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The Correlation of Emergency Medicine Residents' Grit And Achievement

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involving 10 EM residencies over a one-year period. Study subjects were postgraduate year 1-4 EM residents at each site. A survey containing the Grit-S, the Maslach Burnout Inventory, a depression screen, and a career satisfaction scale was administered to participating residents. Correlation coefficients were computed to assess the relationship between residents' grit and non-cognitive characteristics.

Results: A total of 434 residents participated in the study; 49 residents were excluded who did not complete a Grit-S. The mean Grit-S score was 3.62. There was a negative correlation between grit and burnout ($r = -0.22, n = 355, p < 0.001$) and grit and a positive depression screen ($r = -0.16, n = 382, p = 0.001$). There was a positive correlation between grit and career satisfaction ($r = 0.15, n = 381, p = 0.003$).

Conclusion: Our findings suggest that those EM residents with higher Grit-S score are less likely to experience burnout or to screen positive for depression and are more likely to have career satisfaction. These findings may be useful in early identification of residents who may be at risk for burnout, depression, and dissatisfaction with their career choice.

Table. Correlation of grit and non-cognitive characteristics.

	Correlation coefficient	p-value
Grit and burnout	$r = -0.22$	$p < 0.001$
Grit and positive depression screen	$r = -0.16$	$p = 0.001$
Grit and career satisfaction	$r = 0.15$	$p = 0.003$

4 The Correlation of Emergency Medicine Residents' Grit And Achievement

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Background: Early recognition of emergency medicine (EM) residents who may struggle with educational attainment and career success can be difficult. While performance on the in-service examination (ITE) is predictive of success on the EM boards, results are not available until late in the academic year. The use of assessments of non-cognitive traits has emerged as a promising domain for predicting achievement. The non-cognitive trait "grit," defined as "perseverance

and passion for long-term goals," is a means to quantify an aspect of personality. Grit-S is a validated eight-question scale scored 1-5 (5 is the highest score); the average of the responses represents a person's grit. Grit has been shown to predict educational attainment in spelling bees, high school graduation rates, undergraduate grade point average, and success in gross anatomy.

Objectives: Our objective was to determine the correlation between EM resident Grit-S scores and achievement as measured by Medical College Admission Test (MCAT) percentiles, ITE scores, and need for remediation.

Methods: This was a prospective, multicenter trial involving 10 EM residencies over a one-year period. Study subjects were postgraduate year (PGY)1-4 EM residents. The Grit-S was administered as part of a larger survey. MCAT percentile, remediation rates, ITE scores and the ITE score's prediction of percent chance of passing EM boards were collected. We computed correlation coefficients to assess the relationship between residents' grit and achievement.

Results: A total of 434 residents participated in the study; 49 residents were excluded who did not complete a Grit-S. The mean Grit-S score was 3.62. Grit was positively correlated with the likelihood of passing EM boards as measured on the ITE ($r = 0.134, n = 382, p = 0.025$). There was no correlation between grit and the need for remediation ($r = -0.04, n = 378, p = 0.46$) or between grit and MCAT percentiles ($r = -0.08, n = 262, p = 0.22$).

Conclusion: The positive correlation between grit and prediction of passing EM Boards demonstrates grit's potential for the early prediction of success and achievement in EM residents.

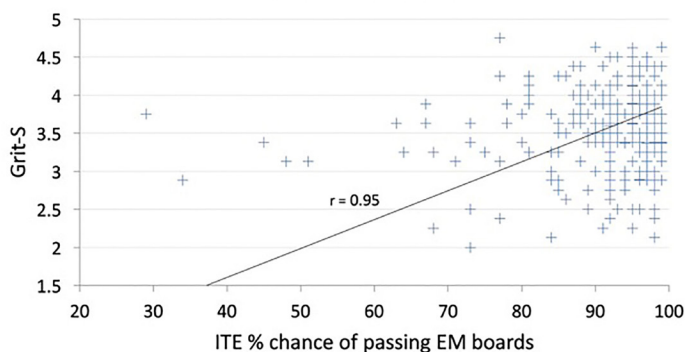


Figure. Correlation of grit score and percent change of passing emergency medicine boards.