Factors associated with burnout among French digestive surgeons in training: results of a national survey on 328 residents and fellows

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Abstract

BACKGROUND: Digestive surgery training is notoriously difficult and medical students choose this path less and less often leading to a veritable demographic crisis for this specialty in France. The aim of this study was to evaluate the working conditions to measure the prevalence of burnout syndrome (BOS) and to identify potential risk factors to implement preventive measures and appropriate support.

METHODS: This was a multicenter, cross-sectional study. An anonymous questionnaire was sent by e-mail to 500 French digestive surgeons in training (residents and fellows).

RESULTS: The response rate was 65.6%. The mean working week was 75.7 hours (±12) and the mean number of night shifts was 5.3 (±1.6)/month.

Sixty-seven percent of respondents had trouble sleeping and 12% reported suicidal thoughts. High-emotional exhaustion, depersonalization, and personal accomplishment low scores were observed respectively in 24.7%, 44.6%, and 47%, corresponding to a high score of BOS in 52%.

CONCLUSIONS: This study showed a high rate of BOS in French digestive surgeons in training and a worrying rate of suicide ideation.

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basic knowledge and practices through long hours of work to be able to face their future professional responsibilities.

This training is notoriously difficult and medical students choose this path less and less often leading to a veritable demographic crisis for this specialty in France.

To date, no study has evaluated the incidence of burnout among digestive surgeons in training. The aim of this study was to evaluate the working conditions of this population, to measure the prevalence of burnout, and to identify potential risk factors to implement preventive measures and appropriate support.

Methods

This was a multicenter, cross-sectional study. Between April and June 2013, an anonymous questionnaire was sent by e-mail to 500 French digestive surgeons in training (residents and fellows).

The first part of the questionnaire included professional sociodemographic variables (working conditions and training) and issues related to health. The second part corresponded to the French version of the Maslach Burnout Inventory.

The study was approved by the local medical ethics committee.

Sociodemographic characteristics and health-related questions

The first part of the questionnaire explored age, sex, marital status, number of children, the practice of extracurricular activities (eg sports, music, cultural activities, …), sleep disorders, alcohol consumption and smoking, and consumption of narcotics and psychotropic drugs (anxiolytics, sedatives, and antidepressants). One question related to the potential presence of suicide ideation (“During the past 12 months, have you had suicidal thoughts?”).

Evaluation of working conditions and training

The first part of the questionnaire also explored professional status (resident or fellow), the number of hours worked per week (including night shifts), the number of monthly night shifts (1 to more than 6), compliance with the compulsory compensatory rest after 24 hours of continuous work (binding in the French law), the area of practice and the perception of salary (sufficient or insufficient).

Four questions related to training (theoretical and practical), to the occurrence of medical errors (“do you have the feeling of committing medical errors?”) and to the level of responsibility (“do you think your level of responsibility is too high”?). Three questions related to the aggressiveness of patients, gratitude from patients, and gratitude from senior surgeons.

Evaluation of burnout

The “Maslach Burnout Inventory” (MBI) in its French form was used in the second part of the questionnaire to evaluate the prevalence of BOS.

This is a validated questionnaire, created in 1996 by Susan Jackson, Michael Leiter, and Christina Maslach. It comes in the form of a self-administered questionnaire consisting of 22 items, evaluating 3 dimensions: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA).

A score is calculated and a value in severity (low, moderate, high) is given for each dimension. The frequency of symptoms was measured by a 6-point scale where zero corresponds to the answer “never” and 6 corresponds to the answer “every day”.

EE is defined as a lack of energy, a feeling of exhaustion of emotional resources, a feeling of frustration, and a loss of enthusiasm. It is measured using 9 questions. EE is considered moderate for a score higher than or equal to 18, and high for a high score greater than 30.

DP refers to the development of impersonal, detached, cynical attitudes toward the people they are caring for. This dimension is informed by 5 questions. The item DP is considered moderate for a score between 6 and 11 and high for a score greater than 12.

PA reduction corresponds to a decrease in self-esteem, a devaluation of their work and skills and the belief of their inability to respond effectively to the expectations of those around them. Eight questions evaluate PA. A decrease in the sense of PA is considered moderate for a score between 34 and 39 and high for a score less than 33.

Severe impairment of one of the subscales is enough to evoke the BOS. We considered surgeons in training to be in BOS when there was severe impairment in at least 1 of 2 main dimensions for EE or DP.

MBI was not analyzed when this was incomplete. These questionnaires were nevertheless taken into account for sociodemographic and professional data.

Statistical analysis

Statistical analysis was performed with Graphpad PRISM 5.0 and SAS/STAT software. It consisted primarily of a descriptive study of the sociodemographic characteristics of the population. Variables were expressed as mean (standard deviation) as median (min-max) or as percentages. The analysis of demographic data used Kruskal-Wallis and Mann-Whitney tests. Correlations for quantitative variables used Spearman’s coefficient calculation. We investigated the factors associated with the severe stage of each of the 3 dimensions of burnout; then the factors associated with severe complete burnout (severe
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