

RESEARCH ARTICLES

Pharmacists as Care Providers: Personal Attributes of Recent Pharmacy Graduates

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Submitted October 19, 2004; accepted December 9, 2004; published May 12, 2005.

Objectives. To determine the extent to which recent pharmacy graduates perceived themselves as caregivers, and to identify differences between respondents' possessing caring attributes and their belief that these were desirable in a pharmacist.

Methods. A cross-sectional study was conducted using a self-administered, online survey instrument asking 402 PharmD graduates to indicate to what extent they felt they had obtained 16 personal attributes appropriate to their responsibilities to patients. Outcome measures included the degree to which graduates believed they possessed the attributes and the desirability of possessing these attributes.

Results. Most of the 95 respondents agreed they possessed the attributes under study and many agreed that these attributes were desirable. There were statistically significant differences between genders, mostly associated with the "dealing with uncertainty" and "leadership" domains.

Conclusion. Pharmacy curricula appear effective, at least partly, in instilling confidence in graduates to provide direct patient care.

Keywords: pharmacy education, attitudes, pharmaceutical care, patient care, pharmacist-patient relationship

INTRODUCTION

Dramatic changes have occurred in pharmacy over the last 35 years. Primarily, these changes were driven by a presumed paradigm shift from the product to the patient. Professional pharmacy associations as well as academic pharmacy have embraced pharmaceutical care as the focal point of a comprehensive re-professionalization strategy, which, for all practical purposes, has resulted in a dichotomization of pharmacy practice involving the terms "product-orientation" versus "patient-orientation."¹⁻¹⁰

Consistent with the evolving practice environments, modern pharmacy curricula emulate the need to teach the necessary skills and knowledge presumed to facilitate pharmacists' ability to implement this paradigm shift from the product to the patient.^{2-4,10,11} Coursework focusing on the clinical, patient-oriented aspects of pharmacy practice, namely pharmaceutical care, has replaced numerous basic science courses.¹¹⁻¹³ It is not clear from the literature, however, whether these new mandates and curricular changes have impacted the way pharmacists perceive themselves as caregivers to the extent that would be expected given the time, effort, and resources that went into impelling this paradigm change.

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In 1999, Holland et al argued, "the focus of efforts to encourage practice change should be the individual pharmacist, because the decision to change ultimately rests with the individual practitioner, not the organization or the profession."⁶⁻⁸ For this reason, it is imperative to ensure that practice change concurs with professional mandates and pharmaceutical education. In other words, pharmacy students must possess the skills and knowledge to assume patient care roles upon graduation.⁵ The profession of pharmacy cannot afford to leave to chance whether pharmacists acquire these skills as they mature in their professional careers.¹⁴

Judging from the professional literature, one would expect to observe certain distinct characteristics of patient care providers as they pertain to a practitioner's caring ability. Health professionals, when asked, will place a considerable emphasis on developing empathic relationships with their patients. Furthermore, researchers have described differences between men and women as women focus more strongly on the social and humanistic aspects of patient care, whereas men have been found to give more attention to the technical and biomedical aspects of the patient encounter.¹⁵ A recent study by Fjortoft et al focusing on pharmacists' caring ability found that pharmacists possessed "relatively high levels of caring ability" and that no differences in caring ability existed between men and women." Overall, however, research conducted on the socialization of health professions students appears

Table 1. Attributes Considered as Desirable in Health Care Professionals

| |
|--|
| Ability to recognize own limitations and strengths |
| Ability to inspire confidence in others, ie, patients |
| Ability to listen |
| Ability to work in a team |
| Adaptability in a changing environment |
| Capacity for independent learning for life |
| Capacity for self-audit |
| Caring and compassionate nature |
| Excitement with the subject of medicine |
| Leadership potential |
| Motivation |
| Open-mindedness |
| Perseverance |
| Satisfactory at interpersonal relationships in your professional life |
| Spirit of curiosity |
| Tolerance of ambiguity and uncertainty, ie, decision making with inadequate data |

inconclusive regarding the development of the psychosocial aspects of patient care practice.¹⁶

No study has yet contrasted pharmacists' self-perceived ability to provide patient care with the respondents' beliefs about the desirability of these attributes. This comparison may reveal a more accurate estimate of an individual's likelihood to assume responsibility for a patient's drug-related needs in the future.

The aim of this study was to answer the question of whether recent pharmacy graduates felt equipped with the interpersonal skills necessary to establish an empathic relationship with their patients and function within their environment as effective, contributing pharmacists. Specifically, the objectives were (1) to determine the extent to which recent graduates possessed the attributes necessary for contemporary, patient-oriented pharmacist roles, and (2) to identify differences between respondents' possessing the attributes and their belief that these attributes were desirable in a pharmacist. Answering these questions could provide vital information required by researchers, educators, practitioners, and the public to guide decision-making in the future and may help our understanding of academic pharmacy's role in providing students with the resources to develop the personal attributes necessary to provide patient care.

METHODS

A cross-sectional study was conducted using a self-administered, online survey instrument that asked participants to indicate to what extent they felt they had attained

16 personal attributes appropriate to their responsibilities to patients (see Table 1). Respondents were also asked to indicate whether they agreed these attributes were "desirable" in a pharmacist. A paper version of the survey instrument had been used and validated with medical graduates.¹⁶ Participation in the study implied respondents' consent. This study was deemed exempt from review by an institutional review board. Data were collected over an 8-week period according to Dillman's tailored design method for mail and Internet surveys.¹⁷ Following a cover letter introducing the study and inviting participation, all participants received a reminder postcard 1 week after the initial mailing as well as a follow-up letter and reminder approximately 3 weeks after the first mailing. A financial incentive in the form of a discount for a continuing education seminar was offered upon completion of the survey, an approach that had been shown to increase response rates significantly (>10 percent).^{17,18} A total of 402 recent graduates of Nova Southeastern University's College of Pharmacy (2000–2003) were invited to participate in this study. All questionnaires were accessed online and submitted electronically to the investigators for data entry and analysis. Descriptive as well as inferential statistics were used to analyze the data. The observation results were examined using standard frequency analysis and chi square analyses were performed to examine significant differences between pharmacist groups in their responses to key questions. All statistical analyses were carried out using *SPSS* version 11.5 (SPSS Inc, Chicago, Ill). Respondent comments to open-ended questions were recorded and divided into categories and then analyzed for common themes.

RESULTS

Description of Sample

Of the 393 letters presumed deliverable, 95 graduates completed the questionnaire, yielding a response rate of 24%. Each class year was represented with 24 students from the graduating class of 2000; 21 from 2001; 22 from 2002, and 28 from 2003 responding. Overall, 65 female and 30 male graduates participated. The majority (98%) of respondents indicated they were practicing pharmacy on a full-time basis. Many of them were practicing in the community setting (60%). Fewer reported practicing in the hospital setting (18%) or in other areas (18%) such as academia, long-term care, industry, mail order/closed pharmacies, or pharmacy benefit management companies. Since graduation, some (18%) of the respondents had gone on to receive further training. They reported completing residencies, fellowships, nuclear pharmacy certification programs, and/or consultant pharmacy licensing programs.

Table 2. Self-described Possession of Attributes, n=95

| Personal Attribute | Gender | Yes, % | Partially, % | No, % | P |
|---|--------|--------|--------------|-------|-------|
| Ability to recognize own limitations and strengths | M | 82.9 | 17.1 | -- | NS |
| | F | 81.7 | 18.3 | -- | |
| Ability to inspire confidence in others | M | 71.4 | 28.6 | -- | NS |
| | F | 70.0 | 30.0 | -- | |
| Ability to listen | M | 88.6 | 11.4 | -- | NS |
| | F | 85.0 | 15.0 | -- | |
| Ability to work in a team | M | 82.9 | 17.1 | -- | NS |
| | F | 83.3 | 16.7 | -- | |
| Adaptability in a changing environment | M | 65.7 | 34.3 | 0.0 | NS |
| | F | 73.3 | 25.0 | 1.7 | |
| Capacity for independent learning for life | M | 71.4 | 28.6 | 0.0 | NS |
| | F | 73.3 | 21.7 | 5.0 | |
| Capacity for self-audit | M | 62.9 | 34.3 | 2.9 | NS |
| | F | 63.3 | 31.7 | 5.0 | |
| Caring and compassionate nature | M | 71.4 | 25.7 | 2.9 | NS |
| | F | 81.7 | 18.3 | 0.0 | |
| Excitement with the subject of pharmacy | M | 68.6 | 28.6 | 2.9 | NS |
| | F | 75.0 | 23.3 | 1.7 | |
| Leadership potential | M | 71.4 | 25.7 | 2.9 | NS |
| | F | 60.0 | 30.0 | 10.0 | |
| Motivation | M | 88.6 | 11.4 | -- | NS |
| | F | 78.3 | 21.7 | -- | |
| Open-mindedness | M | 85.7 | 14.3 | -- | NS |
| | F | 73.3 | 26.7 | -- | |
| Perseverance | M | 88.6 | 11.4 | 0.0 | NS |
| | F | 81.7 | 16.7 | 1.7 | |
| Satisfactory at interpersonal relationships in your professional life | M | 74.3 | 25.7 | 0.0 | NS |
| | F | 61.7 | 35.0 | 3.3 | |
| Spirit of curiosity | M | 74.3 | 17.1 | 8.6 | NS |
| | F | 71.7 | 23.3 | 5.0 | |
| Tolerance of ambiguity and uncertainty | M | 17.1 | 65.7 | 17.1 | 0.015 |
| | F | 46.7 | 43.3 | 10.0 | |

M=male; F=female

Possession of Attributes

Most respondents agreed that they possessed the attributes named in the study. Graduates believed in their “ability to listen”(86%), their “perseverance”(84%), “ability to recognize own limitations and strengths” (82%), “motivation” (82%), and “adaptability in a changing environment” (71%). Fewer graduates felt “satisfactory at interpersonal relationships in their professional life” (66%), possessed “leadership potential” (64%), had the “capacity of self-audit” (63%), and were tolerant of “ambiguity and uncertainty” (36%). Table 2 lists the attributes and the extent to which respondents felt they possessed the attributes.

A statistically significant difference ($p < 0.05$) was found between male and female respondents in the char-

acteristic “tolerance of ambiguity and uncertainty.” Female respondents felt more strongly that they possessed this trait: 47% said they did completely, and another 43% said they partially possessed the trait. Sixty-six percent of male graduates reported partially possessing this trait, while only 17% reported they possessed it completely.

Desirability of Attributes

The majority of respondents agreed that the qualities named were desirable in a practicing pharmacist. Table 3 lists the percentage of male and female respondents who agreed an attribute was desirable. The characteristics that received the highest percentage of agreement overall were a “caring and compassionate nature” (62%), the

Table 3. Comparison of PharmD Graduates Responding “Yes” to the Desirability of Personal Attributes, n=95

| Attribute | Male, % | Female, % | P |
|---|---------|-----------|-------|
| Ability to recognize own limitations and strengths* | 74.3 | 51.7 | 0.03 |
| Ability to inspire confidence in others | 68.6 | 50.0 | 0.078 |
| Ability to listen | 68.6 | 56.7 | NS |
| Ability to work in a team | 62.9 | 53.3 | NS |
| Adaptability in a changing environment | 65.7 | 51.7 | NS |
| Capacity for independent learning for life | 54.3 | 53.3 | NS |
| Capacity for self-audit | 48.6 | 50.0 | NS |
| Caring and compassionate nature | 68.6 | 58.3 | NS |
| Excitement with the subject of pharmacy | 68.6 | 53.3 | NS |
| Leadership potential | 60.0 | 40.0 | 0.06 |
| Motivation | 62.9 | 50.0 | NS |
| Open-mindedness* | 57.1 | 48.3 | NS |
| Perseverance* | 57.1 | 45.0 | NS |
| Satisfactory at interpersonal relationships in your professional life | 42.9 | 48.3 | NS |
| Spirit of curiosity | 42.9 | 35.0 | NS |
| Tolerance of ambiguity and uncertainty* | 37.1 | 50.0 | NS |

*Items for which a statistically significant difference was found between reported possession and desirability ($p < 0.05$).

NS=not significant

“ability to listen” (61%) and the “ability to recognize one’s own limitations and strengths” (60%). Those that were less agreed upon include being “satisfactory at interpersonal relationships in your professional life” (46%), having a “tolerance of ambiguity and uncertainty” (45%), and having a “spirit of curiosity” (38%).

Few significant differences were found between male and female respondents. Differences were found for the items “ability to recognize own limitations and strengths” ($p < 0.05$), “ability to inspire confidence in others” ($p < 0.10$), and “leadership potential” ($p < 0.10$). Additionally, more male respondents tended to agree that most of these traits were desirable. For 13 of the 16 items, a higher percentage of male graduates agreed to their desirability. However, more females than males agreed that “satisfactory interpersonal relationships in your professional life,” “tolerance of ambiguity and uncertainty,” and a “capacity for self-audit” were desirable attributes.

Chi square analyses revealed statistically significant differences between respondents stating they possessed the attribute and stating the attribute was desirable in a pharmacist for 4 of the items: respondents “ability to recognize their own limitations and strengths,” “open-mindedness,” “perseverance,” and “tolerance of ambiguity and uncertainty” (see Table 3).

Training

The majority of graduates with no training beyond the PharmD degree (first professional pharmacy degree) felt that they worked well in a team (87%) and were

adaptable in a changing environment (73%), compared to 62% and 50% of respondents who received training beyond their PharmD degrees ($p < 0.05$).

Place of Employment

Pharmacists working in hospital pharmacies or the pharmaceutical industry valued satisfaction with interpersonal relationships higher than those working in community pharmacy settings. Eighty-two percent of pharmacists, mostly employed in long-term care, pharmacy benefits management, mail-order pharmacies, or nuclear pharmacy settings stated that they were satisfied with their interpersonal relationships in their workplace, and 77% of respondents employed in these settings reported that they considered it very desirable to be “satisfactory at interpersonal relationships in their professional lives” ($p < 0.05$).

Responses to Open-ended Questions

Several respondents (13%) offered open-ended comments. As the previous analysis suggested, graduates reported they felt their education had provided them with the skills and knowledge necessary to provide direct patient care. For example, one respondent stated, “I think it is really important to have a strong sense of self and be a caring, compassionate person in the practice of pharmacy... I feel very well prepared for the working environment.” In contrast, some comments revealed an early sense of disillusionment. “I was more excited about my job and more confident after [initially] being licensed as a pharmacist, but the area that I work in has drained most

of it out of me already. And it only took six months.” Further, several comments implied that students were aware that they needed to take more responsibility for their own learning. “Opportunities are there. If you did not participate, I don’t think you got as much as you could out of the program...”

DISCUSSION

In general, results of this study suggest that recent PharmD graduates feel well equipped with the adequate interpersonal skills needed to provide direct patient care. Respondents’ comments suggested that the curriculum helped develop these attributes, yet their comments indicated that substantial growth also occurred after graduation when they began to practice.

While there were few significant differences in self-reported attributes between men and women, men reported feeling more confident in skills that are “leadership related.” This trend is notable in the significant differences between men’s and women’s perceptions of the desirability of those skills. Gender differences may be difficult to detect when data are self-reported. Faculty members’ evaluations of students’ attitudes during early or advanced practice experiences could produce a more accurate assessment of graduates’ personal attributes if observers are trained properly. Furthermore, perceptions may change over time and recent graduates may not fully appreciate the importance of all of the attributes highlighted in this study. Yet, these differences may impact present choices ultimately affecting their career paths.

While the majority of the respondents felt they possessed these attributes, not all of them believed the attributes were desirable in a pharmacist. There is no clear pattern of respondents’ perceptions of desirability. Educational efforts may help in developing not only these attributes, but in shaping the perception that these are fundamental traits in a responsible, effective pharmacist. An interesting finding pertains to the respondents’ perceived “ability to work in a team,” as well as their “ability to adapt to a changing environment” in relation to their training. Although further interpretation of the effect of post-graduate training beyond the PharmD degree would be conditional on subsequent studies investigating this aspect of pharmacy graduates’ attributes, it raises several relevant questions: How does advanced training influence a practitioner’s ability to work in a team? Are advanced skills and knowledge inversely related to a graduate’s ability to adapt to change in the workplace? Interestingly, the results of this study suggest that post-PharmD training and choice of workplace may be useful predictors of whether a phar-

maciest possesses the attributes essential for assuming patient-oriented roles. Gender, on the other hand, did not emerge as a pertinent predictor of possessing these attributes.

The findings of this study along with those from previous studies on pharmacists’ self-reported caring ability suggest that pharmacists feel equipped with the skills necessary to establish empathic, effective relationships with their patients; nevertheless, an important question remains: Do pharmacists fully understand the process of care? Unlike medical students and nurses, pharmacy students can still graduate from PharmD programs with hardly any experience in direct patient care. Since good care depends on experienced practitioners, offering students ample opportunities for developing and practicing their patient care skills early in the PharmD curriculum will be important.

Other questions surrounding pharmacists’ development of attributes and career paths are also raised by this study. Does the possession of these attributes and/or a belief in their desirability determine a pharmacy graduate’s choice of practice setting, or is it the practice setting that influences the pharmacist’s attributes and beliefs?

Finally, graduates may have possessed the attributes prior to pharmacy school. Further inquiry into and tracking of graduates’ perceptions about their caring ability longitudinally could enhance curricular development. Despite the advantages of the study method, including its ability to show interrelatedness of attributes and conditions, as well as to allow control over the selection of subjects and measurements, findings need to be interpreted with an awareness of the study’s limitations. The cross-sectional nature of the survey implies that establishing directional causality is not possible and that the results may only be representative of the study participants.

CONCLUSIONS

Based on the findings of this study, the pharmacy curriculum at Nova Southeastern University College of Pharmacy appears effective, at least partially, in instilling confidence in graduates to provide direct patient care. While educators should be pleased to know that graduates feel equipped to provide patient care, it may be confusing to find that some graduates do not believe in the desirability of some of these traits. Questions then arise concerning how graduates’ perceptions of pharmacists’ roles differ from those individuals who are promoting this shift to patient-centered care. Future research into the question of how a pharmacist’s self-reported ability to provide patient care translates into actual care

provided, and into the socialization of pharmacists and the institutional framework for pharmacist-provided medication management services is needed to determine the chances of the paradigm shift from the product to the patient ever occurring. These findings present an opportunity for collaboration among colleges of pharmacy using the tools developed in this study, as other schools use different curricular structures and may not emphasize the same educational outcomes.

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