RESEARCH

Factors Associated with Student Pharmacist Philanthropy to the College Before and After Graduation

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Objective. To examine the early stages of a student giving program, to evaluate the program's influence on college donations, and to evaluate other factors that may affect student and year-one post-graduation giving at a college or school of pharmacy.

Methods. A review of student records for graduates of 2013 and 2014 was conducted. Data included student characteristics, scholarship support, international program participation, senior class gift participation, and postgraduation giving. Mann-Whitney U, Kruskal-Wallis, Wilcoxon signed-rank, and Chi-square analyses were performed.

Results. Of 273 graduates, the majority were female (57.1%) and white (74%). Class of 2014 contributed a higher amount to the class gift than the prior class. In 2014, those who received scholarships gave higher amounts to the class gift. For the combined classes, there was an association between the number of students who gave pregraduation and the number who gave postgraduation. In the 2013 class, individuals gave greater amounts postgraduation compared to pregraduation, and a higher percentage of alumni (8%) gave postgraduation compared to alumni from the previous class (<1%).

Conclusion. Participation in year-one postgraduation giving increased after implementation of the senior class gift program. Receiving scholarships influenced giving to the class gift but was not associated with postgraduation giving. Future studies are needed to develop a more comprehensive understanding of student and alumni philanthropy.

Keywords: alumni, pharmacy students, philanthropy

INTRODUCTION

Traditional income sources for colleges and schools of pharmacy include revenues generated from tuition, grants, contracts, services, licenses and patents, other restricted and unrestricted funds, and, in the case of public institutions, state support. With the downturn of the economy in 2008, state funding for public institutions of higher education decreased dramatically. According to a report by the Center on Budget and Policy Priorities, states are spending 23% less per student compared to the prerecession era, and schools of pharmacy are not exempt from budget cuts.¹ As a result, public schools of pharmacy must resort to strategies such as raising tuition to cover costs of operation. Another option to bolster funding is to increase philanthropic giving. Historically, private institutions exhibited a greater reliance than public institutions on funding from gifts and endowments.¹ However, as state funding declines for public institutions, the need for expanded philanthropic sources is becoming

more apparent for public institutions and thus a priority for all postsecondary institutions.

In 2011, higher education received approximately \$30.3 billion through philanthropic giving; 26% of this funding resulted from alumni donations.² As indicated in the literature, the realization of the value of developing a culture of giving increased in recent years, especially among undergraduate students prior to their transition to alumni status.³ The expectation is that if students are made aware of the importance and impact of philanthropic giving, they will be more likely to become donors as alumni.⁴ According to the Council for Advancement and Support of Education (CASE) and other sources, successful strategies to promote student giving include student philanthropy educational programs, peer networking, and collaborations between development/alumni offices and student leadership groups.^{5,6} Another common mechanism to introduce students to philanthropy is the senior class gift, for which funds are collected from students and presented as a donation to the college at commencement or convocation.⁶

Institutional quality, as well as campus experiences/engagement, motivate student and alumni philanthropy

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and play a role in undergraduate alumni giving.⁷⁻¹¹ Specifically, alumni are more likely to give to institutions they believe provide high quality programming and to those that offer more positive campus experiences and opportunities for engagement. The role of student financial aid or scholarship in encouraging alumni giving is less clear-cut. While Cochi Ficano and Cunningham found that institutions providing greater need-based scholarships received a higher level of alumni financial support, neither Baade and Sunberg nor Meer and Rosen found an association between scholarship aid and alumni giving.^{9,12,13}

Although several studies of student and alumni giving at the undergraduate level have been performed, a literature search revealed that little information on student giving programs is available for professional or graduate programs, and no published studies assess student and alumni giving in schools of pharmacy. This study examined the early stages of a student giving program, evaluated the influence of this program on college donations, and examined select factors that may affect student and year-one postgraduation giving at a school of pharmacy. Study objectives were to measure the effectiveness of a newly implemented senior class gift program and to examine the relationships among demographic factors, financial support provided to students during pharmacy school (including scholarships and international program participation), participation in the senior class gift program, and year-one postgraduation giving.

METHODS

In fall 2012, the University of Tennessee College of Pharmacy (UTCOP) began planning its inaugural annual senior class gift program, wherein the graduating class would donate monetary funds or a gift to the college. The program was instituted and students were informed of the program in March 2013. The gift would be presented at the convocation ceremony in May. All graduating students were asked to contribute to the senior class gift fund, but giving was voluntary and no minimum or maximum amount is specified for donation. The UTCOP had 2 primary internal goals for the senior class gift program. The first was to increase giving to the program in each graduating class, both in terms of amount given and number of participants. The second, and perhaps more important, goal was to familiarize students with the process and importance of giving so they would be more likely to become alumni donors.

A retrospective review of student records at the UTCOP, a public institution, was conducted for the classes of 2013 and 2014. For each student, characteristics including age, gender, race/ethnicity, and campus site (Memphis or Knoxville) were collected. Data on receipt of scholarships throughout pharmacy school and participa-

tion in the international program (a month-long advanced pharmacy practice experience for which the college pays at least 50% through an endowment) were also collected. These data were included as independent variables because both programs involved students receiving significant financial support from UTCOP.

Scholarship data were analyzed both as a categorical variable (received a scholarship, yes/no) and as continuous variables (number of scholarships received; total scholarship amount received during 4 years of pharmacy school). International program participation was analyzed as a categorical variable (participated, yes/no). Dependent variables included whether students contributed funds to the senior class gift program and the amount contributed, and whether graduates donated funds to the college in the year following graduation and the amount donated. Investigators were blinded to student/alumni names and other identifying characteristics. The study was approved by the University of Tennessee Health Science Center Institutional Review Board.

Statistical analyses were performed using SPSSv20.0 (IBM, Armonk, NY). The 2 classes were compared to assess changes in student giving as the senior class gift program became more established; however, they were not compared on postgraduation giving, as only 6 months of postgraduation data were available for the Class of 2014. Instead, the association between pregraduation and postgraduation giving for the combined classes was assessed using Chi-square. Each class was analyzed separately to assess factors related to giving. Participant characteristics were summarized by descriptive statistics including frequencies, means, medians, standard deviations, and ranges. As the data were not normally distributed, non-parametric tests were used. The Mann-Whitney U test and the Kruskal-Wallis test were conducted to determine the association between independent categorical variables (gender, race/ethnicity, campus, scholarship received, international program participation), amount given to senior class gift, and amount of year-one postgraduation giving.

Mann-Whitney U tests were also used to determine the association between "giving groups" (ie, those who gave to the senior class gift vs those who did not and those who gave postgraduation vs those who did not) and total scholarship amount. The Wilcoxon signed-rank test (non-parametric paired sample *t* test) was used to compare amount given pregraduation to the class gift program with the amount given one-year postgraduation among the 2013 students. Spearman rho (r_s) correlations were calculated to determine the association between age, number of scholarships received, total scholarship amount, amount given to senior class gift, and amount of year-one postgraduation giving. Chi-square analyses were conducted to examine independency between independent categorical

characteristics and giving groups. The a priori significance level was 0.05.

RESULTS

The study included 273 UTCOP graduates (class of 2013 $n=147$; class of 2014 $n=126$). As noted in Table 1, the majority of students were female (57.1%) and White (74%). Average age was 28.1 years ($SD=3.5$). Twenty-two percent of students participated in the international program, and 46.5% received at least one scholarship during their 4 years of pharmacy school. The average number of scholarships received per student was 1.2 ($SD=1.5$), and the average total scholarship amount was \$6768 [$SD=12\ 657$ (median \$1000)]. A majority of students contributed to the senior class gift (59%), with an average gift per student of \$13 [$SD=19$ (median \$10)]. Twenty individuals contributed postgraduation (7.3%). There was a significant association between those who gave to the senior class gift and those who gave postgraduation ($\chi^2=3.943$, $p<0.05$). In the comparison of the 2 classes (Table 2), the class of 2014 contributed a significantly higher amount per student to the senior class gift compared to the class of 2013 [\$19 ($SD=24$) vs \$7 ($SD=11$), respectively; $p<0.01$]. Significantly more people in the class of 2014, 81%, gave to the senior class gift compared to 40% who gave in the class of 2013 ($\chi^2=46.72$, $p<0.01$).

In the analysis of the 2013 class, there were no differences in amount given to the senior class gift or participation in the class gift program based on the independent variables (age, gender, race/ethnicity, campus, number of scholarships received, total scholarship amount, and international program participation). The average amount of year-one postgraduation giving per student was \$9 ($SD=42$), with approximately 8% of the class donating to the college. Among the 12 who contributed postgraduation, the mean gift was \$110 ($SD=106$). Individuals donated higher dollar amounts postgraduation compared to pregraduation ($p<0.01$). Males in the class of 2013 had significantly higher postgraduation giving compared to females from that class [\$17 ($SD=57$) vs \$4 ($SD=27$)], $p=0.01$). Additionally, a larger percentage of males ($n=9$, 15.3%) gave to the college in the year following graduation compared to females ($n=3$, 3.4%; $\chi^2=6.61$, $p=0.01$). No other variables were associated with postgraduation giving.

In the analysis of the class of 2014, those who received scholarships gave a significantly higher amount to the senior class gift compared to those who did not receive scholarships [\$24 ($SD=31$; median \$20) vs \$13 ($SD=11$; median \$10), respectively, $p<0.01$]. Additionally, number of scholarships received during pharmacy school was significantly, positively correlated with amount given to

Table 1. Demographic, Academic, and Giving Characteristics of the Combined Classes of 2013 and 2014

Characteristics	Combined Classes N=273 (%)
Campus	
Knoxville	103 (37.7)
Memphis	170 (62.3)
Gender	
Female	156 (57.1)
Male	117 (42.9)
Race/ethnicity	
Asian	35 (12.8)
Black/African-American	33 (12.1)
Hispanic	1 (0.4)
Non-Hispanic White	202 (74)
Other	1 (0.4)
Missing	1 (0.4)
Mean Age in Years (SD)	28.1 (3.5)
Mean Number of Scholarships Per Student (SD)	1.2 (1.5)
Received Scholarship	
Yes	127 (46.5)
No	146 (53.5)
Mean Total Amount of Scholarships Received (SD)	\$6768 (12 657)
Participated in International Program	
Yes	60 (22)
No	213 (78)
Mean Amount Contributed to Class Gift Per Student (SD)	\$13 (19)
Total Amount Contributed to Class Gift	\$3443
Contributed to Class Gift?	
Yes	161 (59.0)
No	112 (41.0)
Participated in Postgraduation Giving?	
Yes	20 (7.3)
No	253 (92.7)

the senior class gift ($r_s=0.214$; $p=0.01$). Total scholarship amount was also significantly, positively correlated with amount given to the senior class gift ($r_s=0.184$; $p=0.04$). No other variables were associated with senior class gift program participation.

DISCUSSION

This study was the first of its kind to publish the results of a program designed to promote a culture of giving among pharmacy students. Specifically, this study assessed the early stages (first 2 years) of a class giving program and identified factors associated with student and alumni giving. After reviewing the annual giving of recent graduates (eg, only 0.6% of the class

Table 2. Comparison of Student Characteristics of Classes of 2013 and 2014

Characteristics	Class of 2013 n=147 (%)	Class of 2014 n=126 (%)	p value
Campus			
Knoxville	57 (38.8)	46 (36.5)	0.70
Memphis	90 (61.2)	80 (63.5)	
Gender			
Female	88 (59.9)	68 (54)	0.33
Male	59 (40.1)	58 (46)	
Race/ethnicity			
Asian	21 (14.3)	14 (11.1)	0.61
Black/African-American	17 (11.6)	16 (12.7)	
Hispanic	0	1 (0.8)	
Non-Hispanic White	107 (72.8)	95 (75.4)	
Other	1 (0.7)	0	
Missing	1 (0.7)	0	
Mean Age in Years (SD)	28.0 (7.8)	28.2 (4.2)	0.73
Mean Number of Scholarships Per Student (SD)	1.2 (1.5)	1.2 (1.6)	0.72
Received Scholarship			
Yes	68 (46.3)	59 (46.8)	0.93
No	79 (53.7)	67 (53.2)	
Mean Total Amount of Scholarships Received (SD)	\$6228 (11882)	\$7231 (13 309)	0.45
Participated in International Program			
Yes	32 (21.8)	28 (22.2)	0.99
No	115 (78.2)	98 (77.8)	
Mean Amount Contributed to Class Gift Per Student (SD)	\$7 (11)	\$19 (24)	0.01
Total Amount Contributed to Class Gift	\$1087	\$2356	N/A
Contributed to Class Gift?			
Yes	59 (40.1)	102 (81.0)	<0.01
No	88 (59.9)	24 (19.0)	
Participated in Postgraduation Giving? ^a			
Yes	12 (8.1)	8 (6.3)	N/A
No	135 (91.8)	118 (93.7)	

^aOnly 6 months of postgraduation data was available for the class of 2014, while 12 months of data was available for class of 2013

of 2012 gave to UTCOP one year postgraduation), we started brainstorming on programs that could be quickly initiated to foster an improved culture of giving among UTCOP students who would soon graduate. A senior class gift program seemed a logical place to start.

To initiate the program each year, the dean meets with the class presidents to discuss student philanthropic efforts, and the presidents are then charged with spearheading the senior class gift program. The class presidents encourage class giving by conducting sessions with students to describe the senior class gift program and how funds donated to the college are used to support students (eg, scholarships) and by sending out regular reminder e-mails to students reiterating this information, encouraging donations, and providing updated amounts of funds raised. Individual gift amounts are not publically disclosed, but the total amount of the senior class gift is announced at convocation, and all students who contributed are recognized regardless of individual gift amount.

The inaugural senior class gift program was in 2013, and that class donated \$1087, with approximately 40% of students in the class contributing. In 2014, the program had even greater success, with \$2356 donated by approximately 80% of students. The class of 2014 also committed to endow a scholarship at a minimum level of \$25 000. From this we learned—and now encourage—that the student gift should include not only immediate donations but also future pledges after graduation.

Members of the 2014 class were significantly more likely than the 2013 class to donate to the senior class gift and to give larger amounts. Several reasons may account for these differences. For example, the senior class gift program was first implemented during the class of 2013's final year of pharmacy school. Therefore, no precedent existed at UTCOP for organizers and students to use as a comparator or barometer of success. With the results of the 2013 class gift effort, the class of 2014 had a measure of comparison and was able to critically examine the

process used by the previous class. As a result, the 2014 class was able to improve upon the implementation and delivery of the program. Additionally, knowledge of the 2013 results fostered a spirit of competition that may have driven greater giving in the class of 2014, a motivator not available to the class of 2013. This suggests momentum created by previous classes and competition between classes may facilitate greater and more active giving than direct requests for donations.

Moreover, refinements were made in the senior class gift program during its second year of operation which benefited the class of 2014. For example, students in the class of 2013 were not informed of the program until 3 months prior to graduation, whereas the 2014 class were informed in the fall of their senior year. Additionally, many of the 2014 students attended the 2013 convocation and were fully aware of the senior class gift program and its results. Therefore, the class of 2014 had a longer period to roll out their program and plan for the gift.

Other improvements in the program that may have accounted for differences between the 2 classes were increased communication regarding the program in the class of 2014 (eg, more reminder e-mails were sent), and implementation of a scholarship luncheon ceremony at which students who received scholarships were recognized and a guest speaker discussed the importance of giving back to the college. Based on this experience, we recommend other schools of pharmacy consider beginning student giving programs in the fall to allow ample time for gift preparation, providing programming that emphasizes the importance of giving and being philanthropic, and communicating about the giving program frequently and consistently.

Regarding postgraduation giving in the combined classes, the number of students who gave to the senior class gift was significantly associated with the number of graduates who gave postgraduation, providing evidence that pregraduation giving affects postgraduation giving. Additionally, the average amount given by individuals in the class of 2013 was higher one year postgraduation compared to pregraduation, which is also an indicator of the success we envisioned for the program. Although only 8% of the class of 2013 donated one year after graduation, this is a improvement compared to the previous class. Less than 1% of the class of 2012, which did not have exposure to the senior class gift program, donated to UTCOP one year postgraduation. We speculate that heightened awareness regarding the importance of giving as well as the opportunity to give to the senior class gift may have had some influence on the decision of new alumni to donate postgraduation. As the senior class gift program matures, consistent increases in alumni participation in postgraduation giving will be a more telling indicator of its long-term impact.

The only factor in the analysis related to postgraduation giving was gender, as males in the 2013 class were more likely to give than females one year postgraduation and to donate greater amounts. To better understand these findings and provide context to the gender-based differences seen in postgraduation giving, future studies should consider other factors that may play a role in alumni giving such as alumni satisfaction with their educational experiences, level of alumni outreach and engagement, employment, and income level following graduation. For example, approximately one-third of the class of 2013 graduates went into residency programs, thus making considerably less money than the majority (51%) of graduates who were not in postgraduate training programs.

The study evaluated the 2 classes individually to explore factors that may affect pharmacy student philanthropic giving. Findings regarding the senior class gift program were not consistent across the classes. In the class of 2013, none of the independent variables, including students receiving scholarship support, were significantly related to class gift giving. By contrast, in the class of 2014, students who received a scholarship, a higher number of scholarships, and a larger total scholarship amount during pharmacy school were more likely to donate a greater amount to the class gift.

Given there is no consistent relationship between scholarship support and student/alumni giving, it is unsurprising that results regarding this factor were mixed between the 2 classes.^{9,12,13} Thus, future studies on student giving should consider the possible impact not only of scholarships, but other forms of financial support provided by schools of pharmacy such as travel funds for professional meetings and awards/special recognitions.

To gain additional information regarding student giving, we had informal discussions with several students from both classes. The top 3 reasons students gave for not contributing to the senior class gift program were they did not feel they had the money to donate because of other expenses, such as college and living expenses including upcoming relocation costs; during their exit interview, they were reminded of the total amount of student loans they would be expected to begin paying back soon after graduation, which was daunting information when being asked to donate money; and finally they had paid tuition and, as a result, did not feel compelled to donate (this was less of an issue in the class of 2014). Schools of pharmacy attempting to implement similar senior class gift or other philanthropic programs should develop strategies to address these potential barriers to giving.

As with all studies, there were limitations. As this was a cross-sectional review of records, causality cannot be established between significant independent variables

and student/alumni giving. Sample size was limited to the 2 classes who participated in the student giving program. However, our sample is reflective of the national pharmacy student population.¹⁴ For example, the majority of UTCOP students are female (57% of the classes of 2013 and 2014), similar to 61% of student pharmacists nationally. Likewise, underrepresented minorities constituted almost 13% of the classes of 2013 and 2014 at the college, which is similar to the nearly 12% nationally.

Because data available for UTCOP student records was limited, exploring factors such as student socioeconomic status and income level following graduation were beyond the scope of the study. However, future studies of pharmacy students and alumni should consider addressing these variables. Additionally, as the senior class gift program has only recently been implemented at the institution, giving may become more standardized as the program becomes part of college tradition. For example, in the class of 2015, 86% of students contributed \$3410 to the class gift. Studies of future classes should consider a time-series analysis of student and alumni giving patterns as the senior class gift program becomes a more integral aspect of college operations.

This is the first published study to examine the effectiveness of a program of student giving and factors related to student and alumni giving in schools of pharmacy. Although the program is in its infancy, our experiences thus far have helped us to improve the program. We believe the assessment's findings may prove useful to other schools of pharmacy as they develop and implement student giving programs. Of note, in examining the data for the combined classes, the number of students giving to the senior class gift was associated with number of students giving postgraduation. Additionally, exposure to the senior class gift program may have contributed to the increased amount donated postgraduation compared to pregraduation. Participation in the class gift program may have also contributed to the difference between the classes of 2012 (which did not participate) and 2013 (which did participate) in the percentage of new alumni who donated during the first year after graduation.

CONCLUSION

Student giving increases as the senior class gift program becomes more ingrained in school tradition. Additionally, receiving a scholarship may have a positive influence on student giving. Recommendations include implementing student giving programs early in the school year to maximize time for outreach to students, providing programming on the importance of giving and philanthropy, and providing frequent and consistent communication about student giving programs. We also recommend that schools of pharmacy develop a more comprehensive

understanding of student and alumni philanthropy through investigation of factors that may influence student and postgraduation giving such as income level, living expenses, concerns about student loans, and satisfaction with educational experiences. Once those factors are better understood, schools of pharmacy will be able to more effectively design programs and strategies that encourage and optimize support from students and alumni.

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