The Changing Retail Environment: Its Influence on Professionalism in Chain and Independently Owned Pharmacies

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Abstract

The purpose of this study was to determine if pharmacists could be differentiated with respect to practice site based on their responses to several questions related to professionalism and its consequential influence on pharmacy image. Results revealed that several qualities associated with professionalism (e.g., skills, knowledge, ethics, service, and environment) could be used to distinguish pharmacists by practice site. In general, pharmacists whose primary practice sites were a chain store pharmacy evaluated the items relating to professionalism, work environment, and image more negatively than pharmacists whose primary practice sites were an independently owned pharmacy. Implications for the retail marketing environment, pharmacy management, and pharmacy image are also discussed.

Introduction

Many professionals such as dentists, lawyers, nurses, pharmacists, and physicians practice in an environment where their professional obligations coexist with numerous business responsibilities. This duality between professionalism and mercantilism also exists in any sector where managers or executives are responsible for providing quality health care and other services within a predetermined budget. For example, these same professionals may be employed in Health Management Organizations (HMO's), Management Service Organizations (MSO's), large legal firms, universities, or large electronic firms. Professionals who practice in any of these environments struggle to maintain a highly professional image given the pressures that often accompany business objectives related to a specific type of practice. The purpose of the present study is to investigate the effect of several characteristics associated with the professional and mercantile aspects of pharmacy practice on pharmacists' image of their profession.

Similar to the experiences of other professions, pharmacists also have struggled to provide professional services in an increasingly competitive business environment. The effect of competition on pharmacy practice is apparent by the diverse array of outlets for obtaining prescription services, which includes independently

owned retail pharmacies, large chains, deep-discount pharmacies and mail order organizations. Perceptual differences among pharmacists may be attributed to characteristics such as pharmacy services, prescription prices, the political environment of pharmacy practice including structure, education, attitudes, and regulation. This rapid evolutionary change taking place in pharmacy makes this group an ideal subject for the study of practice environment.

Dimensions of Professionalism

Various models and frameworks exist that describe professionalism, the characteristics associated with professionals, and the work they perform in an organization. For example, Freidson⁸ categorized professionals according to occupational attributes such as the exclusive right to perform a particular kind of work, control over training and access to it, and the right of determining and evaluating the way the work is performed. Hall⁹ developed a professional model composed of two basic, interrelated components. These components are identified as structural and attitudinal.

Structural Components

The major components of the structural side as they relate to medicine have been outlined by Reed and Evans¹⁵. The components of professionalism are summarized as: (1) a distinct body of knowledge; (2) internal regulating capabilities; (3) extensive training and skills requirement; (4) code of ethics; (5) service commitment; and (6) occupational autonomy. These characteristics coupled with the meaningful responsibility associated with one's job allow professionals to provide their members with a "vertical vision" for structuring career lines within and across existing organizations⁶.

Attitudinal Components

The attitudinal side of professionalism is concerned with how practitioners view their work. Hall suggests a correspondence between attitudes and behavior:

If this assumption is correct, then the attitudes comprise an important part of the work of the professional. Once the structural prerequisites of professionalism are met, the approach taken in practice becomes the important consideration (Hall 1968, p. 93).

For example, the complexity of the tasks which professionals perform facilitates their ability to organize and mobilize social and political support to back their territorial claims¹⁸.

As mentioned in the introduction to this paper, a great deal of change is expected to revolutionize pharmacy practice. It is believed that the characteristics discussed earlier will contribute to pharmacists' internal cognitive framework for shaping their view of pharmacy image. However, despite efforts applied toward professional growth, pharmacists are challenged to provide professional services in a highly competitive environment.

Deprofessionalization Resulting From Conflicting Roles

Because the changes described above will have a direct impact on the profession of pharmacy, there is reason to believe that the attitudinal dimension of pharmacists' professional image will also be affected by changes in health care policies, as well as by various characteristics associated with pharmacists' practice environments. Since pharmacists have experienced the effect of these changes for the past five years and longer, they would likely provide an accurate assessment of how these health care policies and practice environment characteristics affect the image of the retail practice of pharmacy.

Characteristics Challenging The Professional Aspects of Pharmacy Practice

Over 20 years ago, the American Pharmaceutical Association funded a study by the Dichter Institute to evaluate pharmacy's image², ³. Key findings of this study include: (1) the professional aspects of pharmacy image are less visible in mass-merchandise and discount environments than in independent pharmacies; (2) this compromised image is related to the perception that other health professionals (e.g., physicians and dentists) sell services not products; and (3) the public cannot accept the mercantile and professional side of pharmacists. Does this study prophetically describe the current state of retail pharmacy's image and the professional component that supports image?

As business considerations have grown in importance, we have seen a growth of pharmacies in the mass merchandise and discount environment. Alternatively, educational training provided in pharmacy schools continues to prepare students for pharmacy practice in a highly professional environment. Yet, according to the Dichter Report, the business considerations serve to diminish the public's perception of retail pharmacy's professional merits. This public perception as well as the pressures from a rapidly changing health care system are likely to be recognized by practicing pharmacists and incorporated into their own view of pharmacy image. Thus, we argue that many qualities associated with professionalism coupled with the ability of pharmacists to perform various professional activities in a challenging practice environment will influence their evaluation of pharmacy image.

Move Toward Cost Effectiveness

Recent changes in the health care system have mandated that health services become cost-effective, efficient, and provide quality care. These changes could detrimentally affect the structural nature of the profession. One act responsible for major changes in the health system is the Drug Price Competition and Patent Term Restoration Act of 19847. There were two reasons for this act. First, pioneer companies received an extension of patent life on new drugs to recapture market time lost during the lengthy drug development In exchange, generic drug companies were allowed greater market accessibility because the need for duplicate research procedures for post-1962 approved drugs was eliminated. In summary, this act increased the market for generic drug products and created fierce price competition for the acquisition of pharmaceutical drug products among manufacturers, wholesalers, and chain warehouses. With the growth in market share of generic drug products, there is increased pressure on pharmacists to inform consumers and educate physicians

about the cost differences between brand and generic drug products. In many cases, third-party administrators mandate generic drug product use through insurance programs that require pharmacists to dispense generic products. As a result, third-party programs have restricted pharmacists' opportunities to use professional judgment in therapeutic decisions. Thus, pharmacists' perceptual differences between actual and desired levels of professional pharmacy practice may result from policies mandated to control rising health care costs.

Customer Service

Recently, a new trend has emerged in pharmacy. The Omnibus Reconciliation Act of 1990 (OBRA '90) requires all pharmacists to provide prospective drug utilization reviews for Medicaid patients. Regardless of pharmacists' current involvement, OBRA'90 will require pharmacists to become more active in the drug product selection process. Embedded in this Act is the concept of pharmaceutical care¹⁰, which emphasizes pharmacist accountability and responsibility to provide services for patients throughout the process of obtaining medications and most importantly when monitoring patient outcomes. Traditionally, pharmacy has been viewed as a dispensing function where the focus was to fill prescriptions as quickly and efficiently as possible. With OBRA '90, a new paradigm of pharmacy practice will emerge that includes the provision of pharmacy services, drug utilization evaluations, and pharmacist-initiated referrals. In toto, this increased clinical involvement is expected to lead to an improved pharmacy image.

In addition to greater opportunities for patient involvement, third-party prescription program and insurance company administrators are playing an increasing role in the prescription drug market. Currently, third-party prescriptions comprise approximately 40% of prescription sales for retail pharmacies¹¹. Although third-party prescription programs generally have a detrimental effect on pharmacy profit margins, retail pharmacists continue to provide prescription services to enrollees for fear of losing business to competitors²¹. Moreover, administration of these programs is cumbersome because third-party plans are generally nonstandardized, decentralized, and require computerized systems to process the claims. Consequently, pharmacists burdened by third-party claim processing activities will have less time to provide professional services to patients.

Political Structure

Along with OBRA '90, other changes are occurring in the educational training of pharmacists. The Commission to Implement Change in Pharmaceutical Education asserted that "the future of pharmacy as a health care profession lies in its ability to contribute to the rational use of medication in health care". Implicit in this statement is the need for educational training in the areas of medication assessment, communication, and quality of life.

Although pharmacists continually strive to maintain a highly professional environment for providing prescription services, increased economic and regulatory pressures work to thwart these efforts. This continued struggle may jeopardize consumers' ability to remain loyal to one pharmacy and consequently, will result in compromised health care services. Identifying the salient components of pharmacy image through pharmacists' self-assessment of these characteristics will hopefully create a market environment where consumers can receive adequate pharmaceutical care delivery.

Business Aspects of Professionalism

Unlike many environments, the practice of pharmacy is highly regulated. For example, the distribution of prescription drug products is controlled and subject to a number of federal and state regulations. Historically, a profession has been defined as an elite social status based on a special body of knowledge that leads in turn to special responsibilities¹³. According to Morden (1989) and Reed and Evans (1987), the standards necessary to set apart a profession are: 1) degree of knowledgeability; (2) relation to client; (3) self interest; (4) professional organizations; (5) internal regulating capabilities; and (6) code of ethics.

As a health profession, pharmacy has formal training programs, a code of ethics, professional associations, and a fair degree of autonomy and self-regulation²². Alternatively, pharmacy does not have complete control over the distribution of prescription and over-the-counter (OTC) medications. Pharmacy's body of knowledge overlaps those of other health professions, and there is a perceived ethical conflict between meeting the customer's professional needs and organizational gains¹². This dilemma represents a serious threat to the profession's self-image. Therefore, it is hypothesized that upon analysis of these characteristics, pharmacists' actual assessment of pharmacy image will differ with respect to the type of practice. More specifically:

- H₁: Pharmacists working in chain pharmacies will evaluate the professional aspects associated with pharmacy image more negatively than pharmacists working in independently owned pharmacies.
- H₂: Pharmacists working in chain pharmacies will evaluate the influence of industry and environmental forces on pharmacy image differently than pharmacists working in independently owned pharmacies.

| Variable Practice Site | Fr | equency | Percent of Sample |
|--|------------------|-----------------------------------|-------------------|
| Single Pharmacy | | 223 | 49.0 |
| Multi-independent | | 48 | 10.5 |
| Chain (≥ four stores) | | 119 | 26.2 |
| Pharmacy department (discount store) | | 61 | 13.4 |
| Other | | 4 | 0.9 |
| | | | |
| - | as the Image of | Retail Pharmacy: ^a 332 | 75.3 |
| - | as the Image of | | 75.3 46.1 |
| In the Past Five Years, h Changed Increase How Would You Rate the Im | age of Retail Ph | 332 167 | |

^{&#}x27;Results based on the percent of positive responses

Methodology

Sample

The sample included 1,089 retail pharmacies that were randomly generated from an updated Hayes directory. This directory provides a comprehensive list of approximately 54,000 pharmacies in the United States. Data collection involved two mailings of questionnaires to all pharmacists in the sample beginning in October 1991 and ending in June 1992. Although as much as six months may have elapsed before the second mailing, there is little concern for response duplication because most pharmacies employ two to three full time pharmacists. Therefore, if more than one response was received from the same pharmacy, it is more likely that one of the other pharmacists on duty responded to the questionnaire.

After the first mailing, pharmacists returned 248 questionnaires for a net response rate of 23.3%. After the second mailing, a total of 456 usable questionnaires were received for a net response rate of 41.6%. As a check for response bias, the first wave of respondents

was compared to the second wave of respondents with respect to practice setting. Results from the chi-square test revealed no significant differences between the first and second wave of respondents. Consistency of data was verified by comparing item means and standard deviations between the first and second wave of respondents. The results of this comparison are shown in the Appendix. Cronbach's alpha for the 55 items was 0.83 indicating that the items were internally consistent at sampling the domain of pharmacy image¹⁴.

Questionnaire Design

A questionnaire designed to capture the dimensions described above was developed to measure pharmacists' opinions of the professional qualities of their practice and pharmacy image. The first question was designed to ascertain how pharmacists rated the image of pharmacy practice using a seven-point "not professional" (1) to "extremely professional" (7) scale. The second part of the questionnaire was designed to ascertain how various changing forces in the health care environment influenced pharmacists' perceptions of their image (See Appendix for a listing of the 55 items used in this

^b Retail image was rated on a seven-point "not professional" (1) to "extremely professional" (7) scale.

analysis.). Previous research along with current issues described earlier were used to identify major areas believed to influence the professional aspects of pharmacy image. These areas include practice environment, pricing practices, educational training, pharmacy services, ethical considerations, and level of service. Pharmacists were asked to rate how each of the 55 items related to professionalism has influenced their opinion of pharmacy image in the past five years. Items were measured on seven-point "strong negative impact" (-3), "no impact" (0), to "strong positive impact" (+3) scales. To encourage responses, pharmacists received an envelope containing a cover letter explaining the purpose of the study and a separate questionnaire returnable with prepaid postage.

Statistical Analysis

Data were first analyzed by multivariate analysis of variance (MANOVA), followed by descriptive discriminant analysis. MANOVA assesses the statistical significance of differences in the groups under investigation and was used as an overall test of the first hypothesis. Stepwise discriminant analysis was used following MANOVA to break down the total association into additive pieces to test the second hypothesis by determining which questions were best at discriminating between the groups of respondents²⁰. In the stepwise procedure, the first variable entered into the discrimin-

ant function is the one that maximizes the separation of the groups, the second variable the next most, etc.

Results

Practice setting included 271 (59.5%) independently owned pharmacies and 180 (39.6%) chain pharmacies. The remaining pharmacies were either located in a medical center or were unidentifiable (Table 1). These findings are consistent with national pharmacy data¹⁷. When asked their opinion of whether the image of retail pharmacy has changed in the past five years, approximately three-fourths of the pharmacists reported a change in image. However, results from pharmacists were divided equally between a decrease and an increase in image. As revealed from the t-test shown in Table 1, pharmacists working in independently owned pharmacies rated image significantly higher than pharmacists working in chain pharmacies thus, supporting the first hypothesis. Although some pharmacists were working for a large chain with the goal of eventually owning their own store, it is believed that the number of pharmacists in this situation would not have a significant effect on the study's results.

Reported in Table 2 are the results from MANOVA and stepwise discriminant analysis. MANOVA yielded significant results (p < 0.001), thus supporting the existence of two distinct groups of opinions of the

| Table 2. Two-level Discriminant Analysis Comparing Chain and Independently Owned Pharmacies | | | | | | |
|--|---------------------|--------------------------------------|-----------------|---------------|------|--------|
| Discriminant Function | Eigenvalue | Canonical R | Wilks Lambda | Chi Square | D.F. | Р |
| 1 | 1.05 | .716 | .488 | 183.13 | 2,20 | <0.001 |
| Group Centroids | Values | | | | | |
| Chains Independents | 1.2106 -0.8614 | | | | | |
| Percent cases corr | rectly classified (| nit ratio) | | | | |
| Sample Holdout (first mai Holdout (second ma Proportional chance | ailing) | 82.93% 81.82% 76.92% 52.00% | | | | |
| Manova | F-Ratio | D.F. | P | | | |
| | 4.39 | 55, 372 | < 0.001 | | | |

Table 3. Items Related to Professional Aspects of Retail Pharmacy Practice: MANOVA and Two-Level DA Results for Comparing Independently Owned and Chain Pharmacies

| Items | F Ratio | P Value | Loadingsa | Group Means ^{bc} | |
|--|------------|------------|-----------|---------------------------|------|
| - | Ratio | Varue | | C | I |
| Pharmacies in discount environments | 19.77 | .001 | .457 | -0.6 | -1.7 |
| Multi-tier pricing by manufacturers | 7.88 | .005 | .456 | -1.8 | -2.6 |
| Pharmacist work environment | 21.47 | .001 | 319 | -0.8 | 0.2 |
| Multiple prescription reimbursement plans | 4.56 | .034 | .240 | -0.8 | -1.4 |
| Pharmacy technicians | 12.16 | .001 | .312 | 0.9 | 0.1 |
| Political structure of pharmacy | 0.28 | .596 | 109 | -0.5 | -0.2 |
| Community involvement | 12.70 | .001 | 184 | 1.1 | 1.6 |
| Unique design of brand products | 9.72 | .002 | .275 | 0.7 | 0.1 |
| Pharmacy profit margins for Rx drugs | 3.92 | .049 | .208 | -0.8 | -1.4 |
| Brand product pricing | 5.20 | .023 | .236 | -1.8 | -2.4 |
| Manufacturers bribing FDA officials | 2.16 | .143 | 019 | -2.3 | -2.3 |
| Third-party incentives for patients to request generics | 0.70 | .403 | .096 | -0.1 | -0.4 |
| Mail-order pharmacy | 0.09 | .769 | .239 | -2.2 | -2.6 |
| Generic drug price increases | 3.45 | .064 | 052 | -0.7 | -0.6 |
| Biotech drugs | 0.02 | .897 | .058 | 1.0 | 0.9 |
| Self-diagnosis product market | 3.36 | .068 | 009 | 0.8 | 0.9 |
| Pharmaceutical care concept | 4.21 | .041 | .073 | 1.3 | 1.2 |
| Advertising disease states to consumers by manufacturers | 2.24 | .135 | .190 | 0.1 | -0.4 |
| Manufacturer profit margins | 0.27 | .607 | .209 | -1.8 | -2.3 |
| Senior citizen discounts | 0.18 | .673 | .042 | -0.4 | -0.5 |

^a Correlations between discriminating variables and canonical discriminant function.

profession. Stepwise discriminant analysis (Method = Wilks) was next used to eliminate noncontributory items from the analysis. Weights for prior probabilities of

group membership were determined by the number of pharmacists in an independent and chain store practice environment, respectively.

^b Items were measured on a seven-point "strong negative impact" (-3) to "strong positive impact" (+3) scale.

^c Group means for C = chains and I = independently owned pharmacies.

Chain pharmacists identified pharmacies in discount environments, multi-tier pricing by pharmaceutical manufacturers, multiple prescription reimbursement plans, and pharmacy technicians as having the most influence on their evaluation of several items related to professionalism and, subsequently, pharmacy image. Alternatively, pharmacists working in independently owned stores identified pharmacist work environment, community involvement, and the political structure of pharmacy as having the most important influences on professionalism and their opinion of image. groups gave mail-order pharmacies, brand product pricing, and manufacturers bribing FDA officials very negative scores on the scale designed to measure professionalism as it relates to pharmacy image, while the pharmaceutical care concept, self-diagnosis market, and biotechnology drugs received favorable ratings (Table 3).

Results in Table 3 reveal significant differences between independent and chain pharmacists for several These results support our second characteristics. hypothesis. Mean scores for pharmacies in discount environments, multi-tier pricing, brand product pricing, and multiple prescription reimbursement plans were low for both groups indicating a negative impact on professionalism and pharmacy image. However, chains scored significantly higher compared to independents indicating a tolerance for discount environments. Also revealed are the advantages of multi-tier pricing, brand product pricing to chain pharmacies, and the corporation's ability to cope with third-party prescription programs. Pharmacy technicians were viewed favorably by both groups. However, the positive impact of technicians on image was rated significantly higher by chain than by independent pharmacists.

Pharmacists working in independently owned pharmacies rated their work environment significantly more favorable compared to pharmacists working in chain stores. In fact, chain store pharmacists gave a negative score to their work environment and its representativeness of the professional qualities of pharmacy practice. Although pharmacists in both settings rated community service high with professionalism, independents rated this item significantly higher compared to chain pharmacists. No significant differences were identified for either group regarding the political structure of pharmacy, mail-order pharmacy, and manufacturer profit margins.

Discussion and Implications

Presented in this study are the results from a nationwide survey of pharmacists' opinions of several professional qualities that are linked to pharmacy image. The goal of this research was to determine if pharmacists' evaluations of these professional qualities as well as their opinions of image will differ with respect to their practice site (i.e., chain vs. independent pharmacy). Because of the complexity of the issues affecting the health care system and the practice of pharmacy, the approach used in the study design was that of self-assessment. Results reveal several areas where pharmacists' perceptions of professional qualities encountered in community practice differ by pharmacist practice site and consequently may have some influence on pharmacists' perceptions of image.

Environmental Assessment of Image

The study results revealed that pharmacists working in chain and independently owned pharmacies rate professional image differently with respect to several characteristics. Although both chain and independent pharmacists reported an overall positive score for image, independent pharmacists scored significantly higher in the t-test than chain pharmacists. In general, mean scores from the discriminant analysis for items dealing with the pricing structure for pharmaceutical products were rated much more negatively by independent pharmacists than chain pharmacists. This result is to be expected since prices for single-source products are likely to be higher for independent pharmacists than for chain pharmacy organizations that can purchase medications in large quantities. Large chain stores have an inherent advantage over independents under the current pricing structure for prescription products because of volume purchasing and better inventory control. chain pharmacists are not directly affected by the pricing structure (i.e., they are pharmacy employees, not owners), their opinion of image may be more positive regardless of the discount environment.

Despite discrepancies in pricing structure, independents scored significantly higher on overall image than chains. This may be related to independents' ability to have more control over the nature of their pharmacy practice (i.e., occupational autonomy) and likewise are able to focus more on the professional qualities of their practice. However, when presented with external cues associated with price, over which they have little control, independents become aware of their competitive disadvantage with chains and thus associated a more negative influence of these items on professional qualities and their relation to pharmacy image.

Another interesting finding is that independent pharmacists appear to have higher opinions of the positive aspects of their practice by strongly emphasizing the professional qualities of community service and the positive aspects of their work environment compared to pharmacists working in chain stores. Traditionally, the competitive advantage of chain pharmacies is achieved through price competition and prescription volume.

Given the nature of this environment, pharmacists have little time to discuss medication use with customers. Some chain pharmacies are attempting to increase pharmacists' counseling activities by incorporating counseling areas into new store designs⁵. In addition, for independents to provide more professional services (e.g., patient counseling, drug utilization evaluation), they must be willing to relinquish the dispensing function to pharmacy technicians and automated dispensing systems. In the past, prescription volume has not been crucial to the economic success of independent pharmacies. In this environment, pharmacy technicians were not necessarily needed and pharmacists may have viewed them as a potential threat to their dispensing function. However, in the current environment, customer interaction is usually higher with independent pharmacists, and perhaps independent pharmacists view technicians as taking time away from this interaction.

Development of a New Retail Strategy

According to current health care trends, it is anticipated that pharmacists must seek professional growth through increased customer contact and greater efforts directed toward therapeutic outcomes. This increased professional role for pharmacists can serve as a basis for establishing competitive advantages in the marketplace for pharmacies that differentiate by service. differentiation will require pharmacists to have greater personal contact with patients, increased availability of comprehensive pharmaceutical services, increased access to patient information, and more interaction with other health professionals. There is some concern that if pharmacists do not promote the professional qualities as a strategy for image enhancement, the public's perception of pharmacists4 will decline as chain pharmacies continue to grow in size¹⁹ and pharmacy practice becomes more corporate¹⁶.

In the retail pharmacy environment, the pharmacist can be an employee or can also be a manager in the case of an independently owned store. Managerial issues regarding the employment of pharmacists in chains, HMO's, and other clinic settings suggests that the work environment may be changed to reduce the emphasis on dispensing responsibilities and increase patient involvement. Overall, pharmacists' perceptions of their ability to perform professional functions may affect the delivery of services as well as pharmacy image. Moreover, if the future direction of pharmacy focuses on increased patient interaction and if the goal of pharmacy education is to prepare pharmacists to practice in a highly professional environment, then it may be beneficial for chain pharmacy leaders to address the current manner in which pharmacy services are being provided.

Suggestions for Future Research

As the health care sector becomes more bureaucratized through the development of corporate mergers, group purchasing organizations, managed care, and health alliances, the demands of meeting predetermined business objectives will likely interfere with professional For example, as demands for more patient counselling increase, the independent pharmacist will have to assign more business management functions to clerks and pharmacy technicians. Thus, while pharmacists indicate more desire for patient involvement, delegating control to other employees may present a difficult task. Therefore, the findings from this study corroborate the existence of an inverse relationship between professionalism and bureaucratization as revealed by Hall (1968). Given the somewhat uncertainties of our health care system, the current study provides a useful benchmark to assess the nature and scope of how these changes will likely influence pharmacists' ability to provide professional services in a corporate environment. Future research could focus on how corporate managers, executives, pharmacists, and other professionals anticipate these changes and formulate strategies to separate the business aspects of corporate operated health care facilities from professional components. 20

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Appendix
Mean and Standard Deviation of Items Related to Professional Aspects of Retail Pharmacy Practice^{ab}

| | Mean (S.D.) First Mailing (n = 248) | Mean (S.D) Second Mailing (n = 208) |
|--|-------------------------------------|---|
| | • | • |
| Pharmaceutical acquisitions/mergers | -0.6 (1.2) | -0.6 (1.1) |
| Counseling services to patients | 2.0 (1.0) | 1.8 (1.2) |
| Dispensing generic products | 0.7 (1.5) | 0.8 (1.4) |
| Community involvement by pharmacists | 1.5 (1.2) | 1.2 (1.3) -0.7 (1.3) |
| Loss of autonomy in dispensing | -0.9 (1.3) | -0.7 (1.3) -0.3 (1.2) |
| Pharmacist shortage | 0.0 (1.3) -0.3 (1.6) | -0.3 (1.2) -0.7 (1.5) |
| Possible national health care insurance | -0.4 (1.6) | -0.7 (1.5) |
| Senior citizens discounts Competence of recent pharmacy school graduates | 0.9 (1.4) | 0.7 (1.3) |
| Entry-level Pharm.D. programs | 0.1 (1.4) | 0.0 (1.4) |
| External Pharm.D. degree programs | 0.3 (1.3) | 0.3 (1.1) |
| Public opinion poll results of pharmacists' trustworthiness | 1.9 (1.1) | 1.8 (1.1) |
| Pharmacy code of ethics | 1.3 (1.3) | 1.1 (1.3) |
| Senator Pryor's political activity | 0.2 (1.4) | 0.1 (1.3) |
| Pharmacists' work environment | -0.3 (1.6) | -0.1 (1.6) |
| Pharmacy technicians | 0.4 (1.4) | 0.3 (1.3) |
| Generic drug product price increases | -0.5 (1.1) | -0.4 (1.0) |
| New drug product price increases | -1.9 (1.4) | -1.9 (1.4) |
| Generic drug product quality | -0.5 (1.6) | -0.3 (1.6) |
| Generic drug product safety | -0.3 (1.5) | -0.2 (1.5) |
| Generic drug product effectiveness | -0.1 (1.5) | 0.0 (1.5) |
| FDA generic drug recalls | -1.3 (1.4) | -1.4 (1.3) |
| FDA brand name drug recalls | -0.8 (1.2) | -1.0 (1.2) -2.1 (1.2) |
| Manufacturers bribing FDA officials | -2.3 (1.1) -1.1 (1.1) | -2.1 (1.2) -1.0 (1.1) |
| Therapeutic failures of brand name drug products | -1.1 (1.1) -1.4 (1.2) | -1.3 (1.1) |
| Therapeutic failures ofgeneric drug products Potential for bioequivalence problems with generic drug products | -1.4 (1.2) | -1.2 (1.1) |
| Subpotent generic drug products | -1.6 (1.2) | -1.6 (1.1) |
| Subpotent brand name drug products | -1.3 (1.2) | -1.3 (1.2) |
| Brand drug product pricing | -2.0 (1.3) | -2.1 (1.2) |
| Direct-to-consumer advertising of prescription drugs by manufacturers | -0.7 (1.4) | -0.7 (1.6) |
| Direct-to-consumer advertising of disease states by manufacturers | -0.2 (1.4) | -0.3 (1.5) |
| Advertising by pharmacies | 0.0 (1.4) | -0.1 (1.6) |
| Advertising of prescription prices by pharmacies | -1.4 (1.4) | -1.5 (1.3) |
| Advertising of pharmacy services by pharmacies | 1.2 (1.3) | 1.0 (1.4) |
| Remote mail-order dispensing services | -2.3 (1.1) | -2.4 (1.0) |
| Retail pharmacies in a discount outlet | -1.2 (1.3) | -1.4 (1.3) |
| Multi-tier drug pricing by pharmaceutical manufacturers | -2.1 (1.2) | -2.3 (1.0) |
| Availability of generics | 0.6 (1.4) | 0.5 (1.4) |
| Inconsistent physical appearance of some generic products | -1.4 (1.1) | -1.4 (1.0) |
| Third-party incentives for pharmacists to dispense generic drugs | -0.6 (1.4) | -0.7 (1.5) |
| Third-party incentives for patients to request generic drugs | -0.3 (1.5) | -0.3 (1.6) -1.1 (1.4) |
| Multiple prescription reimbursement plans | -1.1 (1.4) | -1.1 (1.4) -0.1 (1.0) |
| APhA's generic substitution policy | 0.0 (1.0) -1.1 (1.5) | -1.2 (1.3) |
| Mandatory use of generics | -1.0 (1.4) | -1.3 (1.4) |
| Pharmacy profit margins on prescription drugs Pharmaceutical manufacturer profit margins | -2.0 (1.3) | -2.1 (1.2) |
| Unique design of brand name products | 0.3 (1.0) | 0.3 (1.1) |
| Computerization of pharmacies | 2.2 (1.1) | 2.1 (1.1) |
| Prescription drugs that have been switched to over-the-counter | 1.0 (1.5) | 0.9 (1.4) |
| Biotech drugs | 0.9 (1.1) | 0.8 (1.2) |
| Self-diagnosis product market | 0.8 (1.3) | 0.8 (1.2) |
| Pharmaceutical care concept | 1.3 (1.0) | 1.1 (1.1) |
| Specialization in pharmacy | 1.1 (1.2) | 1.0 (1.2) |
| Political structure of pharmacy | -0.2 (1.4) | -0.5 (1.4) |
| Other (please specify) | | , |

Items were measured on a seven-point "strong negative" (-3) to "strong positive" (+3) impact scale. Cronbach's alpha = 0.83