

# Attitudes of Practicing Pharm.D.s Toward Education and Career: Six-Year Entry-Level vs. Two-Year Postbaccalaureate Degree

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## *INTRODUCTION*

The subject of the entry-level degree for the practice of pharmacy has been debated for the last several years. Surveys have been conducted in an attempt to resolve this controversy. A comprehensive survey of University of California-San Francisco graduates revealed that most of the entry-level Pharm.D. graduates are satisfied with their professional status and find opportunities for advancement (1). Another recent survey, conducted by the American College of Clinical Pharmacy (ACCP) of its membership, showed that the majority of respondents thought the training of the B.S. pharmacist inadequate for the practice of pharmacy. The respondents recognized the demand for specialized services where advanced clinical training is justified (2). The results of this survey led to the ACCP's current position statement that the adoption of the Pharm.D. as the entry-level degree for the profession would compromise the quality of existing Pharm.D. programs and the level of clinical practice (3).

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These surveys and other, similar studies have had a limited scope. The University of California survey was directed at six-year entry-level Pharm.D.s who graduated from the University of California-San Francisco. The ACCP surveyed only its members, the majority of whom were two-year postbaccalaureate Pharm.D.s. The survey conducted here has a broader scope. The present study surveyed practicing Pharm.D.s about their attitudes toward their education and careers and compared the differences between six-year entry-level (6yrEL) degree holders and two-year postbaccalaureate (2yrPB) degree holders on a national level. The survey was conducted in an attempt to determine whether any differences exist between 6yrEL and 2yrPB Pharm.D.s in terms of present career, job satisfaction, and attitude about the necessity of education. In addition, the survey looked for differences between those respondents who had postgraduate training (i.e., residency or fellowship training) and those who did not.

### **METHODS**

The survey was conducted throughout the 50 states during December 1987 and December 1988 and included all practice areas. A two-page, four-sided questionnaire was developed. The questionnaire was field tested within the School of Pharmacy, and refinements and changes were made based on faculty response. The questionnaire requested information in the following areas:

1. Questions related to education (i.e., academic degree earned, date of graduation, completion of a postgraduate training program (e.g., a residency and/or fellowship),
2. Description of present full-time employment (i.e., community practice, hospital practice, academe, dual appointment, or pharmaceutical industry),
3. Questions related to job activities (i.e., percentage of time spent in different areas such as dispensing, clinical services, administrative, and research),
4. Questions related to job satisfaction and adequacy of education and postgraduate training,
5. Salary, and

## 6. Position on adoption of a universal six-year entry-level Pharm.D. degree.

Because this survey was conducted nationally, it was impossible to mail questionnaires to every practicing Pharm.D. To facilitate obtaining a good cross section of practicing Pharm.D.s, the survey was advertised in a letter to the editor in two well-known pharmacy journals. One hospital journal was selected (*American Journal of Hospital Pharmacy*), and one community pharmacy journal (*Drug Topics*) was selected. Potential respondents were asked to send us their names and addresses. In turn, we sent each respondent a copy of the survey questionnaire, a postage-paid return envelope, and a gift as an added inducement. All survey responses were tabulated and analyzed for statistical significance using chi-square and Wilcoxon two-sample tests.

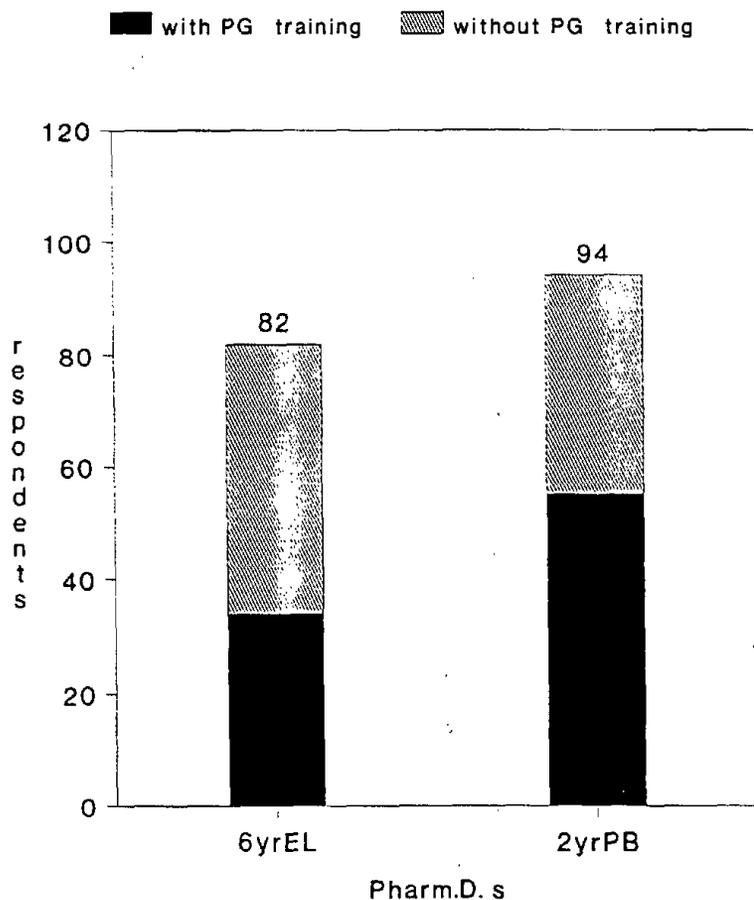
## RESULTS

One hundred ninety-eight questionnaires were mailed to respondents in 36 states, the District of Columbia, and Canada. One hundred seventy-six usable questionnaires were returned for analysis.

Men comprised 56.8% of the total and had an average age of 30-40 years. The women's average age range was 20-30 years. Eighty-two respondents (46.5%) earned 6yrEL degrees, while 94 (53.4%) earned 2yrPB degrees. Fifty-five (58.5%) of the 2yrPB and 34 (41.4%) of the 6yrEL subjects completed a residency or fellowship (Figure 1). Fifty-one percent of the 6yrEL Pharm.D.s and 66% of the 2yrPB Pharm.D.s earned their degrees after 1982.

Tables 1 and 2 show the full-time employment breakdown for 6yrEL and 2yrPB Pharm.D.s. Table 1 reveals a significant difference in the number of 6yrEL Pharm.D.s in community practice (14.2%) and the number of 2yrPB Pharm.D.s (1.7%) in community practice. There was also a significant difference in the number of 2yrPB Pharm.D.s who were full-time faculty (8.5%) and the number of 6yrEL Pharm.D.s who were full-time faculty (1.7%). These trends are continued, as seen in Table 2, where those Pharm.D.s with postgraduate training (completion of a residency or fellowship) are compared to those without such training.

FIGURE 1. Pharm.D.s and Postgraduate Training



In terms of job-related activities, of all respondents, those employed as community pharmacists spent, on average, 60.5% of their time dispensing, 19.5% on administrative activities, and 19.2% providing clinical services. Of community pharmacists, 82.3% were not self-employed, and 50.0% worked for an independent. Those practicing hospital pharmacy spent 40.6% of their time pro-

viding clinical services, 27.7% on administrative functions, 23.4% on dispensing, and, on average, 5.4% on research. Respondents employed as full-time faculty spent 32.6% of their time in didactic teaching, 25.6% conducting research, 23.3% on hospital practice, and 19.3% on administrative activities. Those who had a dual appointment (i.e., pharmacy school faculty/hospital practice) spent 75.5% of their time on hospital practice and 24.5% on faculty responsibilities. Finally, those employed by the pharmaceutical industry spent 35.0% of their time conducting research, 21.7% providing drug information, and 16.7% on administrative functions. These data are summarized in Table 3. There was no significant difference between 6yrEL and 2yrPB Pharm.D.s or between those with and without postgraduate training with respect to job-related activities.

Responses related to job satisfaction and adequacy of education and necessity of postgraduate training are summarized in Figures 2, 3, and 4. In general, both 6yrEL and 2yrPB Pharm.D.s were satisfied to very satisfied with their present employment situation, salary, and career advancement opportunities. The only difference between the two groups was in salary satisfaction. Although both groups were satisfied, 2yrPB Pharm.D.s were significantly less satisfied with their salaries (Figure 2). Again, there was no difference between those with and those without postgraduate training. There was also no significant difference among any of the groups in atti-

TABLE 1. Present Full-Time Employment

| Pharm.D. | A            | B           | C           | D         | E         | F          | Totals |
|----------|--------------|-------------|-------------|-----------|-----------|------------|--------|
| 6yrEL    | 25*<br>14.2% | 32<br>18.2% | 3<br>1.7%   | 9<br>5.1% | 3<br>1.7% | 10<br>5.7% | 82     |
| 2yrPB    | 3<br>1.7%    | 47<br>26.7% | 15*<br>8.5% | 7<br>4.0% | 7<br>4.0% | 15<br>8.5% | 94     |
| TOTAL    |              |             |             |           |           |            | 176    |

\*p = .002

A = Community pharmacist

B = Hospital pharmacist

C = Faculty appointment (full-time)

D = Dual appointment (i.e., pharmacy school faculty/hospital practice)

E = Pharmaceutical industry

F = Other

TABLE 2. Present Full-Time Employment With and Without Postgraduate Training

| Pharm.D.  | A           | B           | C         | D         | E         | F           | Totals |
|-----------|-------------|-------------|-----------|-----------|-----------|-------------|--------|
| 6yrEL*    | 4<br>4.5%   | 12<br>13.5% | 3<br>3.4% | 7<br>8.0% | 2<br>2.2% | 6<br>6.7%   | 34     |
| 2yrPB*    | 1<br>1.1%   | 28<br>31.5% | 7<br>8.0% | 4<br>4.5% | 5<br>5.6% | 10<br>11.2% | 55     |
| TOTAL     |             |             |           |           |           |             | 89     |
| Pharm.D.  | A           | B           | C         | D         | E         | F           | Totals |
| 6yrEL†    | 21<br>24.1% | 20<br>23.0% | 0<br>0%   | 2<br>2.3% | 1<br>1.1% | 4<br>4.6%   | 48     |
| 2yrPB†    | 2<br>2.3%   | 19<br>21.8% | 8<br>9.2% | 3<br>3.4% | 2<br>2.3% | 5<br>5.7%   | 39     |
| TOTAL     |             |             |           |           |           |             | 87     |
| ALL TOTAL |             |             |           |           |           |             | 176    |

\*With postgraduate training

†Without postgraduate training

A = Community pharmacist

B = Hospital pharmacist

C = Faculty appointment (full-time)

D = Dual appointment (i.e., pharmacy school faculty/hospital practice)

E = Pharmaceutical industry

F = Other

tudes toward education. Respondents thought that, excluding postgraduate training, their education was adequate to more than adequate for their present positions (Figure 3). All groups thought that their postgraduate training was necessary, with no significant difference observed (Figure 4).

The average salary earned was \$30,000-\$40,000 per year, with no difference observed among any groups.

The position on adoption of a universal 6-year entry-level Pharm.D. degree represented the most significant difference between 6yrEL and 2yrPB Pharm.D.s. Of those in favor of the 6-year entry-level degree, only 9.1% were 2yrPB Pharm.D.s, while 22.7% were 6yrEL Pharm.D.s. Accordingly, 51.1% of those against the 6-year entry-level degree were 2yrPB Pharm.D.s, while 17.1% were 6yrEL Pharm.D.s. Overall, 68.2% were not in favor of the entry-level degree, while 31.8% were in favor of it. There was

TABLE 3. Job-Related Activities

| Job Description         | Activity               | % of Time |
|-------------------------|------------------------|-----------|
| Community pharmacist    | Dispensing             | 60.5      |
|                         | Administrative         | 19.5      |
|                         | Clinical services      | 19.2      |
|                         | Other                  | 1.3       |
| Hospital pharmacist     | Clinical services      | 40.6      |
|                         | Administrative         | 27.7      |
|                         | Dispensing             | 23.4      |
|                         | Research               | 5.4       |
|                         | Other                  | 2.6       |
| Pharmacy school faculty | Didactic teaching      | 32.6      |
|                         | Research               | 25.6      |
|                         | Hospital practice      | 23.3      |
|                         | Administrative         | 19.3      |
| Dual appointment        | Hospital practice      | 75.5      |
|                         | Faculty responsibility | 24.5      |
| Pharmaceutical industry | Research               | 35.0      |
|                         | Drug information       | 21.7      |
|                         | Administrative         | 16.7      |
|                         | Other                  | 26.7      |

no difference between those with and those without postgraduate training. The data are summarized in Figure 5.

### DISCUSSION

This survey may be helpful in determining attitudes of practicing Pharm.D.s toward their education and careers. However, there are several limitations intrinsic to this survey. The number of respondents is small: by estimation, less than one-half of 1% of the practicing Pharm.D.s. In addition, subjects were not randomly selected. Only those who read the journals and were motivated to respond would have participated in the survey. Furthermore, only two journals were used to advertise the survey; this would incur the potential for subject bias. Therefore, the results cannot and should not be extrapolated to all practicing Pharm.D.s. However, the information gained as it relates to these 176 practicing Pharm.D.s has value.

The results of this survey show that Pharm.D.s as a group share the same attitudes. In general, they were satisfied or very satisfied with their present employment situation, salary, and career ad-

FIGURE 2. 6yrEL vs. 2yrPB Average Level of Satisfaction

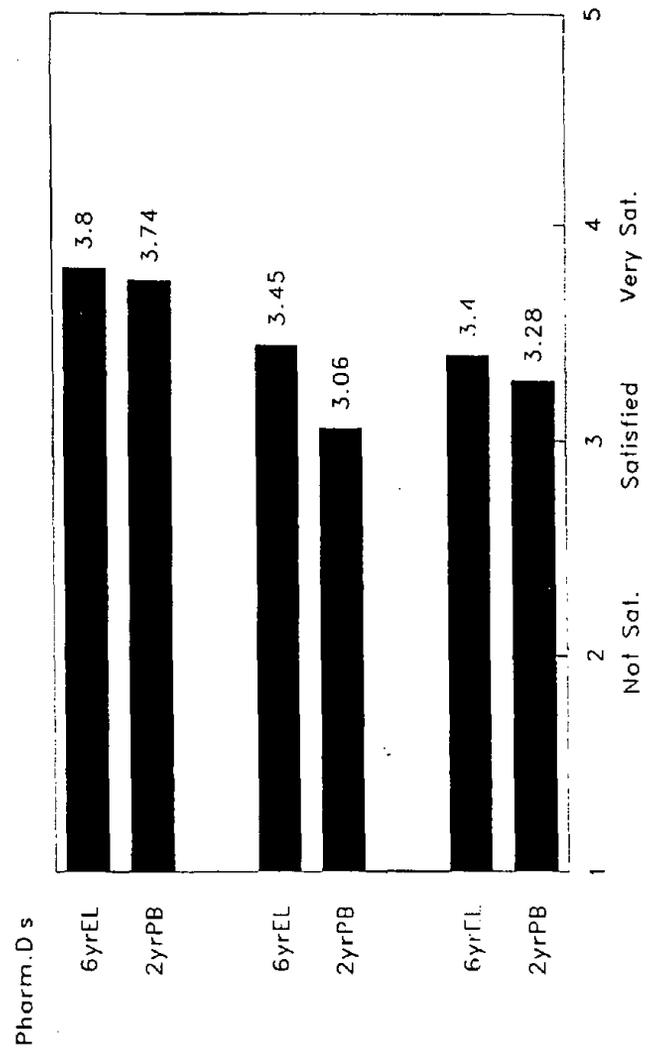


FIGURE 3. Adequacy of Education

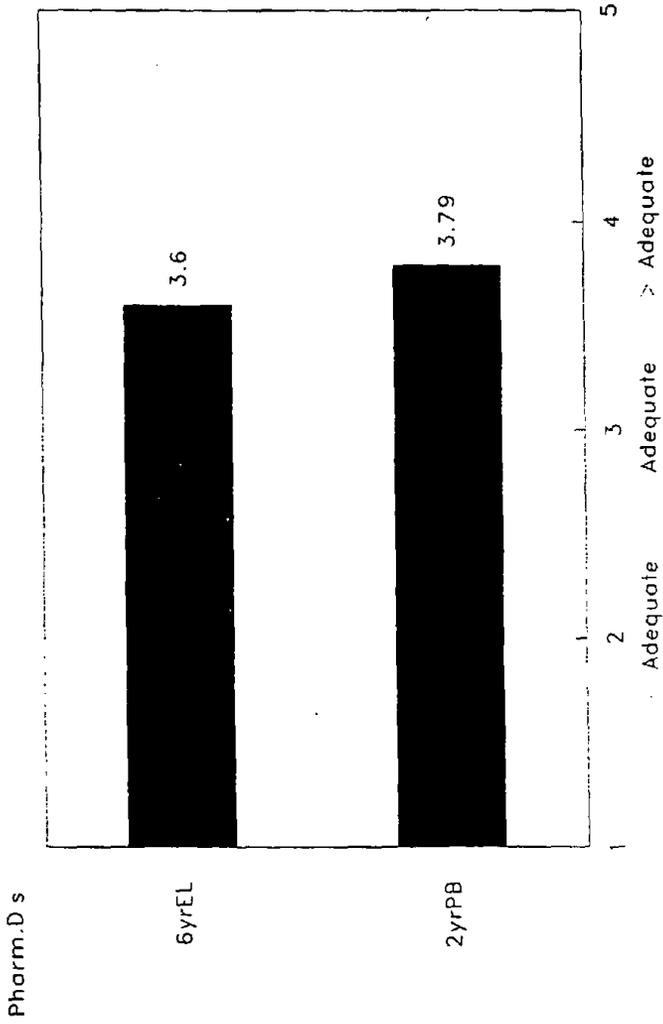


FIGURE 4. Necessity of Postgraduate Training

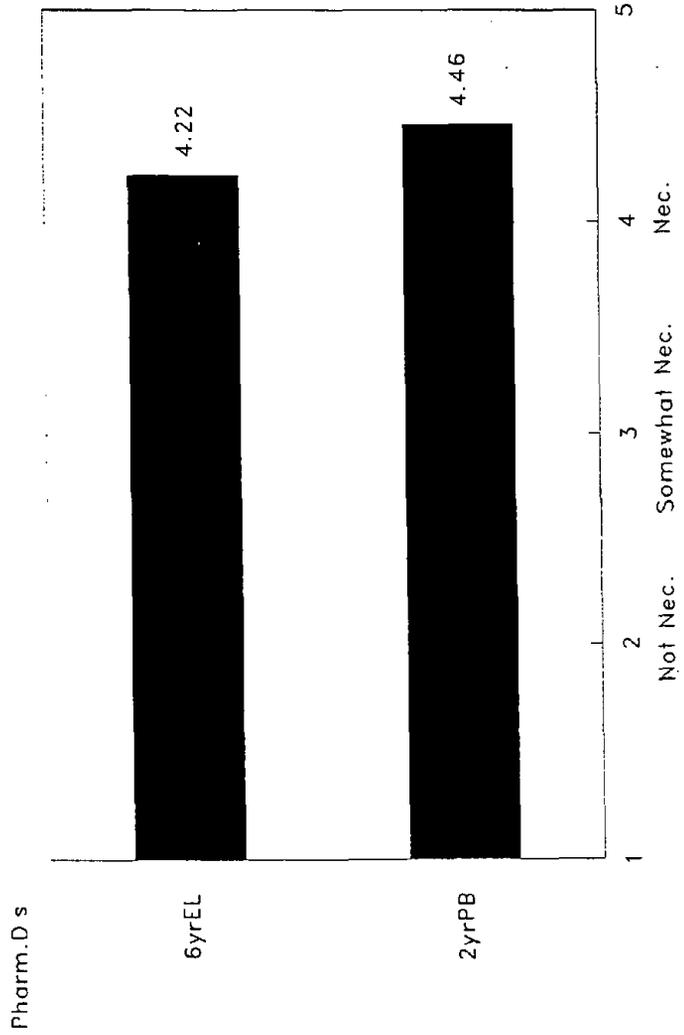
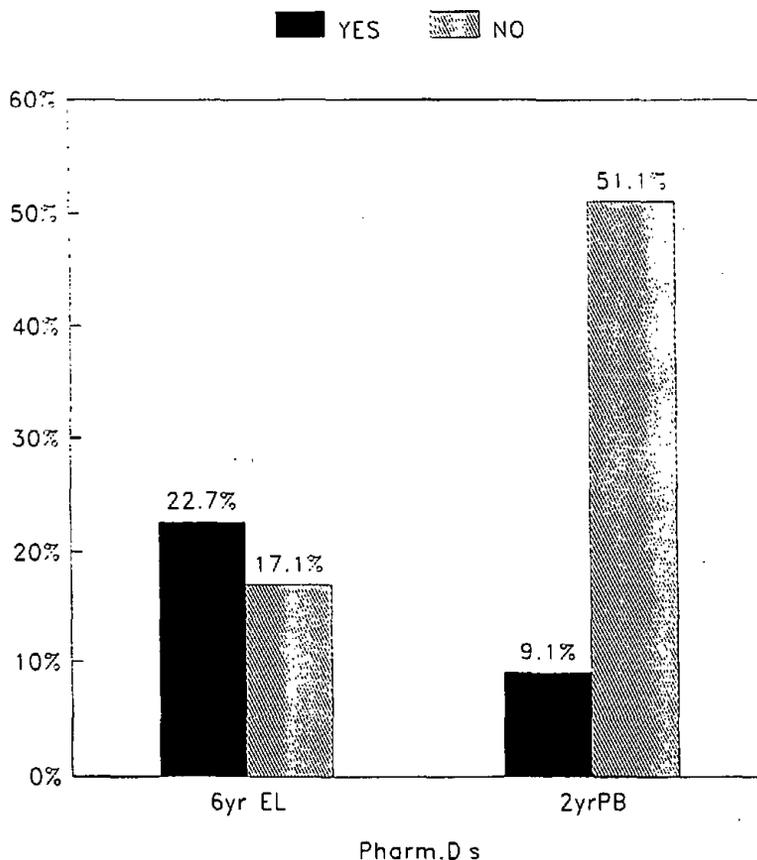


FIGURE 5. Are You in Favor of the Universal Six-Year Entry-Level Pharm.D. Degree?



vancement opportunities. A significant difference was observed for salary satisfaction. Although both groups were satisfied, 2yrPB Pharm.D.s were less so. This difference can be explained by the fact that most of the community pharmacists (who, in this survey, are primarily 6yrEL Pharm.D.s) were very satisfied with their salary. In general, both groups felt their education was adequate or

more than adequate, and both groups felt strongly that their postgraduate training was necessary.

Description of job-related activities was similar for both groups, with or without postgraduate training, with the exception of nearly all community pharmacists being 6yrEL Pharm.D.s and most full-time faculty being 2yrPB Pharm.D.s. This further emphasizes the unified function of Pharm.D.s in the health care system.

The one area of major disagreement between 6yrEL and 2yrPB Pharm.D.s was the adoption of the universal 6-year entry-level degree. By a margin of greater than 2 to 1, 2yrPB Pharm.D.s oppose adoption of the 6-year degree. Although in favor of the 6-year degree, 6yrEL Pharm.D.s were less resolute on the question; only 22.7% were for it, and 17.1% were against it.

### CONCLUSION

On the issue of what the entry-level degree for pharmacy should be, there is presently a lack of consensus, and, for the short run, there will be a continuing debate as to what the entry-level degree for the practice of pharmacy should be. As one scholar put it, "The root of this debate is our lack of consensus about who we are and what we want to become" (4). The results of this survey show that no significant difference exists between 6yrEL and 2yrPB Pharm.D.s with respect to job-related activities, job satisfaction, and salary for these 176 respondents.

The results of this survey indicate that these 176 Pharm.D.s, as a group, are rather homogeneous. Both 6yrEL and 2yrPB Pharm.D.s function in the health care system to provide academic, clinical, dispensing, and information services without significant difference between the two groups. They tend to think and act like a group regardless of degree, except on the position of adoption of the universal six-year entry-level degree. These data cannot be extrapolated to all practicing Pharm.D.s. If we could use this information as a guide, however, then the adoption of the universal six-year entry-level degree would have an impact only in specific areas of pharmacy practice. For example, there would be more Pharm.D.s in community practice. This would be expected for an entry-level degree. In the area of clinical pharmacy faculty, there would be a

shift from 2yrPB to 6yrEL faculty. However, these new 6yrEL Pharm.D.s would need some type of postgraduate training, since this study revealed no 6yrEL Pharm.D.s without postgraduate training employed as pharmacy school faculty.

Unfortunately, this survey did not attempt to ascertain why these 176 Pharm.D.s responded the way they did; therefore, it is impossible to speculate as to why, for example, 17.1% of the 6yrEL Pharm.D.s were against adoption of the 6-year entry-level degree and why 9.1% of 2yrPB Pharm.D.s are in favor of it. Further studies are required to answer these questions.

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