RESEARCH BRIEF

The Predictive Strength of the Physician Assistant College Admissions Test (PA-CAT) Scores to the Class of 2025 Program Performance at Miami-Dade College Physician Assistant Program

University: Class of 2025 Report
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Medical Campus
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Mission:
The mission of the Miami Dade Physician Assistant Program is to educate and train students from a culturally diverse background to become competent primary care physician assistants who will serve the medically underserved patients in urban and rural communities in Florida. The program also promotes academic excellence, high professional standards, and the development of lifelong learners.

Director: Avril Nimblett-Clarke, DMSc, MS, PA-C

Dr. Nimblett-Clarke serves as the Program Director and Chairperson of the Physician Assistant program. She holds a Bachelor of Science degree in Physician Assistant Studies from Howard University and a Master and Doctoral degree in Educational Leadership from A.T. Still University. She has more than 20 years of clinical experience as a Certified Physician Assistant. Her primary clinical practice areas are general pediatrics, adolescent medicine, and sickle cell research. She has also held the roles of Assistant Professor and Academic Coordinator. On a national level, she has served as a facilitator for the Physician Assistant Education Association (PAEA) New Faculty Skill Workshop mentoring new faculty. She is a member of the PAEA leadership committee, where she continues to contribute to a platform of building excellence in leadership among Physician Assistant faculty. Dr. Nimblett-Clarke is passionate about student success and is committed to growing a community of servant leaders." Dr. Nimblett-Clarke was awarded the 2021 Capstone Award of Excellence from A.T. Still University for her capstone project, "Classroom Assessment Techniques in Physician Assistant Education: Improving Learning Gains."

Scott Massey, PhD, PA-C

With over three decades of experience in PA education, Dr. Scott Massey is a recognized authority in the field. He has demonstrated his expertise as a program director at the esteemed Central Michigan University and as the research chair in the Department of PA Studies at the University of Pittsburgh. Dr. Massey's influence extends beyond practical experience; he has significantly contributed to accreditation, assessment, and student success. His innovative methodologies have guided numerous PA programs to ARC-PA accreditation and have improved program outcomes. His predictive statistical risk modeling has enabled schools to anticipate student results. Dr. Massey has published articles related to predictive modeling and educational outcomes. He has also conducted longitudinal research in stress among graduate Health Science students. His commitment to advancing the PA field is evident through participation in PAEA committees, councils, and educational initiatives.

Rajat Chadha, PhD

Dr. Rajat Chadha, with a PhD in Education from Indiana University, Bloomington, is an expert psychometrician with more than 14 years of extensive experience working on multiple significant projects. Dr. Chadha has worked as a psychometrician in high-stakes certification for physicians in the United States. He has also worked on predictive risk modeling for Physician Assistant programs and has published book chapters and peer-reviewed articles in leading journals.

Additional Information

For questions about this research brief, requests for access to the full study, or to express interest in future research participation, please contact:

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Research Brief: The Predictive Strength of the Physician Assistant College Admissions Test (PA-CAT) Scores to Class of 2025 Complete Program Performance at Miami-Dade College Physician Assistant Program

Abstract

The current research study investigated the relationship between PA-CAT scores and overall performance in the PA program for the Class of 2025 (n = 53) at Miami-Dade College.

Results indicate that the PA-CAT composite score has a statistically significant (p < .05) positive correlation with performance for Clinical Anatomy and Physiology (r = 0.708), Semester 1 GPA (r = 0.606), Physical Diagnosis I (r = 0.586), PANCE (r = 0.435), and Clinical Medicine I (r = 0.433). These findings suggest that the PA-CAT is a strong predictor of performance for these measures of the PA program.

Undergraduate science GPA has a statistically significant (p < .05) positive correlation with Surgical Problems and Procedures (r = 0.296); however, no other significant associations were identified between undergraduate science GPA and the remaining performance variables examined in this study. These findings suggest that PA-CAT scores may provide greater utility as predictors of student academic and clinical performance within the program.

Physician Assistant College Admissions Test (PA-CAT)

The PA-CAT is a discipline-specific assessment consisting of 240 items designed to measure knowledge and application across nine prerequisite science subjects essential for success in the rigorous Physician Assistant (PA) curriculum. It was developed specifically for PA educators and admissions departments to support a holistic admissions process.

Since its launch on May 1, 2020, and through July 31, 2025, the PA-CAT has been administered to 5,799 examinees. Each examinee receives a composite scaled score, reflecting overall performance across all items, along with three subject-specific scaled scores in Anatomy & Physiology, Biology, and Chemistry. The composite score demonstrates exceptionally high reliability (0.939), making it a dependable measure of prerequisite science knowledge and application skills, as well as a strong predictor of success in PA program coursework.

Relationship between PA-CAT Composite Score and Performance in Physician Assistant Program

The relationship between PA-CAT composite score and performance in the PA program at Miami-Dade College was investigated by calculating the Pearson correlation coefficient and the associated statistical significance. These are discussed next, along with the interpretation of the strength of the relationship in terms of the size of the correlation coefficient.

Correlation Coefficient

Correlation coefficient quantifies the degree of relationship between two variables. Its value can range from -1 to +1. A positive value implies that when one variable increases, the other tends to increase. A negative value implies that when one variable increases, the other tends to decrease. A value of 0 implies that there is no discernible linear relationship between the variables.

The knowledge of the relationship between two variables can be useful in predicting one variable based on the other, especially if one variable is observed before the other. At Miami-Dade College, the PA-CAT composite score has a positive correlation with Physical Diagnosis I, Clinical Anatomy and Physiology, Semester 1 GPA, Semester 2 GPA, Pharmacotherapeutics, End-of-Curriculum (EOC) examination scores, and PANCE scores. Students with higher PA-CAT composite scores are expected to perform better in these courses compared to students with lower PA-CAT composite scores.

Statistical Significance

Statistical significance is determined using the *P* value, the probability of observing a correlation coefficient by chance if the actual coefficient is 0. For example, if the *P* value associated with a correlation coefficient is 0.082, the probability of observing this or a higher absolute correlation coefficient by chance is 8.2% (8.2 / 100 = 0.082), given that the actual coefficient is 0. A correlation coefficient is statistically significant if the *P* value is lower than the probability that the decision makers consider too low to be by chance only. This threshold value is referred to as significance level, or alpha. One of the most common conventional alpha values used in educational settings is 0.05, also referred to as 5% significance level. When more conservative decision-making is desired, a lower alpha value of 0.01 (1% significance level) is used.

The correlation of PA-CAT composite score with performance in the PA program is statistically significant at the 5% significance level for several variables.

Size of the Correlation Coefficient

A higher absolute correlation coefficient indicates a stronger relationship between two variables and better prediction of one variable based on another. There are general guidelines on the interpretation of the strength of relationships (Cohen, 1988; Cohen, 1992) in terms of the size of correlation coefficient. A correlation coefficient of around 0.100 is considered small, 0.300 is considered medium, and 0.500 or greater is considered large.

Correlation coefficients between PA-CAT composite score and PA program performance variables, *P* values associated with the coefficients, and the interpretation of the size of the relationship are reported in Table 1. Correlation coefficients that were not statistically significant at the 5% significance level are not presented in this report for brevity.

The size of the correlation coefficient of PA-CAT composite score with Clinical Anatomy and Physiology at Miami-Dade College is strong**.** In other words, PA-CAT composite score is very useful in predicting the performance of applicants in this course. The size of the correlation coefficient of PA-CAT composite score with PANCE is medium. PA-CAT composite score is useful in predicting the performance of applicants on their certification exam. The relative usefulness of PA-CAT composite score in predicting performance in Clinical Anatomy and Physiology is higher than the usefulness of predicting performance on the PANCE. Other correlation coefficients in the table can be interpreted similarly.

The scatter plots showing the relationship between PA-CAT composite score and the PA program performance variables are presented in Appendix A.

Table 1: Correlation between PA-CAT Composite Score and PA Program Performance

	Correlation with PA-CAT Composite score	*p* value	Size of the Correlation Coefficient
Physical Diagnosis I	0.586	<0.001	Large
Clinical Anatomy and Physiology	0.708	<0.001	Large
Physical Diagnosis II	0.311	0.036	Medium
Clinical Medicine I	0.433	0.003	Medium
Pathophysiological Basis of Disease I	0.389	0.007	Medium
Pharmacology I	0.368	0.012	Medium
Pathophysiological Basis of Disease II	0.368	0.013	Medium
Pharmacotherapeutics	0.413	0.005	Medium
Physical Diagnosis III	0.313	0.039	Medium
Genetics	0.42	0.006	Medium
Clinical Medicine III	0.356	0.018	Medium
Psychiatry Clerkship	0.329	0.028	Medium
Semester 1 GPA	0.606	<0.001	Large
Semester 2 GPA	0.423	0.003	Medium
Semester 3 GPA	0.346	0.021	Medium
Semester 4 GPA	0.308	0.035	Medium
PACKRAT I	0.329	0.027	Medium
PACKRAT II	0.344	0.02	Medium
EOC	0.369	0.012	Medium
PANCE	0.435	0.003	Medium

Limitations

A limitation of this research study is that the findings are based on a small sample (n = 53) from a single cohort at one PA program and may not be generalizable to other cohorts at the same institution or to other PA programs.