

# The Relationship of Board Certification to Financial and Professional Benefits for Pharmacy Practice Faculty

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**ABSTRACT.** To determine financial and professional benefits to examinees for Board of Pharmaceutical Specialties (BPS) certification, a web-based survey was developed and sent to all 84 US colleges of pharmacy. Numbers of pharmacy practice faculty and board certified faculty were obtained independently from the American Association of Colleges of Pharmacy Roster and the BPS website. Twenty-six surveys were returned. The proportion of BPS-certified faculty was not statistically significantly related to reimbursement of certification-related expenses. The proportion of BPS-certified faculty was statistically significantly related to increases in salary, but not other recognition factors. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2005 by The Haworth Press, Inc. All rights reserved.]*

**KEYWORDS.** Board certification, faculty, reimbursement

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### INTRODUCTION

The Board of Pharmaceutical Specialties (BPS) has administered specialty certification examinations to pharmacists since 1978. Currently certification is available in five specialty areas that include: nuclear pharmacy, nutrition support, oncology, pharmacotherapy, and psychiatric pharmacy. In 1996, BPS established an "added qualifications" credential (1,2). "Added qualifications" highlight an enhanced level of knowledge and skill within a particular recognized specialty. Added qualifications for board certified pharmacotherapy specialists (BCPS) are currently offered in the areas of infectious disease and cardiology and are awarded based upon portfolio reviews conducted by content experts (3).

Surprisingly little information is available regarding the benefits of BPS certification for pharmacy practitioners or faculty (4-7). In 1993, two years after the first pharmacotherapy certification examination was administered, Wagner et. al. conducted a telephone survey of all colleges of pharmacy in the US and Canada to assess the incentives offered to pharmacy practice faculty who became board certified in pharmacotherapy (5). At that time, no college required board certification as a condition of employment; however, 20 schools (24%) reported that they were considering it as a future criterion. Twenty-six schools (31%) reported that certification was considered in promotion and tenure, while sixteen (19%) indicated that certification was associated with a one-time merit salary increase. Thirty-five (41%) schools provided at least partial financial support for certification expenses. Expenses reimbursed included fees for the American College of Clinical Pharmacy (ACCP) preparatory course (14%), the examination itself (31%), and travel to the examination site (24%). Twelve schools (14%) covered all certification-associated costs (5). To date, this study has been the only research focused specifically on board certification of pharmacy practice faculty.

To follow-up the earlier results of the Wagner et. al. study and to determine changes in attitudes and policies since 1993, we undertook a survey of US colleges of pharmacy regarding board certification. The main objective of this study was to describe and measure the effects of BPS certification in academia as perceived by deans of colleges of pharmacy. This data has been reported elsewhere (8). Further analysis of this data addressed several secondary objectives: to determine the extent of BPS-certification costs reimbursed by colleges of pharmacy; to discern financial and professional benefits to pharmacy practice faculty BPS examinees; and to determine which, if any, factors influenced the percentage of

BPS-certified faculty at US colleges of pharmacy. These secondary objectives are described and examined in this paper.

## **METHODS**

The details of the web-based survey are described in a previous publication (8). This instrument was e-mailed in December 2002 and completed surveys were received over the next two months. As part of this survey, 26 of 35 institutions chose to provide their identities so that additional analysis could be conducted regarding institutional characteristics. To address the secondary objectives, additional analyses were performed on the subset of 26 schools that provided their identities. The overall BPS-certification rate and rates for each institution were determined as follows. Information on each US college of pharmacy was compiled from the AACP 2002-2003 Roster (9). These data included number and rank of full-time faculty in pharmacy practice. The number of BPS-certified faculty at each college of pharmacy was obtained by cross-referencing the list of BPS-certified individuals on the BPS website (10) in October of 2003 with the AACP 2002-2003 Roster (9). In this manner, the rate of BPS-certification was determined for each institution, independently of the web-based survey.

Regression analyses using Microsoft Office Excel (Microsoft Corporation, 2003) were performed on the data with the dependent variable being the percentage of BPS-certified faculty based on survey respondents. The explanatory variables used were any certification-related expense reimbursement factor (examination preparation course, examination fee, re-certification fee, PSAP modules, annual fee, exam-related travel, or no reimbursed expenses), any recognition factor (one-time bonus, consideration in promotion and tenure, promotion, salary increase, public recognition, increased responsibilities/privileges, or no recognition), private/public institution status, consideration in tenure and promotion, salary increases, and faculty rank.

## **RESULTS**

### ***Demographics***

The demographics for the subset of 26 identifiable colleges (31% response rate) are provided in Table 1. From the AACP Roster, the mean

TABLE 1. Demographics of Responder Colleges of Pharmacy (n = 26)

Position of Responder	n (%)	
Dean	13 (50)	
Chair	12 (46)	
Assistant Professor	1 (4)	
	<u>Mean (range)</u>	
Number of pharmacy practice faculty, as reported by responder	24 (9-53)	
Number of pharmacy practice faculty, as reported in AACP Roster	21 (10-40)	
	<u>Mean (%; range)</u>	
Number of BPS-certified faculty, as reported by responder	7 (32.6; 1-26)	
Number of BCPS-certified faculty, as reported on BPS website	5 (23.9; 0-13)	p < 0.01

number of instructors/lecturers, assistant professors, associate professors, and professors was 1, 12, 5, and 4, respectively.

### ***Survey Results***

No institution required BPS certification for new faculty members, although 8 institutions anticipated such a requirement in the future. The amount of certification-related expenses reimbursed varied considerably between institutions and is reported in Table 2. Some institutions provided incentives and/or recognition to BPS-certified faculty (Table 2).

### ***Regression Analysis***

The proportion of BPS-certified pharmacy practice faculty was higher in institutions that responded to the survey (23.9%) than those that did not respond (16.6%;  $r^2 = 0.079$ ;  $p < 0.011$ ). The proportion of BPS-certified faculty reported by institutions compared to the proportion as counted in the AACP 2002-2003 Roster and the BPS website was higher and had a substantial amount of variability ( $r^2 = 0.33$ , meaning that only 33% of the variance in reports is explained by AACP counts). The reported proportion was higher than the counted proportion in schools that responded to the survey ( $t = 6.87$ ,  $p < 0.0001$ ). The institutional faculty distribution by

TABLE 2. Expenses Reimbursed, Incentives, or Recognition Provided by Responder Colleges of Pharmacy (n = 26)

Expenses Reimbursed	n (%)
None	9 (35)
Examination preparatory course	8 (31)
Examination fee	8 (31)
Examination fee, only if passed	7 (27)
Re-certification fee	7 (27)
Pharmacotherapy Self-Assessment Program	4 (15)
Annual renewal fee	3 (12)
Incentives and Recognition	
None	6 (23)
Consideration in promotion and tenure	19 (73)
Public recognition	13 (50)
Increased salary	5 (19)
Promotion	3 (12)

rank was not associated with the proportion of BPS-certified faculty ( $r^2 = 0.011$ ,  $p = \text{NS}$ ). The relationship of reimbursement of certification-related expenses, incentives, or recognition is shown in Table 3. The percentage of BPS-certified faculty was not related to private/public status or consideration in tenure and promotion, but was related to salary increases ( $r^2 = 0.149$ ,  $p = 0.05$ ). The estimated effect of salary increases is a higher prevalence of BPS-certified faculty (48.8%) in institutions that provide salary incentives compared to institutions that offer no incentive (28.8%). The actual amount of the salary increase was not specifically reported.

## DISCUSSION

The substantial variability between the proportion of BPS-certified pharmacy practice faculty reported by institutions compared to the proportion as counted in the AACP 2002-2003 Roster and the BPS website ( $r^2 = 0.33$ ) is remarkable. These two proportions should be essentially the same and should yield a very high  $r^2$  value. The study methodology may explain some of this variation. The counted proportion may be slightly out of date or inaccurate as it depends on the accuracy of the Roster. Asking

TABLE 3. Relationship of Reimbursement, Incentives, or Recognition to Proportion of BCPS-Certified Faculty

Explanatory Variables	r <sup>2</sup>	F	Number of Variables, Degrees of Freedom	p
Salary increase	0.149	4.21	1, 24	0.05
Any incentive benefit	0.334	2.01	5, 20	0.12
Any expenses reimbursed	0.413	1.81	7, 18	0.14

administrators to report the number of faculty and the number of BPS-certified faculty also introduces human error. The survey respondents may not have known the exact number of faculty or of BPS-certified faculty. Thus, the numbers reported may have been estimates.

Increases in salary were the only factor statistically related to an increase in the proportion of BPS-certified pharmacy practice faculty. The simple conclusion is that if institutions wish to increase their number of BPS-certified faculty, they should provide a salary increase for those who successfully pass the examination. However, the relatively low coefficient of variation (14.9%) indicates that this factor only explains a small proportion of the variance of BPS-certified faculty. Other factors, such as peer recognition, increased feelings of self-worth, or a desire to achieve BPS-certification status may be more motivating to faculty. McArtor et al. conducted a survey of all pharmacists that were BPS-certified in 1996 (n = 793) (4). The objective of this study was to measure the tangible and intangible benefits of certification by BPS. The response rate was 65% (n = 480). The greatest perceived benefits of certification in this study were feelings of improved self-worth and competence (4). These results were not specific to pharmacy practice faculty, but may provide some insight into motivating factors for this group. Many pharmacy practice faculty spend a substantial proportion of their time in clinical practice. Higher skill levels, as demonstrated by BPS certification, may also lead to patient care benefits, another potentially motivating factor for seeking BPS certification among pharmacy practice faculty. Another potentially motivating, but uninvestigated, factor is the desire to build credentials to seek other employment. Supplementing credentials in this fashion may be in anticipation of an employment change in the near or foreseeable future. These less tangible benefits to pharmacy practice faculty are not discernable from the current research because they require direct inquiry of the faculty members, but may provide some theoretical explanations for the results seen. Another possible effect of salary increases in re-

sponse to BPS certification is that those institutions that rewarded faculty members with a salary increase were better able to retain those faculty members. In this scenario, the increase in salary would not be a motivating factor for the faculty member to seek BPS certification, but rather the existence of a salary increase helped to retain those faculty members that did attain BPS certification and, thus, increased the proportion of BPS-certified faculty at those institutions.

Consideration in the promotion and tenure process for faculty who achieved BPS certification was not associated with a higher proportion of BPS-certified faculty. While positive consideration would be expected to be a motivating factor for faculty, there may be an explanation for this result. Though this information is not available from our data, it is possible that many pharmacy practice faculty are not in tenure-track positions in colleges of pharmacy. Faculty members in clinical-track positions might be more likely to take the examination than those in tenure-track positions because the exam content may be more applicable to the daily pharmacy practice activities of clinical-track faculty rather than tenure-track faculty. Therefore, this consideration might be less of a motivator for faculty to take the examinations than would be expected. A second possibility is that faculty members may not be aware of the specific consideration given to them in the promotion and tenure process if they become BPS-certified. "Consideration" is an ill-defined term and may have very different meanings at different institutions and even among individual faculty members. If that is the case, it is unlikely that the consideration given would be recognized as a tangible benefit by faculty and might not motivate them to take the examination.

There are costs to the examinee to become and remain BPS-certified. Currently, the examination fee is \$600 with a \$100 annual fee (10). Optional materials may include a preparatory course (\$210-250) and the Pharmacotherapy Self-Assessment Program (\$395). It is frequently necessary for the examinees to travel to attend the preparatory course and/or the examination and, thus, they will incur travel-related expenses. Every seven years, a recertification fee of \$400 is assessed, but the annual fee is waived for that year. There is no additional fee to take the written recertification test. Alternatively, the BPS-certified individual may elect to use various continuing education methods to become recertified in addition to the \$400 fee (10). Given these expenses, it might be expected that reimbursement would surface as a factor associated with the percentage of faculty who were BPS-certified. In reality, these costs are small compared to the salary of the average pharmacy practice faculty member. Spread over the entire seven-year certification period, they become even

smaller, approximating the cost of a new text or association membership. It may be that reimbursement of these costs is not significant enough to influence faculty behavior.

External forces may also influence the number of faculty pursuing BPS certification in the future. The American Society of Health-Systems Pharmacists draft accreditation standards for specialty pharmacy residencies stipulate that specialty residency program directors have “board certification in the specialty [when certification is offered in that specific advanced area of practice]” (11). A significant number of specialty residency program directors are college of pharmacy faculty. If these standards are adopted, they may provide external pressures to this portion of faculty to become BPS-certified.

Some limitations to our study exist and should be considered when analyzing the data. Our survey results represent 26 of 84 colleges surveyed and non-response bias, therefore, may exist with regard to the results. Survey methodology relies upon the respondent’s knowledge of his/her institution and its policies regarding certification of faculty. Also, differences among faculty given specific appointment types (i.e., clinical versus tenure track) were not elicited.

The results of our regression analysis are limited to the accuracy of the AACP Roster. The Roster may not be completely accurate or updated when compared to the actual number of faculty at each institution. The delay in updating may explain some of the variation seen between the counts from the Roster and the reported numbers on the survey. Another potential explanation may be regarding adjunct pharmacy practice faculty. There may be substantial institutional variation in the inclusion of such individuals in both the survey and the AACP Roster. In both cases, only full-time individuals were included, but there may have been variability in the interpretation of this criterion.

Another limitation related to time is that institutional policies may have changed regarding BPS-related reimbursement. Therefore, the ability to correlate current policies with certification is limited by the fact that policies may not have been the same at the time some of the faculty sought BPS certification.

While no college of pharmacy required BPS certification for hiring new pharmacy practice faculty members, it is possible that preference is given to BPS-certified faculty and that incentives at the time of hiring (e.g., higher starting salary or rank) were provided to certified faculty candidates. This practice would have contributed to institutions having a higher proportion of BPS-certified faculty without being reflected in the current analysis.



## CONCLUSIONS

The proportion of BPS-certified faculty was not statistically significantly related to reimbursement of certification-related expenses. The proportion of BPS-certified faculty was statistically significantly related to increases in salary, but not other recognition factors.

The results of this study may help direct the distribution of limited resources toward this end. Clearly, the influence of a salary increase is considerable. The specific dollar amounts of salary increases were not collected in this survey; however, the effect of an average salary increase causes the percentage of BPS-certified faculty to increase 20% (28.8% to 48.8%). Reimbursement of expenses and recognition factors other than salary did not influence the percentage of BPS-certified faculty. Therefore, deployment of resources to these areas might be unlikely to increase the number of BPS-certified individuals.

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## REFERENCES

1. Bertin RJ. Added qualifications: A new dimension in pharmacy specialty certification. *Ann Pharmacother* 1997; 31(12):1532-1534.
2. Bosso JA, Hardin TC. Added qualifications for pharmacy specialists: Another perspective. *Ann Pharmacother* 1997; 31(12):1535-1536.
3. Board of Pharmaceutical Specialties. Available from <http://www.bpsweb.org/>. Accessed on March 25, 2004.
4. McArtor JP, Rascati KL. Benefits of certification for pharmacy specialists. *J Am Pharm Assoc Wash* 1996; NS36: 128-134.
5. Wagner ML, Wagner BK, Smith CL. Faculty have few incentives for becoming board certified in pharmacotherapy. *Pharmacotherapy* 1993; 13: 500-503.
6. Wieland LD, Murphy JE. Academic and training requirements in advertisements for pharmacy management and clinical positions. *Am J Health Syst Pharm* 1996; 53: 289-293.
7. Pradel FG, Palumbo FB, Flowers L, et al. White paper: Value of specialty certification in pharmacy. *J Am Pharm Assoc* 2004; 44: 612-20.
8. Romanelli F, Ryan M, Smith KM. Board of pharmaceutical specialties-certified faculty: A survey of United States colleges of pharmacy. *Pharmacotherapy* 2004; 24: 395-400.

9. American Association of Colleges of Pharmacy. Roster of Faculty and Professional Staff. Alexandria, VA: American Association of Colleges of Pharmacy, 2002.

10. Board of Pharmaceutical Specialities. Locate Certified Specialists. Available at <http://www.bpsweb.org/Locate.Certified.Specialist/toster.asp>. Accessed on March 25, 2004.

11. American Society of Health-System Pharmacists. Draft ASP accreditation standards for specialized pharmacy practice residencies. Available from <http://ashp.org/rtp/PDF/May 2002DRAFTStdSpecRes.pdf>. Accessed March 24, 2004.



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