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ORIGINAL ARTICLE

Association between burnout and depressive symptoms among Turkish dentists

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Abstract *Background/purpose:* Health care professionals including dentists can experience increased professional burnout. The aim of the study was to evaluate the association between depressive symptoms and burnout among Turkish dentists.
Materials and methods: This study was conducted among a Turkish dentist sample in Ankara (Turkey) between February 2015 and August 2015. From a total of 500 dentists, 337 were included. A self-structured questionnaire, Maslach Burnout Inventory (MBI), and Beck Depression Inventory (BDI) were completed by the participants. The Student *t* test or analysis of variance was used to compare the variables.
Results: A total of 337 dentists (162 female dentists; mean age of participants 36 ± 4.45 years) participated in this study. Age, sex, professional status, years in profession, sector, and number of patients seen/d were factors affecting level of burnout ($P < 0.05$); 29% of the participants showed burnout and 22.2% showed depressive symptoms. Participants showed increase in emotional exhaustion (38%), increase in depersonalization (22%), and decrease in personal accomplishment (12%). The mean score of BDI significantly correlated with those of the MBI subscales ($P < 0.05$). All items of BDI except weight loss, irritability, and loss of appetite significantly correlated with MBI subscores ($P < 0.05$).
Conclusion: Dentists may face burnout and depressive symptoms during their professional life. Increased burnout level can give an idea on depressive symptoms, and may provide an opportunity to identify depression earlier. Creating and raising awareness about burnout are important to avoid and prevent depression among dentists. Further longitudinal studies analyzing the effects of

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interdisciplinary client-centered self-management programs for dentists on depressive symptoms and burnout must be planned.

Introduction

Several studies have suggested that many professionals including dentists can experience increased professional burnout, which is a syndrome characterized by emotional exhaustion (enthusiasm for work), depersonalization (feelings of cynicism), and a low sense of personal accomplishment.[1,2] Many researchers have analyzed the relationship between burnout syndrome and depressive symptoms and concluded that depressive symptoms and burnout do not arise from the same situation and are different conditions; however, these researchers have noted that the emotional exhaustion component is positively related to depression.[3] Besides, some studies on health care professionals such as doctors, nurses, and physical therapists have concluded that although burnout and depression are different, they are closely related factors that affect the life of a health care professional.[4–6] In addition, some studies have indicated that items of burnout have reciprocal relationships with depressive symptoms.[1,7,8] Furthermore, some studies have proved that burnout is associated with psychological and physical diversities.[8,9] Findings of recent studies suggest that depressive symptoms, such as depression, anxiety, broken relationships, problematic alcohol use, and suicidal ideation, have adverse personal consequences for dentists and dental students in certain situations.[10,11] These symptoms, which may be due to increased burnout level, may decrease professionalism, restrict the quality of care, increase the risk of medical errors, and promote early retirement.[11,12]

According to literature sources, only limited studies are available on the inter-relationships between burnout and depressive symptoms among dentists.[3,7] Thus, the aim of this study was to (1) assess the prevalence of burnout among dentists, (2) compare the levels of burnout with respect to demographic characteristics among dentists, (3) assess the level of depressive symptoms among dentists, and (4) analyze the relationship between burnout and depressive symptoms among dentists.

Materials and methods

Members of the Ankara Dentists Association were selected as the study population. A total of 500 dentists registered in the Ankara Dentists Association were sent an e-mail, which included an invitational letter for study participation that also provided information about the study, and an informed consent form. An occupational therapist visited the dentists who agreed to participate in the study, and gave them information about the study aims and implementation process. The study period was from March 2015 to September 2015. During the visit, each participant (dentist) was asked to fill in his/her demographic characteristics and complete the evaluation tests individually with the occupational therapist. A group of occupational therapists scored the evaluation tests. The occupational therapists were educated about implementing the tests; additionally, their inter-rater consistency was also evaluated (once in every 10 tests' scoring). Eligible population included dentists practicing for at least 1 year and having patient contact for at least 6 months. Dentists having vacation for more than 1 month, having psychological problems, or undergoing therapies (e.g., medication, psychotherapy) in the last 6 months were excluded from analysis. The data were coded and an independent group of therapists without knowing the aim of the study rechecked the 25% of the data. There were no wrongly coded data. The study protocol was designed according to the Principles of the Declaration of Helsinki and approved by the Institutional Review Board of Hacettepe University (Research No. GO 15/49), and there was no conflict of interest.

We collected the following demographic characteristics of the study participants: age, sex, professional status (only dentist or dentist with a doctoral degree), date of graduation, number of years working with patients, health sector (public or private), number of patients seen/d, and working shifts. The Maslach Burnout Inventory (MBI) scale was used to evaluate burnout and the Beck Depression Inventory (BDI) scale was used to assess depressive symptoms.

Although the concept of "burnout" is a topic of great interest among researchers, only limited information is available in this subject area to guide experimental research. The MBI scale has been recognized as the leading measure of burnout. MBI has been further enhanced to measure the perception of burnout from three defined groups with regard to the individuals' job and the people with whom they closely interact. These three instruments are as follows: MBI-Human Services Survey, MBI-Educators Survey, and MBI-General Survey. The MBI was adapted to Turkish by Ergin.[13] The Turkish version is a validated 22-item questionnaire, which uses a 5-point Likert scale for responses (0 = never to 4 = always).[13] The MBI addresses the following three subscales: (1) emotional exhaustion (9 items), which measures feelings of being emotionally overextended and exhausted due to work; (2) depersonalization (5 items), which measures the unfeeling and impersonal response toward recipients of one's service and care treatment; and (3) personal accomplishment (8 items), which measures one's successful achievement and competency at work. Increased scores on emotional exhaustion and depersonalization and decreased scores on personal accomplishment subscales indicate *burnout*. Summative total scores and independent subscale scores are calculated for each subset. A reliability analysis of the Turkish version of MBI indicated that it is a reliable

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