

Burnout, Depression and Job Satisfaction in Obstetrics and Gynecology Residents

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ABSTRACT—Objective: This study among ObGyn residents was designed to determine the relationship of burnout to job satisfaction, depression, and self-care activities. **Methods:** The link to a 64-item, anonymous, self-administered online survey was distributed to obstetrics and gynecology residents at six obstetric and gynecologic residency programs in the greater Hartford Connecticut region. We used the Maslach Burnout Inventory-Human Services Survey to assess job burnout, the Center for Epidemiological Studies-Depression Scale to identify depression, and we incorporated questions regarding job satisfaction and self-care activities. **Results:** Of the surveyed residents, 13% satisfied all three subscale scores for high burnout and >50% have high levels of depersonalization and emotional exhaustion. Residents with high levels of emotional exhaustion were

less satisfied with their careers ($P=0.001$), regretted choosing ObGyn ($P<0.001$), and had higher rates of depression ($P<0.001$). A high level of depersonalization was inversely correlated to job satisfaction and personal accomplishment, and strongly correlated to depression. A high level of personal accomplishment was strongly correlated with job satisfaction and satisfaction with the specialty but was inversely correlated with a sense of depersonalization. There was no correlation between burnout and self-care activities. **Conclusions:** Burnout is strongly correlated with depression and inversely correlated with job satisfaction. Burnout and depression were highly prevalent among ObGyn residents. Decreasing stressors and assuring motivated, committed, and supportive educators may prove to be helpful in the enhancement of resident job satisfaction.

Introduction:

BURNOUT is defined as a psychological syndrome characterized by emotional exhaustion, depersonalization, and a low sense of personal accomplishment that occurs due to prolonged occupational stress. The development of depersonalization is related to experiencing emotional exhaustion and therefore these two categories of burnout often correlate. Burnout occurs more frequently in professions that involve working closely with people such as teaching, social work, and health care.¹ The syndrome has been linked to impaired job performance, poor psychological health, career dissatisfaction and ultimately suboptimal patient care.

The concept of physician job satisfaction and its relationship to burnout has only recently received much attention. Unfortunately, the evidence found so far suggests that dissatisfaction with medical practice, for all fields,

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is increasing.²⁻⁵ Keeton et al have explored physician satisfaction across various specialties and its association with work-life balance and burnout. This study found that although physicians struggle with work life balance, most still remain highly satisfied with their career. It also introduced the idea of burnout and its importance as a predictor of job satisfaction.⁶

Job satisfaction is especially important to the field of obstetrics and gynecology, as this discipline has had fewer applicants recently, especially male.⁶⁻⁹ In the early 90's, Obstetrics and Gynecology (ObGyn) was considered the most popular of the six major specialties in the NRMP, with 86% of the positions filled with US medical school graduates compared with only 68% in 2003.⁷⁻⁸ According to a 2003 study of obstetricians and gynecologists, more than one out of four were dissatisfied with their careers, among the highest dissatisfaction rates of medical specialties.³ Similar to other fields of medicine, ObGyn may also be at high risk for burnout and depression. Although the concept of burnout has been investigated since the 1970s, studies analyzing burnout during residency training are scarce.

Physicians who are exposed to repetitive stressors at work are more likely to be at risk for burnout. It is estimated that among practicing physicians from all specialties, burnout rates range from 25% to 60%.¹⁰⁻¹⁵ In a study conducted in Spain exploring stress symptoms and burnout in ObGyn residents, the prevalence of burnout syndrome during ObGyn residency was high. Single marital statuses along with the workload of an office practice without staff supervision were significant predisposing factors.¹⁶ Therefore, burnout has the potential to lead to both suboptimal patient care and self-care as well as poor educational motivation. Self-care, or lack of self-care, can be measured by how one takes care of their health and/or manages stress (involvement in exercise, family time, or hobbies as opposed to the use or abuse of alcohol, tobacco, and/or drugs).

Depression is another factor that can influence job satisfaction. Depression is under recognized and under diagnosed in the general population and even more so in physicians. One study conducted in Switzerland explores the prevalence of depressive symptoms among residents across several specialties. Low life satisfaction scores along with depression and anxiety tended to be higher in resident physicians than the normal population.¹⁷ These poor life satisfaction scores, as well as worsening psychological and physical wellbeing, tended to be worse in junior, compared to senior, level residents.¹⁷ In a more recent study, approximately 20% of medical trainees (residents and medical students) were classified as depressed, based on the CES-D, and of the surveyed population 6% admitted to suicidal ideation.¹⁸

The professional satisfaction in the field of obstetrics and gynecology has not been explored in depth, and even less so in residency. In the few studies we identified which investigated burn out, career satisfaction and depression among obstetrics and gynecology residents,^{19,20} one suggested that resident job satisfaction is inversely correlated with burnout and depression.¹⁹ The purpose of this current study is to survey a group of US-based obstetrics and gynecology residents to investigate levels of burnout and its relationship to job satisfaction, self-care activities, and depression.

Materials and Methods:

Residents involved in the seven obstetrics and gynecology residency programs within one hour of Hartford, Connecticut: University of Connecticut, Yale, Stamford Hospital, Bridgeport Hospital, St. Francis Hospital and Medical Center, Danbury Hospital, and Baystate Medical Center were invited to take part in an online survey. A total of six of the seven programs gave permission for their residents to complete the survey.

After receiving approval by the University of Connecticut Institutional Review Board, and approval from the program directors of each residency program, the 64-item, anonymous online survey was made available from February 20, 2009 to May 7, 2009. The link to the survey was emailed to the residents by their program coordinators. The survey addressed demographics, self care habits, career satisfaction, burnout, and depression.

The demographics section included questions regarding age, gender, year of training, number of children, marital status, the number of residents in the program, number of hours worked per week, and their work schedule. Self care questions addressed consumption of alcohol, use of tobacco, and exercise.

Job burnout was assessed with the use of the Maslach Burnout Inventory-Human Services Survey (MBI-HSS), a 22-item questionnaire that has been shown to be reliable and valid in the health care field.¹ The MBI-HSS measures work-related stress in the form of burnout and is a useful instrument for monitoring stress levels in residents. MBI-HSS evaluates three areas that are characteristic of burnout: 1) emotional exhaustion 2) depersonalization and 3) personal accomplishment. These three areas are measured on a subscale according to the frequency of their occurrence. Thus, a high degree of burnout is characterized by high scores for emotional exhaustion and depersonalization, along with low scores for personal accomplishment.

The emotional exhaustion (EE) subscale concentrates on feelings that result from being emotionally overextended and exhausted due to work. The depersonalization (DP) subscale assesses the impersonal response that may develop towards patient's overtime. The personal accom-

Table 1.—Burnout Subscale Scoring

	High	Levels of Burnout Moderate	Low
Emotional Exhaustion	≥ 27	19–26	≤ 18
Depersonalization	≥ 10	6–9	≤ 5
Personal Accomplishment	≤ 33	39–34	≥ 40

plishment (PA) subscale measures feelings of competence and success at work. Respondents were asked to assign a frequency to each of the statements assessing job burnout on a scale from never to once a day with the corresponding numerical values zero to six (zero, never; one, a few times a year or less; two, once a month or less; three, a few times a month; four, once a week; five, a few times a week; six, every day). Based on responses, numeric scores were generated for each dimension. These scores were then grouped into low, average and high degrees of PA, EE and DP based on certain cutoff scores (Table 1). A high score for both emotional exhaustion and depersonalization subscales equates to higher degrees of burnout and have been associated with decreased job performance, reduced job commitment, stress-related health problems, and low career satisfaction. Higher scores on the personal accomplishment subscale are consistent with lower levels of burnout.¹

Depression was assessed with the Center for Epidemiological Studies-Depression Scale (CES-D). It is a 20-item instrument that was developed by the National Institute of Mental Health to detect clinical depression in adults. The CES-D addresses the following elements: depressive affect, somatic symptoms, positive affect, and interpersonal relations. The questions cover areas included in the diagnostic criteria for depression and possible scores range from zero to 60, with the higher scores indicating the presence of more symptomatology. A score of 16 or greater is considered depressed. It has been used in urban and rural populations, and in cross-cultural studies of depression.²¹ Studies that use the CES-D indicate that it has very good internal consistency, acceptable test-retest stability, and validity. All postgraduate years (PGY) of obstetric and gynecology residents in the 6 programs were included.

The section on job satisfaction included several questions, based on our review of multiple previous studies related to burnout and ObGyn career satisfaction.^{1,3,6,10–15,19,20} The questions were as follows: 1) “How satisfied are you with your current job? (Zero = not at all, six = very satisfied),” and the following yes/no questions: 2) “Do you regret choosing ObGyn?” 3) “Have you considered changing your career or residency in the past month?” 4) “Do you feel that the residents and faculty

are generally supportive?” 5) “Are you satisfied with the amount of training in procedural skills?” 6) “Are you satisfied with the pace and amount of workload?” 7) “Is the faculty committed to teaching?” 8) “Do you feel that resident education is a high priority?”

Statistical Methods.—The survey was designed to collect information that would allow us to identify participants who met criteria for burnout and to investigate the relationship between levels of burnout to job satisfaction, self care activities, and depression. The survey was hosted by SurveyMonkey.com and the link was emailed to residency coordinators who then emailed all the residents in their programs the cover letter and the link to the survey.

Data was then entered into an Excel database, which was then transferred into SPSS (17.0 for Windows) for statistical analyses. Descriptive analysis was utilized to characterize the entire sample. Statistical analyses were performed to identify correlations between the primary outcome measure (burnout) and other factors: job satisfaction, self care activities, and depression. We computed Pearson correlation with *rho* coefficients and their corresponding *P*-values. We also used χ^2 for discrete variables and independent sample *t* tests for parametric data.

Results

Demographics.—Of the six programs that participated in the survey, five are located in Connecticut and one is located in MA. The survey was emailed to a total of 124 residents. Fifty-seven residents (46%) from five of the programs completed the online survey. Of the 57 surveys, 49 answered all questions (86%). The demographic results are summarized in Table 2. The surveys had good representation across all four PGY years. The majority of the respondents were married, females, without children. Most worked 60 to 80 hour work weeks with an average call of every fifth night. Half of those surveyed exercise at least one to four times a week. The majority of respondents (79%) consume alcohol, and of those that consume alcohol, 27% (12/45) admit to an increase in the use of alcohol over the past year. No resident reported smoking.

Burnout.—The mean score for emotional exhaustion was 27.8 ± 10 , for personal accomplishment it was 37.2 ± 6.3 , and for depersonalization 10.4 ± 5.3 . These scores, and the predominant pattern of the MBI-HSS scores, indicate high emotional exhaustion, high depersonalization

Table 2.—Demographics

Characteristic	
Age (y)	
Mean ± SD	30.1 ± 3
Range	26 to 37
	N (%)
Gender (n = 57)*	
Male	5 (8.8)
Female	52 (91.2)
PGY (n = 57)*	
1	15 (26.3)
2	16 (28.1)
3	14 (24.6)
4	12 (21.1)
Marital Status (n = 57)*	
Single	26 (45.6)
Married	30 (52.6)
Divorced	1 (1.8)
Children (n = 55)*	
Yes	15 (27.3)
No	40 (72.7)
# Residents/Program** (n = 57)*	
12	5 (8.8)
17	13 (22.8)
20	14 (24.6)
26	12 (21.1)
37	13 (22.8)
Hours Worked/Week (n = 57)*	
40–60	2 (3.5)
61–80	37 (64.9)
81–100	17 (29.8)
> 100	1 (1.8)
Nights On Call (n = 53)*	
Every 4th	13 (24.5)
5th	17 (32.1)
6th	8 (15.1)
7th	15 (28.3)

* n = the number of respondents out of 57 for that question

** 5 out of 6 eligible programs had residents respond. The corresponding number of residents per program can be seen on the left while the number from the program responding can be seen in the right hand column.

and a low to moderate sense of personal accomplishment (Fig. 1). There were seven out of 55 residents (13%) who satisfied all three subscale scores for high burnout with high emotional exhaustion, high depersonalization, and a low sense of personal accomplishment. There were more than 50% of the residents, however, who had high levels of depersonalization and emotional exhaustion.

Residents who were highly emotionally exhausted, compared to those who were not, had decreased career

satisfaction ($P < 0.001$), regretted choosing ObGyn ($P < 0.001$), and had higher scores on the CES-D ($P < 0.001$). Emotional exhaustion and depersonalization, according to these data, were highly correlated ($P = 0.004$). Those that scored high for depersonalization were less satisfied with their jobs ($P = 0.053$). In addition, higher depersonalization correlated with increased depression and lower levels of PA ($P = 0.002$). Residents who had higher levels of PA were more likely to be satisfied with their careers ($P = 0.023$) and did not regret choosing ObGyn ($P = 0.009$). We noted an inverse relationship between personal accomplishment and depersonalization.

When we compared our subscale scores for burnout with those of internal medicine residents from a previous study²², we found similar results (Fig. 2). There were no significant relationships between any burnout subscale and age, marital status, PGY level, having a child, call schedule, hours worked/week, or self care categories.

Depression.—In our study, the residents' CES-D scores ranged from zero to 37 out of a possible score of 60, with a mean of 14 ± 8 . Overall, 37.5% of the surveyed residents were categorized as depressed. This percentage is higher than the overall lifetime prevalence of depression in the general population (5% to 20%).²¹

Depression was found to be lower with an increasing level of training ($P = 0.038$) and with a lower number of hours worked per week ($P = 0.057$). Residents who scored higher on CES-D had lower job satisfaction ($P = 0.001$) and were more likely to regret choosing ObGyn ($P = 0.002$). Higher CES-D scores correlated with higher depersonalization and EE ($P = 0.019$ and $P < 0.001$, respectively). Of the 32 residents with EE scores in the high category, 19 were depressed (59%); of the 29 residents with high depersonalization scores, 15 were depressed (52%); and nine of the 22 residents with low PA were depressed (41%). Age, marital status, having children, call schedule, self care categories, and PA did not have any significant correlations to the CES-D scores.

Job Satisfaction.—Thirty eight out of 54 residents (70%) had a job burnout score of four or greater. Residents that were more satisfied with their jobs were less likely to regret choosing ObGyn or to have thought about changing their residency and career in the past year ($P = 0.001$). Residents who felt that faculty at their programs were supportive, interested in teaching, and placed education as a high priority each seemed to have more job satisfaction ($P < 0.001$, $P < 0.003$, and $P < 0.001$; respectively). Job satisfaction also correlated with training satisfaction and with satisfaction in the location of training ($P = 0.001$, and $P = 0.055$; respectively). Marital status, age, self-care activities, call schedule, and hours worked per week did not influence job satisfaction.

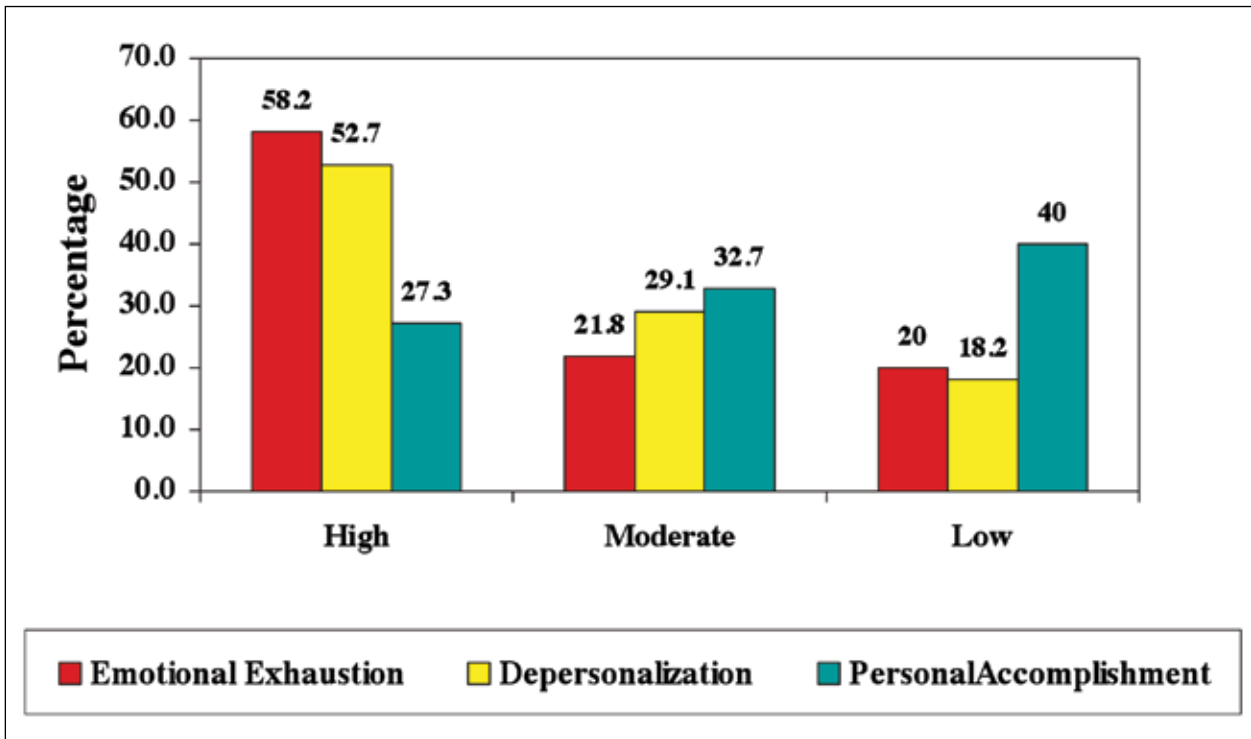


Figure 1.—This figure shows the percent of ObGyn residents in each burnout group based on their MBI-HSS scores.

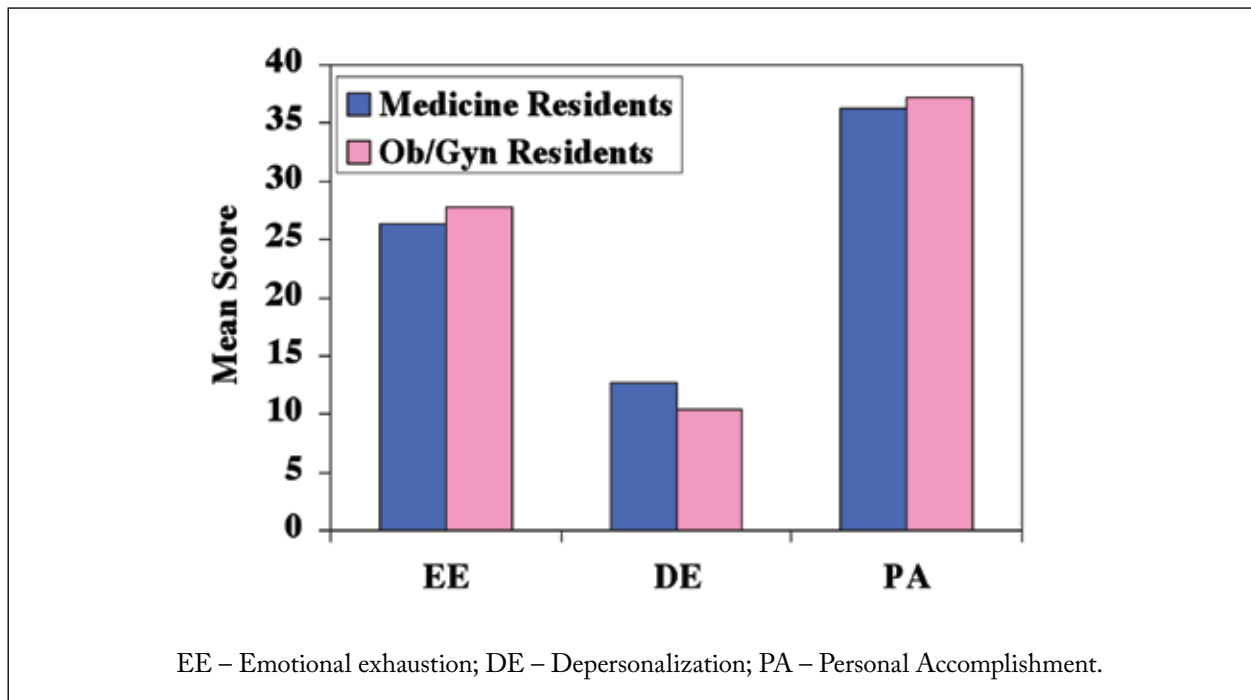


Figure 2.—This graph shows a comparison of ObGyn resident burnout scores in the current study to normative values for internal medicine residents²² based on the MBI-HSS.

Discussion:

Residency can be stressful and overwhelming. In a previous study, approximately one out of five ObGyn residents were classified as having burnout.²⁰ It is crucial to recognize and understand factors that affect burnout in a resident as this, in turn, influences resident satisfaction, performance, and patient care. Once these factors are recognized, change can be instituted by residency programs to create an atmosphere where residents are satisfied and committed practitioners. Fortunately, the idea of burnout and its implications for residents and established physicians has recently gained much attention.

Previous studies have suggested that there may be a correlation between decreasing job satisfaction and a high level of burnout and/or depression. Our study supports this finding in all three dimensions of burnout: EE, depersonalization, and PA. In addition, our study also supports the idea that job satisfaction is inversely correlated with depression. We showed higher than expected rates of burnout, which correlated with depression. Although we showed similar rates of burnout compared to the internal medicine field (Fig. 2), it is important to point out the high number of females in our study. Because the prevalence of depression is higher in women,^{23,24} it is hard to know what effect the current trend of more women in ObGyn is having. We do not know how these results would compare if an equal proportion of men and women were queried, as was seen in the internal medicine study.²² Since higher rates of job dissatisfaction and burnout could lead to lower overall morale, this may be another reason to continue studying the effects of fewer men in ObGyn.²⁵⁻²⁷

Depersonalization measures a lack of feeling towards the recipient of one's care. In Shanafelt et al's study, for instance, depersonalization was significantly associated with suboptimal patient care.²² One can then speculate that feelings of depersonalization can negatively affect the patient-physician relationship which can further decrease job satisfaction. These findings suggest a self-perpetuating downward spiral. In other words, a resident with a tendency toward depression may begin feeling burnout and depersonalization, leading to patient dissatisfaction, which could cause further job dissatisfaction, and hence worsening depression.

Because those with increased years of training displayed less depression, it is possible that with each PGY year, residents become more comfortable with their role, are better able to cope with challenges, and have more autonomy. This is consistent with the results of a prior study which suggested that junior residents, compared to senior residents, have lower physical and psychological well-being along with lower life satisfaction.¹⁷ Findings like this, along with the findings related to work

hours, emotional exhaustion, and depersonalization are interesting and important. It would be helpful to design programs which implement strategies to improve these factors and then test to see if burnout and depression can be improved. It would be important to analyze the effect of autonomy, an early level of comfort, satisfying work hours, reasonable length of shifts,²⁸ and relaxation or stress reducing techniques. Also, faculty who are supportive, interested in teaching, and place a high priority on teaching is important.

Surprisingly, there were no strong correlations between self-care activities and the three subscales of burnout. One would predict that those with high burnout scores would be less likely to exercise and have increased their alcohol consumption. However, we did not find such correlations in our study. Previous studies have speculated on the various factors that can influence residency burnout and have categorized these into situational, personal, and professional.^{29,30} Less than optimal learning conditions, sleep deprivation, increased workload, and difficult patients all fall into the situational category. Personal stressors include financial stressors, inadequate coping mechanism, and family obligations. Lastly, stressors in the professional realm include information overload, career planning, patient care responsibilities, along with supervision of medical students and junior residents³⁰. These are all additional factors which could be studied.

This study has limitations that are common to cross-sectional survey analyses. The retrospective nature of the survey relies on resident recall and the reliability of the information offered, hence there is a chance that those most unhappy were the most likely to respond. Although less than half of those invited did respond (46%), it is within the range of other physician surveys (46% to 56%).^{6,13,14} The low percent of male respondents makes it difficult to give meaningful comparisons between women and men and is consistent with the national trend of fewer male ObGyn residents. Since we have a small sample size and are restricted by location, it is difficult to generalize these findings to all obstetrics and gynecology programs. While the timing (February 20th to May 7th) could have led to a seasonal effect, it was felt that delaying the survey until the end of February was more likely to avoid the mid-winter long, cold, dark days. Although our survey was restricted to residency programs in close proximity to Hartford, Connecticut, we did include residents in both community as well as university based programs. In addition, burnout in residency may not reflect attitudes once an independent practice is established, hence, this data may not necessarily represent all ObGyn practitioners. It should also be noted that self reported duty hours are notorious for being overestimated, hence analyses with these data may be limited.

Conclusion

In conclusion, job burnout is strongly correlated with depression and inversely correlated with job satisfaction. In our study, burnout and depression were more prevalent than anticipated. Due to the strong correlations between burnout, depression, and job satisfaction, future studies should investigate management strategies and prevention of burnout in residents. These findings help us realize the effect that training may have on our trainees. Striving for a balance of male and female residents may help lower the baseline rates of depression. Supportive, committed, and motivated teachers make a large difference. As we continue to struggle with the implementation of revised and refined duty hours, the effect on job satisfaction, burnout, and depression should be considered and monitored.

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