RESEARCH BRIEF

The Predictive Strength of the Physician Assistant College Admissions Test (PA-CAT) Scores to Class of 2026 Didactic Year Performance at University of Nevada, Reno Physician Assistant Program

University of Nevada, Reno: Class of 2026 Report
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(1) University of Nevada Reno

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University of Nevada
Reno School of Medicine
PA Studies Program
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Mission:
The mission of the University of Nevada, Reno School of Medicine Physician Assistant (PA) Studies Program is to train flexible and committed primary care clinicians dedicated to strengthening health care in their communities.

Director: Brian S. Lauf, DMSc, PA-C, DFAAPA

In 2015, Dr. Lauf joined the University of Nevada, Reno School of Medicine as the Founding Program Director of the developing Physician Assistant (PA) Studies Program. Brian is a graduate of the charter class at Oregon Health Sciences University (OHSU) in Portland, Oregon. After graduating and returning to Nevada, Brian was fortunate to practice in a rural clinic alongside a seasoned rural physician for several years. In 2000, Brian earned a Master of PA Studies from the University of Nebraska. In 2020, Brian completed a Doctor of Medical Sciences (DMSc) degree from the University of Lynchburg. Throughout his career, Brian has been a lifelong learner and has continuously pursued the evolution of PAs in clinical medicine, leadership, and health information technology, while also being an entrepreneur in the business of health care.

Dr. Lauf's commitment to the PA profession is evident in his numerous leadership roles. He has served as President of the Nevada Academy of PAs (NAPA) in 2001, 2020, and 2024 and has chaired the Government Affairs Committee. His advocacy for the PA profession extends to the national level, where he has served several terms as Delegate/Chief Delegate to the AAPA HOD. He is also a Commissioner of the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA).

Julie Thomas, M.S., DMSc, PA-C, DFAAPA

Dr. Thomas is an Associate Professor in the Physician Assistant Studies Program at the University of Nevada, Reno School of Medicine, where she also serves as the Director of Curriculum. Julie earned a Doctor of Medical Science (DMSc) degree from Rocky Mountain University of Health Professions in 2022, a Master of Science in Physician Assistant Studies from the University of New England in 2002, and a Bachelor of Science in Kinesiology from the College of William and Mary in 1998. In addition to her academic appointments, Dr. Thomas practices Psychiatry as a Physician Assistant at Renown Regional Medical Center in Reno, Nevada. She has previously practiced Family Medicine, Gastroenterology, and Surgery.

Dr. Thomas is an active member of several professional organizations, including the American Academy of PAs, Nevada Academy of PAs, and the PA Education Association, where she has contributed to several conferences and workshops. With a career spanning over two decades, Dr. Thomas brings a wealth of experience and expertise to her role. Her dedication to both education and clinical practice underscores her commitment to advancing the PA profession.

Jeffrey S. Weinert, PhD

Dr. Weinert is an Assistant Professor at the University of Nevada, Reno School of Medicine, where he has worked since September 2022. With over 22 years of experience, he specializes in educational technology, instructional design, and academic assessment. Jeff served as the Coordinator of Academic Assessment, a role he has held since 2012, focusing on enhancing instruction, curriculum alignment, and developing online assessment methods. He has been a part-time Professor of Biology at Truckee Meadows Community College since 2002, teaching in several formats, including in-person, online, and flipped classrooms. Jeff has taught high school and hands-on science and is passionate about STEM education, frequently volunteering to conduct science demonstrations to inspire young minds.

Scott Massey, PhD, PA-C

With over three decades of experience in PA education, Dr. 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. Scott'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. 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 2026 Didactic Year Performance at the University of Nevada Reno Physician Assistant Program

Abstract

This study examined the relationship between PA-CAT scores and didactic-year performance in the Class of 2026 (n = 25) at the University of Nevada, Reno. The PA-CAT Composite score demonstrated statistically significant positive correlations ($p < .05$) with performance in Basic Science in Clinical Medicine, Pathophysiology, Emergency Medicine, and PACKRAT I. These findings suggest that the PA-CAT is a meaningful predictor of didactic-year performance in the PA 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 scores and didactic-year performance in the PA program at the University of Nevada, Reno was examined using Pearson correlation coefficients and tests of statistical significance. The following section discusses these results and interprets the strength of the relationships based on the magnitude of the correlation coefficients.

Correlation Coefficient

The correlation coefficient quantifies the strength and direction of the relationship between two variables, ranging from -1 to +1. A positive value indicates that as one variable increases, the other tends to increase, while a negative value indicates that as one increases, the other tends to decrease. A value of 0 suggests no linear relationship between the variables.

Understanding these relationships is useful for predicting outcomes, particularly when one variable can be measured before the other. At the University of Nevada, Reno, PA-CAT Composite scores showed positive correlations with Basic Science in Clinical Medicine, Pathophysiology, Emergency Medicine, and PACKRAT I. This suggests that students with higher PA-CAT Composite scores are more likely to perform well in these courses compared to those with lower scores.

Statistical Significance

Statistical significance is assessed using the *p* value, which represents the probability of observing a correlation coefficient as extreme as the one calculated if the true correlation were zero. For example, a *p* value of 0.082 means there is an 8.2% chance of observing that correlation (or a stronger one) purely by random variation, assuming no true relationship exists.

A correlation is considered statistically significant when the *p* value falls below a pre-determined threshold, known as the significance level (alpha). In educational research, the most commonly used alpha is 0.05 (the 5% significance level), while more conservative analyses may adopt 0.01 (the 1% significance level).

At the University of Nevada, Reno, the correlation between PA-CAT Composite scores and several didactic-year performance measures was statistically significant at the 5% level.

Size of the Correlation Coefficient

A higher absolute correlation coefficient reflects a stronger relationship between two variables and indicates greater predictive value. General guidelines for interpreting effect sizes suggest that a coefficient of approximately 0.10 represents a small relationship, 0.30 a medium relationship, and 0.50 or greater a large relationship (Cohen, 1988; Cohen, 1992).

Table 1 reports the correlation coefficients between PA-CAT Composite scores and PA program performance variables, along with their associated *p* values and interpretations of relationship strength. Statistically significant results highlighted in red. At the University of Nevada, Reno, the correlations of PA-CAT Composite scores with Basic Science in Clinical Medicine, Pathophysiology, Emergency Medicine, and PACKRAT I fall within the "large" range, indicating that PA-CAT scores are highly predictive of student performance in these courses. Other correlations in the table may be interpreted using the same guidelines.

Scatterplots depicting the relationships between PA-CAT Composite scores and 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	Correlation with PA-CAT Composite score	*p*-value	Statistically Significant (5% level)?	Size of the Correlation Coefficient
Anatomy	0.467*	p = 0.019	Yes	Medium
Physiology	0.406*	p = 0.044	Yes	Medium
Basic Science in Clinical Medicine	0.611**	p = 0.001	Yes	Large
Pathophysiology	0.559**	p = 0.004	Yes	Large
Adult Medicine	0.345	p = 0.091	No	Medium
Pharmacology	0.163	p = 0.435	No	Small
Emergency Medicine	0.554**	p = 0.004	Yes	Large
PACKRAT I	0.522**	p = 0.008	Yes	Large
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).				

Limitations

A limitation of this study is that the findings are based on a small sample (n = 25) drawn from a single cohort at one PA program, which restricts their generalizability to other cohorts at the same institution or to PA programs more broadly.

Appendix A: Scatter plots – Relationship between PA-CAT Composite Score and PA Program Performance