

The Role of Grit in Predicting Success in Medical School

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INTRODUCTION

- Holistic admissions processes evaluate non-cognitive traits, such as motivation and attitude, rather than intellect alone
- ‘Grit’ is “the tendency to sustain perseverance and passion for challenging long-term goals”¹
- Isolated studies in pharmacy and nursing students show positive correlation between Grit and GPA, course engagement, student skills, and emotion²
- Grit is predictive of surgery resident psychological health³
- The correlation between Grit and medical student performance has not been evaluated
- Grit surveys exist, but are easily gamed by applicants and thus unsuitable for use in admissions

METHODS

- Retrospective review of four graduated WMed classes (2018-2021)
- The experiences section of each AMCAS admission application was de-identified and examined for six pre-determined objective measures of Grit (see Results)
- Each application was independently reviewed by two reviewers, with a third reviewer serving as a tiebreaker as needed
- 2564 experiences from 270 student applications across four classes were reviewed
- Students were assigned to either have Grit (Yes) or not (No)
- Multiple academic and non-academic performance metrics were analyzed for correlation with Grit

RESULTS

An objective measure of Grit, suitable for use during Admissions file review, was developed. Examples of sustained involvement in activities include college-level sports, performance arts, military service, work, volunteering, and research.

	GPA	MCAT (percentile)	Admissions Attributes Score
Grit YES n=72	3.59	88.25	0.22
Grit NO n=198	3.60	86.40	0.22

Table 1: All applicants reviewed, regardless of Grit assignment, were determined to be similar in pre-admission metrics and attributes.

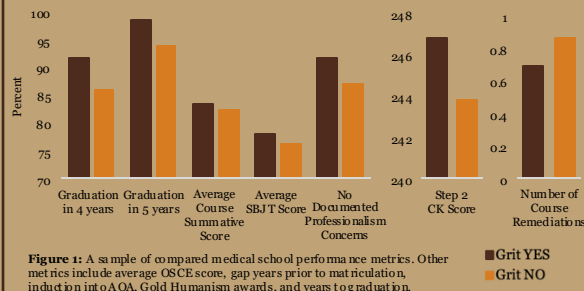


Figure 1: A sample of compared medical school performance metrics. Other metrics include average OSCE score, gap years prior to matriculation, induction into AOA, Gold Humanism awards, and years to graduation.

CONCLUSION

- Grittiness may predict academic and non-academic success in medical students with substantive implications for use in the holistic admissions process
- Universal standards to screen for Grit in medical education do not currently exist
- Further statistical analysis is needed to determine whether Grit predicts academic and non-academic performance
- Further correlation of Grit with other non-academic metrics, including student well-being, should be evaluated
- Additional class data should be included to further validate the observed differences

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REFERENCES

1. Robertson-Kraft, C., & Duckworth, A. L. (2014). True grit: Trait-level perseverance and passion for long-term goals predicts effectiveness and retention among novice teachers. *Teachers College Record: The Voice of Scholarship in Education*, 116(3), 1–27. <https://doi.org/10.1177/01614681141600306>
2. Stoffel, J. M., & Cain, J. (2018). Review of grit and Resilience Literature within Health Professions Education. *American Journal of Pharmaceutical Education*, 82(2), 6150. <https://doi.org/10.5688/ajpe6150>
3. Salles, A., Cohen, G. L., & Mueller, C. M. (2014). The relationship between grit and resident well-being. *The American Journal of Surgery*, 207(2), 251–254. <https://doi.org/10.1016/j.amjsurg.2013.09.006>