell, Kellet, Teuchmann, & Briner, 1998; Westman et al., 2011), we argue that positive and frequent interpersonal relationships may function as a 'double-edged sword'; although the characteristics of good relationships such as mutual feedback protect workers from exhaustion, on a dyad level, positive interactions may also actually enable the crossover of exhaustion, when the level of exhaustion is high and interaction is frequent. Because of hierarchical relationships, we also expect that exhaustion is more likely to cross over from dentists to dental nurses than vice versa.

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Dentists' perceived stress and its relation to perceptions about anxious patients

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Moore R, Brødsgaard I: Dentists' perceived stress and its relation to perceptions about anxious patients. Community Dent Oral Epidemiol 2001; 29: 73–80.

Abstract – Dentists' perceptions about the stressfulness of dental practice, their perceptions about dental anxiety and its management were surveyed in a descriptive study. A mailed questionnaire was completed by 216 randomly selected Danish private dentists. Of these, nearly 60% perceived dentistry as more stressful than other professions. Dentist perceptions of the most intense stressors were (ranked): 1) running behind schedule, 2) causing pain, 3) heavy work load, 4) late patients and 5) anxious patients. Bivariate odds ratio (OR) analyses were undertaken to check for associations of perceived stress and other dentist variables with perceptual outcomes about anxious patients. Signs of dental anxiety were reported to be less often spotted by older (≥52 yr) dentists (OR=3.1) who perceived their job stress to be greater than that of other professionals (OR=3.2). Perceived causes of dental anxiety (1st, 2nd or 3rd choices tallied and then ranked) were 1) fear of pain, 2) trauma in dental treatment, 3) general psychological problems, 4) shame about dental status and 5) economic excuses. Dentists who reported that dental anxiety was primarily the result of general psychological problems in patients, usually had solo (OR=2.4) practices older than 18 years (OR=2.6) and reported high perceived stress (OR=2.2). Adjusted odds ratios for these two dentist perception outcomes about anxious patients generally improved strength of associations and confidence intervals. There were no meaningful differences by practice location or perceived public image. Also, there was no significant association between the use of pharmacological strategies for anxiety and the perceived stress of dentists. Nearly all dentists talked with anxious patients as their main treatment strategy. It was concluded that psychosocial aspects of dental practice have meaningful and often adverse associations with dentist perceptions about anxious patients. Some dentists appeared to require more knowledge about dental anxiety and managing their own stress.

Key words: anxiety; dental care; dentist-patient relations; epidemiology; occupational stress

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Most investigations of psychosocial environments in dental practice have described perceived stress or stressors among dentists (1–5) and variables that may be effected by or associated with stress, such as career satisfaction (1, 4, 6) or role image (7). Two studies also related stress to dentist health problems (5, 6) and three studied stress in relation to marital or other social or psychological outcomes (4–6). Only one study has investigated interactive effects of dentist behaviors on normative patient beliefs (8). This study notably did not address dentist stress or patient anxiety or pain. There have, however, been studies that looked at dentists' or dental students' assessments of problematic patient behaviors including anxiety (1, 9–12) and typical management strategies for anxious patients (9–11). But there have been no investigations studying possible associations between dentists' perceived stress levels and how they perceive anxious patients and their treatment.

In studying possible associations between dentist stress and perceptions of anxious patients, one is-

A survey of stress levels, self-perceived health and health-related behaviours of UK dental practitioners in 2005

E. J. Kay[1] and J. C. Lowe[2]

IN BRIEF

- Dentists do not appear to be any more stressed than they were in 1996.
- Dental practice can cause stress but stress can be positive.
- Use and abuse of alcohol within the profession does not appear to be a major problem.
- Greater awareness of the role of occupational health services may be helpful to many dentists.

RESEARCH

VERIFIABLE CPD PAPER

Objective To record stress levels and self-perceived health and health-related behaviours of dentists. **Design and Method** A questionnaire was sent to a random sample of 1,000 BDA members in April 2005. Respondents were questioned about self-perceived general health, medicine and drug use, tobacco and alcohol use, self-perceived general well-being, sexual health, occupational health, physical activity and nutrition. There were also some questions about women's health. Results were compared to a BDA study of dental professionals' health and well-being carried out in 1996. **Results** A response rate of 55% was achieved (545 replies). Two-thirds (67%) of respondents considered themselves in very good or excellent health and 53% were happy and interested in life. Only 42% were free from pain and discomfort and 26% experienced levels of pain that prevented them from taking part in a few or some activities. The majority (86%) had very or fairly stressful lives but most (83%) were either very or somewhat satisfied with their lives. Nearly all respondents (90%) planned to take action to improve their health during the 12 months following the survey: popular actions planned included increasing exercise (58%) and losing weight (42%). Very few respondents used tobacco (4% daily and 4% occasionally) and most (59%) said that only a few of their friends smoked: 36% had no tobacco-using friends. Only 3% of respondents had never had alcohol. The Short Michigan alcohol screening test revealed that 6% of dentists had a drink problem and 9% had alcoholic tendencies. The most common factors contributing to stress at work were patient demands (75%), practice management/staff issues (56%), fear of complaints/litigation (54%) and non-clinical paperwork (54%). More than half (53%) of respondents were relatively inactive during the day but 57% took some form of physical exercise at least 3-4 times per week. Nearly half (49%) of respondents felt that their level of physical activity was very likely or somewhat likely to cause them health problems. **Conclusion** In spite of the dramatic recent changes to dentistry, the differences between the results of this study and the results of the research carried out in 1996 are minimal. Claims that dentistry is a dangerously stressful occupation are not justified and dentists seem to be as well and happy as other professional groups. There is however, a slight increase in the use of alcohol. Stress management and personal and professional awareness training should be included in the undergraduate curriculum, so that threats to physical and mental well-being which might occur during a dentist's professional life may be avoided or addressed.

INTRODUCTION

Evidence suggests that working in dentistry can be detrimental to the long-term health and general well-being of an individual, due to the mentally and physically challenging nature of the profession.[1,2] Dental practitioners often work alone and this, coupled with the strain of simultaneously running a business and providing a high standard of clinical care to patients, can be psychologically stressful.[3] Dealing with nervous or anxious patients can be emotionally challenging and is another source of stress. The dental surgery is a difficult physical working environment and dental practitioners are often required to sit for long periods of time in awkward positions, whilst undertaking extremely fine and exacting work.[4]

In 1987, a study of job satisfaction, mental health and job stressors identified factors which caused stress in general dental practitioners (GDPs) in the UK.[5] A follow-up study carried out ten years later highlighted new stressors affecting GDPs, which included uncertainty felt during times of change.[6] In addition, a recent study of stress and health in UK GDPs showed that a high percentage of NHS dentistry was associated with high levels of overall stress.[7]

A study of dental professionals' health and well-being was carried out by the BDA in 1996 and the results were published in 1997.[8] The results indicated that dental personnel were probably as healthy and well as any other professional subgroup of the population and

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Stress Management in the Difficult Patient Encounter

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It is almost axiomatic that dentistry be viewed as a stress-laden profession. Rada and Johnson-Leong [1] cogently imply that the sources of stress for the practicing dentist derive from two key factors: the dentist's office or working environment and the dentist's personality, makeup, and lifestyle. Some dentists experience enormous, and what appears to be unmitigated, stress during the course of the day. These dentists find it difficult to contain their emotions and are predisposed to succumb to inner feelings of stress when encountering either demanding patients or challenging cases. At times, some dentists may perceive that some of their own staff members tend to sabotage what they consider to be proper office practice. In some instances, the stress experienced by the dentist stems from fear of the litigious-prone patient.

The already existing psychologic conditions of some dentists are exacerbated with the passage of time; or the dentist may develop anxiety-related disorders, depressive symptoms, professional "burnout," or other clinical syndromes. When burnout sets in, the dentist feels emotionally, and even physically, exhausted. Often, the latter state is accompanied by the unfolding of a cynical purview toward patients and staff, and self-perceptions of incompetence may also evolve. Consultation with a mental health professional is imperative when professional burnout defines the dentist's psyche.

The intent of this article is to spotlight aspects of the dentist's day-to-day challenges which might contribute to acute or prolonged feelings of stress. A special focus is on unique patient personae that govern certain patient

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When does quality of relationships with coworkers predict burnout over time? The moderating role of work motivation

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Summary The present prospective study examines the interplay between the quality of relationships with coworkers and work motivation in predicting burnout. Considering self-determined motivation at work as a potential moderator, we investigated whether relationships with coworkers are equally important to all employees in preventing burnout. A total of 533 college employees participated in this study. Data were collected at two time points, two years apart. Results from structural equation modeling indicated negative main effects for high-quality relationships and self-determined motivation on burnout. A significant interaction effect between these two factors on burnout was also revealed, suggesting that high-quality relationships with coworkers is crucial for those employees who exhibit less self-determined work motivation. Implications for burnout research and management practices are discussed (Deci & Ryan, 1985). Copyright © 2009 John Wiley & Sons, Ltd.

Introduction

Burnout constitutes a prominent occupational health problem plaguing organizations today (Schaufeli, 2003). It is defined as an affective reaction to ongoing stress whose core content is emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, 1982). *Emotional exhaustion* refers to the depletion of one's emotional resources, while *depersonalization* refers to a negative, cynical, and detached attitude toward other people or the job itself, and *reduced personal accomplishment* refers to a decrease in feelings of job competence and productivity. Thus, in addition to being marked by a loss of emotional energy, burnout implies a negative assessment of the self (reduced personal accomplishment) and of others (depersonalization). As such, each dimension captures critical aspects of the burnout syndrome (Schaufeli & Taris, 2005). Over the years, burnout has been linked to several detrimental outcomes, including lower organizational commitment, work satisfaction, and performance, as well as increased turnover, absenteeism, and health care costs (see Halbesleben & Buckley, 2004; Maslach, Schaufeli, & Leiter, 2001).

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Outcome of career expectancies and early professional burnout among newly qualified dentists

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Objectives: To measure burnout development, outcome of expectations with regard to dental career and feelings of being unprepared for practice among newly graduated general dental practitioners. **Methods**: In 1997, 50 dentists were approached to fill in the Maslach Burnout Inventory, Dutch version (UBOS) and some additional variables between six months and one year after graduation at the Academic Centre for Dentistry Amsterdam (ACTA) (76% response). Six years later, in 2003, the same 50 dentists, plus another 60 who had graduated in the same period at ACTA, were approached (78% response). **Results**: Using Repeated Measures analysis, mean scores of dentists for whom two measurements were available on the three UBOS subscales (N=24) showed no statistically significant changes over six years on Emotional Exhaustion, Depersonalisation, or Personal Accomplishment. The same was true for group means of all in 1997 (N=33) compared with all in 2003 (N=82). However, according to manual criteria, varying percentages (7.2% - 24.4%) of dentists showed an unfavourable level on either one of the UBOS dimensions. Factors most frequently mentioned to be responsible for being unprepared for practice were: law and insurance matters (61.2%), practice organisation (56.6%) and staff management (55.2%). Most frequently reported factors that came out (much) worse than expected were: stressfulness of work (45.1%), and staff management (43.4%). **Conclusions**: Burnout appears no threat for the average newly qualified dentist. However, some individuals report alarmingly high burnout scores at an early professional stage. Practice management is the professional aspect about which young professionals worry most. It is recommended that dental schools pay attention to practice management skills and the stressfulness of work in the curriculum. Also, longitudinal monitoring of dental students and newly qualified dentists on burnout development is strongly advocated.

Key words: Psychology, burnout, practice management, professional development

Stress among dental students has been a frequent research topic and Sugiura *et al.*[1] recently presented an overview of relevant studies on this topic. In general, three distinctive categories of stress provoking factors can be distinguished: school related factors (such as a bureaucratic administration system), study related factors (such as having to pass exams), and student related factors (such as personality characteristics or health behaviour). In describing student stress, authors usually highlight the relevance for later professional functioning, stating that self-knowledge on how one deals with stress as a student may be a key to adequately dealing with occupational stress as a post graduate dentist.

Chronic occupational stress may develop into professional burnout[2,3], which is usually described using Maslach and Jackson's[4] definition: ' ... a syndrome of emotional exhaustion, depersonalisation, and reduced personal accomplishment that can occur among individuals who do 'people work' of some kind'. The three burnout dimensions mentioned are not equivalent, but refer to three distinct aspects of the syndrome. Emotional exhaustion refers to feelings of being depleted of one's emotional resources, depersonalisation refers to a negative, callous, or excessively detached response to the recipients of one's services or care, while reduced personal accomplishment refers to a decline in one's

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Stress, burnout and health in the clinical period of dental education

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The study examined the extent of stress, burnout and health problems experienced by fourth and fifth year dental students from the three universities of Dresden, Freiburg and Bern. The objectives of the study were to: (i) identify frequent sources of stress and to report the prevalence rates of burnout and health problems in dental students, (ii) determine the rate of students suffering from severe burnout symptoms and (iii) identify stress factors related to the burnout symptoms of emotional exhaustion and depersonalisation. A total of 161 dental students from Dresden, Freiburg and Bern participated in the study. They completed the Psychosocial Stress Inventory, the Maslach Burnout Inventory and the Health Survey Questionnaire. Frequent sources of stress were limitation of leisure time, examination anxiety and the transition stress that was related to the adaptation to the demands of the clinical phase of dental education. Few differences existed between the students of the fourth and the fifth study year. Study-related stress was lowest in Bern and considerably higher in Dresden. Differences of mean levels of burnout symptoms were found only for the burnout dimension of emotional exhaustion. Students from Dresden and Freiburg were more emotionally exhausted than students from Bern, students from Dresden also reported more health problems than students from Bern or Freiburg. Ten per cent of the dental students suffered from severe emotional exhaustion, 17% complained about a severe lack of accomplishment and 28% reported severe depersonalisation symptoms. Forty-four per cent of the variance of emotional exhaustion was explained by study-related factors such as lack of leisure time, examination anxiety and transition stress. The only predictor of depersonalisation was a lack of social integration, accounting for 3% of the variance. A lack of social integration may be an indicator of low social competence which may cause difficulties in dealing with patients adequately and therefore result in depersonalisation. The results indicate a need to identify the group of students who may have insufficient social skills for dealing adequately with the patients, and to train them accordingly.

Key words: stress; burnout; health; dental students.

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Stress in dentists and dental students

The profession of dentistry is considered to be extremely stressful (1). This is true for all stages of the dental career, that is for established dentists, young dentists and dental students. Dentists suffer from especially high degrees of stress even when compared with other health professions (2, 3). Either diverse and extreme demands or a lack of resources which exceed the person's coping capacities can be viewed as the sources of occupational stress (4). Daily interactions with patients, colleagues and staff, time pressure, paper work, defective equipment, or problems in the treatment of patients, etc. are potential stressors for dentists. Young dentists already experience stress, they complain about too much work and report lacking time to reflect on the professional experience they have gathered so far. They worry often about making mistakes, which in turn leads to an increase of psychological symptoms (2). Even dental students suffer from considerable psychological distress (5). Thirty-six per cent of a sample of undergraduate first-year dental students showed high levels of distress according to the General Health Questionnaire, a finding similar to the results found in a sample of medical students (6). Typical sources of stress for dental students are frequent examinations, reduced leisure time and changing curricula (7). In addition, meeting treatment requirements often involves high demands (anxious patients, time limits, complicated and irreversible interventions, for example tooth extraction, etc.) and possible conflicts (e.g. with the clinical supervisor), which can lead to high stress levels (8). With regard to personal factors, examination phobia, a lack of self-confidence, and the vast difference between the students' expectations and the reality they are confronted with frequently prove to be considerable stressors for dental students. Stressors

An analysis of stress and burnout in UK general dental practitioners: subdimensions and causes

M. Toon,*[1] V. Collin,[2] P. Whitehead[3] and L. Reynolds[4]

Key points

- Shows that GDPs exhibit the highest levels of stress and burnout among UK dentists.
- Shows that levels of productivity stress are higher among GDPs practising NHS treatment.
- Suggests that practice ownership does not moderate the relationship between patient-led stress and burnout.
- Suggests that practice ownership does positively moderate the association between regulatory stress and burnout.

Introduction Dentistry is well documented as a stressful profession. The majority of UK dentists work in general practice, which can carry multiple sources of stress. Previous research has acknowledged the propensity of these sources of stress for general dental practitioners (GDPs) when undertaking clinical, administrative and managerial tasks. The results of these accumulative stress sources can lead to burnout among GDPs. Understanding the environmental drivers of stress is an important step in high, and in some reported cases, unsustainable levels of stress and burnout. **Aims** To investigate the key dimensions of stress among GDPs and to model causality between these stress subdimensions and burnout as an outcome. To further identify the moderating influence of dentistry type (NHS, private) and performer type (practice owner, associate, corporate associate). **Materials and methods** The data are drawn from an online survey of UK dentists comprising BDA members and non-members. A total of 1513 GDP responses were used in the final analysis. The analysis was conducted using structural equation modelling. **Results** We identify four subdimensions of stress in general dentistry; productivity stress, work content stress, patient-led stress and regulatory stress. Each dimension of stress is shown to have a significant causal link to burnout among the GDP population. While burnout levels among this population are already in excess of accepted thresholds, we find that stress is further elevated in specific areas of dentistry type and when performer type is considered. **Conclusions** This study contributes across three main areas. First, stress dimensions in general dental practice are identified. Second, these dimensions are shown to have a causal relationship with burnout. Third, specific cases of general dentistry are shown to elevate already problematic areas of stress among GDPs.

Introduction

Investigation into dentists' wellbeing reveals stress and burnout at consistently high levels.[1] Some studies look at stress alongside other aspects of wellbeing such as physical health,[2] while others have focused on a more holistic account of stress.[3] Burnout has also received attention in the context of UK dentists,[4] UK medics[5] and medics more broadly.[6] A recent British Dental Association (BDA) survey[7] highlights a significant gap in wellbeing between UK dentists and the general population.

Among UK dentists, GDPs fare particularly badly, reporting 'significantly higher stress than all other types of dentists.'[1] GDPs represent a particular case among front line clinical dentists. They carry direct accountability for their productivity as set out by their practice in the case of performers, and by the local NHS in the case of providers. The organisational context is typically a small business with associated limited functional support that one might expect in larger organisations such as HR, in house training and clear management structures. The resulting environment can prove isolating for the clinical dentist.[8]

A combination of clinical autonomy and accountability and relative isolation may confound stress in patient interactions. Interpersonal conflict is more easily deflected where an employee can readily refer to organisational policy to legitimise their position. GDPs are not employees in the conventional sense and policy in small dental businesses is often lacking. This is a weak starting point to address nervous patients who can present as hostile and challenging.

Regulation is conducted at a comprehensive level in UK dentistry and is in part the reason for the high standards in the sector. Conventionally, regulation is undertaken at the organisation level rather than the individual level. Large organisations will have compliance departments to deal with regulatory aspects of the business. Smaller businesses also deal with regulation at the organisation level, although often find themselves challenged for resources.

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COMMUNITY DENTISTRY AND ORAL EPIDEMIOLOGY

Burnout and engagement in relation with job demands and resources among dental staff in Northern Ireland

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Gorter RC, Freeman R. Burnout and engagement in relation with job demands and resources among dental staff in Northern Ireland. Community Dent Oral Epidemiol 2011; 39: 87–95. © 2010 John Wiley & Sons A/S

Abstract – *Objectives:* To investigate the psychological health – in particular, levels of burnout and engagement, job demands, job resources, and general psychological distress – among dental staff in Northern Ireland. *Methods:* Three hundred questionnaires were administered to all dental offices in the western part of Northern Ireland. The questionnaire consisted of 'Maslach Burnout Inventory (MBI)', 'Job Demands in Dentistry measure', 'Utrecht Work Engagement Scale (UWES)', 'Job Resources in dentistry measure', and 'General Health Questionnaire (GHQ)'. *Results:* Overall response rate among all staff members was 45% (for general dental practitioners: 65%). Burnout mean scores were unfavourable when compared with MBI manual norm scores, 26% had scores in the 'high' categories of both emotional exhaustion (EE) and depersonalization (DP). This is an indication of severe burnout risk. Time pressure, financial worries, and difficult patients appeared to be the most prominent work demands (mean scores >3). All job demands' scales correlated significantly ($P < 0.01$) and positively with both EE and DP: $0.30 > r < 0.62$. Mean scores for UWES, and all job resources' subscales were all well above each subscale's range midpoint. Treatment results appeared the most prominent work resource. GHQ mean score for all was 1.05 (SD = 0.51). No difference in mean score was found between dentists and other staff ($F_{1,123} = 1.08$, NS). With 'case level' set at a score >3 as a cut-off point, 25% of the subjects have to be considered cases. *Conclusion:* Burnout is a serious threat for the dental team in this region of Northern Ireland, especially among general dental practitioners. One-quarter of the dentists were categorized as having a serious burnout risk. Dentists appeared to have most trouble with the work environment aspects: time pressure and financial worries. Furthermore, the proportion of those suffering from psychological distress was unusually high. In contrast to these findings, encouraging levels of engagement were identified. It is recommended that attention for burnout risk is given priority by dental associations.

Key words: burnout; engagement; practice management; social dentistry; work stress

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One of the possible consequences of chronic work-related stress is professional burnout (1). Professional burnout consists of three defining dimensions: emotional exhaustion (EE), the development of a negative or cynical attitude towards one's patients or clients [depersonalization (DP) or cynicism], and the tendency to evaluate oneself negatively [diminished personal accomplishment (PA)] (2). Although physical exhaustion may also be a sign of burnout, it is the feeling of being emotionally depleted that is considered the core element of professional burnout.

Burnout in dentistry has been investigated in a small number of countries, with more recent

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Burnout and depression: Causal attributions and construct overlap

Renzo Bianchi and Romain Brisson

Abstract

Burnout has been commonly regarded as a job-induced syndrome. In this 468-participant study (67% female; mean age: 46.48), we examined the extent to which individuals with burnout and depressive symptoms attribute these symptoms to their job. Fewer than half (44%) of the individuals with burnout symptoms viewed their job as the main cause of these symptoms. The proportion of participants ascribing their depressive symptoms to work was similar (39%). Results from correlation and cluster analyses were indicative of burnout–depression overlap. Our findings suggest that burnout may not be a specifically job-induced syndrome and further question the validity of the burnout construct.

Keywords

burnout, causal attribution, cluster analysis, depression, occupational health, stress

Introduction

Burnout has been viewed as a job-induced syndrome combining pervasive fatigue and loss of motivation (Maslach et al., 2001; Schaufeli and Taris, 2005; Shirom and Melamed, 2006). While burnout has been commonly regarded as a product of unresolvable job stress, the determinants of the symptoms assessed by burnout measures have been questioned in recent years (Bianchi et al., in press; Bianchi et al., 2014; Hakanen and Bakker, 2017). Both qualitative and quantitative studies have suggested that burnout is associated with difficulties inside *and* outside the occupational sphere (Bianchi et al., 2013; Dyrbye et al., 2006; Gauche et al., 2017; Verweij et al., 2017).

The issue of whether burnout can be considered a specifically job-induced syndrome is important for at least two reasons. First, because interventions for burnout should not be restricted to work if nonwork factors are involved in the etiology of the syndrome. Second, because the job-induced character of burnout has been argued to constitute a key distinguishing feature of the syndrome, most notably vis-à-vis depression (Maslach et al., 2001). As put by Shirom (2005): "Conceptually, burnout is distinct [from depression] in that it is dependent on the quality of the social environment at work" (p. 266). In a somewhat similar vein, Leiter and Durup (1994) noted that the distinction between burnout and depression is related to "differences in their attributional patterns, and their context specificity" (p. 359).

In this study, we investigated the extent to which individuals reporting burnout symptoms attribute these symptoms to their job. Because

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Job resources in Dutch dental practice

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Aim: To develop an instrument measuring job resources among dentists, and to assess the relative importance of these resources and relate them to job satisfaction. **Methods:** 848 Dutch general dental practitioners (GDPs) received a questionnaire to monitor work experiences, including the Dentists' Experienced Job Resources Scale (DEJRS, 46 items, score range: 1(not satisfying) to 5 (very satisfying), and the Dentist Job Satisfaction Scale (DJSS, 5 items, Cronbach's alpha = 0.85). **Results:** A total of 497 (58.6%) dentists responded. Factor analysis (PCA) on the DEJRS resulted in 8 factors (Cronbach's alpha: $0.75 > \alpha < 0.89$), representing distinguishable categories of job resources. In rank order: Immediate Results / Aesthetics (M=4.04, sd=0.5); (Long term) Patient Results (M=4.03, sd=0.6); Patient Care (M=3.90, sd=0.6); Craftmanship (M=3.77, sd=0.7); Idealism / Pride (M=3.65, sd= 0.6); Entrepreneurship (M=3.55, sd=0.9); Material Benefits (M=3.05, sd=0.7); and Professional Contacts (M=3.03, sd=0.7). MANOVA indicated gender differences on: (Long term) Patient Results ($F(1,548)=10.428$, $p = .001$), and Patient Care ($F(1,548)=11.036$, $p<.001$). Subscale correlations with the total DEJRS are: $0.57 > r < 0.88$. All subscales show a positive correlation with the DJSS. **Discussion**: The DEJRS is a valuable and psychometrically sound instrument to monitor job resources as experienced by GDPs. Dentists report immediate results and aesthetics, and long term results of working with patients to be the most rewarding aspects. All job resources showed a positive correlation with job satisfaction. The discussion includes conjecture that stimulating a greater awareness of job resources serves a major role in burnout prevention.

Key words: Practice management, work stress, professional burnout

Working in a dental practice is recognised to be both a physically and mentally demanding profession. Consequently, occupational stress among dentists has regularly been a topic of research in the last two or three decades[1-7]. Summarising these empirical studies, the following categories of job related stress factors among dentists emerge: Work Pressure, Financial Aspects, Patient Contacts, Work Contents, Career Aspects, Team Aspects, and Work and Private Life Interference[7]. Apparently, dentistry is a profession with a wide range of possible pitfalls.

There are several theoretical approaches each defining stress in a different way. One of the models frequently used in relation to work stress comes from the interaction theory. This theory states that the evaluation of the work situation by an individual as being threatening and the assessment as to whether or not the individual knows how to deal with the threat is crucial for stress to occur[8]. One of the possible consequences of chronic occupational stress for the individual is professional burnout[9]. The most commonly used definition of professional burnout consists of three dimensions: mental or emotional exhaustion, the development of a negative or cynical attitude towards one's patients or clients, and the tendency to evaluate oneself negatively[10].

In organisational psychology, the path to burnout is sometimes described as one in which the professional increasingly experiences a lack of resources. For instance, in the Conservation of Resources theory, the basic tenet is that people have a deeply routed motivation to obtain, retain, and protect that which they value[11]. According to other authors, job resources should be seen as the opposite of job demands, which are responsible for exhausting someone[12]. Resources function as a buffering protection against burnout, and burnout occurs when a net loss of valuable personal buffers, or resources, is perceived that cannot be replenished.

Burnout thus can be considered a serious risk to the

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IN BRIEF

This paper found that:
- GDPs suffer from work-related stress.
- A lot of the GDP work-related stress is linked to working within the NHS.
- Minor psychiatric symptoms were high, similar to doctors.
- Over half of the GDPs reported backache, headache, difficulty in sleeping and being nervy, tense or depressed.
- A third of the GDPs were overweight or obese.
- This survey highlights the need to develop interventions to reduce GDPs' work-related stress and improve their working conditions.

'It's difficult being a dentist': stress and health in the general dental practitioner

H. L. Myers[1] and L. B. Myers[2]

Objective The aim of the study was to investigate overall stress, work-stress and health in general dental practitioners (GDPs).

Design, setting and subjects A nationwide anonymous cross-sectional survey was undertaken using stratified random sampling of 2,441 GDPs in the UK.

Main outcome measures Measures included perceived stress, Work Stress Inventory for Dentists, job dissatisfaction, measures of health symptoms and health behaviour, dental and demographic information.

Results The main findings were that perceived stress was significantly correlated with measures of dental stress. Work-related factors: fragility of dentist–patient relationship, time and scheduling pressures, staff and technical problems, job dissatisfaction, percentage NHS, and number of hours worked per week together explained nearly a half of GDPs overall stress in their life (linear multiple regression, adjusted $r^2 = 0.48$, $F(2, 2404) = 509.68$, $P < 0.0001$). Health behaviours such as alcohol use was associated with work stress ($r = 0.18$, $P < 0.001$) and over a third of GDPs were overweight or obese. Sixty per cent of GDPs reported being nervy, tense or depressed, 58.3% reported headache, 60% reported difficulty in sleeping and 48.2% reported feeling tired for no apparent reason. These were all related to work stress (one way analysis of variance, $F(1,2211) = 241.53$ $P < 0.0001$, $F(1,2214) = 86.17$ $P < 0.0001$; $F(1, 2215) = 125.55$ $P < 0.0001$; $F(1,2211) = 209.67$ $P < 0.0001$ respectively). Levels of minor psychiatric symptoms were high, with 32.0% of cases identified. The amount of backache was also high (reported by 68.3% of GDPs).

Conclusion A high percentage of NHS dentistry was associated with high levels of overall stress in GDPs' lives, indicating that the nature of NHS dentistry should be carefully investigated to try to improve GDPs working conditions. A comparatively large number of dentists reported high levels of psychological stress symptoms, such as being nervy, tense and depressed, showing minor psychiatric symptoms, with alcohol use being related to stress. Other factors reported which were not related to stress but may be related to the actual practice of dentistry were that a third of dentists were overweight or obese and over 60% reported backache. Overall, these findings indicate the stressful nature of dentistry and difficulties in working conditions. The next step should be to develop interventions to help dentists to reduce stress in the dental surgery.

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INTRODUCTION

Stress is a largely hidden problem within the NHS, however the 'stressors' faced by health professionals may not only affect their own mental and/or physical health but may adversely affect the quality of care that the health service offers.[1,2] Being a professional within healthcare has long been identified as a high-stress occupation due to the combination of difficult working circumstances, exposure to potentially hazardous diseases, human suffering and ability to affect human life.[3]

Research on stress in health professions has mainly focused on doctors and nursing staff,[4] with only a minority of studies studying dentists, although it is recognised that dentistry is a stressful profession. For many years, studies have suggested that dentistry generates more stress than any other profession, primarily because of the nature and working conditions of the dental surgery.[5–7] Statistics on dentistry and cardiovascular disease, alcoholism, drug abuse, divorce and elevated rates of suicide suggest that the typical life of a general dental practitioner (GDP) is a stressful one.[8–10] However, there has been a lack of recent comprehensive surveys investigating stress, health and the GDP. An early study carried out in the 1980s of 484 dentists in the UK by Cooper and co-workers[6] identified the pattern of work stressors suffered by GDPs. However, since that time no large-scale study has been undertaken. Similarly, there has been a fairly recent study looking at health in the general dental practice, but this was a descriptive study and did not investigate stress.[11]

Therefore, the aim of the current study was to investigate stress and health in a large nationwide sample of GDPs from the UK. We were especially interested in finding out what factors in the dental

Burnout and Personality: Evidence From Academia

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Using multiple theoretical perspectives (stress, conservation of resources, and deviance), we investigated the relationship between burnout and personality. Burnout is measured with the Maslach Burnout Inventory (emotional exhaustion, depersonalization, and personal accomplishments), and personality is captured with the Mini-Marker Inventory (extroversion, conscientiousness, agreeableness, openness to experience, and emotional stability). Regression analyses controlling for demographic characteristics, based on 265 instructors of a large state university, indicated that emotional exhaustion is negatively related to extroversion and emotional stability and positively related to openness to experience. Depersonalization is negatively related to agreeableness and emotional stability. Personal accomplishments are positively related to extroversion, conscientiousness, agreeableness, and emotional stability. Implications of the results are discussed.

Keywords: personality, burnout, academic, career, assessment

Concerns about employee burnout have been articulated during the past quarter of the century (Howard, 1975). Negative outcomes of burnout include cynicism, dissatisfaction, and turnover (Sethi, Barrier, & King, 1999). Burnout is manifested in all organizations (Golembiewski, Boudreau, Sun, & Luo, 1998) and costs businesses in the United States up to $200 billion annually in terms of mediocre productivity (Smith, 1999). Factors that contribute to burnout have been widely discussed over the years (Burke & Greenglass, 1989; Harrington, Bean, Pintello, & Mathews, 2001; MacDougall, 2000; Tyler, 1999). Researchers have predominantly followed Maslach and Leiter (1997, 1999), who outlined six major influences on burnout.[1] A close examination of these six influences reveals that they are all external to the individual, with the primary triggers of burnout

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

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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

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The Influence of Culture, Community, and the Nested-Self in the Stress Process: Advancing Conservation of Resources Theory

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La théorie de la préservation des ressources (COR présuppose que la perte d'une ressource est la principale composante du processus de stress. Un gain en ressources, par contre, est présenté comme étant d'importance croissante dans un contexte de perte. Parce que les ressources sont aussi utilisées pour contrecarrer une perte de ressources, les gens sont, à chaque phase du processus de stress, de plus en plus vulnérables aux séquelles du stress négatif, cela si la succession des évènements débouche sur une spirale de pertes rapides et douloureuses. La théorie COR est perçue comme étant une alternative aux théories du stress basé sur l'évaluation parce qu'elle repose davantage sur la nature objective et culturellement interprétée de l'environnement dans la détermination du processus de stress, plutôt que sur l'analyse personnelle de l'individu. La théorie COR a prédit avec succès un ensemble de données liées au stress dans des situations organisationnelles, dans le domaine de la santé, dans les suites du stress traumatique et dans la gestion du stress quotidien. Des avancées récentes dans la compréhension des fondements biologique, cognitif et social des réponses de stress se sont révélées cohérentes avec la formulation originelle de la théorie COR, mais suggèrent qu'il faudrait appréhender cette théorie et le processus de stress d'une façon plus collective que ce ne fut d'abord le cas. On traite aussi du rôle des gains et pertes de ressources dans le pronostic des conséquences positives du stress. On discute enfin des limites et des applications de la théorie COR.

Conservation of Resources (COR) theory predicts that resource loss is the principal ingredient in the stress process. Resource gain, in turn, is depicted as of increasing importance in the context of loss. Because resources are also used to prevent resource loss, at each stage of the stress process people are

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Development of a Measure of Workplace Deviance

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The purpose of this research was to develop broad, theoretically derived measure(s) of deviant behavior in the workplace. Two scales were developed: a 12-item scale of organizational deviance (deviant behaviors directly harmful to the organization) and a 7-item scale of interpersonal deviance (deviant behaviors directly harmful to other individuals within the organization). These scales were found to have internal reliabilities of .81 and .78, respectively. Confirmatory factor analysis verified that a 2-factor structure had acceptable fit. Preliminary evidence of construct validity is also provided. The implications of this instrument for future empirical research on workplace deviance are discussed.

Workplace deviance is a pervasive and expensive problem for organizations. For example, 75% of employees have reportedly stolen from their employer at least once (McGurn, 1988), and it has been estimated that 33% to 75% of all employees have engaged in behaviors such as theft, fraud, vandalism, sabotage, and voluntary absenteeism (Harper, 1990). In recent studies, almost 25% of an employee sample indicated knowledge of illicit drug use among coworkers during the past year (Lehman, Wolcom, & Simpson, 1990), 42% of a surveyed sample of women reported experiencing sexual harassment at work (Webb, 1991), and 7% of a sample of employees reported being victims of physical threats (Northwestern Life Insurance Company, 1993).

It is not surprising that the prevalence of workplace deviance poses a serious economic threat to organizations. The annual costs of workplace deviance have been estimated to be as high as $4.2 billion for workplace violence alone (Bensimon, 1994), $40 to $120 billion for theft (Buss, 1993; Camara & Schneider, 1994), and $6 to $200 billion for a wide range of delinquent organizational behavior (Murphy, 1993).

Despite the prevalence and costs of workplace deviance, our current understanding of workplace deviance remains limited, and much empirical research has yet to be done. This empirical research may be enhanced by the availability of a validated measure of workplace deviance. The purpose of this study is to produce such a measure.

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Understanding Workplace Deviance

Workplace deviance has been defined as voluntary behavior that violates significant organizational norms and, in so doing, threatens the well-being of the organization or its members, or both (Robinson & Bennett, 1995). Workplace deviance refers to voluntary behavior in that employees either lack motivation to conform to, and/or become motivated to violate, normative expectations of the social context (Kaplan, 1975). Organizational norms consist of basic moral standards as well as other traditional community standards, including those prescribed by formal and informal organizational policies, rules, and procedures (Feldman, 1984).

For scales to be valid, it is essential that there be at least a tentative theoretical model to guide scale development (Churchill, 1988; DeVellis, 1991). It is argued here that deviant behaviors fall into clusters or families (Robinson & Bennett, 1997; Roznowski & Hulin, 1992). Any specific deviant behavior can be placed into one of these behavioral families. We make this assumption because we believe that although there are a myriad of different manifestations of deviant behaviors, research suggests that some of these manifestations are similar in nature to one another, share similar antecedents, and may thus be functional substitutes for one another (i.e., they serve the same goals; Robinson & Bennett, 1997).

Research suggests a wide range of reasons why employees engage in deviant behavior (Bennett, 1998a, 1998b; Robinson & Bennett, 1997; Robinson & Greenberg, 1999), ranging from reactions to perceived injustice, dissatisfaction, role modeling, and thrill-seeking. Yet, deviant organizational behavior is distinct in that it is usually behavior that is very constrained in the workplace. Employees in a given time period or context are very limited in terms of the type of deviant behavior in which they can engage. Thus, they may be motivated to engage in deviance, but that deviance will take different manifestations depending on the constraints of the situation. We would argue then that an employee may choose from among deviant behaviors within a family that are functionally equivalent, choosing the one that is least constrained, most feasible, or least costly, given the context (Robinson & Bennett, 1997).

If an individual engages in one behavior from a family, he or she is more likely to engage in another behavior from that family than

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ORIGINAL ARTICLE

Relationship between emotional intelligence, stress, and burnout among dental hygiene students

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Abstract

Objective: Emotional intelligence (EI) is the recognition and management of emotions within oneself and others. Limited evidence exists that determine whether EI is related to stress and burnout.

Purpose: The purpose of this project was to determine whether relationships exist between EI, stress, and burnout levels among undergraduate dental hygiene students.

Methods: This study used a quantitative cross-sectional research design. The study instrument consisted of 3 parts: (1) The Emotional Quotient Self-Assessment Checklist consisted of 30-questions in 6 domains and measured EI; (2) The Modified Dental Environment Stress Questionnaire consisted of 39 questions in 5 domains and measured stress; and (3) The Maslach Burnout Inventory-Health Services Survey consisted of 22 questions in 3 domains and measured burnout.

Results: The responses from 57 participants were used (response rate = 93.3%). A moderate negative correlation was found between self-control and personal stress and a moderate negative correlation was found between empathy and emotional evaluation. Moderate positive correlations were found between self-awareness, empathy, motivation, self-competence, self-confidence, and total EI scores and personal accomplishment. Multiple linear regression analysis found self-control was a significant predictor of personal stress ($R^2 = .023$, $P = .023$); empathy and self-competence were significant predictors of clinical stress ($R^2 = .085$, $P = .034$); empathy and self-awareness were significant predictors of emotional exhaustion ($R^2 = .071$, $P = 0.006$); and empathy was a predictor of personal accomplishment ($R^2 = .150$, $P = 0.002$).

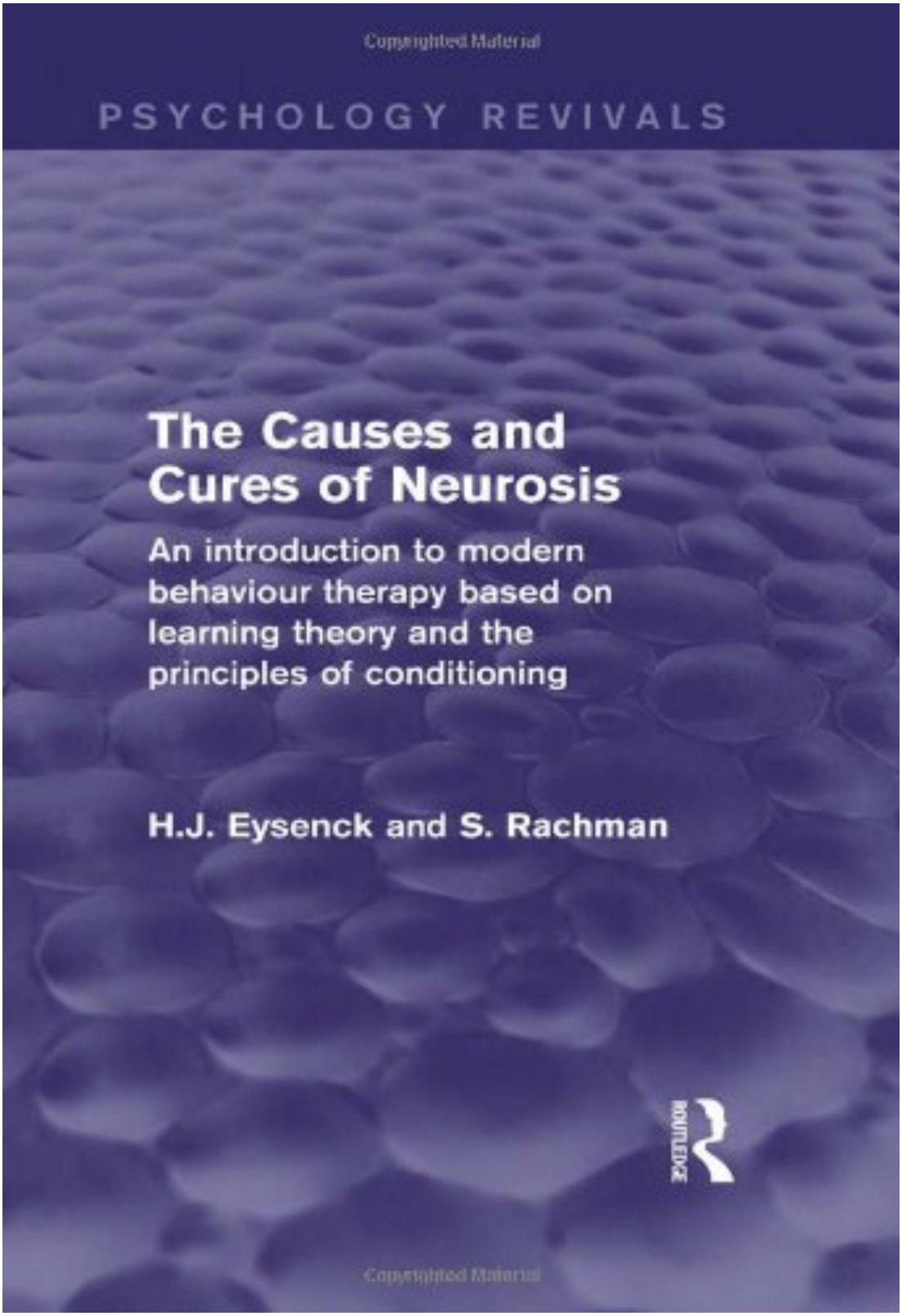
Conclusion: Subcomponents of EI were found to be significant predictors of stress and burnout levels. Future research is needed to improve EI levels to tolerate stress and minimize burnout levels.

KEYWORDS

burnout, Emotional intelligence, stress, undergraduate dental hygiene students

1 | INTRODUCTION

Health professional students learn their professions by balancing the academic demands of didactic instruction and the clinical application within a limited period. This remains especially true for dental hygiene programs, in which graduates are expected to perform the duties of a dental hygiene professional in 3 years. With the current curricular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An empirical study of how emotion dysregulation and social cognition relate to occupational burnout in dentistry

Matthew R. Nangle,*[1] Julie D. Henry,[2] Courtney von Hippel[2] and Kathleen Kjelsaas[2]

Key points

- Suggests emotion dysregulation and personal distress contribute to the risk of occupational burnout in dental professionals.
- Burnout tendency in undergraduate dental students highlights the need for early educational and/or psychological intervention.
- Examines why effective management of emotional state in clinical practice may reduce risk of practitioner burnout and improve patient outcomes.

Abstract

Introduction Dentists are frequently exposed to occupational stressors, including emotionally tense interactions with patients who are experiencing pain, anxiety and fear. Unsurprisingly, dentists are also a group that experience particularly high levels of occupational burnout. The present study provides the first empirical test of whether occupational burnout is higher, and general wellbeing is lower, for dental practitioners and students who have greater difficulties managing their own emotions (emotion dysregulation) and detecting and interpreting social cues from others (social cognitive difficulties).

Materials and methods Ninety-six dental practitioners and 54 dental students completed validated measures of emotion regulation, social cognitive function, occupational burnout and wellbeing.

Results Consistent with broader literature, rates of burnout were significantly higher in both dental practitioners and students, relative to normative standards. Importantly, the results also identified significant associations between rates of burnout with both emotion dysregulation, as well as one of the measures of social cognitive function: the empathic disposition to experience discomfort in response to the distress of others (personal distress). Ratings of emotion dysregulation and personal distress were also significantly higher for dental students relative to practitioners.

Conclusion These data highlight the importance of being able to effectively manage difficult emotions in the dental practice.

Introduction

The phenomenon of occupational burnout was originally identified by Freudenberger,[1] who noted how excessive workplace demands could lead to an individual becoming exhausted, and ultimately inoperative. Burnout has more recently been defined as 'a state of physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding'.[2] A particularly important feature of this definition is that it specifically attributes burnout to the stress of coping with emotional demands. Considering the amount of emotional stress that dentists routinely face in clinical practice,[3,4] it is not surprising that a high rate of burnout has been identified among dental practitioners. Indeed, one recent study estimated that more than a quarter of dental staff are at 'severe risk' of burnout.[5] In their recent systematic review of this literature, Singh *et al.* concluded that 'there is scope to identify and prevent burnout by introducing screening and intervention programmes at undergraduate level'.[6]

While the role of emotional stress in predicting burnout is well established, the specific types of regulatory strategies used by dental practitioners to deal with stress, and how these relate to burnout, remain poorly delineated. Emotion regulation refers to the set of processes by which one's inner experience and outward expression of emotion are regulated. Emotion dysregulation (the inappropriate, excessive or extreme application of available and otherwise adaptive emotion regulation processes) has been linked to poorer mental wellbeing broadly, and greater psychopathology.[7] To date, only three studies have assessed either emotion regulation or emotion dysregulation in dental practitioners.[8,9,10] All three of these studies used qualitative research methods to assess the same small group of dentists (N = 20), and in none of these studies was the relationship between the use of different emotion regulation strategies and burnout specifically assessed. The development of effective interventions first requires identifying which specific types of regulatory strategies are related to burnout.

The first aim of the present study was therefore to extend the current understanding of the types of emotion regulation strategies used by dental practitioners, and directly test how the use of different strategies relate to burnout.

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Turnover in health care: the mediating effects of employee engagement

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COLLINI S.A., GUIDROZ A.M. & PEREZ L.M. (2015) *Journal of Nursing Management* **23**, 169–178.

Turnover in health care: the mediating effects of employee engagement

Aim This study aimed to understand the interaction between interpersonal respect, diversity climate, mission fulfilment and engagement to better predict turnover in health care.
Background Registered nurse turnover has averaged 14% and current nursing shortages are expected to spread. Few studies have studied employee engagement as a mediator between organisational context and turnover.
Method Study participants were employees working within 185 departments across ten hospitals within a large healthcare organisation in the USA. Although a total of 5443 employees work in these departments, employee opinion survey responses were aggregated by department before being linked to turnover rates gathered from company records.
Result Engagement fully mediated the relationship between respect and turnover and the relationship between mission fulfilment and turnover. Diversity climate was not related to turnover.
Conclusion Turnover in health care poses a significant threat to the mission of creating a healing environment for patients and these results demonstrate that workplace respect and connection to the mission affect turnover by decreasing engagement.
Implications for nursing management The findings demonstrated that to increase engagement, and improve turnover rates in health care, it would be beneficial for organisations, and nurse management to focus on improving mission fulfilment and interpersonal relationships.

Keywords: engagement, health care, mediation analysis, organisational context, turnover

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Introduction

The statistics regarding the future of nursing paint a grim picture for the present, but a bright picture for the future. Registered nurse (RN) turnover averaged 14% in previous years (KPMG 2011) and the current nursing shortage is expected to continue to spread across the USA (Juraschek *et al.* 2012). Nevertheless, health care accounted for one out of every five new jobs created in 2011, roughly 297 000 jobs (Bureau of Labor Statistics 2012a). Future employment projections estimate 1.2 million more nurses will be working in the USA in 2020 to account for industry growth and replacement needs as RNs leave the workforce (Bureau of Labor Statistics 2012b). Retaining qualified and high-performing nurses is a key initiative for

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The Influence of Interpersonal Relationships on Nurse Managers' Work Engagement and Proactive Work Behavior

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George Knafl, PhD

OBJECTIVE: This study tested the effects of interpersonal relationships on nurse managers' work engagement and proactive work behavior.
BACKGROUND: An engaged workforce may help healthcare organizations improve performance. In healthcare, nurse managers are responsible for creating motivating work environments. They also need to be engaged, yet little is known about what influences nurse managers' performance.
METHODS: A self-administered electronic survey was used to collect data from 323 nurse managers working in acute care hospitals. Instruments included the Relational Coordination Scale, Utrecht Work Engagement Scale, and Proactive Work Behavior Scale.
RESULTS: Interpersonal relationships with nurse administrators were most predictive of nurse managers' work engagement. Interpersonal relationships with physicians were most predictive of nurse managers' proactive work behavior.
CONCLUSION: Organizational cultures that foster quality interpersonal relationships will support the job performance of nurse managers.

Improving patient safety in resource-constrained environments is a daunting task facing healthcare organizations. Nonhealthcare, high-performing organizations have demonstrated that the driving force behind top performance is an engaged workforce.[1,2] Engaged employees are energized, dedicated, and motivated to persevere and complete their work.[3] Managers are critical for creating environments fostering employee engagement.[2] Managers must be engaged in their own work to create these stimulating work environments. In healthcare, nurse managers are expected to create motivating work environments for nurses, yet little is known about what motivates nurse managers. This study tested factors that should positively influence nurse manager work performance.

Work Engagement

Work engagement is a motivational state characterized by vigor, dedication, and absorption.[3] Engaged employees enjoy challenges, exhibit mental resilience, and are engrossed in their work. Whereas many early studies of work engagement were conducted in business settings, studies of work engagement in healthcare are only beginning to appear in the literature. In a literature review, Simpson[4] found only 1 study[5]

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Burnout, depression and suicidal ideation in dental students

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Abstract

Objectives: To investigate the prevalence, gender influence, and relationships between burnout, depression and suicidal ideation within the last year among second, fourth and fifth-year dental students.

Study Design: A cross-sectional study was carried out in 212 dental students enrolled in the second, fourth and fifth years at the School of Dentistry of Seville using the Maslach Burnout Inventory-Student Survey and the MBI-Human Services Survey, the "Patient Health Questionnaire-2", and the "Questions about Suicidal Ideation and Attempted Suicide".

Results: The response rate among dental students was 80%. Burnout prevalence in dental students was higher in second and fourth years than in fifth year ($p = 0.059$ and $p = 0.003$, respectively). Depression prevalence in the fourth year approached significance ($p = 0.051$). Prevalence of suicidal ideation within the past year was higher, yet not reaching significance, in fourth year. No gender-related differences were found. A significant association was observed between burnout and depression, and between depression and suicidal ideation ($p < 0.001$), but no association was found between burnout and suicidal ideation.

Conclusions: This study has brought our attention to the high prevalence of burnout and depression, and reported for the first time the prevalence of suicidal ideation among dental students in preclinical and clinical years.

Key words: *Burnout, depression, suicidal ideation, dental students.*

Introduction

Dentists seem to be prone to professional burnout, anxiety disorders and clinical depression because of the variety of sources of stress encountered throughout the professional career, and there is the possibility of beginning as early as university (1-4).

The term burnout was introduced in the 1970s by Maslach and Leiter (5), and was defined as a syndrome with emotional exhaustion (EE), depersonalization (DP) and diminished personal accomplishment (PA) that can occur among individuals working with people.

Research of dental student burnout has increased in recent years and most studies have been focused on clinical years (6-9). In these studies, the standard instrument

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Risk of suicide amongst dentists: myth or reality?

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Objectives: To analyse the scientific weight of the studies about reports of suicide rates in dentistry and decide the possible stressors caused by dental clinical activity, their consequences and their treatment. **Discussion:** The previous literature treats the high suicide rate associated with the dental profession in different ways: myth for some, important statistical data which needs further research for others. The possible errors repeated in the literature as a result of not introducing certain indispensable variables are analysed and a report given of the main stressors linked to the profession. The results showed that the absence of treatment of the disorders arising from these stressors by qualified professionals along with the lack of preventative measures developed by universities and clinicians to be one of the main problems. **Conclusions:** In the literature we find systematically a suicide rate among dentists higher than those of other occupations. These studies lack the correct scientific weight and new studies are required that introduce the demographic variables, the psiquiatric morbidity previous to the development of the profession, the opportunity factor, the stressors not related to work and the relative emphasis to these are necessary to for the profession to decrease the risk of suicide.

Key words: Occupation, suicide, dentistry, mental health, burnout, stress, risk factors

The American Centers for Disease Control and Prevention[1] indicates that although suicide is fatal, in cases of surviving an attempt, the sequels are as devastating physically as well as psychologically not only for the person that tries to commit suicide but for all those who are close to them.

One's profession is not by itself one of the main risk factors; however, the profession-related stressors that we develop during our daily practice could generate certain disorders that can increase the possibility of suicide scenarios.

A large number of articles have been written about suicide in relation to dentistry and health care workers for more than 70 years[2]. The line that dentists are prone to commit suicide has been repeated so many times both in the specialist press and in the mass media that by carrying out a search on the Internet, we found a large amount of news that consider it to be a fact. The high suicide rate associated with our profession is treated in diverse ways in the scientific literature: myth for a few, generally dentists, and statistical data which need further studies for others, generally psychologists. The literature about the patterns of suicide by occupation is filled with contradictory conclusions[3]. In this review we will try to analyse the scientific weight of the studies, searching for factors that may allow us to discover the relationship of the profession to the risk of suicide, analysing the factors that are linked with dental activities.

When reviewing the literature it is essential to undertake an analysis of the statistical results. We focus on the American databases because of their accuracy and availability.

The inclusion criteria serve to explain certain errors that have been systematically repeated in most of the studies of the previous literature. Initially, we will comment about the number of suicides in the population of working age (20-64 years). Many previous studies did not include this limitation; selecting a mistaken control group allowing the suicide of a dentist who had retired 15 years previously to be counted with the suicide rate of the profession. That suicide, for obvious reasons, has nothing to do with work-related stressors[3].

The number of suicides according to the National Institute of Occupational Safety and Health[4] (NIOSH) during 2005 in the EEUU countries among the population of working age was approximately 27,000 cases, which produces a rate of 13.54 suicides for each 100,000 inhabitants, putting suicide in the five top causes of death in the EEUU for our reference population.

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COMMENTARY

Suicide rate in the dental profession: Fact or myth and coping strategies

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ABSTRACT

This article summarizes relevant scientific data on the alleged high suicide rate among dentists as compared to other health care professions. Potential contributing risk factors for the dental profession are identified. In addition, a brief review is provided for major depressive disorder, a contributor to increased suicide, along with its symptoms, underlying theory, drug treatment and coping skills to combat this disorder.

Key words: Dental suicide rate, dentist, major depressive disorder, suicide

Introduction

Do dentists have the highest suicide rate among health care professionals? Are they at a higher risk of suicide? To more fully understand this topic, it is necessary to address several issues which include: the reporting of suicides, the statistics of suicide, the myth of suicide prone dentists and risk factors and symptoms.

Suicide Rates in Dentists

Suicides tend to be under reported due to the stigma of shame and religious implications.[1] Further, suicide classified according to professions is complicated by suicides being reported as accidental death. Additionally, many states do not list the occupation of the deceased. From a statistical point of view, there is the problem of small numbers. Dentists represent only a small fraction of the total population and only a small portion die in a given year; of that number, only a small fraction die from suicide. Consequently, people draw conclusions on very limited samples. For example, one Midwestern state reported occupation on the death certificate-defined as the occupation the person did most of their life. In a 16 year period from 1989 to 2004, there were 244,628 total deaths.[2] There were 3002 suicides or 1.2% of the total deaths were suicides. Of the 244,628 deaths, 222 were dentists of which four committed suicide. Based on the above, about 1.8% of dentists who died had committed suicide. It would be disingenuous and misleading to conclude, therefore, that 50% more dentists committed suicide than the overall population. Statistically, this would be a sweeping and inaccurate generalization. The national suicide rate is 1.3% of total deaths.[3]

The myth surrounding the suicide rate of dentists can be traced back to studies that lack the correct scientific weighting for demographics.[4] Alexander, in a 2001 article, traces the beginnings of the myth to the 1920's when both the lay public and professional media repeatedly portrayed dentists as being suicide prone. In addition, over the years both the medical and dental professions have been referenced as groups of health care providers that are at a high risk of committing suicide.[1] These assertions have been repeated and apparently accepted without sufficient supporting data. In the 1960's claims based on statistical evidence that dentists committed suicide at a higher rate than other health care providers began to appear in the literature.[1]

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ORIGINAL ARTICLE

WILEY

Burnout, depression and suicidal ideation in dental and dental hygiene students

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Abstract

Introduction: The aim of this study was to assess the relationship between burnout, depressive symptoms and suicidal ideation in dental and dental hygiene students and to evaluate the influence of gender, programme type and year of study.

Subjects and methods: Third- and fourth-year dental (DS) and first- and second-year hygiene students (DHS) completed the Patient Health Questionnaire (PHQ-9) and an abbreviated Maslach Burnout Inventory online as measures of depressive symptoms/suicidality and burnout, respectively. The statistical analyses included summary statistics and tests for intergroup comparisons (chi-square) to evaluate the influence of gender, programme type (DHS or DS) and year of study. Correlations between depression, suicidality and burnout were also conducted.

Results: A total of 32 dental hygiene and 119 dental students participated. 40% of the dental and 38% of the hygiene students met criteria for burnout. No differences were found between years or between programmes. Nine per cent of both dental and hygiene students were above the cut-off for moderate depressive symptoms, but there were no statistical differences between the third- and fourth-year dental and the first- and second-year hygiene students. Six per cent of the dental and 9% of the dental hygiene students were above the cut-off for clinically significant suicidal ideation, but there were no statistical differences between dental and hygiene students. There were no differences noted in the dental students based on gender for any of the measures. Depression was significantly associated with all three subscales of burnout. Suicidal ideation was only significantly related to the lack of personal accomplishment subscale of burnout.

Discussion: These findings suggest the need for introducing preventive measures for such affective states in dental and dental hygiene training programmes.

KEYWORDS
students, dental education, stress, burnout, depression, dental hygiene

1 | INTRODUCTION

The challenges of studying dentistry and dental hygiene place students at high risk for negative affective states. Although it has been hypothesised that some stress may actually be beneficial as a stimulus for learning,[1] the negative consequences of stress in dental education are significant.[2] One of the possible long-term negative consequences of stress is burnout, defined as a combination of emotional exhaustion, depersonalisation and a decreased sense of personal accomplishment.[3] Burnout is well recognised as an occupational risk factor for practicing

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Factors Associated with Burnout in Dentistry from Occupational Therapy Perspective: A Systematic Review

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Abstract

Background: Burnout is a high risk mental problem for dentists and dental students and risk factors must be highligthened. There is limited literature on the factors effecting level of burnout among dentists and dental students.
Aims: To show the most relevant factors related with burnout among dentists and dental students from occupational therapy view.
Methods: The literature was searched via EMBASE, PUB MED, MEDLINE, and HMIC databases to review and show the factors associated with burnout in dentists and dental students. Critical Appraisal Skills Programme was used to find the statistically significant affecting factors.
Results 95 studies were identified but 25 studies were found suitable for the review. The most prevalent and statistically significant factors associated with burnout were: older age, female, gender, student status, doing postgraduate education and level of occupational participation.
Conclusions This review showed several factors related to burnout among dentists and dental students. Further longitudinal and prospective studies are needed.
Key words Burnout; Dentist; Occupational participation

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REVIEW ARTICLE

Burnout Syndrome in Dentistry

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ABSTRACT

Burnout can pose a serious problem to the dental profession, especially since it is difficult to detect early and that most individuals are unaware of the fact that they suffer from it. Being a serious threat to the dental profession, it is considered as a public health issue. Extensive research on burnout has been done in psychiatry since a long time. Burnout is a complex phenomenon enclosing emotional exhaustion, depersonalization, and reduced personal accomplishment. Despite surplus proposed mechanisms, philosophies, opinions, and different models, diagnosis is challenging. This literature review focuses on the onset of burnout, the predisposing factors, the developmental models, and the practical methods to address the problem.

Keywords: Burnout, Dentistry, Prevention, Stress.

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INTRODUCTION

Dentistry has traditionally been considered as a financially lucrative, prestigious, and prosperous profession. In India, the reason for majority of the students choosing dental profession could be that they have been suggested by a family member who is already practicing dentistry. It gives an opportunity of being self-employed. It is considered as a convenient profession for maintaining a balance between work and family life, and it gives a great opportunity for meeting people on a regular basis.[1,2] Dental work is a unique social combination of clinical practice, personal traits, and emotions of a health care provider and its recipient.

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Dental professionals are academicians, clinicians, or those engaged in both. In reality, the economic factors involved like the cost of dental education, practice start-up cost, unrealistic expectations of perfectionism from doctors, long working hours, limited time available for family life and recreation, low satisfaction in three domains: Relationships with patients, relatives, and staff; professional status/esteem; and scope for intellectual growth could add to the stress in susceptible individuals resulting in burnout.[3]

Burnout syndrome is defined as a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among people who work with the general public in some capacity.[4] Burnout is multifactorial secondary to chronic occupational stress. Predisposing factors responsible for occupational burnout are patient anxiety, compromised treatment, stress of perfection, economic pressures, staff and technical problems, time management issues, dentist–patient relationship, physical posture and uncomfortable working environment, and unhappy personal life.[5,6] There are three primary components of burnout—exhaustion, cynicism, and inefficiency.[7] Exhaustion can be described as a feeling of inability to give more effort toward work. Cynicism is a distancing of oneself from job and colleagues, whereas inefficiency is a feeling of inadequacy and incompetence while focusing on a certain work at hand.[3]

Burnout can pose a serious problem to the dental profession, especially since it is difficult to detect early and that most individuals are unaware of the fact that they suffer from it. Thus, it needs to be addressed swiftly, especially in India, where the dental needs of a large population are dependent on limited professionals. Limited literature is currently available on burnout in the dental profession. Therefore, the purpose of this literature review is to discuss profession-specific stressors and the potential impact of burnout on the dental profession.

HISTORY

In 1974, a German psychiatry resident in the United States, Herbert Freudenberger introduced the word "burnout" as a behavioral entity to the lexicon. Herbert elaborated it as a state of exhaustion (emotional and mental) observed among volunteer workers with varied physical and behavioral outcomes. In 1976, at the Annual Congress of American Psychology Association, Cristina Maslach

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Interventions to Reduce Burnout and Improve Resilience: Impact on a Health System's Outcomes

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Abstract: With the continuously changing health care environment and dramatic shift in patient demographics, institutions have the responsibility of identifying and dedicating resources for maintaining and improving wellness and resilience among front line providers to assure the quality of patient care. Our institution, the Ohio State University Wexner Medical Center (OSUWMC), has addressed the goal to decrease burnout for providers in a multistep, multiprofessional, and multiyear program starting firstly with institutional cultural change then focused provider interventions, and lastly, proactive resilience engagement. We describe herein our approach and outcomes as measured by provider wellness and health system outcomes. In addition, we address the overall feasibility and effectiveness of these programs in promoting provider compassion and mindfulness while reducing burnout and improving resilience. Institutional culture change and readiness were initiated in 2010 with the introduction of Crew Resource Management training for all providers across the OSUWMC. This multiyear program was implemented and has been sustained to the current day. Focused interventions to improve mindfulness were undertaken in the form of both Mindfulness in Motion (MIM) training for intensive care unit personnel and a "flipped classroom" mindfulness training for faculty and residents. Lastly, sustainable changes were introduced in the form of the Gabbe Health and Wellness program which consists of interprofessional MIM training and other wellness offerings for staff, faculty, and residents embedded across the entire medical center. The introduction of Crew Resource Management in 2010 continues to be endorsed and supported throughout OSUWMC for all providers, including residents and students. The improvements seen have not only improved patient satisfaction but also reduced patient safety events and improved national reputation for the institution as a whole. Subsequently, MIM training for intensive care unit providers has resulted in improved resilience as well as decreased patient safety events. In addition, the "flipped classroom" mindfulness training for residents

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The authors declare that they have nothing to disclose.

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ORIGINAL PAPER

Burnout in Mental Health Services: A Review of the Problem and Its Remediation

Gary Morse · Michelle P. Salyers · Angela L. Rollins · Maria Monroe-DeVita · Corey Pfahler

Published online: 1 May 2011

Abstract Staff burnout is increasingly viewed as a concern in the mental health field. In this article we first examine the extent to which burnout is a problem for mental health services in terms of two critical issues: its prevalence and its association with a range of undesirable outcomes for staff, organizations, and consumers. We subsequently provide a comprehensive review of the limited research attempting to remediate burnout among mental health staff. We conclude with recommendations for the development and rigorous testing of intervention approaches to address this critical area.

Keywords Burnout · Burnout prevention · Mental health staff

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Introduction

Burnout has been defined a number of ways (Burke and Richardsen 1993; Chemiss 1980; Pines and Aronson 1988; Stalker and Harvey 2002), but most researchers favor a multifaceted definition developed by Maslach et al. (1993, 1996) that encompasses three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. The dimension of emotional exhaustion refers to feelings of being depleted, overextended, and fatigued. Depersonalization (also called cynicism) refers to negative and cynical attitudes toward one's consumers or work in general. A reduced sense of personal accomplishment (or efficacy) involves negative self-evaluation of one's work with consumers or overall job effectiveness (Stalker and Harvey 2002). Many researchers consider burnout to be a job-related stress condition or even a "work-related mental health impairment" (Awa et al. 2010, p. 184); in fact, burnout closely resembles the ICD-10 diagnosis of job-related neurasthenia (Maslach et al. 2001; World Health Organization 1992). Although burnout is correlated with other mental health conditions, such as anxiety and depression, research also supports that burnout is a construct distinct from these other mental health disorders, from a general stress reaction, and from other work phenomena such as job dissatisfaction (Awa et al. 2010; Maslach et al. 2001). Burnout is also distinct from secondary traumatization, vicarious traumatization, and compassion fatigue (Canfield 2005; Dunkley and Whelan 2006; Figley 1995).

Since burnout was first described in the early 1970s, thousands of conceptual papers and empirical studies have focused on this complex phenomenon. As research has burgeoned over the past three decades, it has become clear that burnout, which occurs cross culturally, is prevalent

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Prevention of burnout: New perspectives

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Abstract

Job burnout has long been recognized as a problem that leaves once-enthusiastic professionals feeling drained, cynical, and ineffective. This article proposes two new approaches to the prevention of burnout that focus on the interaction between personal and situational factors. The first approach, based on the Maslach multidimensional model, focuses on the exact opposite of burnout: increasing engagement with work by creating a better "fit" between the individual and the job. The second approach draws from the decision-making literature and reframes burnout in terms of how perceptions of the risk of burnout may lead to suboptimal choices that actually increase the likelihood of burning out. These new approaches provide a more direct strategy for preventing burnout than typical unidimensional "stress" models because these new approaches (1) specify criteria for evaluating outcomes and (2) focus attention on the relationship between the person and the situation rather than one or the other in isolation.

Key words: Burnout, Prevention, Job stress, Risk-taking

Job burnout has been long recognized as an occupational hazard for various people-oriented professions, such as human services, education, and health care. It was first discussed in these terms in the mid-1970s (Freudenberger, 1974, 1975; Maslach, 1976), and the portrait of burnout that was painted then has not changed much in the intervening years. The key characteristics are an overwhelming exhaustion; feelings of frustration, anger, and cynicism; and a sense of ineffectiveness and failure. The experience impairs both personal and social functioning. Although some people may quit the job as a result of burnout, others will stay on, but will only do the bare minimum rather than their very best. This decline in the quality of work and in both physical and psychological health can be very costly—not just for the individual worker, but for everyone affected by that person.

Burnout is a particularly tragic endpoint for professionals who entered the job with positive expectations, enthusiasm, and a dedication to helping people. The norms for these types of caregiving, teaching, and service occupations are clear, if not always stated explicitly: to be selfless and put others' needs first; to work long hours and do whatever it takes to help a client, or patient, or student; to go the extra mile and to give one's all. Sadly, such a "gift" to others can come with a high price tag, as illustrated by the following classic case of burnout:

> I am a psychologist, going on my third year of employment as a therapist in a community mental health center. I have seen myself change from an avid, eager, open-minded, caring person to an extremely cynical, not-giving-a-damn individual in just two and a half years. I'm only twenty-six, and I've already developed an ulcer from doing continuous work in crisis intervention. I've gone through drinking to relax enough to go to sleep, tranquilizers, stretching my sick leave to its ultimate limit, and so on. At this point, to get through the year, I've chosen to flip into the attitude of going to the mental health center as if I were working at GM, Delco, or Frigidaire factories—that's what it has become here, a mental health *factory!* I am slowly, painfully beginning to realize that I need time away from constantly dealing with other people's sorrows, and that in order to head off the deadness that is beginning to happen inside of me, I must get away, apply for a month or so leave of absence, maybe more—when I start shaking just upon entering the office, then I know *that's it.* It hurts to feel like a failure as a therapist in terms of not being able to handle the pressure, but it's better that I do something about it now, rather than commit suicide later after letting it build up much longer." (Maslach, 1982a, pp. 5–6).

The Situational Context of Individual Burnout

Several key themes, which underlie virtually all descriptions of the burnout experience, underscore the impact of the job environment on burnout. One of these themes is *imbalance*. The demands of the work are high, but the re-

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QUANTITATIVE RESEARCH

Predictors of Canadian Physicians' Prevention Counseling Practices

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ABSTRACT

Objective: To understand predictors of Canadian physicians' prevention counseling practices.

Methods: A national mailed survey of a random sample of Canadian physicians conducted November 2007-May 2008.

Results: Primary care physicians (n=3,213) responded to the survey (41% response rate); those with better personal health habits, female physicians, and physicians aged 45-64 years old were more likely to report "usually/always" counseling patients than did others, but there were no significant differences by province, origin of one's MD degree, or practice location. There was a clear and consistent relationship between personal and clinical prevention practices: non-smokers were significantly more likely to report counseling patients on smoking cessation; those who drank alcohol less frequently, drank lower quantities or binged less often were more likely to counsel on alcohol; those exercising more to counsel patients more about exercise; those eating more fruits and vegetables to counsel patients more often about nutrition; and those with lower weight were more likely to counsel about nutrition, weight or exercise. Physicians who strongly agreed or agreed that "they will perform better counseling if they have healthy habits" averaged higher rates of counseling ($p<0.001$).

Conclusions: Personal characteristics of Canadian physicians help predict prevention counseling. These data suggest that by encouraging physicians to be healthy, we can improve healthy habits among their patients – an innovative, beneficent, evidence-based approach to encouraging physicians to counsel patients about prevention.

Key words: Physician; health; health education; counseling; patient counseling; Canada; prevention

La traduction du résumé se trouve à la fin de l'article.

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It is a health policy goal across North America to increase the proportion of persons appropriately counseled about health behaviours.[1-6] Some literature from outside Canada has suggested that one way to promote counseling may be to encourage physicians to have healthier personal practices, as doctors may "preach what we practice".[7] However, this personal–clinical relationship has only been reasonably well established in the United States,[7-9] a country that is socio-culturally similar to Canada but with a very different health system. We therefore had two questions to investigate: 1) whether this personal–clinical relationship held in a second country (or whether there were unusual factors in the US that created this relationship), and 2) specifically whether the personal–clinical relationship was a function of the peculiarities of the US system or could be found in a system with universal access. We investigated these questions with a large survey of Canadian physicians.

METHODS

Our survey was developed in collaboration with the Canadian Medical Association (CMA), with input from the Association of Faculties of Medicine of Canada, Physician Health Program of British Columbia, Canadian Association of Interns and Residents, Canadian Physician Health Network, the College of Family Physicians of Canada, and the Royal College of Physicians and Surgeons of Canada. Ethical approval was obtained from the University of British Columbia.

Prior to distribution, the survey was promoted in several CMA-related venues, and the protocol was piloted and University of British Columbia Institutional Review Board-approved. We sent the questionnaires and cover letters to 8,100 randomly selected physicians, excluding residents and retired physicians. From the original mailing list, 166 physicians had no known mailing address, or were retired, residents, or working abroad; eliminating these cases reduced the original study population to 7,934.

All materials were available in English and French. The initial survey mailing (late November 2007) and first follow-up mailing (mid-December 2007) were sent to the entire sample of 7,934 physicians. A reminder e-mail was sent (where e-mail addresses were available) in January 2008, followed by a third survey mailing to all non-responders, and a fourth follow-up to British Columbia physicians in March 2008. Survey responses were accepted until May 2008. To ensure anonymity, an external third party created a blinded system. As an incentive, all sampled physicians could participate in a draw for two $1,000 prizes.

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Conflict of Interest: None to declare.

MAYO CLINIC

SPECIAL ARTICLE

Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout

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Abstract

These are challenging times for health care executives. The health care field is experiencing unprecedented changes that threaten the survival of many health care organizations. To successfully navigate these challenges, health care executives need committed and productive physicians working in collaboration with organization leaders. Unfortunately, national studies suggest that at least 50% of US physicians are experiencing professional burnout, indicating that most executives face this challenge with a disillusioned physician workforce. Burnout is a syndrome characterized by exhaustion, cynicism, and reduced effectiveness. Physician burnout has been shown to influence quality of care, patient safety, physician turnover, and patient satisfaction. Although burnout is a system issue, most institutions operate under the erroneous framework that burnout and professional satisfaction are solely the responsibility of the individual physician. Engagement is the positive antithesis of burnout and is characterized by vigor, dedication, and absorption in work. There is a strong business case for organizations to invest in efforts to reduce physician burnout and promote engagement. Herein, we summarize 9 organizational strategies to promote physician engagement and describe how we have operationalized some of these approaches at Mayo Clinic. Our experience demonstrates that deliberate, sustained, and comprehensive efforts by the organization to reduce burnout and promote engagement can make a difference. Many effective interventions are relatively inexpensive, and small investments can have a large impact. Leadership and sustained attention from the highest level of the organization are the keys to making progress.

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THE CHALLENGE FACING HEALTH CARE EXECUTIVES

This is a challenging time for health care executives. Increasing price competition, narrowing of insurance networks, and a greater proportion of patients with noncommercial insurance (eg, Medicare, Medicaid) due to the Affordable Care Act have all resulted in declining reimbursements. In parallel, requirements for "meaningful use" of electronic health records have resulted in large capital expenditures and dramatically increased clerical burden for staff.[1,2] These financial challenges have, by and large, been addressed by increasing productivity expectations for physicians (ie, caring for more patients with the same amount of time/resources), efforts to improve efficiency, and expense reductions to decrease the cost of care delivered (doing more with less).

Health care organizations are also facing a variety of other threats. Increased mergers and consolidation of competitors place contracting at risk and are a perpetual, existential threat to organizational survival.[3] The implementation of new quality metrics and requirements for public reporting necessitates greater attention to measures of system safety and increased resources to count, track, and report these dimensions. The national shortage of nurses and physicians in many specialties makes it challenging to maintain adequate staffing.[4,5] Assessment of patient satisfaction and ubiquitous ratings of hospital "quality" creates incessant pressure to keep up with competitors in the technological "arms race" and to invest resources to maintain a state-of-the-art physical plant. Attacks from cyber criminals and nation states are a constant threat to information security as well as the trust of patients and the public.

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Burnout

Burnout prevention: A review of intervention programs

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ABSTRACT

Objective: To evaluate the effectiveness of intervention programs at the workplace or elsewhere aimed at preventing burnout, a leading cause of work related mental health impairment.
Methods: A systematic search of burnout intervention studies was conducted in the databases Medline, PsycINFO and PSYNDEX from 1995 to 2007. Data was also extracted from papers found through a hand search.
Results: A total of 25 primary intervention studies were reviewed. Seventeen (68%) were person-directed interventions, 2 (8%) were organization-directed and 6 (24%) were a combination of both interventions types. Eighty percent of all programs led to a reduction in burnout. Person-directed interventions reduced burnout in the short term (6 months or less), while a combination of both person- and organization-directed interventions had longer lasting positive effects (12 months and over). In all cases, positive intervention effects diminished in the course of time.
Conclusion: Intervention programs against burnout are beneficial and can be enhanced with refresher courses. Better implemented programs including both person- and organization-directed measures should be offered and evaluated.
Practice implications: A combination of both intervention types should be further investigated, optimized and practiced. Institutions should recognize the need for and make burnout intervention programs available to employees.

1. Introduction

1.1. Background

Burnout is a work related mental health impairment comprising three dimensions: emotional exhaustion, depersonalisation and reduced personal accomplishment. Emotional exhaustion is the state of being depleted of one's emotional resources, depersonalisation refers to a negative, cynical and detached approach to people under ones care and reduced personal accomplishment refers to a sense of low self-efficacy and negative feelings towards one's self.

The presence of these three components alongside one another differentiates burnout from stress and other psychological conditions with which it shares similar symptoms like depression, fatigue, anxiety or lack of motivation. Burnout further differs from stress in that its victims have experienced prolonged symptoms. Burnout results from stress that comes about through the social relationship between a helper and a help recipient, usually found in asymmetrical professional relationships, whereby the victim is the "giver" and the client(s) the "receiver". This is usually the case with professionals like physicians, nurses, teachers or social workers [1]. For example an estimated 22% of physicians in the USA, 27% of physicians in Great Britain [2] and 20% of physicians in Germany suffer burnout [3]. Similarly, about 30% of teachers are affected [4,5] and some studies report up to 40% [6]. However, burnout can manifest in any person and the number of individuals suffering burnout are continuously on the rise [7].

An imbalance between job demands and job skills, a lack of job control, effort reward imbalance (discrepancy which exists between resources, expectations and job reality) and prolonged work stress, are some of the leading risk factors for the development of burnout or other work related mental health

Abbreviations: EE, emotional exhaustion; DP, depersonalisation; PA, personal accomplishment; LOE, level of evidence; BBI, Bergen burnout indicator; CBI, Copenhagen burnout inventory; MBI, Maslach burnout inventory; UBOS, Utecht burnout scale; MBI-NL, Maslach burnout inventory-Netherlands; EVL-Burnout, burnout assessment questionnaire; RCT, randomised controlled trials.

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