Burnout Among Otolaryngology Residents in Saudi Arabia: A Multicenter Study

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OBJECTIVE: Determine the prevalence of, and associated risk factors for, burnout among otolaryngologist residents in Saudi Arabia.

DESIGN AND SETTING: A cross-section study of multicenter hospitals in Saudi Arabia conducted in March 2013.

PARTICIPANTS: Registered residents in Saudi Otolaryngology Board Program.

MAIN OUTCOMES MEASURES: The Maslach Burnout Inventory was used to measure burnout status. Questions supplementary to the Maslach Burnout Inventory were also included to identify associated potential risk factors such as demographic data, resident satisfaction, and work conditions.

RESULTS: Of the initial 123 questionnaires that were distributed, 85 yielded responses, a rate of 69%. The mean age (standard deviation [SD]) of respondents was 29 (2.3) years. Of those, 67% (57/85) were men and 66% (55/85) were married. Resident levels were delineated: level 2, 19%; level 3, 33%; level 4, 29%; and level 5, 19%. The mean number of on-call days/month (SD) was 7 (2), clinics/week (SD) was 3 (1), sleep hours/day (SD) was 6 (1), and operations/week (SD) was 2 (1). The mean emotional exhaustion (EE) and depersonalization scores were high at 29.5 (SD = 9.6) and 10.7 (SD = 6), respectively. The mean personal accomplishment was low at 32.33 (SD = 6). The mean of all subscales did not differ by sex (EE p = 0.5; depersonalization p = 0.09; personal accomplishment p = 0.4). Mean EE differed by marital status, which was 31.2, 31.3, and 25.6 for married, divorced, and single, respectively, analysis of variance test p = 0.045.

CONCLUSION: Burnout prevalence was found to be high among otolaryngologist residents in Saudi Arabia. The associated variables examined in this study should be addressed to decrease this level of burnout and provide residents with a less stressful work environment. (J Surg Ed 72:844-848. © 2015 Association of Program Directors in Surgery. Published by Elsevier Inc. All rights reserved.)

KEY WORDS: burnout, physicians, residents, otolaryngology

COMPETENCIES: Medical Knowledge, Systems-Based Practice

INTRODUCTION

Researchers have been compelled to investigate the complex issue of burnout owing to the serious physical and emotional effect it has been shown to have on health care workers, resulting in inferior patient care. Burnout has been recognized as an occupational hazard and has been frequently studied across different medical specialties and in different countries.[1-4] In recent years, a number of studies have investigated the various dimensions of burnout syndrome and factors associated with it among otolaryngology residents, academic chairs, and academic faculties of otolaryngology. Each of these studies reported the prevalence of high levels of burnout, ranging from 3% to 16%. The studies also identified several different work- and home-related stressors that correlated with burnout levels, such as the number of work hours per week, age, and marital status.[5-8]

The term "burnout" was first introduced in the 19th century by psychologist Herbert Freudenberger.[9] Christina Maslach would later define burnout as a syndrome characterized by emotional exhaustion (EE), depersonalization (DP), and a sense of low personal accomplishment

(PA).[10,11] EE refers to feelings of emotional drain and fatigue when interacting with others. DP denotes negative feelings or cynical attitudes or both one harbors toward the recipients of their service or care. Finally, there is the self-evaluation or PA dimension of burnout, which is characterized by the tendency to negatively evaluate one's own work. Christina Maslach and Susan Jackson developed Maslach Burnout Inventory Scale (MBI) to quantify burnout status using these 3 dimensions. In this scale, EE is measured using 9 questions, DP with 5 questions, and PA with 8 questions. Answers to these questions are given on a scale of frequency of occurrence, ranging from 0 (none) to 6 (every day).[10,11]

Although several studies had investigated burnout among otolaryngology residents worldwide, this is the first such study to specifically address the prevalence of burnout and its associated risk factors in otolaryngology residents in Saudi Arabia.

MATERIALS AND METHODS

Study Design and Participants

The study used a cross-sectional questionnaire, which was sent to all otolaryngology residents registered for Saudi board training in March 2013. We included all residents attaining level 2(postgraduate year 2 [PGY2]) through level 5 (PGY5) training in Riyadh City, Western Region, Eastern Region, and Abha City. We excluded level 1 (PGY1) residents as they rotate through other surgical specialties such as plastic surgery, and as they had not yet begun otolaryngology training, a mandatory part of the first year of the Saudi Otolaryngology Board Training Program. Each questionnaire included a cover letter detailing the purposes of the study and instructions on how to complete the form. To maintain confidentiality, no questions regarding the identity of the resident were included in the questionnaire.

To increase the response rate, the questionnaires were distributed and collected by a senior resident during weekly resident education academic activities. The questionnaires collected from Western Region, Eastern Region, and Abha City were sent to the principal investigator via FedEx. The study was conducted between March and May 2013 after obtaining approval from the research committee at the King Saud University Research Center.

Questionnaire Content

We used the English version of the MBI-Human Services Study to assess the prevalence of burnout. The MBI questionnaire consists of 22 questions meant to assess the 3 components of burnout, EE, PA, and DP. The section examining EE involved 9 resident conditions such as "I feel emotionally drained from my work." The DP section included 5 conditions, such as "I have accomplished many

worthwhile things in this job." Finally, the PA section included 8 conditions such as "I feel like I treat some of my patients as if they were impersonal objects." Participants responded to the 22 conditions using a 7-point scale, ranging from "never" (0) to "every day" (6). The results were then stratified into the 3 levels of relative burnout: mild, moderate, and severe. The cutoff points for each level were selected based on the suggestions of previous literature on the subject, (low EE ≤18, high EE ≥27; low DP ≤ 5, high DP ≥10; and high PA ≥40, low PA ≤33).[5-8,10,11]

Demographic data collected from the residents consisted of sex, age, marital status, residency year level, and number of children. Career satisfaction, balance between personal and professional life satisfaction, and monthly job income satisfaction were measured using a 5-point Likert scale, ranging from "very satisfied" (1) to "very dissatisfied" (5). Work schedules and stressors were reported as an average value based on certain criteria such as on-calls per month and hours of sleep per day. Lastly, spousal support was also measured using a 5-point Likert Scale, ranging from "very supported" (1) to "very unsupported" (5).

Statistical Analysis

Data were summarized as means or proportions. The nonparametric Spearman correlation coefficient was calculated to determine the association between continuous variables, and the analysis of variance test was used to compare means for continuous outcomes and discrete categories. Categorical variables were compared using the chi-square test. All tests were 2 sided, and $p < 0.05$ was considered significant in all tests. The statistical analysis was performed using IBM SPSS software, version 21 (IBM SPSS Inc., NY).

RESULTS

Questionnaires were distributed to 123 resident, and 85 questionnaires were collected, a response rate of 69% (85/123).

The mean age (standard deviation [SD]) of the residents was 29 (2.3) years. Overall, 67% (57/85) of respondents were men, and 66% (55/85) were married. Level 2, level 3, level 4, and level 5 residents represented 19%, 33%, 29%, and 19% of the sample, respectively. The mean of number of on-calls/month (SD) was 7 days (2), number of clinics/week (SD) was 3 (1), number of sleep hours/day (SD) was 6 (1), and number of operations/week (SD) was 2 (1) (Table 1).

The mean EE score was high at 29.5 (SD = 9.6), as was the mean DP score at 10.7 (SD = 6). The mean PA was low at 32.33 (SD = 6). The mean of all subscales was not statistically significant by sex (EE P = 0.5; DP p = 0.09; PA p = 0.4.). Mean EE differed by marital status— 31.2,