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Correlation Between Emergency Medicine Resident Self-Assessed and Faculty-Assessed Grit-S Scores

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both an EM and ICU setting. Limitations include a lower-than-desired response rate, missing contact information, and possible overrepresentation of graduates in academic practice.

## 10 Clinician Understanding and Perceptions of Starting an Emergency Medicine Residency Program

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**Background:** Research on new emergency medicine (EM) residency programs has focused on procedures and metrics with limited information on clinicians involved. There is a lack of data on community Emergency Department (ED) clinicians' attitudes, perceptions, and knowledge relating to developing an EM residency program.

**Objectives:** Primary objectives were to explore the perceptions, attitudes, and knowledge of clinicians working in a community ED at two institutions developing an EM residency program. Secondary objectives included identifying potential related barriers.

**Methods:** This was an IRB-approved anonymous and voluntary electronic survey-based study of clinicians (physicians, midlevel providers, and nurses) working in two community EDs. Surveys tailored to each group of clinicians consisting of multiple choice and open-ended questions were emailed to all clinicians working in either ED, with exclusion criteria being any temporary or non-ED personnel. Descriptive statistics were used along with manual qualitative content analysis for emerging themes.

**Results:** Twenty-three clinicians (10 physicians, 4 nurses, and 9 midlevel providers) responded representing less than 20% of the population. Seventeen felt metrics would worsen with a residency, and 9 felt teamwork would improve. Sixty-one percent thought patient safety would not change and 30% felt it would worsen.

Most ED physicians are looking forward to working with EM residents and feel that it will greatly increase their career satisfaction. All nurses and most midlevel providers perceive an EM residency will not change their career satisfaction.

Physician knowledge gaps were primarily related to ACGME requirements such as duty hours. Non-physicians had many knowledge gaps ranging from awareness of residents being physicians to uncertainty of what residents were allowed to do and length of training.

One theme identified in midlevel response was a concern of job security and experience with one noting "less patients, less time with attendings, and less procedures." A theme identified from nurse responses was that their concerns regarding the residents would not be addressed.

**Conclusions:** Despite significant non-response bias, the information obtained is helpful in identifying knowledge gaps and potential barriers prior to starting an EM residency at two community EDs.

## 11 Correlation Between Emergency Medicine Resident Self-Assessed and Faculty-Assessed Grit-S Scores

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**Background:** Accurately assessing trainees' fortitude and resolve can be a challenge for educators. The investigation into novel assessment tools is ongoing. The predictive power of traditional evaluations is debatable; new assessment tools are being investigated. Grit, defined as "perseverance and passion for long-term goals," has emerged as a means to quantify an aspect of personality. Grit-S is a validated 8-question test scored on a 1-5 scale (5 is the highest score); the average of the responses represents a person's Grit. The Grit-S Score has been demonstrated to predict educational attainment when studied in other populations and has been shown to be accurate with an informant report version. The ability for faculty to accurately assess Grit in trainees could prove helpful in identifying learner needs and avenues for further career development.

**Objectives:** Our objective was to determine the correlation between an emergency medicine (EM) resident self-assessed and faculty-assessed Grit-S Score. We hypothesized that there would be a high correlation between the scores.

**Methods:** This was a national prospective, multicenter trial involving ten EM residencies. Study subjects were PGY 1-4 EM residents and resident-selected faculty at each site. The Grit-S survey was administered to participating EM residents; an informant version was completed by their self-selected EM faculty. A correlation coefficient was computed to assess the relationship between residents' self-assessed and the residents' faculty-assessed Grit-S Score.

**Results:** A total of 303 residents participated in the study; 103 residents were excluded who did not have a faculty assessed Grit-S Score. The mean resident self-reported Grit-S Score was 3.63 (Fig. 1) and the mean resident faculty-assessed Grit-S Score was 4.23. There was no correlation between the two Grit-S Scores ( $r = 0.13$ ,  $n = 333$ ,  $p = 0.064$ ) (Fig. 2).

**Conclusions:** There was no correlation between the resident and faculty-assessed Grit-S Scores; however, faculty overestimated the Grit-S Scores of residents. Our findings corroborate the challenges faculty face with accurately assessing aspects of residents that they are supervising. While faculty may not be able to accurately assess the Grit-S Score of residents, Grit may still be a useful predictive personality trait that could help shape future training.

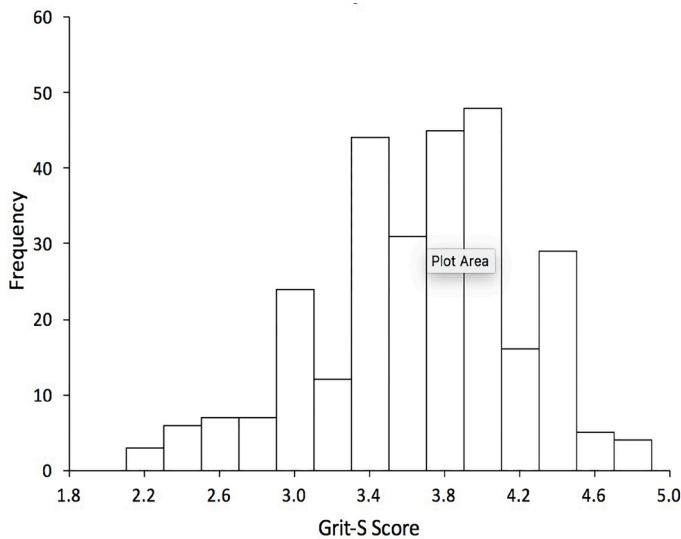


Figure 1. Resident self-reported Grit-S Score.

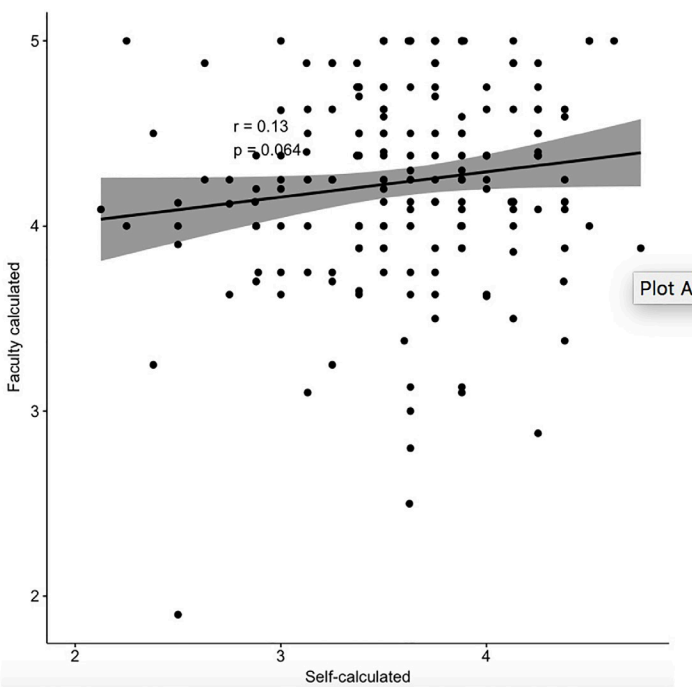


Figure 2. Correlation of residents' self-reported Grit-S Score and the residents' faculty-assessed Grit-S Score.

## 12 Do EM resident self-assessed milestone levels and that of the Clinical Competency Committee Consensus Align Over Time?

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**Background:** Self-assessment is an important skill for physicians to determine ongoing learning needs over the course of a career. Graduate medical education training programs should incorporate self-reflection into the biannual evaluation process in order to assist residents with development of this professional skillset. A mechanism for feedback on this process is needed.

**Objectives:** To assess the agreement between the Clinical Competency Committee (CCC) assignment of milestone levels for an individual resident (gold standard) and the resident's self-assessment of the same milestones over eight evaluation periods during four years of training.

**Methods:** We analyzed milestone assessment for a single class of 12 residents across the four years of their emergency medicine training. Milestone levels as assigned by the CCC and resident were assessed overall and at eight evaluation time points (PGY-1 midyear (MY), PGY-1 end-of year (EOY), PGY-2 MY, PGY-2 EOY, PGY-3 MY, PGY-3 EOY, PGY-4 MY, and PGY-4 EOY) using weighted kappa statistics (with 95% CIs) and agreement.

**Results:** 79% of residents completed self-assessments over 4 years allowing for comparison to CCC milestone evaluations. Overall, agreement ranged from 21% to 46% with 18 of 23 milestones having moderate agreement between the CCC and the resident and 5 milestones having fair agreement [Table 1]. While inter-rater reliability was low at each of the eight time points, agreement between the

Table 1. Overall inter-rater agreement of milestone data by milestone.

Milestone	Kappa	95% CI	Agreement
Emergency Stabilization	0.452	(0.359 – 0.538)	21%
Observation and Reassessment	0.457	(0.368 – 0.543)	25%
Airway Management	0.433	(0.324 – 0.532)	25%
Systems-based Management	0.452	(0.350 – 0.547)	28%
Other Diagnostic Therapeutic Procedures: Vascular Access	0.338	(0.203 – 0.468)	29%
Medical Knowledge	0.425	(0.278 – 0.544)	29%
Patient Safety	0.438	(0.340 – 0.537)	29%
Anesthesia and Acute Pain Management	0.508	(0.419 – 0.602)	30%
Technology	0.383	(0.264 – 0.483)	30%
Accountability	0.384	(0.288 – 0.487)	32%
Multi-tasking (Task-switching)	0.462	(0.377 – 0.556)	33%
Patient Centered Communication	0.392	(0.284 – 0.510)	33%
Pharmacotherapy	0.512	(0.427 – 0.598)	34%
Disposition	0.467	(0.366 – 0.575)	34%
Other Diagnostic and Therapeutic Procedures: Goal-directed Focused Ultrasound (Diagnostic/Procedural)	0.406	(0.263 – 0.554)	34%
Professional values	0.38	(0.274 – 0.509)	36%
General Approach to Procedures	0.472	(0.335 – 0.590)	37%
Other Diagnostic and Therapeutic Procedures: Wound Management	0.558	(0.458 – 0.644)	38%
Performance of Focused History and Physical Exam	0.432	(0.326 – 0.559)	39%
Diagnostic Studies	0.521	(0.426 – 0.626)	41%
Practice-based Performance Improvement	0.549	(0.443 – 0.660)	42%
Team Management	0.525	(0.428 – 0.634)	43%
Diagnosis	0.589	(0.481 – 0.682)	46%