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Stress and wellness levels in Emergency Medicine residents and attendings compared to residents and attendings from other specialty training programs

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Introduction

Physicians are at high risk for burnout when compared to the general population. Burnout is a constellation of symptoms characterized by emotional exhaustion, depersonalization and decreased/low sense of personal accomplishment¹. Burnout affects health, relationships, motivation, and patient outcomes. Elements of emergency medicine (EM) may make EM residents/attendings more vulnerable to stress. Examining physician resilience and finding ways to implement change is essential to improving the culture of residency training. The objective of this study was to compare well-being and stress between EM residents and other residents and to compare EM residents and attendings.

Methods

Residents across 19 training programs at a single academic medical center were recruited to voluntarily complete an anonymous survey to assess their overall well-being and stress using the Physician Well-Being Index (measures negative indicators of wellness- Mayo), Wellness Scale (measures positive indicators- Wayne State University) and Perceived Stress Scales. Responses from EM were compared against residents/attendings across other residency programs (Mann-Whitney). This survey was IRB exempt.

Results

- 303 residents across the institution responded, 37 EM residents
 - Of EM residents, 41% reported low stress, 51% reported moderate stress, 8% reported high stress.
 - EM residents had similar Perceived Stress, Wellness and Well-being compared to other residents (table 2).
 - EM residents reported significantly greater perceived organizational support (POS) and psychological safety (PS) compared to non-EM residents (table 3).
- 189 attendings across the institution responded to the survey; 31 (53% response rate) Emergency Medicine attendings.
 - Perceived Stress, Wellness and Well-being scales were similar for EM compared to other specialty attendings ($p > .05$).
 - There was no difference in POS or PS for EM attendings vs non-EM attendings ($p > .05$).

Table 1. Response Rates

Department	N (% Response Rate)	
	FY18 Residents	FY18 Attendings
Psychiatry	14 (38% RR)	--
Otolaryngology H&N Surgery	9 (90% RR)	--
Neurosurgery	13 (87% RR)	11 (85% RR)
Physical Medicine & Rehabilitation	17 (94% RR)	--
Radiology	29 (85% RR)	--
Ophthalmology	9 (100% RR)	--
Plastic Surgery	10 (100% RR)	5 (71% RR)
Dermatology	6 (100% RR)	9 (100% RR)
Orthopaedic Surgery	21 (88% RR)	18 (72% RR)
Neurology	12 (67% RR)	8 (21% RR)
Oral & Maxillofacial Surgery	10 (71% RR)	7 (117% RR)*
Emergency Medicine	37 (86% RR)	31 (53% RR)
Pediatrics	23 (49% RR)	32 (40% RR)
General Surgery	28 (65% RR)	26 (55% RR)
Obstetrics & Gynecology	20 (83% RR)	18 (78% RR)
Urology	6 (60% RR)	5 (71% RR)
Radiation Oncology	8 (100% RR)	--
Pathology	14 (88% RR)	19 (68% RR)
Anesthesiology	17 (39% RR)	--
Institutional	303 (71% RR)	189 (56% RR)

Note: Total number of members on each category was provided by the department and/or GME Office to calculate response rates. *Total number of respondents was greater than the number of members in the role category.

Table 2. EM vs Non-EM Perceived Stress, Wellness and Well-Being scales

	Perceived Stress Scale	Wellness Scale (positive)	Physician Well-Being Index (negative)
EM Residents	14.91	3.69	2.35
Non-EM Residents	15.19	3.64	2.35
EM Attendings	13.84	3.88	2.0
Non-EM Attendings	15.49	3.92	2.0

Table 3. Mean Perceived Organizational Support and Psychological Safety among residents

	Perceived Organizational Support (POS)	Psychological Safety (PS)
EM Residents	4.31	4.03
Non-EM Residents	3.71	3.74
P value	p< .001	p=.004

Discussion

- Based on the results of the survey, EM residents and attendings have moderate to high stress and low well-being.
- EM residents showed overall better wellness compared to residents of other specialties, however, EM attending physicians showed slightly lower scores compared to the institutional average and attending score averages of other specialties.

- The stressors affecting EM resident stress levels and well-being are likely systems-related considering EM residents' have higher perceived organizational support and perceived psychological safety in their training program compared to non-EM residents (table 3).
 - Possibly due to increased organizational and program support of residents during EM residency.
 - Program and specialty specific restrictions regarding work hour limitations (60 hour work week in EM vs 80 hour work week used by other specialties as required by ACGME).
 - Possible underreporting by EM residents regarding stressors.
- Previous studies have shown that there are substantial differences in burnout by specialty with "first encounter" physicians (emergency medicine, family medicine, internal medicine, etc.) demonstrating higher levels of burnout.²
- These results suggest that burnout in EM may be similar to that of burnout seen in other specialties within VCUHS.
- Additional research may be beneficial to identify what specific factors play a role in overall increased resident perceived support and to guide the development of effective wellness efforts.
- As an institution, stress and well-being need to be addressed on multiple levels for all providers. These instruments are useful for benchmark comparisons and to track internal improvement efforts.



References/Acknowledgements

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