RESEARCH ARTICLES

Perceptions of Campus Experiences by African-American Pharmacy Students Based on Institutional Type

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Objectives. This study compared perceptions of campus experiences between African American students at historically black colleges of pharmacy (HBCPs) and those at predominantly white colleges of pharmacy (PWCPs).

Methods. A written survey instrument was administered to a convenience sample of minority pharmacy students who attended a national meeting of the Student National Pharmaceutical Association.

Results. Responses were received from students who attended all 5 HBCPs (n = 16) and 24 PWCPs (n = 59) in the US. Contrary to the general college impact literature, these findings revealed no significant differences in the perceptions of campus experiences between African American students at HBCPs and those at PWCPs with regards to academic advising, campus climate, campus life, campus support services, instructional effectiveness, and student centeredness. Students at HBCPs showed higher satisfaction scores for a survey item on campus responsiveness to diverse populations.

Conclusions. Results should help extend knowledge about African American pharmacy students’ college experiences and guide programmatic initiatives that foster increased retention and recruitment.

Keywords: African American, historically black colleges of pharmacy, perceptions

INTRODUCTION

Increasing the number of students of color at colleges of pharmacy is more important than ever given the demographic predictions of the growing minority population. The American Association of Colleges of Pharmacy (AACP) has highlighted the importance of diversity in pharmacy education, as evidenced by the October 2000 Final Report of the AACP Ad Hoc Committee on Affirmative Action and Diversity and the theme of the 2002 AACP Interim Meeting, “Cultural Competence: Meeting Needs of a Diverse Population.” Diversity in America is culturally and socially constructed; race and ethnicity are among the variables that may define the construct.

State legislators, accrediting organizations, parents, community representatives, and alumni, among others, are demanding accountability from institutions to address the under representation of students of color in certain health professional schools, including colleges of pharmacy. Most research studies suggest that African American students in historically black colleges and universities (HBCUs) tend to be more satisfied overall with their college experiences than their counterparts in predominantly white institutions (PWIs) and perceive HBCUs as providing a more nurturing environment.

This study attempted to examine whether African American pharmacy students who attend historically black colleges of pharmacy (HBCPs) have different experiences than their African American student counterparts at predominantly white colleges of pharmacy (PWCPs). This study investigated whether institutional racial composition makes a difference in African American pharmacy students’ experiences as it relates to their levels of satisfaction and their perceived levels of the importance of institutional programs and support.
Background

During the past 5 years, African American student enrollment in higher education increased by nearly 10%. Although some level of progress is to be applauded, the African American student enrollment gain was the smallest among the nations’ 4 major ethnic minority groups. Within all professional schools, African American students realized an impressive 1-year enrollment increase of 10.1% from 1996 to 1997, reversing a previous enrollment decline. Data reported by the National Center for Education Statistics demonstrated that, as a group, students of color made up 21% of those earning first professional degrees in 1997, continuing a steady growth trend from 16.8% in 1993 and 11.2% in 1987. Minorities accounted for 23.4% of all first-professional degree students enrolled in 1997. Specifically for professional degree programs in colleges of pharmacy, in the 1999-2000 academic year, black students composed 6.6% of students receiving first professional pharmacy degrees, students of Hispanic origin (any race), 4.0%; and American Indian or Alaskan Native, 0.6%. Asian Americans and white students earned 20.7% and 62.2%, respectively, of all the first professional degrees in pharmacy conferred. Asians and whites are not considered to be underrepresented minority students in pharmacy, as described in the AACP White Paper.

Almost 2 decades ago, it was estimated nationally that about half of entering African American college freshman would not graduate. Though there is a plethora of studies of African American student experiences in undergraduate and graduate education, few studies have been performed in the health professional schools on African American students. Further, no studies have been published specifically regarding African American students in pharmacy schools. The need to increase and retain African American students in colleges of pharmacy is of utmost importance, especially in light of the current and projected shortage of pharmacists in the country and the growing diversity of the US population. There are currently 83 colleges of pharmacy in the United States, of which 5 are categorized as HBCPs. Historically black colleges have educated more than a third of African American pharmacists, and three pharmacy schools account for 61.2% of Hispanic pharmacy students in the United States.

The majority of underrepresented minority students attend PWIs, although HBCUs continue to educate a significant number of African American men and women. However, most studies explain the trend of African American enrollment at HBCUs in part to the greater affordability of HBCUs, their capacity to offer a more supportive and nurturing learning environment, a more desirable cultural experience, and the tradition of cultivating black leadership. Therefore, satisfaction with their college experiences can have a significant role in whether African American students stay or leave an institution.

Research performed on African American college students seems to suggest that various forms of student interaction with their environment can have significant impact on student satisfaction, learning, and development. The works of Pace (1984), Astin (1993), Kuh (1993), and Tinto (1987) posited that the more satisfied and involved a student is in college, the more likely he or she will be academically successful and graduate. Their studies suggested that for African American students, an understanding of the relationship between college experiences and college success is important. However, research on the perceived campus experiences of African American students in health professional schools is lacking.

Conceptual Framework

The educational literature on college impact, which focused on students’ college experiences and the campus environment, was the conceptual framework used to explain the specific student perceptions that are under consideration. In the limited studies done on the educational advantages of the different types of institutional environments for minority undergraduates and graduates students, it was reported that African American students perceived that the environments of many PWIs were more alienating than those of HBCUs. This may explain in part, why the persistence rates for African American students at PWIs are often lower than those for white students at the same institutions.

It was further reported that African American students who attended HBCUs showed higher levels of persistence and degree attainment than those in PWIs. Although a significant percentage of African American men and women still attend HBCUs, significantly more African American students in the United States now attend institutions in which the student body is predominantly white. This increased racial integration of American post-secondary education has not been accomplished without certain challenges for African American students in white institutions.

In the early 1970s, it was believed that some black students attended HBCUs because of the perception that they would earn higher grades at HBCUs, as opposed to PWIs or because the former might not be as academically competitive as the latter. However, in...
the 1980s, it was reported that African American students performed better academically at HBCUs not because getting good grades was easier, but because the social environment enhanced their successful academic adjustment.\textsuperscript{40-42} African American students at HBCUs reported more satisfaction in their relationships with other students (although they also viewed the peer environment as more competitive), had more positive relationships with faculty, and perceived greater faculty concern for students and teaching. HBCU students had more negative perceptions of the administrators on their campuses, finding them less “helpful, considerate, or flexible” than did African American students in PWIs.\textsuperscript{13} Despite that fact, HBCU students were more satisfied with their choice of institution, were more likely to indicate that they would choose the same institution again, and were less inclined to transfer to another institution.\textsuperscript{13}

There was no evidence as to whether the findings from the studies cited above would hold up within the professional pharmacy education programs. The purpose of this study was to report the results of a survey that examined the effects of institutional environment (HCBPs and PWCPs) on the academic and personal development of African American pharmacy students. It is hoped that this study will help familiarize administrators, decision-makers, institutional researchers, and other educators with students’ perceptions of campus experiences and help foster the increased recruitment and retention of highly qualified African American students at US colleges of pharmacy. Until now, there has been no study of African American pharmacy students in both HBCPs and PWCPs based on their perceived levels of satisfaction with the institutions and colleges and the perceived levels of importance placed on the services and programs provided by their colleges and institutions.

\textbf{METHODS}

\textbf{Sample and Survey Instrument}

We utilized a national convenience sample of African American pharmacy students who were members of the Student National Pharmaceutical Association (SNPhA). For the purpose of this study, “African American” was used as the terminology to describe racial background for students who self-reported their race as either African American or black. The sample represented African American students who were from both HBCPs and PWCPs and had attended a national annual SNPhA meeting conducted within the last 3 years (exact year attended was not revealed to protect the confidentiality of respondents). A written survey instrument was administered to a volunteer sample of meeting participants to examine their perceptions of campus experiences. A total of 114 students from various US states registered for the meeting. This cross-sectional survey was administered on the last day of the meeting. About three fourths of the registrants remained in attendance at that time and agreed to participate.

The survey was conducted in accordance with the procedures of the Institutional Review Board at the University of Illinois at Chicago. The Student Satisfaction Inventory\textsuperscript{TM} (SSI) was used, with permission of the USA Group Noel-Levitz, which developed the instrument. Noel-Levitz is a nationally recognized consulting firm specializing in higher education enrollment management, financial aid, and student retention, to examine the areas of campus life of importance to students, as well as the areas of satisfaction. The Noel-Levitz SSI is used in student satisfaction studies to measure how effectively campuses deliver what students expect, need, and want. The 12 scales in the original SSI have been widely utilized; in its 2002 annual report, Noel-Levitz reported that 864 colleges and universities have administered the SSI to enrolled students.\textsuperscript{43}

In this study, we used the SSI and instructed the respondents to report their levels of satisfaction and importance on 45 closed-ended items on the questionnaire. The investigators added an open-ended item regarding the respondents’ perceptions on minority recruitment and retention. The questionnaire also included demographic items. The closed-ended questions were rated on a 5-point Likert scale by level of importance, where a 1 indicated “not important at all” and 5 indicated “very important,” and level of satisfaction, where 1 indicated “very dissatisfied” and 5 indicated “very satisfied.” The responses were treated as interval-level values, and the items were categorized into scales. Respondents were given the opportunity to indicate “not applicable” where appropriate.

Data were analyzed using the SPSS statistical package (Windows Version 11.0). Data analysis included descriptive statistics, scale reliabilities, chi-square, and \textit{t}-tests for independent groups. The level of significance was set \textit{a priori} at alpha < 0.05. Responses to the open-ended question were analyzed by content analysis for emergent themes using Catpac II\textsuperscript{TM} (Academic Version 2. Woelfel J, The Galileo Company, 1998), a qualitative software package.

The SSI’s original 12 scales, as denoted by Noel-Levitz, included some scales with only 1 or 2 items. Thus, some of the scales used in the SSI (version for 4-
year schools) were collapsed/combined because of item similarities, as determined through a consensus of the study investigators. In our analyses, 6 scales and/or indicator measures were adapted for use from the SSI. Listed below are the scale/indicator names, with the parenthetical identification of the scales used in the SSI:

- Academic advising effectiveness (same in SSI)
- Campus climate and campus life (campus climate, campus life)
- Campus support services (campus support services, registration effectiveness, service excellence, recruitment and financial aid effectiveness, safety and security)
- Student centeredness (student centeredness, concern for the individual)
- Instructional effectiveness (same in SSI)
- Responsiveness to diverse populations (same in SSI)

The academic advising effectiveness scale included 5 items with statements pertaining to one’s academic advisor’s approachability and his/her concern about student success. The campus climate and campus life scale included 8 items that addressed sense of belonging, institutional reputation, and channels for expressing student complaints. The campus support services scale included 12 items with statements ranging from library staff helpfulness and approachability, computer lab adequacy and accessibility, tutoring services availability, to financial aid availability, among others. (A 13th item regarding a campus student center was deleted prior to final data analysis because of the large number of missing responses due to inapplicability for the respondents.) The student-centeredness scale included 7 items with statements such as “faculty member’s care about me as an individual,” “student disciplinary procedures are fair,” and “students are made to feel welcome.” The instructional effectiveness scale included 11 items with statements exploring commitment to academic excellence, intellectual growth, and quality of instruction, faculty member availability, and job market competitiveness. The last indicator, responsiveness to diverse populations, was a single-item measure regarding a strong commitment to racial harmony on campus.

For data analysis, the scale scores were analyzed descriptively and comparisons were made based on institutional type (HBCP and PWCP) for respondent perceptions of importance and satisfaction of institutional effort for each scale. Similar to the method used by Noel-Levitz, individual performance gaps scores were calculated by subtracting the satisfaction scores (level of satisfaction) from the importance score (strength of student’s expectation). In this way, a positive performance gap score might indicate unmet student expectations, while a negative performance gap score would indicate that the institution is exceeding students’ expectations. A larger performance gap score for a scale would indicate that the institution is not meeting students’ expectations.

**RESULTS**

**Sample Demographics**

Eighty-five of the SNPhA national annual meeting attendees completed the survey. These students represented 29 US colleges of pharmacy. Twenty percent (i.e., 17 of 85) attended the 5 HBCPs and 80 percent attended 24 PWCPs. Geographically, student respondents were enrolled in pharmacy schools in 21 different states and the District of Columbia. All sample respondents were from underrepresented minority groups in pharmacy education. The self-reported race/ethnicity backgrounds included: African American (n = 75), Hispanic (n = 6), other (n = 4). For purposes of this study, only data from the African American pharmacy students were analyzed further.

When limited to African American pharmacy students, 16 respondents (21%) attended a HBCP and 59 (79%) attended a PWCP. With regard to gender breakdown, 52 (69%) were female respondents, 21 (28%) were males, and 2 (3%) respondents did not identify their gender. Most respondents were enrolled in doctor of pharmacy professional degree programs (n = 70, 93%), with the remainder in baccalaureate pharmacy programs (n = 5, 7%). The professional year classifications reported by respondents included first-year pharmacy, n = 5 (7%); second-year n = 29 (39%); third-year n = 26 (35%); and fourth-year n = 15 (20%). The mean age of the sample was 24.9 ± 3.5 years.

**Campus Experiences**

Table 1 shows that the multi-item scales displayed a high internal consistency as measured by Cronbach’s alpha scores that ranged from 0.75 to 0.87, and also shows the overall ratings and reliabilities on importance and satisfaction with campus experiences for the pharmacy students. The African American pharmacy students placed a high level of importance on each of the scale variables, with lower ratings (more neutral) for their corresponding satisfaction levels.

Table 2 compares the responses of African American students from HBCPs with those of the African
Table 1. Overall Ratings and Reliabilities on the Importance and Satisfaction with Campus Experiences by Students at Historically Black Colleges of Pharmacy and Predominantly White Colleges of Pharmacy

<table>
<thead>
<tr>
<th>Scale or Indicator*</th>
<th>Importance Ratings†</th>
<th>Satisfaction Ratings‡</th>
<th>Reliabilities§</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean (SD)</td>
<td>Reliabilities</td>
</tr>
<tr>
<td>Academic advising effectiveness</td>
<td>70</td>
<td>4.53 (0.64)</td>
<td>0.82</td>
</tr>
<tr>
<td>Campus climate &amp; campus life</td>
<td>71</td>
<td>4.33 (0.53)</td>
<td>0.75</td>
</tr>
<tr>
<td>Campus support services</td>
<td>71</td>
<td>4.50 (0.51)</td>
<td>0.87</td>
</tr>
<tr>
<td>Student centeredness</td>
<td>71</td>
<td>4.50 (0.60)</td>
<td>0.83</td>
</tr>
<tr>
<td>Instructional effectiveness</td>
<td>70</td>
<td>4.67 (0.45)</td>
<td>0.87</td>
</tr>
<tr>
<td>Responsiveness to diverse populations</td>
<td>74</td>
<td>4.47 (0.92)</td>
<td>---</td>
</tr>
</tbody>
</table>

*Individual attitudinal items were randomly ordered in the survey instrument.
†Values ranged from 5 = very important, 4 = somewhat important, 3 = neutral, 2 = somewhat unimportant, 1 = not important at all.
‡Values ranged from 5 = very satisfied, 4 = satisfied, 3 = neutral, 2 = dissatisfied, 1 = very dissatisfied.
§Cronbach’s alpha.
‖Single-item measure.

Table 2. Comparisons Between African American Pharmacy Students at Historically Black Colleges of Pharmacy and Predominantly White Colleges of Pharmacy* 

<table>
<thead>
<tr>
<th>Scale/Indicator and by Institution type</th>
<th>Importance scores</th>
<th>Satisfaction scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>P</td>
</tr>
<tr>
<td>Academic Advising Effectiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWCPs*</td>
<td>4.57 (0.56)</td>
<td>0.288</td>
</tr>
<tr>
<td>HBCPs*</td>
<td>4.38 (0.87)</td>
<td></td>
</tr>
<tr>
<td>Campus Climate &amp; Campus Life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWCPs*</td>
<td>4.35 (0.50)</td>
<td>0.639</td>
</tr>
<tr>
<td>HBCPs*</td>
<td>4.28 (0.63)</td>
<td></td>
</tr>
<tr>
<td>Campus Support Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWCPs*</td>
<td>4.50 (0.49)</td>
<td>0.962</td>
</tr>
<tr>
<td>HBCPs*</td>
<td>4.50 (0.59)</td>
<td></td>
</tr>
<tr>
<td>Student Centeredness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWCPs*</td>
<td>4.51 (0.60)</td>
<td>0.882</td>
</tr>
<tr>
<td>HBCPs*</td>
<td>4.49 (0.63)</td>
<td></td>
</tr>
<tr>
<td>Instructional Effectiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWCPs*</td>
<td>4.66 (0.47)</td>
<td>3.72 (0.59)</td>
</tr>
<tr>
<td>HBCPs*</td>
<td>4.73 (0.39)</td>
<td></td>
</tr>
<tr>
<td>Responsiveness to Diverse Populations†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWCPs*</td>
<td>4.47 (0.95)</td>
<td>2.56 (1.30)</td>
</tr>
<tr>
<td>HBCPs*</td>
<td>4.47 (0.83)</td>
<td>0.977</td>
</tr>
</tbody>
</table>

*HBCPs = Historically Black Colleges of Pharmacy; PWCPs = Predominantly White Colleges of Pharmacy.
†Single-item measure.
‡P significant at alpha level 0.05.
American students from PWCPs. With 1 exception, there were no statistically significant differences on the measures of importance and satisfaction between the African American pharmacy students based on institutional type. In the area of responsiveness to diverse populations, however, students at HBCP had significantly higher scores.

Table 3 shows the performance gap scores for the theoretical scales. There was a larger performance gap score (more unmet expectations) for the single-item measure on responsiveness to diverse populations. The African American students who attended PWCPs produced a larger performance gap score on the responsiveness to diversity indicator.

In response to the “yes or no” portion of the open-ended question on student perceptions as to whether institutional strides had been made to increase or retain minority students, 10 (66.7%) of the 15 respondents from HBCPs answered “yes.” Of the 51 respondents attending PWCPs, 30 (58.8%) said “yes.” There were no significant differences for the dichotomized answers, based on institutional type ($P = 0.585$). A thematic analysis was used to organize and make judgments about the meaning of the open-ended qualitative responses on institutional strides for racial/ethnic diversity, which provided more revealing results. Some of the actual student responses are reported verbatim without editing to maintain the integrity of the responses and to give poignancy to the statements. The names of the colleges of pharmacy are disguised by using the letter X to denote a college.

The most prominent themes that emerged revealed respondents’ concerns about the need to increase minority student enrollment, the need to increase minority student retention, and the university’s responsiveness to diversity. Open-ended responses as to whether survey respondents believed that their institutions had made strides to increase and retain minority pharmacy students clustered along institutional types. Among the institutional type responses, however, there were also differences of opinion. The major theme that emerged from about half of the African American students who attended PWCPs and who provided open-ended responses was that their respective colleges were striving to increase minority student recruitment, but that not enough was being done to retain them. This student’s response captures this general theme.

Yes, it’s evident that there is an effort in place to increase the number of minority students at the college. I have seen the number steadily increase as the years have gone by. Yet I feel that a greater effort needs to be done in the area of retention. I feel that not enough is done to help students that are at high risk to not pass a class. I think that advisors should be more concerned about their students and should approach their student at the earliest sign that they are performing below par.

A student from PWCP

Some of the respondents from PWCPs who perceived that their colleges were making strides in minority recruitment efforts seemed to indicate that students also had a role, as evidenced by the following response.

Yes. I feel however that the responsibility lies with the current students to perform above and beyond in order to increase enrollment. In other words, current students should pave the way for new students through excellent (outstanding) performance.

A student from PWCP

The other half of African American students from PWCPs (who provided open-ended responses) was very emphatic about the lack of progress by their institutions in recruiting and retaining minority students. This student’s response summed up the theme that emerged from this group.

No, not at all. My first semester as freshman, we were 15 minority and by the end of the first semester, there were 2 minority students including myself. We also have students coming in as preferred students because of grades, SAT scores, etc, and they end up flunking out with no concern from administration. Retention is now done by organizations I am involved in because myself and the other minority care. We get involved with orientation, get all minorities together and explain to them this is what to expect and this will be expected of you. Network, talk to professors, use study groups, etc. However, the university still has not tried to address this although we have brought this to their attention several times!!! At X university you do a lot more “fighting” to get what your classmate (who is usually white) already has received. X university is a great school but it needs more cultural awareness and diversity which I think will come in time.

A student from PWCP

There was a general feeling among African American students at PWCPs that the percentage of African American and Hispanic pharmacy student representation had remained the same but that other racial and ethnic minority student populations had increased. It is important to note that in some of the PWCPs represented in this survey sample, Asian-American students are counted as minority while in other PWCPs only African Americans, Hispanics, and Native Americans are counted as minorities. There was a feeling by a student respondent from a PWCP that “it seems as if the university meets a designated ‘quota’ and stops there.”
Table 3. Performance Gap* Between Importance and Satisfaction for African American Pharmacy Students

<table>
<thead>
<tr>
<th>Scale/Indicator</th>
<th>Mean Performance Gap Scores (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic advising effectiveness</td>
<td>1.00 (0.92)</td>
</tr>
<tr>
<td>Campus climate &amp; campus life</td>
<td>0.94 (0.75)</td>
</tr>
<tr>
<td>Campus support services</td>
<td>1.04 (0.71)</td>
</tr>
<tr>
<td>Student centeredness</td>
<td>1.29 (0.89)</td>
</tr>
<tr>
<td>Instructional effectiveness</td>
<td>0.94 (0.65)</td>
</tr>
<tr>
<td>Responsiveness to diverse populations</td>
<td>1.68 (1.44†)</td>
</tr>
</tbody>
</table>

Performance gap score calculated by subtracting satisfaction score from the importance score; a larger performance gap score for a scale indicates that the institution is not meeting students’ expectations.

†Single-item measure and sole indicator where significant differences between responses from students at PWCPs (n=57, performance gap mean ± SD = 1.94 ± 1.48) and HBCPs (n=15, performance gap mean ± SD = 0.67 ± 0.61); t = 5.07; P<0.001.

I do not feel that X college of pharmacy recruits minority students like they really want them. I believe they do it so their “quotas” are met. Then again, X college of pharmacy is a pretty new pharmacy program (X years old) — and we are competing against X for students. Though I have not seen any blatant discrimination against the few minorities that are there — I have heard stories of discouraging comments made by professors and administrators. We have more foreigners (Saudi Arabians mostly and Africans) than blacks. I believe X pharmacy school should make a more enthusiastic effort to the surrounding HBCU’s in the area (A,B and C universities) to recruit more minorities (mainly blacks). These 3 schools alone produce some of the most intelligent, positive, and goal-oriented leaders of our next generation.

A student from PWCP

It was noted that not only was there divergence of opinions between students from PWCPs and HBCPs, but there were some divergent opinions within the same institutions. For example, while some students applauded their colleges for increasing minority enrollment and making great efforts at retaining minority students, other respondents from the same college of pharmacy portrayed a different opinion, as seen by the following responses.

Yes, we have made great strides. We have set up programs to help increase minority enrollment, visiting high schools and talking to incoming freshmen.

A student from PWCP

A student from the same pharmacy school as the above respondent wrote:

No, I don’t feel that my institution has made adequate strides to increase minority students. We have had meetings with the “powers that be” and we have yet to see positive changes.”

A student from PWCP

Responses from students attending HBCPs were very positive about minority student enrollment, which was expected. The general theme from the students from HBCPs was that students who attend HBCPs do graduate and are generally satisfied with their college experiences. HBCPs were perceived as aggressively recruiting students with offers of scholarships and excellent postgraduate programs. It was also the general consensus from the respondents that HBCPs were striving to attract the best and brightest African American students in the country. The admissions standards were considered as competitive as or more so than those of some PWCPs. There was a recurring written theme of the type of environment students encounter at HBCPs

For example:

“When students visit our campus, they feel at home because the environment is full of love, caring, fun and beauty. This corresponds to our motto ... X pharmacy school truly knows how to live up to their motto. When a student feels comfortable and if they feel as if they belong, they tend to choose such a school to continue their education.” A student from HBCP

DISCUSSION

The racial and ethnic composition of HBCPs and PWCPs may be central to the institutional culture they create. If there are unique programs and services that create a more supportive environment for African American pharmacy students at HBCPs, these should
be identified to ascertain whether it is possible to enhance or implement them to facilitate recruitment and retention of highly qualified underrepresented minority students at PWCPs. Each type of institution offers many unique benefits to attending, and we do not advocate that African American pharmacy students select one over the other based on our findings. Rather, our goal was to help identify issues and opportunities regarding campus experiences that are salient to African American pharmacy students. Knowledge of these issues should help university administrators and other decision makers identify areas of institutional strength, as well as areas where improvements are needed, to enhance the recruitment and retention of qualified minority students who are underrepresented in pharmacy education.

We acknowledge that multiple variables influence where students choose to go to college, beyond whether the institution is an HBCU or PWI. These variables likely include geographic location of the institution, costs of attending and student financial standing, family background, individual interests, and other reasons. Further research is warranted to explore what variables influence (and the type of relationship) college choice among African American pharmacy students because this was beyond the scope of the present study. Regardless of institutional type, the learning environment should be comfortable and conducive to fostering and stimulating intellectual and personal growth for all students.

Contrary to other college student research performed on African American students in HBCUs and PWIs, there were no significant differences found in the perceptions between African American pharmacy students at HBCPs and PWCPs in advising effectiveness, campus climate and campus life, institutional effectiveness, campus support services, or student centeredness. We offer the following possible explanations. Other studies were conducted primarily on undergraduate students with different majors and diverse disciplines. This sample of African American students comprised a more homogenous group, with the same academic major of pharmacy. It is speculated that similar attributes are found among the types of students who are attracted to and admitted to professional pharmacy programs (eg, strong pre-pharmacy academic records indicating propensity for success, altruistic views, etc). In addition, we suspect there were no differences found due to the homogeneity among pharmacy schools and colleges. AACP, the American Council on Pharmaceutical Education, and other organizations help establish institutional norms, which pharmacy schools are expected to follow. These discipline-specific norms may offset differences, which might be seen in the general student population for undergraduate students where institutional standards are more disparate.

It is possible, however, that the limitations of our sampling method failed to reveal differences (ie, the small sample of readily available subjects). The respondents in this sample were students who were active in the SNPhA, as demonstrated by their attendance at the national annual meeting. Thus, they displayed other similarities (eg, interest levels, goal-oriented, involvement and possible leadership positions within their colleges), which might transcend institutional differences. Results might be different with a larger probability sample. While we believe that the results are germane, there is no attempt to generalize the findings beyond this sample. This cross-sectional survey may not be representative of African American students at all colleges of pharmacy. However, the findings can serve as a lens by which colleges of pharmacy can begin to examine the factors that are considered important in the recruitment and retention of their underrepresented professional students.

It is recommended that the study be replicated with larger samples drawn from more PWCPs and HBCPs. Additionally, we used a pre-existing survey instrument, the Noel-Levitz SSI, which was developed for the general undergraduate college population. Other researchers may wish to develop attitudinal instruments based on more sophisticated methods of objective measurement (eg, survey development based on item response theory). Nevertheless, the theoretical foundation and responses from this sample of African American pharmacy students (representing 29 US colleges of pharmacy) should serve as a baseline for further research and heightened sensitivity.

Regardless of institutional affiliations, on average, the student respondents placed high values on the level of importance on all of the college impact scales measured in this study. Their satisfaction levels for the same scales, however, were more neutral. Supporting the educational research literature, there were significant differences between African American students at PWCPs and HBCPs in terms of their scores on institutional responsiveness to diverse populations. African American students who attended PWCPs were less satisfied regarding diversity initiatives; however, not all of these students were unhappy. The thematic analysis provided further evidence of institutional-type differences in respondent views on institutional efforts to increase and retain minority students.

Campus climate (as a general concept, not the scale in this study) embraces the culture, habits, decisions, practices, and policies that make up campus life. It is the daily environment and comfort factor that African American students experience on campus. Students and other members of the campus community who feel unwelcome or alienated from mainstream of campus life are unlikely to remain. If they do remain, they are less likely to be successful. Culture is shaped by tradition, values, and attitudes. Changing the campus climate can be a daunting and elusive task. However, because the climate is so central to all other efforts to improve minority participation, it is the point of departure and the culmination of all efforts.\textsuperscript{10}

To some extent, the demarcations between HBCUs and PWIs are diminishing. Most HBCUs have become very proactive in their recruitment efforts not only to lure academically talented minority students, but also to attract qualified white students for enrollment at their institutions.\textsuperscript{45} A year 2001 newspaper article noted that there were 4 HBCUs where white students made up the majority of students, and white students totaled at least 20\% of the student population at 10 other HBCUs.\textsuperscript{45} The perception that predominantly minority institutions are lacking in both program quality and strong faculty human capital is slowly eroding. The reason this perception may have been true in the past was due to funding inequities. For decades, education at predominantly minority institutions has been plagued by inadequate support from the state and federal level for research and development, faculty improvements, and facility maintenance.\textsuperscript{45} With more federal funding now benefiting minority institutions, the programs offered and the quality of the instructional staff also have gone up. In this study, there were no differences found between the minority pharmacy students in HBCPs and those in PWCPs with respect to the scale items on instructional effectiveness.

What are the implications of this study’s findings to both types of pharmacy colleges? It is good news for university administrators and faculty members from the standpoint that only one significant difference was found between students at HBCPs and PWCPs. Students in HBCPs reported that their institutions were more responsive to diverse populations. University administrators and faculty are urged to examine closely the reasons for this discrepancy.

With respect to recruitment and retention, the competition for well-qualified African American pharmacy students and other underrepresented groups is real. The stigma that was once associated with earning a degree from a minority institution is now becoming a thing of the past. University administration may want to position their colleges critically and strategically to prevent the talent drain of competitive minority students in their states who leave the state for another pharmacy school. As part of this, they should examine the intersection of race/ethnicity and pharmacy school culture. It is hoped that this paper will begin to extend knowledge about African American pharmacy students’ experiences in HBCPs and PWCPs and provide a framework regarding the types of activities and programs to which to devote more resources and time from the college and institutional level. University administrators must take heed of these issues in their efforts to build a campus environment that is conducive to intellectual pursuits, and also nurtures students with the long-range goal of serving a more global and inclusive society.

There are many potential benefits to enhanced racial and ethnic campus diversity. Students who receive education in racially heterogeneous institutions tend to assess their academic, social, and interpersonal skills more highly than those who attend more homogeneous colleges and universities.\textsuperscript{46,47} Diversity challenges stereotypes and encourages critical thinking. Great minds do not always think alike. Racial and ethnic diversity provides an institutional environment where students learn to communicate effectively with people from varied backgrounds and who have different perspectives, something that enriches the experiences for all.\textsuperscript{48} Given the changing societal demographics, diversity of the pharmacy student population should help promote effective communications across cultural lines, which should result in improved pharmaceutical care provision for diverse populations upon graduation.

The AACP ad hoc Committee on Affirmative Action and Diversity reported that there is under representation among certain minority student groups in pharmacy schools, and under representation of minority pharmacists and faculty members.\textsuperscript{1} The AACP has taken leadership in the public discourse. Having now embraced the much heralded 21st century pluralistic society, we urge that all pharmacy schools commit to help create a pharmacy student population that is truly pluralistic and culturally competent. The cost of failure to do so would be too high for all citizens.

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