

Grit and resilience: factors affecting burnout amongst US neurosurgery residents

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Introduction

Burnout is widely discussed within medicine, defined as physical or emotional exhaustion due to prolonged stress or frustration. Factors such as emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA) have been used as a measure of burnout. Studies have begun investigating grit (continued fortitude in the face of hardship), and resilience (the ability to recover from a setback), and their relationship to burnout.

Methods

We surveyed all US neurosurgical residents to determine prevalence of burnout amongst residents using discretional analysis. A multivariate analysis determined which variables were associated with higher levels of EE, DP, PA, burnout, grit, and resilience.

Results

Of 1385 US neurosurgery residents, 423 (30.5%) responded. The prevalence of burnout was 33.0% (95% Confidence Interval 28.6%-37.7%). Increased grit was associated with USG ($p=.006$), married residents ($p=.025$), and less social/personal stressors ($p=.003$). Increased resilience was associated with male gender ($p=.006$), IMG ($p=.017$), and less social/personal stressors ($p=.005$). Increased burnout was associated with larger amounts of social/personal stressors ($p=.002$), clinical rotations ($p=.001$), and lack of children ($p=.016$). Increased PA was associated with married residents ($p=.040$). Increased DP was associated with PGY-2 and PGY-4 years (not-continuous variables) ($p<.001$), more social/personal stressors ($p=.045$), clinical rotations ($p<.001$), and Asian or Pacific Islander race ($p=.017$). Increased EE was associated with more social/personal stressors ($p<.001$), clinical rotations ($p=.033$), and lack of children ($p=.007$). There was a positive correlation between EE and DP, as well as between PA, grit, and resilience. There was a negative correlation between EE and DP with PA, grit, and resilience.

Conclusions

Neurosurgery residents have significantly lower prevalence of burnout than other resident/fellows and practicing physicians. Increased social/personal stressors are associated with increased levels of burnout and decreased grit and resilience. Levels of grit and resilience are higher when social and personal stressors are decreased, indicating that these characteristics may fluctuate over time.

Learning Objectives

By the conclusion of this session, participants should be able to:

- 1) Understand the concept behind burnout within the field of medicine, and how burnout is defined.
- 2) Understand the prevalence of burnout amongst US neurosurgery residents compared to published rates for residents/fellows and practicing physicians from other specialties.
- 3) Understand whether there is a correlation between burnout, grit, and resilience, while using EE, DP, PA as benchmarks for burnout.

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