

# Correlation of Admission Variables and a Standardized PA Admission Exam

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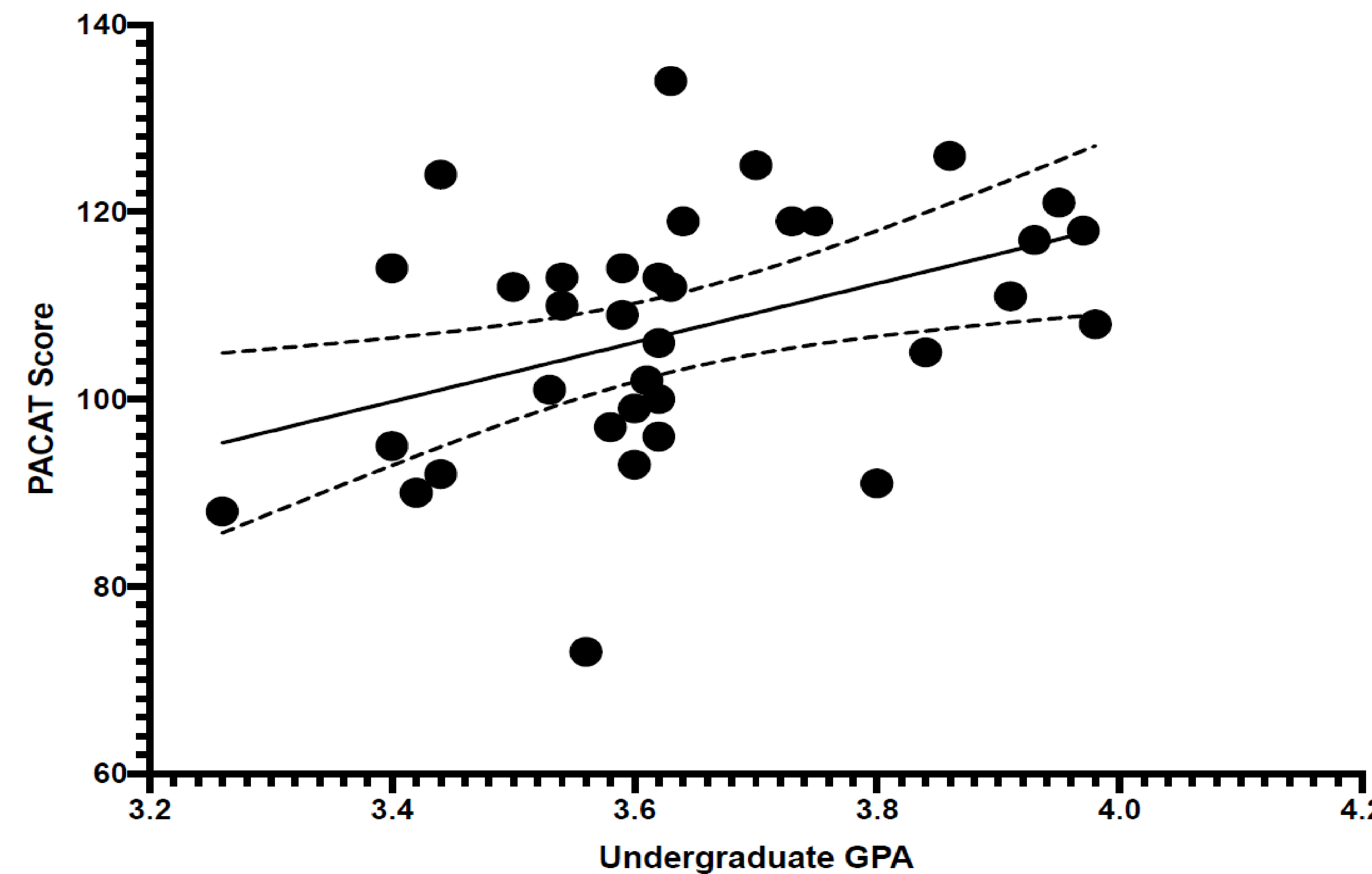
## Background

- Candidate selection processes for physician assistant (PA) education admissions is heterogeneous and challenged by a lack of standards or guidance.<sup>1,2</sup>
- In the academic and professional literature, there is a dearth of controlled studies, multi-center analyses, or studies of large populations; further, the published studies are generally small and offer inconsistent results.<sup>1</sup>
- A standardized exam for PA applicants may guide admissions decisions and predict student success in achieving the necessary competencies during the program and upon completion.
- This study sought to determine the correlation between demographics, undergraduate academic performance, and the PA College Admission Test (PA-CAT), a standardized exam developed by Exam Master® Corporation for use in PA admissions.

## Methods

- A cross-sectional study design and analysis of multiple administrative databases was performed after IRB approval.
- The dependent variable of interest was overall performance on the PA-CAT (Version 2.0), a standardized, 180-question exam that covers 12 subject areas commonly required by PA programs as preadmission coursework.
- Newly-matriculated PA students for the 2019 Spring Term academic semester completed the PA-CAT after their first week of pre-clinical coursework.
- Independent variables of interest included undergraduate GPA, scores on the Graduate Record Examinations (GRE) Verbal Reasoning and Quantitative Reasoning measures, pre-admission patient care hours, age, and gender.
- Descriptive statistics (e.g., means, standard deviations, frequencies) and linear regression were used to examine associations between dependent and independent variables.

Relationship Between PA-CAT Score and Undergraduate GPA



Exam Content Weighting	
Anatomy	15%
Physiology	15%
General Biology	10%
Genetics	10%
General Chemistry	10%
Microbiology	10%
Biochemistry	5%
Medical Terminology	5%
Organic Chemistry	5%
Psychology	5%
Sociology	5%
Statistics	5%

Exam Cognitive Levels	
Knowledge	22%
Comprehension	19%
Application	41%
Analysis	16%
Synthesis	1%
Evaluation	1%

## Results

- Complete data was available from 36 PA trainees (77% female, 23% male, 0% nonbinary) with a mean age of 24.5 years (SD 4.2).
- The mean PA-CAT score was 107.1 (SD 13.2) out of 180.
- Higher undergraduate GPA and higher scores on the Quantitative Reasoning and Verbal Reasoning components of the GRE were associated with higher PA-CAT scores ( $p < 0.05$ ).
- For every one unit (whole number) increase in GPA, the PA-CAT score increased by 31.5 points ( $p < 0.05$ ).
- Mean PA-CAT scores did not differ by age, gender, or by the number of patient care hours completed prior to PA program matriculation ( $p > 0.05$ ).

## Conclusions

- The standardized admission exam may have some promise as an admissions variable, at least in its correlation with undergraduate GPA and the commonly-required GRE.<sup>3</sup>
- Further study is necessary to:
  - Generalize these results to a larger population,
  - Analyze social identities and backgrounds that may impact exam performance, and
  - Identify potential relationships between the exam and PA educational outcomes.

## References

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2. Honda T, Patel-Junankar D, Baginski R, Scott R. Admissions variables: predictors of physician assistant student success. *J Physician Assist Educ*. 2018;29(3):167-172. doi:10.1097/JPA.0000000000000212
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