



# Knowledge and Perceptions of Undergraduates Regarding the Physician Assistant Profession

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## Abstract

**Purpose:** Physician assistants (PAs) are healthcare providers licensed to practice medicine under physician supervision in the United States. Despite the increasing popularity and utility of the profession, knowledge of the role of PAs remains scarce among many segments of the population. The purpose of this study was to determine the knowledge and perceptions of the PA profession among undergraduate students, as well as what factors are associated with better knowledge and perception of the profession.

**Methods:** Using a cross-sectional survey, information was gathered regarding knowledge and perception of PAs. A total of 364 students were surveyed from randomly selected undergraduate classes at a Connecticut public university.

**Results:** Knowledge scores were significantly higher ( $p < 0.05$ ) in older students, female students, those with plans to pursue a healthcare career, those majoring in health and human services, and those satisfied with care received from a PA. Significantly better perceptions ( $p < 0.05$ ) of PAs were found in older students, those with plans for a future career in healthcare, those majoring in health and human services, those who received prior care from a PA, and those who were satisfied with prior care from a PA. After a short educational intervention, improvements in perceptions were statistically significant ( $p < 0.001$ ).

**Conclusions:** This study identifies areas of needed improvement in knowledge and perception of PAs and also provides impetus for educational and marketing-based interventions to improve knowledge and perception of the PA profession in the college student population.

## Research Questions

1. What is the perception of the PA profession among undergraduate students?
2. What is the knowledge of the PA profession among undergraduate students?
3. What factors, demographic or otherwise, are associated with knowledge and perception of the PA profession among undergraduate students?
4. Will a short educational intervention alter perception of the PA profession among undergraduate students, and if so, how?

## Instrumentation

The survey, designed specifically for this study, was validated through reviews by a technical expert panel of PA and PhD educators as well as cognitive interviews of college students. Reliability of the knowledge ( $\alpha = 0.902$ ) and perception ( $\alpha = 0.924$ ) questions was ensured. The possible knowledge score range was 0-68, while the possible perception score range was 0-34. The survey was administered before and after a short-educational intervention in which students were provided with a one page handout detailing the role and education of PAs, created with language from the American Academy of Physician Assistants (AAPA)

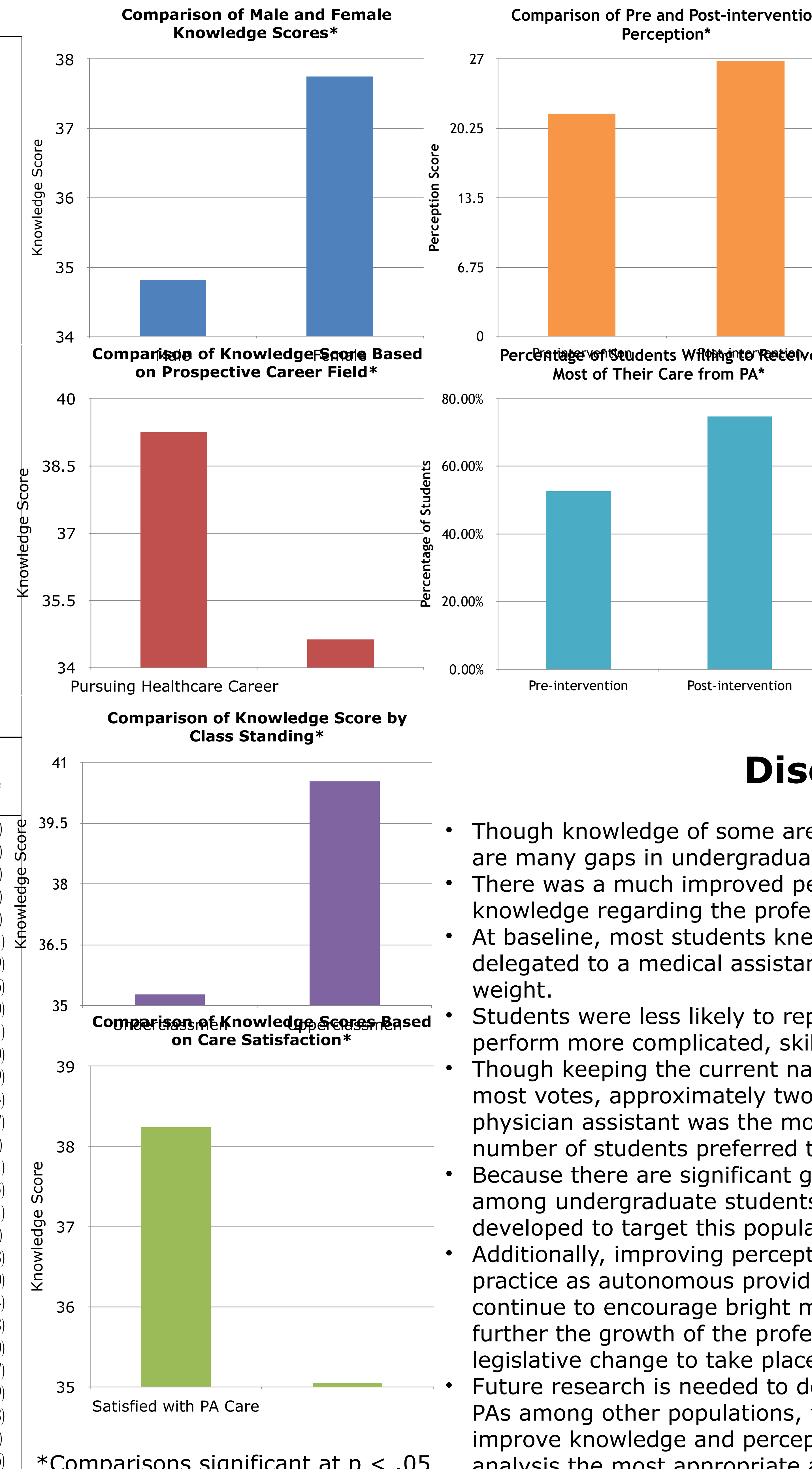
Baseline Characteristics of Surveyed Undergraduate Students (n=364)

Characteristic	f	Percent
Age		
18	104	28.8
19	102	28.3
20	71	19.7
21	44	12.2
22	27	7.4
23	13	3.6
Gender		
Male	82	22.7
Female	275	76.2
Deferred	4	1.1
Race		
White	249	69.9
Black or African-American	56	15.7
Native Hawaiian or Pacific Islander	0	0.0
Asian	12	3.4
American Indian or Alaskan Native	1	0.3
Other	32	9.0
Deferred	6	1.7
Ethnicity		
Hispanic	44	12.7
Non-Hispanic	292	84.1
Deferred	11	3.2
Future Career in Healthcare		
Yes	168	46.7
No	165	45.8
Undecided	27	7.5
Current Major		
Arts and Sciences	86	24.4
Health and Human Services	185	52.6
Business	30	8.5
Education	51	14.5
Year in School		
Freshman	147	41.0
Sophomore	105	29.2
Junior	57	15.9
Senior	50	13.9
Received Care from PA		
Yes	208	57.9
No	50	13.9
Unsure	101	28.2

Knowledge of PA Ability to Perform Tasks

Task	Yes f(%)	No f(%)	Unsure f(%)
Take Vital Signs	332 (93.8)	5 (1.4)	17 (4.8)
Give Injections	255 (72.0)	66 (18.6)	33 (9.3)
Draw Blood	264 (75)	57 (16.2)	31 (8.8)
Administer Meds	155 (44)	162 (46)	35 (9.9)
Take Medical History	289 (82.1)	34 (9.7)	29 (8.2)
Staple Closed a Head Wound	111 (31.4)	172 (48.6)	71 (20.1)
Perform Physical Exam	223 (63.7)	89 (25.4)	38 (10.9)
Order Lab Tests	197 (56.0)	100 (28.4)	55 (15.6)
Order X-rays	187 (52.4)	108 (30.3)	57 (16.0)
Interpret Lab Tests	160 (45.7)	129 (36.9)	61 (17.1)
Interpret X-rays	161 (45.7)	131 (37.2)	60 (17.0)
Diagnose Medical Problems	123 (34)	174 (49.3)	56 (15.9)
Prescribe Meds	103 (29.3)	209 (59.4)	40 (11.4)
Perform Surgery	37 (10.6)	272 (77.7)	41 (11.7)
Treat Minor Medical Problems	276 (78.6)	41 (11.7)	34 (9.7)
Treat Chronic Medical Problems	123 (35.0)	161 (45.9)	67 (19.1)
Perform a Skin Biopsy	74 (21.1)	184 (52.4)	93 (26.5)
Counsel Patients on Smoking Cessation	245 (70.0)	45 (12.9)	60 (17.1)
Educate Patients	295 (83.8)	26 (7.4)	31 (8.8)
Refer Patients to Specialists	240 (68.4)	66 (18.8)	45 (12.8)
Treat Patients in the Emergency Room	138 (39.2)	133 (37.8)	81 (23.0)
Be on Call Overnight	217 (61.5)	64 (18.1)	72 (20.4)
Be the Primary Care Provider	81 (22.9)	209 (59.2)	63 (18.7)
Suture Closed a Patient After an Operation	108 (30.5)	154 (43.5)	92 (26.0)
Apply Casts	211 (59.8)	76 (21.5)	66 (18.7)
Deliver Babies	78 (22.2)	204 (58.0)	70 (19.9)
Perform CPR	270 (76.7)	44 (12.5)	38 (10.8)
Measure Height and Weight	320 (90.9)	12 (3.4)	20 (5.7)
Practice Independently	74 (20.9)	207 (58.5)	73 (20.6)

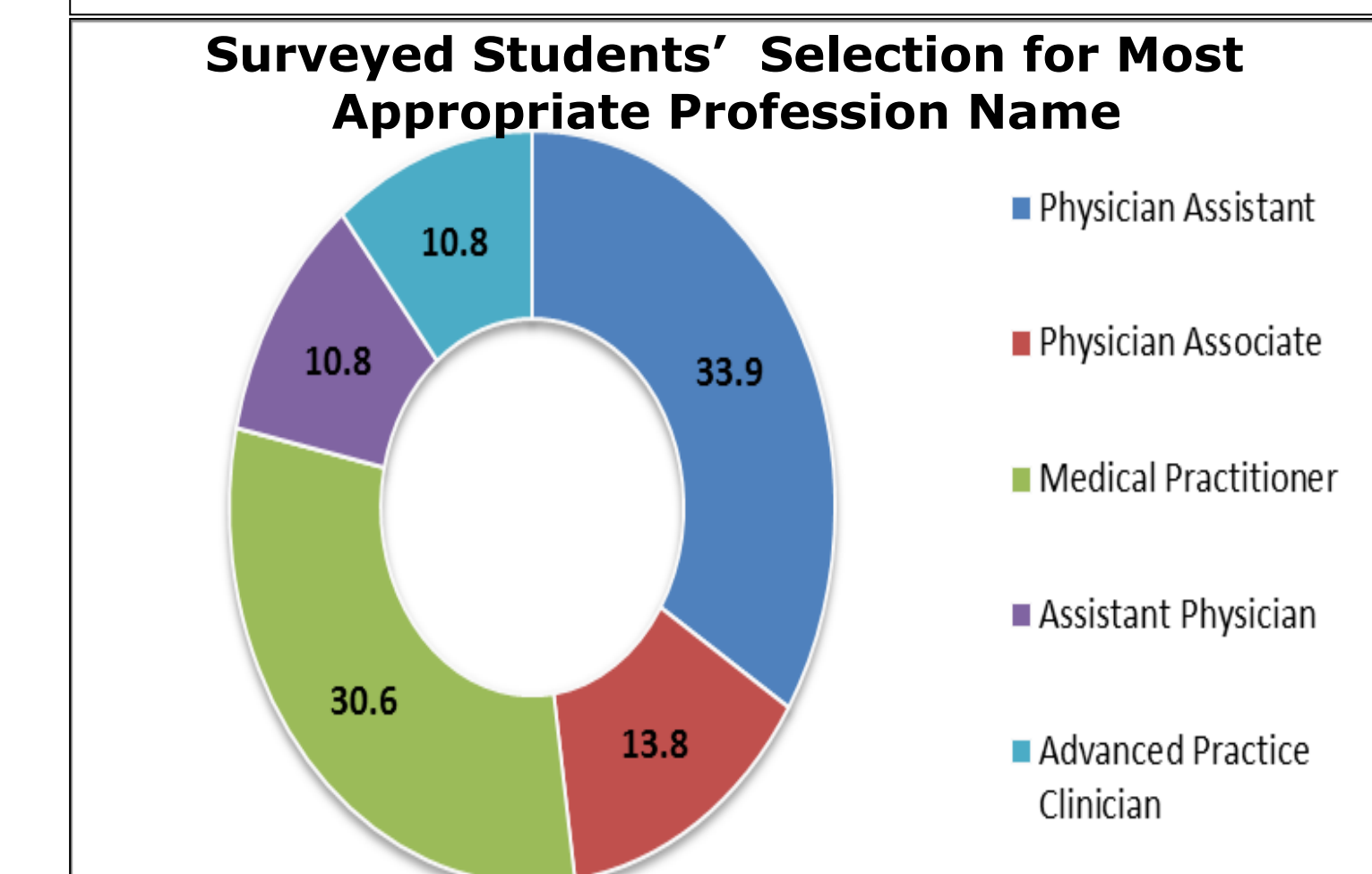
## Results



Comparison of Initial and Final Perceptions of Undergraduate Students by Medical Problem

Medical Problem	Yes Initial (%)	Yes Final (%)	p-value
Deep Wound	39.1	69.8	<0.001*
Cold or Flu Symptoms	88.6	89.5	0.11
Chest Pain	54.6	76.2	<0.001*
Trouble Breathing	53.5	79.2	<0.001*
Abdominal Pain	56.5	78.7	<0.001*
Trouble Urinating	57.3	77.3	<0.001*
Blood in Your Stool	44.6	72.9	<0.001*
Sprained Ankle	70.6	84.2	<0.001*
Rash	79.5	86.1	<0.001*
Headache	86.7	88.4	0.046*
Minor Car Accident	54.6	81.2	<0.001*
Major Car Accident	21.6	48.2	<0.001*
Depression	42.1	68.1	<0.001*
Diabetes	39.3	71.2	<0.001*
High Blood Pressure	59.0	78.4	<0.001*
Sexually Transmitted Infection	44.3	77.3	<0.001*

\*Comparison significant at  $p < 0.05$ .



## Discussion

- Though knowledge of some areas of PA practice is substantial, there are many gaps in undergraduate knowledge regarding the profession.
- There was a much improved perception of PAs after a small amount of knowledge regarding the profession was provided to students.
- At baseline, most students knew that PAs could perform tasks typically delegated to a medical assistant such as taking vitals, height, and weight.
- Students were less likely to report thinking that a PA was able to perform more complicated, skillful tasks.
- Though keeping the current name of physician assistant received the most votes, approximately two-thirds of students disagreed that physician assistant was the most appropriate name, and a nearly equal number of students preferred the title of medical practitioner.
- Because there are significant gaps in knowledge of the PA profession among undergraduate students, educational interventions should be developed to target this population.
- Additionally, improving perception is important to enable PAs to practice as autonomous providers within the healthcare field, to continue to encourage bright minds to seek careers in the field, to further the growth of the profession, and to enable meaningful legislative change to take place regarding PA scope of practice
- Future research is needed to determine knowledge and perception of PAs among other populations, to develop effective interventions to improve knowledge and perception, and to decide through data analysis the most appropriate and least confusing name for the profession going forward.

\*Comparisons significant at  $p < .05$