Educational Research Applications

Review Article

The Impact of Student Academic Advising on the Successful Matriculation throughout the Doctor of Pharmacy Program

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Abstract

This paper investigated the relationship between academic advising and the successful matriculation of a pharmacy student, by examining factors such as satisfaction after an advising meeting, including positive or negative experiences, adherence to recommendations, and benefits from the meetings. Information was gathered in an observational study, utilizing surveys distributed to 77 first-year pharmacy students at Howard University College of Pharmacy. The research studied the relationship by examining the student's demographics such as age, whether they worked before entering the pharmacy program, and annual income, which also showed statistical significance when linked to their experience with academic advising. Results from this study showed availability of advising has significance regarding matriculation, student success, and motivation in the pharmacy program as a first-year student. The data also suggested that there is also a correlation of satisfaction by participants regarding the availability of the advisor and how many times a student meets with them.

Introduction

A Doctor of Pharmacy (PharmD), is a professional degree that can be achieved in either 3 or 4 years. In order to obtain this prestigious degree, one must go through an extensive educational curriculum, completion of up to 2,000 hours of clinical experience, earn a grade average point of 2.5" or higher in all required coursework, and meet the many other school-specific stipulations. The PharmD program encompasses challenging, clinical and experiential components that must be completed in order to become eligible for graduation and to take the licensing exam. However, with helpful measures put in place and implementation of useful resources; students will have the support they need to matriculate successfully through the program.

Students within programs of health professions, such as the Pharm.D. program, utilize the mentorship and advice of faculty, as academic support and guidance throughout their journey in the program. "There are specific services a school of pharmacy is expected to provide, including ensuring student access to resources necessary for success, such as academic support personnel [1]. Students in rigorous health programs rely on services that can assist them, because they may face academic and professional issues that may be different from students of other programs. An assessment of research published on medical students showed that satisfaction with faculty advising was dependent on meeting at least one time and increased with an increase in visits [2].

The Accreditation Council for Pharmacy Education (ACPE), states in the 2016 Accreditation Standards, that pharmacy institutions should provide all students with adequate academic advising, curricular and career-pathway counseling in order to meet the needs of its students. According to ACPE standard 17a, under guidance for progression, an essential factor that has been found to contribute to student success, retention and attrition are having supportive and proactive student services that comprise of mentoring/advising by faculty members, preceptors, and professional staff [3].

Background

Academic advising is considered a process that assists students to realize the maximum educational benefits and help them to better understand themselves and to learn to use the resources of th e institution to meet their special educational needs and

aspirations [4]. However, in some institutions, academic advising has not been given the needed attention [5] and many students go to school with limited interactions with their advisors and are left feeling confused and unsatisfied with the advising services offered. It is imperative that professional educational programs, like Doctor of Pharmacy programs; design advising structures that cater to the demand and needs of their students. The purpose of this study is to investigate the usefulness of student advising in pharmacy programs and if it makes an impact on the student's successful matriculation as a first professional year student.

There are two different approaches to advising that can be implemented in order to accommodate different styles of students. The two advising styles are called prescriptive and developmental advising. With perspective advising, the advisor will tell the student what needs to be done in order to meet their graduation requirements. The student has little leeway to make their own choices when it comes to the direction of their education. While in developmental advising, the advisor will work proactively with the student and collaborate, to ensure they meet the requirement for graduation. The advisor allows the student to make choices in their education, resulting in the student being in the lead of their decisions.

In a study conducted at mid-South University, a total of 429 students were surveyed to discover what style of advising they prefer and what style of advising their advisor uses. It was determined that 95.5% students preferred developmental advising style and 78% of students were receiving developmental advising [6]. While faculty advising is paramount for the success of the student, the type of advising is also critical toward student development and satisfaction.

In addition to advising approaches, there are different models of advising that are implemented based on the structure of the school. The various models include the faculty-only model, split model, supplementary model, and satellite model. The faculty model is where a student is assigned to a faculty member in their department and they meet for a one on one interaction periodically throughout the year. The split model implements the use of advising centers for a designated group of students who have not declared a major yet. The supplementary model uses advising centers like the split model, but students are also assigned to a faculty advisor once the student has declared a degree of study. Lastly, the satellite model allows each academic unit to be responsible for their own advising, but conduct advising across the campus. Most pharmacy programs have implemented the faculty- only model, that allows the student to meet for a one to one interaction with their advisor to aid the student in developing educational and career plans that are consistent with their life goals.

Research validates that academic advising that incorporates developmental approaches and faculty-student interactions, can have a significant effect on student motivation, involvement, and retention [7-12]. However, how many times should students meet with their advisor, so they can receive the full benefits of this resource. Many pharmacy schools require a set number of times a student should meet with their advisor. To understand best practices in pharmacy student advising, a review was performed of the top pharmacy schools according to ACPE. The goal of this study is to determine the value of an advising program for the success of students during their first professional year in a pharmacy program.

Methodology

Data was collected from a total of 77 participants, who are first-year students at Howard University College of Pharmacy. A survey was created and distributed utilizing Qualtrics, which is an online data collecting and analyzing software. The survey consisted of 21 questions and the participants remained anonymous. The study variables were categorized on how often they see their advisor, experience they had with their advisor, and the overall success of the advising program. The data was rated utilizing the 5-point Likert scale, In addition, SPSS Statistical software was utilized to compare the data and to determine if advising was significant in helping students successfully matriculate through the PharmD program. To measure statistical significance, the alpha was set to a level of 0.05.

Results

Of the 77 participants in the study, there were more female than male participants, with a total percentage of 70.5% and 29.49% respectively. The majority of the students were between the age of 21-24, which consisted of 60% of the total participant population. About 61.54% of the students have a bachelor's degree and about 69.44% of the students have a health-related job. Students who mostly agreed that advisors address their academic issues to their satisfaction, amounted to about 37.18%. The students who can meet with their advisors and try to adhere to the recommendations they are given were about 46.75%. Students who are agreed they were mostly satisfied with the current co-curricular requirements and that it is beneficial towards their academic goals were about 35.9%. An average of 42.3% of the participants believe that the experiences they had with the advising sessions are pleasant and very informative. About 45.45% of the participants strongly agree that the quality of advice that they are given is beneficial to them. Lastly, about 44.87% of the participants disagree about feeling discouraged after meeting with their advisor (Tables 1-8 and Figures 1 and 2).
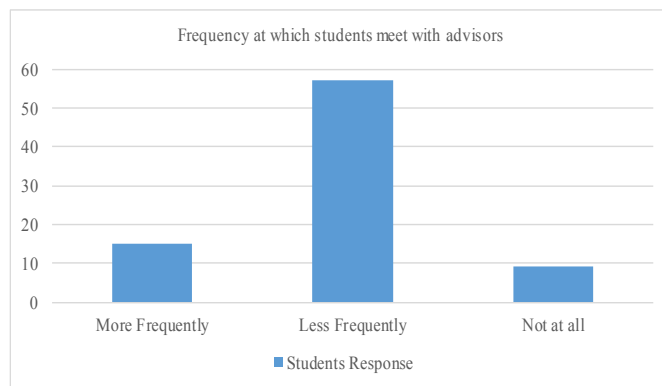
Participant Population

Female	Male
55 (71.4%)	22 (28.6%)
N=77	

Table 1: Participants by Gender

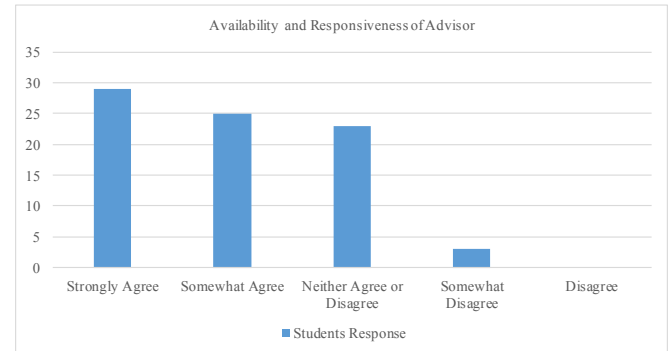| <20	21-25	26-30	30-35	>35
1 (1.3%)	48 (62.3%)	18 (23.4%)	5 (6.5%)	5 (6.5%)

Table 2: Participants by Age (N = 77).

Figure 1: Advising Frequencies.

The frequency at which students met with their advisor amounted to 15% and 55% who will go less frequently; versus the 9% who will not go at all.

Figure 2: Advisor Availability.

The availability and responsiveness of the advisor had 27% strongly agreeing and 22% neither agree or disagree, versus the 2% who somewhat disagree.

We attempt to link some of the demographic factors if they are linked to different responses. As shown in (Table 3), those who made less than $1,000 per year, 14.3% respond as somewhat agreed that advising was helpful and 42.9% strongly disagreed. However, for those who made between $30,001-$45,000 per year, 40.0% somewhat agreed that advising was helpful and 0% strongly disagreed.

Annual income vs. Advising was helpful

			I met with my advisor and it was very helpful to me.	Neither agree nor disagree	helpful Somewhat agree	Somewhat disagree	Strongly agree	Strongly disagree	Total
income		Count	2	0	0	1	0	0	0	3
		% within income	66.7%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	100.0%
	<$1000	Count	0	0	0	1	1	2	3	7
		% within income	0.0%	0.0%	0.0%	14.3%	14.3%	28.6%	42.9%	100.0%
	>$45,000	Count	0	0	2	5	0	2	0	9
		% within income	0.0%	0.0%	22.2%	55.6%	0.0%	22.2%	0.0%	100.0%
	$1001 – $15,000	Count	0	0	7	13	0	6	1	27
		% within income	0.0%	0.0%	25.9%	48.1%	0.0%	22.2%	3.7%	100.0%
	$15,001 – $30,000	Count	0	0	5	9	0	8	1	23
		% within income	0.0%	0.0%	21.7%	39.1%	0.0%	34.8%	4.3%	100.0%
	$30,001 – $45,000	Count	0	0	4	4	0	2	0	10
		% within income	0.0%	0.0%	40.0%	40.0%	0.0%	20.0%	0.0%	100.0%
	Annual income from your Job if you have worked.	Count	0	1	0	0	0	0	0	1
		% within income	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total		Count	2	1	18	33	1	20	5	80
		% within income	2.5%	1.3%	22.5%	41.3%	1.3%	25.0%	6.3%	100.0%

Table 3: Descriptive Statistics: Income vs. Advising.

Annual income relationship to if advising was helpful. Extracted from SPSS output data from this study.

Count: number of participants within income bracket and selection of helpfulness

% within income: percentage of participants within income bracket and selection of helpfulness

Has a job vs. Satisfication of advising

			My advisor addresses my issue to my satisfaction.	Neither agree nor disagree	Somewhat agree	Somewhat disagree	Strongly agree	Total
job		Count	2	0	0	0	0	0	2
		% within job	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	Have you worked or had a job before coming to Howard University pharmacy program?	Count	0	1	0	0	0	0	1
		% within job	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	No	Count	0	0	0	0	1	2	3
		% within job	0.0%	0.0%	0.0%	0.0%	33.3%	66.7%	100.0%
	Yes	Count	0	0	22	24	1	27	74
		% within job	0.0%	0.0%	29.7%	32.4%	1.4%	36.5%	100.0%
Total		Count	2	1	22	24	2	29	80
		% within job	2.5%	1.3%	27.5%	30.0%	2.5%	36.3%	100.0%

Table 4: Descriptive Statistics: Employed vs. Advising.

Employment relationship to satisfaction of advising. Extracted from SPSS output data from this study.

Count: number of participants whom are employed and selection of satisfaction

% within income: percentage of participants whom are employed and selection of satisfaction

Regarding having a working experience before coming to the pharmacy program, those who worked or had a job, 1.4% say somewhat disagreed that the advisor addressed their issue and they left satisfied. However, for those who did not work before entering the pharmacy program, 33.3% somewhat disagreed that the advisor addressed their issue and they left satisfied.

Age vs. Discouraged after advising

			I have gotten discouraged after visiting your advisor.	Neither agree nor disagree	Somewhat agree	Somewhat disagree	Strongly agree	Strongly disagree	Total
age		Count	2	0	0	0	0	0	0	2
		% within age	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	< 20	Count	0	0	1	0	0	0	0	1
		% within age	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	> 35	Count	0	0	0	1	1	1	2	5
		% within age	0.0%	0.0%	0.0%	20.0%	20.0%	20.0%	40.0%	100.0%
	21 – 25	Count	0	0	16	0	5	6	21	48
		% within age	0.0%	0.0%	33.3%	0.0%	10.4%	12.5%	43.8%	100.0%
	26 – 30	Count	0	0	3	1	4	0	10	18
		% within age	0.0%	0.0%	16.7%	5.6%	22.2%	0.0%	55.6%	100.0%
	30 – 35	Count	0	0	1	0	2	0	2	5
		% within age	0.0%	0.0%	20.0%	0.0%	40.0%	0.0%	40.0%	100.0%
	What is your AGE (in years)?	Count	0	1	0	0	0	0	0	1
		% within age	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total		Count	2	1	21	2	12	7	35	80
		% within age	2.5%	1.3%	26.3%	2.5%	15.0%	8.8%	43.8%	100.0%

Table 5: Descriptive Statistics: Age vs. Discouraged Advising visit.

Age relationship to discouragement after advising: Extracted from SPSS output data from this study.

Count: number of participants whom are within age bracket and selection of discouragement

% within income: percentage of participants whom are within age bracket and selection of discouragement

For those who were between the ages of 21-25, 12.5% strongly agreed they were discouraged and for those greater than 35, 20% strongly agreed as well. However, for those who are between the ages of 26-30 and 30-35, 0.0% strongly agreed. While those who were greater than 35, 20.0% strongly agreed as well.

In order to decide whether there is any statistical difference between the variables and outcome of advising, a chi square test was analyzed.

Chi- Square Tests			
	Value	Degrees of Freedom	Asymptotic Significance(2- sided)
Pearson Chi-Square	166.211[a]	36	.000
Likelihood Ratio	49.039	36	.072
Number of Valid Cases	80		
[a]87.8% have expected count less than 5. The minimum expected count is .01.			

Table 6: Statistical Difference: Income less than $30,000 vs Income greater than $30,000.

Students who had income less than $30,000 believed that the advising program was very helpful in comparison to those that made more, 51.3% vs. 17.1% respectively (p-.072).

Chi- Square Tests			
	Value	**Degrees of Freedom**	**Asymptotic Significance(2- sided)**
Pearson Chi-Square	174.458[a]	15	.000
Likelihood Ratio	37.430	15	.001
Number of Valid Cases	80		
[a]87.5% have expected count less than 5. The minimum, expected count is .01.			

Table 7: Statistical Difference: Were Employed before entering program vs. Unemployed.

Students who were employed before entering Howard University believed that their advisors addressed their issues more than the student who did not have jobs, 61.2% vs. 2.6% respectively (p=0.001).

Chi- Square Tests			
	Value	**Degrees of Freedom**	**Asymptotic Significance(2- sided)**
Pearson Chi-Square	181.293[a]	36	.000
Likelihood Ratio	50.317	36	.057
Number of Valid Cases	80		
[a]91.8% have expected count less than 5. The minimum expected count is .01.			

Table 8: Statistical Difference: Under 25 years old vs.25-35 years old.

Student who were 25 and under, felt significantly discouraged than their counterparts who were 26-35 when meeting with their advisor, 7.8% vs. 3.9% respectively (p-0.057).

Discussion

There was adequate research on the effects of academic advising and how it can be helpful toward the student during their program. The results of this study are comparable of past research. Due to the results of this study and of past research, there is confidence that the information retrieved from the participants of this study were successfully demonstrating the understanding of how academic advising has an impact on student success and matriculation.

This study showed that many of the students had positive responses towards the advising program and saw the benefits towards utilizing it. When analyzing the data extensively, there were many factors that stood out and resulted in significant values.

Students who were employed before entering the pharmacy program believed that their advisors addressed their issues more than the student who did not have jobs, with a p=0.001. This factor is significant and can possibly be due to the fact that students who were employed are able to ask the right questions that can help them toward reaching their career goals because they have already been exposed to what work life consists of. In addition, younger students of 25 and under, felt significantly discouraged than their counterparts when meeting with their advisor (p = 0.057). An explanation could be that younger student may not be as expressive of their feelings and concerns as their older counterparts, which can in result widen the gap between the connection between them and their advisor. However, it is important to note that the population of participants who are between 21-25 were higher than every other age group, so this also could have contributed to data. Also, those aged greater than 35 had 20.0% who strongly agreed that they felt discouraged; but it was not significant in comparison to those who were under 25. In addition, an explanation could be that those greater than 35 are discouraged for not starting as early in the field of pharmacy in comparison to their counterparts, so they may not be fully utilizing their advising meetings to their advantage. Lastly, students who had income less than 30,000 believed that the advising program was very helpful in comparison to those that made more (p = 0.072). This huge variance may be due to students who have lower income may need more assistance advice and time with their advisors regarding personal issues that could fall under money and time management.

The overall, data showed that most students had positive responses toward their advising meetings and felt that they were indeed beneficial to their matriculation as a first-year student within the pharmacy program. Although, the data was in favor of advising, there may be some bias in the results. The participants only consisted of first year pharmacy students, so receiving advising within their first year of a professional program is very crucial and important and that could have skewed the data. Also, with the participants only consisting of first year pharmacy students, this could cause limitation issues because it does not account for the other pharmacy students (second, third and fourth years).

Conclusion

The study was conducted to determine if academic advising had an impact on the students success and matriculation in the PharmD program as a first year student. The study revealed that advising did play a significant role in predicting success and matriculation as determined by the responses in favor of beneficial and positive feedback on the survey from the participants. Past research and the results of this study were able to provide adequate support to show the impact of how advising can affect a student during their first professional year. Utilizing the recommendations from the advisor and also going to advising showed significant benefits, due to the students' positive reactions from their meeting. In result, the outcome from attending meetings with their advisor, was helpful for their matriculation.

Academic advising has many features to it beyond meeting just the requirement to graduate. Research affirms that academic advising, student services, and faculty-student contact can have a significant effect on student motivation, involvement, and retention[7]. Overall, with the support of previous research and this study, there is a definite correlation between advising and success of student matriculation in the Doctor of Pharmacy Program.

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