Insights into Decreasing Applicants to Schools and Colleges of Pharmacy in the United States

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CONTENTS

KEY FINDINGS

This study sought to explore recent declines in pharmacy school applications by describing factors that influence undergraduate students' decision to study pharmacy at selected research universities in the United States (US) with schools and colleges of pharmacy. Key findings include:

- Factors that positively influence undergraduate students' decision to study pharmacy include the prestige of a doctorate degree, job security/stability, salary, job availability, the ability to improve people's health and wellbeing, the opportunity to work in healthcare, and the range of possible careers within pharmacy.
- Family members, pharmacists, pre-pharmacy or pharmacy students, a college teacher or advisor, and pre-pharmacy clubs were more frequently reported as a positive factor in undergraduate students' decision to apply or have an intent to apply to pharmacy compared to students who were still undecided.
- High tuition for pharmacy school negatively influences undergraduate students' decision to study pharmacy.

These factors can help schools and colleges of pharmacy and professional organizations develop impactful practices and policies for promoting and recruiting individuals into the pharmacy profession.

INTRODUCTION

The landscape of the pharmacist workforce in the United States (US) is evolving rapidly. The profession had been preparing for a projected surplus of pharmacists resulting from a rapid growth in the number of and enrollment at pharmacy schools.[1] In 2000, there were 78 accredited schools and colleges of pharmacy which produced approximately 7,000 graduates each year.[2] By 2022, 142 accredited schools and colleges of pharmacy were in operation, and the number of graduates had nearly doubled to 13,323.[3]

However, the number of applicants to schools and colleges of pharmacy has declined over the past decade.[4] In 2011-2012, schools and colleges of pharmacy received 99,821 applications.[5] By 2021-2022, the number of applications to more than 140 schools and colleges of pharmacy decreased to 35,749.[6]

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The declining application numbers have resulted in persistent decreases in the average enrollment of entering classes, from 226 per school for the 2008-2009 academic year to 131 per school in 2017.[6,7] In 2019, an estimated 83% of pharmacy schools and colleges did not fill their available seats for the entering class.[8] Many schools and colleges are investing increasing resources into recruitment.[9,10] Declining applications and subsequent declining enrollment creates pressure to fill open academic seats, leading to concerns that students who are recruited may not be sufficiently competitive, diverse, and qualified.[11-13]

The current decrease in applications is concerning because the National Center for Health Workforce Analysis (NCHWA) projects a shortage of 4,980 pharmacists over the next 15 years through 2036.[14] Demand for pharmacists overall is projected to grow 3% from 2022 to 2032.[15] While fewer pharmacist jobs are expected in community pharmacy due to business consolidation, demand for pharmacists in healthcare diagnosing and medication management in some healthcare settings, such as hospitals and clinics, is projected to grow 9% by 2032.[15]

The decrease in applications to pharmacy schools is thought to be due to several internal and external forces affecting higher education and pharmacy practice.[10] Overall college enrollment has experienced a decline over the past decade, a trend that has been exacerbated by the COVID-19 pandemic and shifting perceptions of the value of higher education.[10,16] College applications are expected to continue to decline due to the decrease in college-age population beginning in 2025, termed the "enrollment cliff."

Concurrently, many pharmacists have left their professions at unprecedented rates.[17-19] In the 2022 National Pharmacist Workforce Survey, approximately 37% of pharmacy respondents' employment status changed since March 2020.[20] A systematic review of the literature found a 51% prevalence of burnout, a psychological response to work related stress, in pharmacists which was associated with longer working hours, high or excessive workload, and poor work-life balance.[21]

A well-trained pharmacy workforce will be needed to meet growing patient and employer demand and to be prepared for changes and expansions in pharmacists' roles. This study sought to explore recent declines in pharmacy school applications by describing factors that influence undergraduate students' decision to study pharmacy at selected research universities in the US with schools and colleges of pharmacy. The study findings provide insights for pharmacy education and professional pharmacy organizations working to promote the profession and prevent further decline in the pharmacist workforce.

METHODS

Data Collection

We developed a 56-item web-based survey instrument guided by a review of relevant literature and recent available data (**Appendix A**).[21-23] The survey included demographic questions and questions regarding factors that influenced participants' decision to study pharmacy, including lifestyle factors (e.g., job security, vacation time), education and training (e.g., tuition, prerequisites), pharmacists' careers (e.g., board exam and licensure requirements), and people and experiences (e.g., teachers, previous work experience). Participants were asked to indicate whether factors positively influenced, negatively influenced, or did not influence their decision. The survey, which took approximately 10 minutes to complete, was piloted with five pharmacy students.

We identified and collaborated with a convenience sample of deans of schools and colleges of pharmacy at major research universities from all four US Census regions. The deans disseminated a cover letter by email to undergraduate pre-pharmacy and health sciences students which included a description of the study purpose, procedures, human subjects' information, and an electronic survey link for students to participate in the study survey. Study participants were not asked for their name or other identifying information, however, at the completion of the survey participants were invited to enter their email to take part in

a $100 gift card drawing in acknowledgement for their time. Data were collected from May 2023 through October 2023 using REDCap electronic data capture tools hosted at the University of Washington Institute of Translational Health Sciences.[24,25] The University of Washington Human Subjects Division approved the study as exempt research.

Data Analysis

We used Stata 14.0 to generate descriptive statistics. Given the exploratory nature of the survey, we did not calculate comparative statistical tests.

RESULTS

A total of 159 students responded to the survey from five research universities in Iowa, New York, Texas, Washington, and Wisconsin. We excluded surveys with incomplete data (n=37) or from respondents who reported that they did not intend to apply to pharmacy schools and colleges (n=28), resulting in 94 complete surveys for analysis.

We compared factors that influenced participants' decision to study pharmacy between those who reported they had applied to pharmacy school or intended to apply, hereafter referred to as decided participants, (n=60, 64%) and those who were unsure or undecided, hereafter referred to as undecided participants (n=34, 36%) (**Table 1**). While most respondents were age 25 or younger and female, undecided participants were somewhat older than decided participants (71% of undecided participants were age 20-25 vs. 31% for decided participants) and more were male (32% undecided vs.13% decided). Race and/or ethnicity categories were not mutually exclusive. Higher percentages of undecided participants compared with decided participants were Asian (65% vs. 27%) and lower percentages were White or European descent (44% vs. 70%). Slightly higher percentages of undecided participants were born outside the US compared with decided participants (18% vs. 10%). Similar percentages of undecided and decided participants reported having a disability (6% and 7%). Approximately a third of each of the groups came from families with parents who had not completed a four-year degree.

Most participants were from the University of Washington (47%) or the University of Iowa (30%). All undecided participants (n=34) were from the University of Washington. Both undecided and decided participants reported that working in a hospital setting was a top choice after graduating from pharmacy school (74% and 82%, respectively). The second choice setting varied with undecided participants reporting industry (53%) and decided participants reporting outpatient or clinical settings (52%). Besides pharmacy, participants in both groups were asked to select other graduate school options they had considered pursuing including a Doctor of Medicine (MD), Master's degree or PhD (field not specified), and/or Physician Assistant (PA) degrees. Higher percentages of undecided participants compared with decided participants indicated interest in pursuing an MD (71% vs. 43%), Master's degree or PhD (47% vs. 37%) and/or PA degree (32% vs. 20%).

Lower percentages of undecided participants had ever worked as a pharmacy technician compared with decided participants (9% vs. 52%). Among the undecided participants who had ever worked as a pharmacy technician, 67% had obtained certification as a pharmacy technician compared with 42% of decided participants (data not tabled).

Factors that influenced participants' decision to study pharmacy

Several factors positively influenced all participants' decision to study pharmacy across factors related to education and training, lifestyle, and pharmacists' careers (**Figure 1**). The most frequently reported positive factor related to education and training among all participants was prestige of a doctorate (68% undecided vs. 92% decided). Compared to undecided participants higher percentages of decided participants reported postgraduate training opportunities, pharmacy school location, pharmacy school curriculum, and years to a Doctor of Pharmacy (PharmD) degree as positive factors. Job security/stability, salary, and job availability were the most frequently reported positive factors related to lifestyle among undecided (85%, 91%, and 82%,

respectively) and decided participants (97%, 95%, and 87%, respectively). Most participants in both groups reported that the ability to improve people's health and wellbeing (88% undecided vs. 100% decided), the opportunity to work in healthcare (88% undecided vs.100% decided), and the range of possible careers within pharmacy (88% undecided vs.97% decided) were factors related to pharmacists' careers that positively influenced their decision to study pharmacy. Other pharmacist career factors that were commonly reported as positive influencers by decided and undecided participants included providing public service, focusing on medications, being in an intellectually challenging field, collaboration with other healthcare professionals, patient interaction and communication, and expanding roles and opportunities for pharmacists.

Select factors were identified as negatively influencing participants' decision to study pharmacy. High tuition at pharmacy schools and colleges was most frequently reported as negatively influencing the decision to study pharmacy among all participants (79% undecided vs. 72% decided). Pharmacy school difficulty was also frequently reported as a negative influence by all participants (53% among both undecided and decided). A higher percentage of undecided participants identified board exam and licensure requirements as having a negative influence on their decision (52% undecided vs. 23% decided), although data were not collected on the specific aspects of these factors that influenced participants' decisions. Nearly a third (31%) of undecided participants indicated the desire to own their own business or be their own boss did not influence their decision to study pharmacy compared to 63% of decided participants.

Experiences and people that influenced respondents' decision to study pharmacy

We also compared experiences and people that influenced participants' decision to study pharmacy (**Figure 2**). The most frequently reported experience positively influencing participants' decision to study pharmacy in both groups was enjoyment of science in high school or college (91% undecided vs. 98% decided). Family members, pharmacists, pre-pharmacy or pharmacy students, a college teacher or advisor, and pre-pharmacy club were more frequently reported as people who positively influenced their decision to study pharmacy among undecided participants (50%, 33%, 38%, 29%, and 15%, respectively) compared to decided participants (72%, 70%, 68%, 60%, and 52%, respectively).

No experiences or types of people were identified as commonly negatively influencing participants' decision to study pharmacy; however, a few factors were commonly reported as not influencing participants' decision to study pharmacy. Undecided participants most commonly identified pre-pharmacy club (85%), career pamphlets, books, or assessments (82%), previous pharmacy work experience (76%), and career fairs and conferences (76%) as not influencing their decision to study pharmacy. Among decided participants, career fairs or conferences (80%), family members in the pharmacy profession (76%), media (75%), social media (73%), and career pamphlets, books, or assessments (72%) were most frequently reported as not influencing their decision.

Table 1. Respondent demographic and educational characteristics by intention to apply to pharmacy schools and colleges, n=94

	Intention to apply to pharmacy school				Total N=94 (%)	
	Have applied or plan to apply (n=60)		Unsure/undecided (n=34)			
	Count	Percent	Count	Percent	Count	Percent
Age, years[a]						
<20	40	68%	9	26%	49	53%
20-25	18	31%	24	71%	42	45%
>26	1	2%	1	3%	2	2%
Gender[b,c]						
Female	51	85%	23	68%	74	79%
Male	8	13%	11	32%	19	20%
Non-binary/use a different term	1	2%	1	3%	2	2%
Race and/or ethnicity[b]						
American Indian or Alaska Native	0	0	1	3%	1	1%
Asian	16	27%	22	65%	38	40%
Black or African American	2	3%	1	3%	3	3%
Arab, Middle Eastern, North African	2	3%	0	0	2	2%
Native Hawaiian or other Pacific Islander	1	2%	0	0	1	1%
White or of European descent	42	70%	15	44%	57	61%
Hispanic, Latino, or Latino origin	5	8%	2	6%	7	7%
Place of birth						
Inside the US or US territories	54	90%	28	82%	82	87%
Outside the US	6	10%	6	18%	12	13%
Disability[a]						
Yes	4	7%	2	6%	6	6%
No	56	93%	31	94%	87	94%
One or more parent(s) completed 4-year degree						
Yes	40	67%	20	59%	60	64%
No	19	32%	13	38%	32	34%
Unsure	1	2%	1	3%	2	2%
University enrolled, 2022-2023						
University of Washington	10	17%	34	100%	44	47%
University of Iowa	28	47%	0	0	28	30%
University of Wisconsin	13	22%	0	0	13	14%
University of Buffalo	8	13%	0	0	8	9%
University of Texas at Austin	1	2%	0	0	1	1%

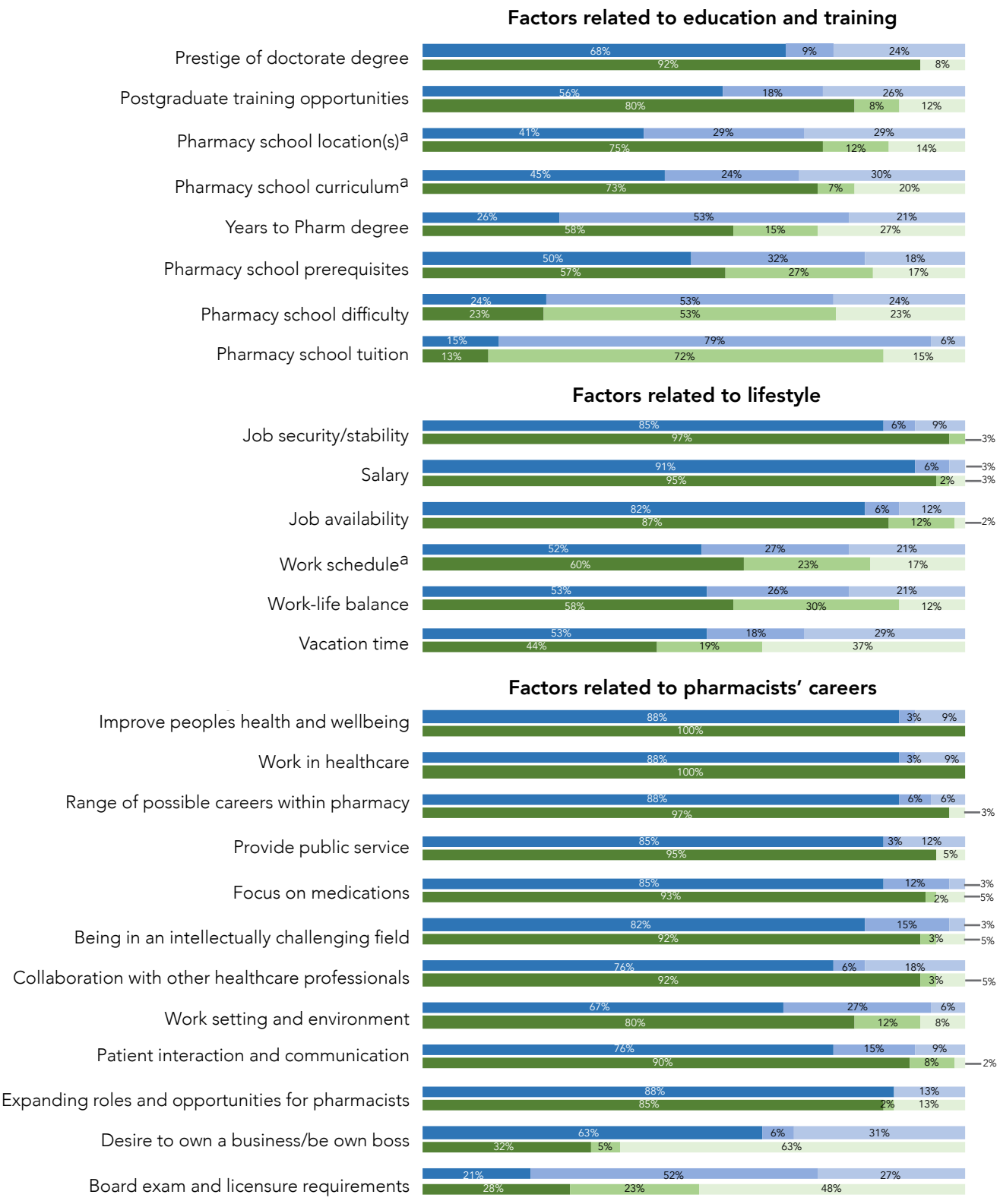
Table 1. continued next page

Table 1. continued

	Intention to apply to pharmacy school				Total N=94 (%)	
	Have applied or plan to apply (n=60)		Unsure/undecided (n=34)			
Area(s) of pharmacy respondents hope to work[b]						
Community or retail	16	27%	10	29%	26	28%
Hospital	49	82%	25	74%	74	79%
Industry (e.g., drug company)	18	30%	18	53%	36	38%
Outpatient or clinic	31	52%	14	41%	45	48%
Other, not listed	3	5%	0	0	3	3%
Unsure, undecided	11	18%	4	12%	15	16%
Other[d]	3	5%	0	0	3	3%
Degrees considered besides pharmacy[b]						
Doctor of Medicine (MD)	26	43%	24	71%	50	53%
Doctor of Osteopathic Medicine (DO)	1	2%	5	15%	6	6%
Doctor of Medicine in Dentistry (DMD)	6	10%	5	15%	11	12%
Graduate School (Master's degree, PhD)	22	37%	16	47%	38	40%
Nurse (RN)	7	12%	4	12%	11	12%
Nurse Practitioner (NP)	5	8%	5	15%	10	11%
Physician Assistant (PA)	12	20%	11	32%	23	25%
Other/not listed[e]	6	10%	3	9%	9	10%
No other degree considered	15	25%	0	0	15	16%
Pharmacy technician experience						
Currently/ever worked as a pharmacy tech	31	52%	3	9%	34	36%

a. Missing one response, not included in calculations of percentages.
b. Respondents requested to "Check all that apply", thus the total exceeds 100%.
c. Other term reported (genderqueer), n=1
d. Other settings where respondents hope to work include regulatory pharmacy, research, and public policy.
e. Other degrees considered include anesthesia, chemistry, Doctor of Optometry, ophthalmologist, physical therapy, veterinary medicine, microbiology.

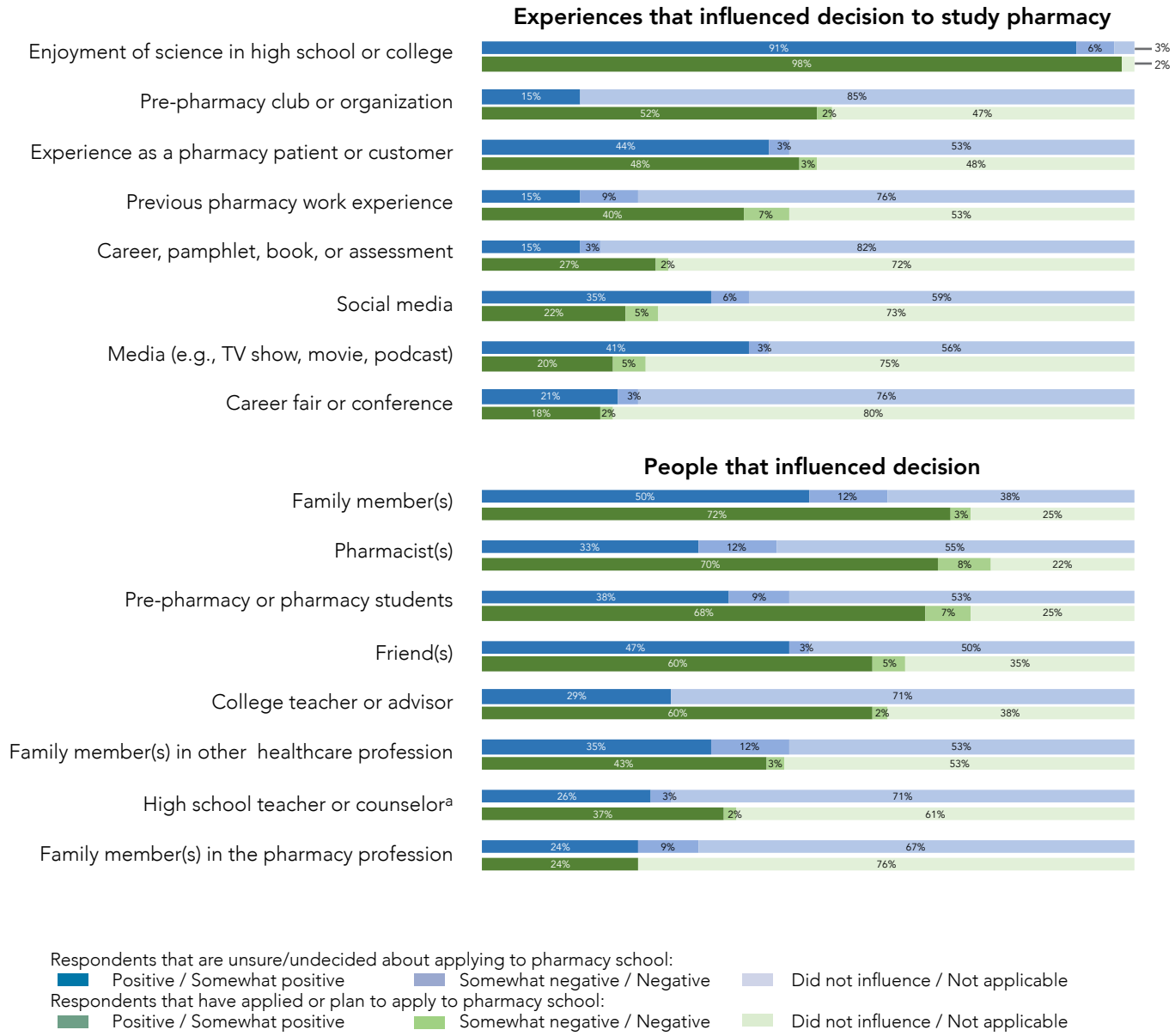
Figure 1. Factors that influenced respondents' decision to study pharmacy, by intention to apply to pharmacy schools and colleges



Respondents that are unsure/undecided about applying to pharmacy school:
Positive / Somewhat positive | Somewhat negative / Negative | Did not influence / Not applicable
Respondents that have applied or plan to apply to pharmacy school:
Positive / Somewhat positive | Somewhat negative / Negative | Did not influence / Not applicable

a. Missing one response, not included in calculations of percentages.
b. All categories under "factors related to pharmacists' careers" missing one (n=93) or two responses (n=92), not included in calculations of percentages.

Figure 2. Experiences and people that influenced respondents' decision to study pharmacy, by intention to apply to pharmacy schools and colleges



a. Missing one response, not included in calculations of percentages.
b. All categories under "factors related to pharmacist career" missing one (n=93) or two responses (n=92), not included in calculations of percentages.

DISCUSSION

Over the span of just a few years, a projected pharmacist surplus has become a projected shortage. Increased projected demand for the pharmacy workforce is related to increased need for pharmacists as their roles expand beyond traditional medication dispensing and more are integrated into healthcare teams in hospitals and clinics.[1,26,27] Pharmacy education has an important role in this evolving workforce landscape. Given the substantial recent changes, a better understanding of undergraduate students' decisions to pursue pharmacist careers is key to meeting the growing workforce demand.

In findings from this survey, both students that had or planned to apply to pharmacy school and those that were undecided reported that many of the same educational, career, and lifestyle factors influenced their decision to study pharmacy. Like previous research, we found the ability to work in healthcare and people's health and wellbeing continued to be positive factors influencing individuals' decision to pursue pharmacist careers.[7,21,22] Further, pharmacists and family members continued to have a large influence on both students that have decided and those that have not yet decided to apply to pharmacy schools while students were less influenced by career fairs or conferences.[28] Many schools and colleges of pharmacy have adapted their recruitment approaches targeting high school and undergraduate populations via strategies such as pharmacy summer camps, pharmacy-themed games or competitions, undergraduate courses, and dual degrees.[29-33] Methods such as these, which deviate from conventional career fair paradigms, appear appropriate based on the factors influencing students' decision to study pharmacy found in this study. It also appears important for schools and colleges of pharmacy to prioritize interactions with pharmacists in their recruitment strategies. Alumni ambassador programs, like one at University of Georgia, which enlists alumni to promote pharmacy as a career choice, could positively influence students' decision to study pharmacy similar to the approach of student ambassador programs.[34] However, more work is needed to understand how pharmacists message or discuss their current careers.

A new finding of this study that has not been identified from previous research is the negative impact of pharmacy school tuition on students' decision to study pharmacy. Pharmacy school tuition was the most frequently reported factor negatively influencing the decision to study pharmacy among all survey participants. In 2023, 82.2% of graduating pharmacy students indicated they incurred debt to pay for expenses in their PharmD degree program.[35] In 2023, on average, students borrowed approximately $168,000 to finance their degree compared to approximately $134,000 in 2013.[35,36] Since 2004, costs to pharmacy students have risen at a rate faster than inflation.[37] Our findings support the need for pharmacy education to evaluate strategies to address the financial burdens current and future pharmacy students face.[37,38] Some schools and colleges have identified novel strategies to address the tuition barrier. For example, the University of Utah launched the First Year Free Program in 2023 to cover the first full year of tuition for every accepted student.[39] Other ideas include need-based scholarships, tuition discounting, and revenue stream diversification to enable a decrease in tuition.[7]

Interestingly, the public image of pharmacy did not appear to influence participants' decision to study pharmacy. There have been calls to action within the profession to improve the public image of pharmacists.[7,40-42] The Pharmacy is Right for Me (Pharm4Me) campaign was launched in 2011 by several national pharmacy organizations to help inspire and recruit the next generation of student pharmacists.[43] More recently, the American Society of Health-System Pharmacists announced a new national awareness campaign highlighting pharmacists' patient care roles in hospitals and health systems.[44] We hypothesize that undergraduate students who were negatively influenced by the public image of the profession may have already decided to not study pharmacy and were not represented in this sample.

Limitations

Our study offers valuable insights into factors contributing to or deterring students' interests in pursuing a career as a pharmacist. The findings, however, are subject to several limitations. The data collected may not be representative of students who are considering pharmacy careers due to the small sample size and use of self-selected convenience sampling. The denominator or total number of potentially eligible participants is unknown, which further raises concerns about the generalizability of the findings.

CONCLUSIONS

These findings suggest that the strongest positive factors influencing undergraduate students' decision to study pharmacy continue to be the ability to work in healthcare and affect people's health and wellbeing, and input from family members and pharmacists about the profession, while pharmacy tuition has become a negative factor. Understanding the factors that influence undergraduate students' decision to pursue a pharmacy career is necessary for developing realistic and targeted approaches for recruitment to schools of pharmacy. Our aim is that these findings will support strategic recruitment and outreach for schools of pharmacy and provide insights to aid pharmacy advocacy organizations and policy makers in promoting the profession.

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Pharmacist Career Pathways Survey

The University of Washington's Center for Health Workforce Studies is conducting an academic research study funded by the Health Resources and Services Administration (HRSA) to better understand pathways into pharmacist careers. The survey will take approximately 10 minutes to complete. After you complete the survey, you may enter your email and take part in a drawing for a chance to receive one of twenty $100 electronic gift cards as a thank you for participating. If you take part, your chances of winning will depend on the total number of respondents participating in the drawing.

The survey questions ask about your motivations and influences to study pharmacy and include basic background and demographic information. You will not be asked to provide your name, personally identifiable information, or any personal health information. You may choose to not answer any question.

Section 1. Eligibility

Please review the consent information before proceeding. By submitting your responses to this survey, you agree to participate in this study.

[Attachment: "Pharmacist Career Pathways Consent Information.pdf"]

Please answer the following question to help us determine if you are eligible to participate in this research study.

Have you or do you plan to apply to pharmacy school?

- ◯ Yes
- ◯ No
- ◯ Unsure/ undecided

In which university were you enrolled as a student during the 2022-2023 academic year?

- ◯ Ohio State University
- ◯ Purdue University
- ◯ Rutgers University
- ◯ University of Arizona
- ◯ University of Buffalo
- ◯ University of California San Diego
- ◯ University of California San Francisco
- ◯ University of Colorado
- ◯ University of Florida
- ◯ University of Georgia
- ◯ University of Illinois Chicago
- ◯ University of Iowa
- ◯ University of Kentucky
- ◯ University of Maryland
- ◯ University of Michigan
- ◯ University of Minnesota
- ◯ University of North Carolina
- ◯ University of Pittsburgh
- ◯ University of Southern California
- ◯ University of Tennessee
- ◯ University of Texas at Austin
- ◯ University of Utah
- ◯ University of Washington
- ◯ University of Wisconsin
- ◯ Virginia Commonwealth University
- ◯ Other

Section 2. Motivations and Influences

Please indicate how the following factors related to lifestyle influenced your decision to study pharmacy.

	Positively influenced	Somewhat positively influenced	Somewhat negatively influenced	Negatively influenced	Did not influence	Not applicable
Salary	○	○	○	○	○	○
Job availability	○	○	○	○	○	○
Job security/ stability	○	○	○	○	○	○
Vacation time	○	○	○	○	○	○
Work-life balance	○	○	○	○	○	○
Work schedule	○	○	○	○	○	○

Please indicate how the following factors related to education and training influenced your decision to study pharmacy.

	Positively influenced	Somewhat positively influenced	Somewhat negatively influenced	Negatively influenced	Did not influence	Not applicable
Pharmacy school prerequisites	○	○	○	○	○	○
Pharmacy school tuition	○	○	○	○	○	○
Pharmacy school curriculum	○	○	○	○	○	○
Pharmacy school difficulty	○	○	○	○	○	○
Pharmacy school location(s)	○	○	○	○	○	○
Years to PharmD degree	○	○	○	○	○	○
Prestige of doctorate degree	○	○	○	○	○	○
Postgraduate or residency training opportunities	○	○	○	○	○	○

Please indicate how the following factors related to pharmacist careers influenced your decision to study pharmacy.

	Positively influenced	Somewhat positively influenced	Somewhat negatively influenced	Negatively influenced	Did not influence	Not applicable
Board exam and licensure requirements	○	○	○	○	○	○
Communication and collaboration with other healthcare professionals	○	○	○	○	○	○
Desire to own a business/ be own boss	○	○	○	○	○	○
Expanding roles and opportunities for pharmacists	○	○	○	○	○	○
Focus on medications	○	○	○	○	○	○

Improve people's health and wellbeing	○	○	○	○	○	○
Patient interaction and communication	○	○	○	○	○	○
Provide public service	○	○	○	○	○	○
Range of possible careers within pharmacy	○	○	○	○	○	○
Being in an intellectually challenging field	○	○	○	○	○	○
Work in healthcare	○	○	○	○	○	○
Work setting and environment	○	○	○	○	○	○

Please indicate how the following people and experiences influenced your decision to study pharmacy.

	Positively influenced	Somewhat positively influenced	Somewhat negatively influenced	Negatively influenced	Did not influence	Not applicable
Family member(s)	○	○	○	○	○	○
Family member(s) in the pharmacy profession	○	○	○	○	○	○
Family member(s) in other healthcare profession	○	○	○	○	○	○
Friend(s)	○	○	○	○	○	○
Pharmacist(s)	○	○	○	○	○	○
Pre-pharmacy or pharmacy students	○	○	○	○	○	○
Pre-pharmacy club or organization	○	○	○	○	○	○
College teacher or advisor	○	○	○	○	○	○
High school teacher or counselor	○	○	○	○	○	○
I enjoyed science in high school or college	○	○	○	○	○	○
My previous pharmacy work experience	○	○	○	○	○	○
My experience as a pharmacy patient or customer	○	○	○	○	○	○
Career fair or conference	○	○	○	○	○	○
Career pamphlet, book, or assessment	○	○	○	○	○	○
Media (e.g., TV show, movie, podcast)	○	○	○	○	○	○
Social media	○	○	○	○	○	○

Please list any other factor(s) that negatively influenced your decision to study pharmacy that was not mentioned.

Please list any other factor(s) that positively influenced your decision to study pharmacy that was not mentioned.

Section 3. Demographics

Please answer the following questions to provide us with information about yourself.

In what area(s) of pharmacy do you hope to work? (select all that apply)

- ☐ Community or retail
- ☐ Hospital
- ☐ Industry (e.g., drug company)
- ☐ Outpatient or clinic
- ☐ Other/ not listed
- ☐ Unsure/ undecided

Please specify the area(s) of pharmacy.

_____

What degree(s) are you or have you considered besides pharmacy? (select all that apply)

- ☐ Doctor of Medicine (MD)
- ☐ Doctor of Osteopathic Medicine (DO)
- ☐ Doctor of Medicine in Dentistry (DMD)
- ☐ Graduate School (Masters, PhD)
- ☐ Nurse (RN)
- ☐ Nurse Practitioner (NP)
- ☐ Physician Assistant (PA)
- ☐ Other/ not listed
- ☐ No other degree considered

Please specify the degree(s).

_____

Are you currently or have you ever worked as a pharmacy technician?

- ◯ Yes
- ◯ No

Have you obtained certification as a pharmacy technician (e.g, CPhT)?

- ◯ Yes
- ◯ No

What is your age?

_____

What is your gender? (select all that apply)

- ☐ Female
- ☐ Male
- ☐ Non-binary, I use a different term

The term I use for gender is:

What is your race and/or ethnicity? (select all that apply)

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic, Latino, or Latino origin
- ☐ Arab, Middle Eastern, or North African
- ☐ Native Hawaiian or other Pacific Islander
- ☐ White or of European Descent
- ☐ Not listed

You selected American Indian or Alaska Native. What is the name of your enrolled or principal tribe?

_____

You selected Asian. Please specify. (select all that apply)

- ☐ Asian Indian
- ☐ Cambodian
- ☐ Chinese
- ☐ Filipino
- ☐ Japanese
- ☐ Korean
- ☐ Malaysian
- ☐ Pakistani
- ☐ Vietnamese
- ☐ Not listed

You selected Black or African American. Please specify. (select all that apply)

- ☐ Black
- ☐ African
- ☐ African American
- ☐ African Caribbean
- ☐ Not listed

You selected Hispanic, Latino, or Latino origin. Please specify. (select all that apply)

- ☐ Cuban
- ☐ Mexican/ Mexican American/ Chicano/ Chicana
- ☐ Puerto Rican
- ☐ South or Central American
- ☐ Not listed

You selected Native Hawaiian or other Pacific Islander. Please specify. (select all that apply)

- ☐ Guamanian or Chamorro
- ☐ Native Hawaiian
- ☐ Samoan
- ☐ Not listed

You indicated your race and/or ethnicity was not listed. Please specify.

_____

Where were you born?

◯ Inside the US or US territories
◯ Outside the US

Please specify the country where you were born.

_____

Do you have a disability?

An individual with a disability is defined by the ADA as a person who has a physical or mental impairment that substantially limits one or major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment.

◯ Yes
◯ No

Did any of your parent(s) or guardian(s) complete a 4-year college or university degree?

◯ Yes
◯ No
◯ Unsure

Would you like to participate in a drawing for the chance of being selected to receive a $100 electronic gift card?

◯ Yes
◯ No

Please provide your email address.

_____