Residency as a Social Network: Burnout, Loneliness, and Social Network

Reference:

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Tags
- Clinical domain: Professional
- Educational domain: (Post)graduate

Background

We live in an era where speakers give TED talks claiming that "we lose a medical school full of physicians every year to suicide". Multiple studies document the hazards of medical training: needlesticks, intimidation, harassment, marital conflict, depression, MVCs post-nights, violence...And burnout. In study after study (usually as a self-report in a survey), residents are found to have a high degree of burnout as a population. The numbers range from ~20% to as high as ~80% scoring "positive" on standard instruments. Physician burnout itself is associated with other bad outcomes, including: depression, suicide, lesser altruism, impaired empathy, unprofessional behaviour, adverse events, and lower patient satisfaction.

Why do physicians have such scandalous stats? Is it the long hours, the social isolation, the sleeplessness, the hierarchy? How can we intervene to promote resilience and wellness in this critical next generation to enter our profession?

Purpose

The authors of this study (which includes a Pediatrics resident and Cincinnati meded guru Eric J Warm), set out to examine the relationship between "burnout" and "loneliness" or "social network centrality".
**Type of paper**

Research: Standardized testing using 3 psychological instruments

**Key Points on the Methods**

The authors hypothesized that greater loneliness would be found with greater burnout, and that the strength of social networks would be protective. Shapiro et al built upon previous work using a validated instrument to measure physician burnout (the Maslach Burnout Inventory-MBI), as well as threshold scores used in previous research on physicians. The MBI has 3 scales to measure the constructs of emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). They correlated burnout scores with another validated 3-item "loneliness scale", as well as scores on a commonly-used social network analysis instrument (UCINET SNA software). On the later, greater number of connections and location within their network (or "centrality") indicate measures of social health.

Their target audience was n=124 internal medicine and pediatrics residents in Cincinnati.

Threats to these methods include: small n, multiple analyses, single site, social desirability bias, and recall bias.

**Key Outcomes**

Response rate was 77% (95/124). 45% of residents in the study ruled in for burnout on the EE scores, 49% on the DP scores, 33% met both criteria. Burnout was associated with self-reported loneliness scores, with ORs of around 1.5, in a dose-dependent fashion. Males had greater depersonalization scores. Otherwise, no differences were noted with gender or marital status.

PA scores did not correlate with loneliness. On the other hand, higher PA scores were associated with greater social network measures, such as centrality.

With an n of only 95, some of the subgroup analysis gets to some pretty small subpopulations.
Key Conclusions

The authors conclude that burnout in residency correlates with loneliness, and a greater sense of personal accomplishment correlates with a stronger social network.

Spare Keys – other take home points for clinician educators

This is an interesting study, part of a new generation of papers using social network analysis in medical education. A few points of emphasis for CEs:

1. Physician wellness is a major issue in our profession, and we as meded leaders need to seriously examine our enterprise to make it better in the 21st century
2. Social network analysis is emerging as a new and powerful tool to ask questions in medical education
3. Residents can publish cool studies too

Shout out

Shout out to our buddy Eric J Warm from Cincinnati: a clever meded scholar who rocked his ICRE2015 plenary on competency-based training.