Trends in PCAT Requirements and Utilization Across Colleges and Schools of Pharmacy

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Objective. To identify national trends in Pharmacy College Admissions Test (PCAT) requirements and underlying rationales for not requiring the PCAT.

Methods. An electronic survey was sent to all United States pharmacy programs concerning: (1) current and future PCAT requirements; (2) use of the PCAT or other means to assess written communication skills; (3) use of unofficial PCAT scores and; (4) reasons for not requiring the PCAT (if applicable). Data analysis consisted of descriptive statistics using Microsoft Excel.

Results. One hundred five (73%) of 144 colleges and schools of pharmacy responded to the survey. Twelve institutions discontinued the PCAT requirement between the 2018-2019 and 2019-2020 admissions cycle. “A desire to increase pharmacy applications by reducing admissions barriers” was the most commonly selected reason for discontinuation. Concerns regarding PCAT registration fees were high nationwide. The majority of pharmacy programs using the PCAT invite applicants “always, often, or sometimes” for an interview before receiving official PCAT scores. The majority of pharmacy programs consider the PCAT writing score for admissions decisions; other methods used include onsite essays and personal statements.

Conclusion. While at the time of this study the majority of institutions required the PCAT for admission to pharmacy school, the use of this exam has declined nationally.

Keywords: pharmacy college admissions test, admissions, assessment, student pharmacists

INTRODUCTION

The Pharmacy College Admissions Test (PCAT) is a standardized test designed for and administered to prospective pharmacy students by the Pearson Corporation. The objective of the exam is to measure academic preparation for pharmacy school and, for many years, most pharmacy programs used the PCAT as part of their assessment of applicants for admission. In recent years, there has been a decline in the number of institutions requiring the PCAT for admission. Anecdotally reported reasons for discontinuing the PCAT are varied.

The PCAT Advisory Committee, appointed by the President of the American Association of Colleges of Pharmacy (AACP) and comprised of AACP staff and members representing various pharmacy programs, is charged with advising AACP and the Pearson Corporation in the development, administration, and promotion of the PCAT. The Committee also assists in the enhancement of the exam to ensure it effectively predicts the academic preparedness of pharmacy applicants. The committee conducted a nationwide survey to identify current usage and national trends related to the PCAT, and to characterize underlying rationales for eliminating the PCAT admission requirement.

METHODS
The AACP PCAT Advisory Committee developed a 13-item survey, which contained questions in the following content areas: (1) current and future PCAT requirements for admission; (2) use of the PCAT or other means to assess applicants’ written communication skills; (3) institutional concerns about the cost of the PCAT; (4) use of unofficial PCAT scores during the admission process and; (5) reasons for not requiring the PCAT as an admissions requirement (asked only of institutions not requiring the PCAT).

The survey, available at https://bit.ly/2EvFLYe, was administered electronically utilizing the Formsite.com platform (Chicago, Illinois) and sent through the AACP Connect member communication portal in May 2019 to the online communities for PharmCAS, the Student Services Personnel special interest group (SIG), and the Council of Deans representing all pharmacy programs in the United States (n=144 as of 2019 when the survey was disseminated). Instructions in the recruitment email specified only individuals knowledgeable about the use of the PCAT at their institution (eg, admissions director or admissions committee chair) should complete the survey. Two reminder emails were sent within the following month.

AACP staff obtained institutional demographic data (ie, institution type, year founded, geographic region) and merged that data with the PCAT survey responses to create a de-identified data set. Programs were categorized as “established” (founded before 1996) and “newer” (founded in 1996 or later), reflecting the time point when there was a substantial increase in the total number of pharmacy programs in the United States. Responding programs were characterized by the Federal Trade Commission’s geographic regions, and then grouped into four sections based on location (Midwest, Northeast, South, and West). Data analysis consisted of descriptive statistics using Microsoft Excel for Office 365, Excel version 1902. Responses of “not sure” and “not applicable” were removed from descriptive calculations.

RESULTS

One hundred five (73%) of 144 pharmacy programs responded to the survey. The majority of respondents were public institutions (57/105, 54%) and those founded before 1996 (56/105, 53%). Geographic groups totaled 24 schools from the Midwest, 27 from the Northeast, 29 from the South, and 25 from the West. The breakdown of programs requiring the PCAT (reported by region and institution type) is depicted in Table 1. Twelve of 76 institutions that required PCAT for admission in 2018-19 stopped requiring it for 2019-20 (4) or were undecided (8) at the time of the survey. These 12 institutions were comprised of three private and nine public; seven established before 1996 and five in 1996 or later; and by geographic region three were Midwest, four Northeast, two South, and three West. Eliminating a universal PCAT requirement was the most common reason cited for the change. Twenty-nine institutions (18 private, 17 newer) that do not require or will no longer require the PCAT indicated the reasons for this decision by selecting from a list of options (multiple selections allowed). A “desire to increase pharmacy applications by reducing admissions barriers” was the most commonly selected choice (21/29, 72%). The majority of programs selecting this response were newer (13/21, 62%), private institutions (12/21, 57%), and nearly half (9/21, 43%) were located in the West region. “Our analysis indicates PCAT is not a strong predictor of success for our students” was selected by 15 programs (10/15, 67%, were private). “Other colleges/schools in my region do not (or no longer) require the PCAT” was also chosen by 15 institutions; these programs were more likely to be newer (10/15, 67%), private (10/15, 67%), and located in the West region (8/15, 53%). The full list of questions and breakdown of responses can be found in Table 2.

The PCAT registration fee was a perceived application barrier by most institutions. Most respondents (81/105, 77%) agreed or strongly agreed the fee may prevent low-income students from applying to their program. This was a more common sentiment among public institutions (47/57, 82%, agreed or strongly agreed) than private (34/48, 71%, agreed or strongly agreed). Concern regarding registration fee payment as a deterrent for low-income applicants was high nationwide: 81 programs agreed or strongly agreed. Regional competition was also a concern: 83 programs agreed or strongly agreed the PCAT registration fee may prevent low-income students from applying to their program. This was a more common sentiment among public institutions (47/83, 57%) and public institutions (47/83, 57%), newer (37/83, 45%) and established programs (48/83, 55%), and all geographic regions (22/83, 27% Northeast, 20/83, 24% Midwest, 17/83, 20% West, 24/83, 29% South).

The majority (60/84, 71%) of programs that utilize the PCAT “always, often, or sometimes” invite applicants for an interview before receiving the official PCAT score, with this practice being most common among private institutions and in the Northeast. Acceptance of a candidate prior to receiving the official PCAT score was more common among private institutions and in the South. Once applicants were admitted, 23 institutions (12 private, 11 public) utilized PCAT scores to identify at-risk students who might benefit from early intervention to avoid academic struggles. Only one school...
in the West region used PCAT scores in this way, compared to five in the Midwest, seven in the Northeast, and ten in the South.

Of the 48 institutions that reported considering the PCAT writing score for admissions decisions, nearly 70% (33/48) were public. By region, it was least used in the West (only four programs, all public). Eighteen of the 48 programs (38%) utilized it to meet the requirement set forth by the Accreditation Council for Pharmacy Education (ACPE) to assess written communication in the admissions process. All respondents were also asked what other methods they use to fulfill this requirement: 60% (63/105) require an onsite essay during the interview process (34 private and 29 public). Only 28 programs reported using the personal statement from the Pharmacy College Application Service application as a writing sample to fulfill ACPE’s applicant writing requirement.

**DISCUSSION**

The majority of pharmacy programs required the PCAT for admission at the time of the survey, although the number continues to decline. Our data suggest programs requiring the PCAT for admission tend to be public and established. Over one-third of private institutions, compared with approximately one-fourth of public, admit applicants to the program without receiving an official PCAT score. This suggests that pharmacy programs might be moving toward a more holistic admissions process.

More than one-quarter of respondents utilized the PCAT for early intervention for students at risk of academic difficulty in pharmacy school. This survey did not ascertain whether institutions utilized other metrics for determining which students require additional assistance, though Muratov and colleagues demonstrated that several components should be considered when making this determination. Utilizing PCAT scores “more holistically,” such as a metric for early intervention, may continue to be an area of utility for the PCAT even in programs where the exam is not required for admission.

The current published evidence is mixed regarding the PCAT’s relationship to pharmacy school success. In one retrospective study, PCAT scores were strong predictors of success in a pharmaceutical calculations course, and in several other studies, on the Pharmacy Curriculum Outcomes Assessment (PCOA). However, Ferrante and colleagues demonstrated that PCAT scores have little to no impact on students’ progress during pharmacy school, and others state that PCAT scores do not predict student performance on Objective Structured Clinical Examinations or Advanced Pharmacy Practice Experiences. The lack of correlation between PCAT scores and all aspects of student academic success does not negate its predictive value, especially when it comes to PCOA. This is an important point in light of ACPE’s use of PCOA as a measure of curricular effectiveness, and the PCAT’s potential to identify at risk students for early intervention before they struggle in the curriculum or perform poorly on the PCOA. However, its unclear relationship to academic progress coupled with pressure from other regional institutions no longer requiring the PCAT, may explain the survey results showing a shift away from requiring the PCAT.

One concern brought to light by this study is that some institutions perceived the cost of the PCAT as a barrier to students applying to their program. The majority of respondents expressed a concern about the PCAT fee, especially when other programs in their area did not require the PCAT. This is a greater concern for public institutions, the majority of which required the PCAT for admission. Additionally, while fewer than half of the responding programs in the West region did not require the PCAT for admission, their expressed concern about the impact of the PCAT fee on applicants was not significantly different from institutions in other regions.

The movement away from standardized testing is not limited to pharmacy education. A growing number of law schools have announced they will accept the Graduate Record Examination in lieu of the Law School Admission Test for admission to accommodate prospective students who are exploring multiple career options. There has also been a dramatic shift in testing policies at undergraduate institutions. Between September 2018 and September 2019, nearly 50 colleges and universities announced they were dropping the Scholastic Aptitude Test or American College Testing as an admission requirement. Additionally, an organization claiming the standardized testing requirement violates antidiscrimination statutes within their state sued the University of California in December 2019. These and other environmental factors may influence an institution’s decision to require the PCAT for admission.

Interestingly, 48 respondents indicated they used the PCAT writing score in their admissions decisions, but only 40% reported using the writing score to meet ACPE’s requirement for assessing written communication during the admissions process. Onsite essays and use of the PharmCAS application personal statement were commonly reported by programs as methods used to assess writing skills. Both methods have limitations that must be considered as inferior to the PCAT writing assessment: PharmCAS essays may not be written by applicants, and onsite writing samples pose problems with standardization. In contrast, the writing section of the PCAT uses a validated process with trained scorers using standardized processes and rubrics. A potential option for programs wanting only a standardized writing assessment would be for this PCAT section to be offered as a standalone product at low cost.
CONCLUSION

While at the time of this study the majority of institutions required the PCAT for admission to pharmacy school, the use of this exam has declined nationally. This trend seems to be driven by the decreasing applicant pool and regional trends requiring the PCAT for admission. Some programs have found additional uses for the PCAT such as identifying at risk students, but further research is needed to determine the relationship between PCAT performance and success in pharmacy school.

ACKNOWLEDGMENTS

All authors are present or past members of the AACP PCAT Advisory Committee. Paul Jungnickel serves as Chair of AACP’s PCAT Advisory Committee. Libby Ross serves on the AACP staff. AACP has an agreement with Pearson in support of the PCAT.

REFERENCES


Table 1. PCAT Requirements

<table>
<thead>
<tr>
<th>All Schools 2018 n (%)</th>
<th>2018-19 n=105 Required* n (%)</th>
<th>Not required** n (%)</th>
<th>Required* n (%)</th>
<th>Not required** n (%)</th>
<th>Undecided n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All schools</td>
<td>144</td>
<td>76 (72)</td>
<td>29 (28)</td>
<td>64 (61)</td>
<td>33 (31)</td>
</tr>
<tr>
<td>Age of program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Founded 1996 or later</td>
<td>78 (54)</td>
<td>31 (63)</td>
<td>18 (37)</td>
<td>26 (53)</td>
<td>18 (37)</td>
</tr>
<tr>
<td>Founded before 1996</td>
<td>66 (46)</td>
<td>45 (80)</td>
<td>11 (20)</td>
<td>38 (68)</td>
<td>15 (27)</td>
</tr>
<tr>
<td>Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>76 (53)</td>
<td>27 (56)</td>
<td>21 (44)</td>
<td>24 (50)</td>
<td>21 (44)</td>
</tr>
<tr>
<td>Public</td>
<td>68 (47)</td>
<td>49 (86)</td>
<td>8 (14)</td>
<td>40 (70)</td>
<td>12 (21)</td>
</tr>
<tr>
<td>US Location~</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwest~</td>
<td>24 (17)</td>
<td>19 (79)</td>
<td>5 (21)</td>
<td>16 (67)</td>
<td>5 (21)</td>
</tr>
<tr>
<td>Northeast$</td>
<td>48 (34)</td>
<td>23 (85)</td>
<td>4 (15)</td>
<td>19 (70)</td>
<td>5 (19)</td>
</tr>
<tr>
<td>South^</td>
<td>41 (28)</td>
<td>22 (76)</td>
<td>7 (24)</td>
<td>20 (69)</td>
<td>8 (28)</td>
</tr>
<tr>
<td>West@</td>
<td>30 (21)</td>
<td>12 (48)</td>
<td>13 (52)</td>
<td>9 (36)</td>
<td>15 (60)</td>
</tr>
</tbody>
</table>

*Required for all applicants, OR required for some applicants but not all
**Accepted and considered but not required, OR Not required nor considered
~ excludes Lebanese American University; denominator for this group is 143.
*includes AK, AZ, CA, CO, HI, ID, MT, NV, OR, UT, WA, WY
$includes IA, IL, IN, KS, KY, MO, MN, ND, NE, SD, WI
@includes CT, DC, DE, MA, MD, ME, MI, NH, NJ, NY, OH, PA, RI, VA, VT, WV
^ includes AL, AR, FL, GA, LA, MS, NC, NM, OK, SC, TN, TX
Table 2. Reasons for Not Requiring the PCAT

<table>
<thead>
<tr>
<th>Reason</th>
<th>n=29 (%)</th>
<th>&lt;1996 n=17</th>
<th>≥1996 n=12</th>
<th>private n=18</th>
<th>public n=11</th>
<th>West n=13</th>
<th>Other regions n=16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desire to increase pharmacy applications by reducing admission barriers.</td>
<td>21 (72)</td>
<td>13</td>
<td>8</td>
<td>12</td>
<td>9</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Other colleges/schools in my region do not (or no longer) require the PCAT.</td>
<td>15 (52)</td>
<td>10</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Our analysis indicates PCAT is not a strong predictor of success for our students.</td>
<td>15 (52)</td>
<td>9</td>
<td>6</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>PCAT is too expensive for applicants.</td>
<td>13 (45)</td>
<td>4</td>
<td>9</td>
<td>5</td>
<td>8</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>PCAT does not help us identify qualified applicants.</td>
<td>12 (41)</td>
<td>6</td>
<td>6</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Our perception that PCAT is not a strong predictor of success.</td>
<td>11 (38)</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Non-cognitive attributes are more heavily (or solely) weighted in our admissions process.</td>
<td>9 (31)</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>PCAT does not adequately assess content areas.</td>
<td>5 (17)</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>PCAT test dates do not meet our needs.</td>
<td>4 (14)</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>PCAT scoring is too slow.</td>
<td>2 (7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PCAT is too long for test-takers.</td>
<td>1 (3)</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1 (3)</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
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