

Pharmacists' Roles and Factors Affecting Patient Care in Korea

Monica J. Hwang, PhD¹ and Henry N. Young, PhD²

¹Department of Pharmacy Administration & Public Health, College of Pharmacy and Health Sciences, St. John's University and

²Department of Clinical and Administrative Pharmacy, College of Pharmacy, University of Georgia

Conflict of interest: The Author(s) declare(s) that they have no conflicts of interest to disclose.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Keywords: community pharmacist, patient care, counseling, Korea, separation of prescribing and dispensing, pharmaceutical reform

Abstract

Objectives: This study was conducted to explore Korean community pharmacists' perceptions of their roles in providing care to patients after the implementation of the Separation of Prescribing and Dispensing Act (SPD Act) and to investigate pharmacists' perceptions about factors that impact their patient care.

Methods: Eight community pharmacists participated in semi-structured, face-to-face, in-depth interviews in Korea. A snowball sampling technique was used to obtain participants. Interviews were audio-recorded and transcribed. Interviews were analyzed using a summative content analysis procedure.

Key findings: Participants' perceptions of their roles centered on dispensing prescriptions, educating and counseling patients, and helping patients with OTC products. Participants perceived time constraints due to prescription volume and patient expectations as factors influencing their provision of patient care.

Conclusion: This study suggests that the SPD Act was successful in changing pharmacists' roles in the Korean health care system. None of the participants perceived their role to include prescribing, while all of the participants indicated that their primary role was to dispense medications. Future research should examine the pervasiveness of the themes identified in this study across Korean community pharmacy practice in order to generalize the impact of the SPD Act.

Introduction

On July 1, 2000, the 'Separation of Prescribing and Dispensing (SPD) Act' was implemented in South Korea (hereafter referred to as Korea). Under the previous system, both pharmacists and physicians were allowed to prescribe and dispense medications.¹ The duplicated roles among the healthcare providers and uncontrolled access to pharmaceutical products led to an over utilization of drugs, high pharmaceutical expenditures,^{2,3} and a waste of healthcare resources in Korea.⁴ In 1996, Korea's total health care expenditures exceeded the total income of the national health insurance.⁵ As a result, the Korean national health insurance began to experience significant deficits.⁵ The SPD Act was implemented to decrease drug expenditures and improve the quality of pharmaceutical care by reducing the rate of unnecessary medication use.⁴

The SPD Act differentiated the roles of pharmacists and physicians.³ The new policy prohibited pharmacists from prescribing and physicians from dispensing drugs. The SPD Act changed Korean pharmacists' professional roles by restricting customary patient care practices. Prior to the implementation of the SPD Act, pharmacists were able to independently diagnose patients' conditions and dispense medications accordingly.² In the new system, pharmacists can dispense prescription drugs to patients only if they present a prescription from a physician. Furthermore, pharmaceuticals were reclassified into over-the-counter (OTC) and prescription drugs.² As of 2000, 38.5% of drugs (10,775 items) were classified as OTC and 61.5% (17,187 items) as prescription.³

The changes in the professional roles mandated by the SPD Act may have posed difficult challenges for pharmacists in Korea.² For example, a study conducted four days prior to the reform by the Korean Pharmaceutical Association showed that among 13,198 pharmacies surveyed only 4,001 pharmacies (about 30%) had the complete set of the necessary medication to fulfill the dispensing role.⁶ This rather abrupt reform with insufficient preparedness could have introduced uncertainty into the professional roles of

Corresponding author: Monica Hwang, PhD, Assistant Professor, Department of Pharmacy Administration & Public Health, College of Pharmacy & Health Sciences, St. John's University, St. Albert Hall Room 120, 8000 Utopia Parkway, Queens, NY 11439; Office Phone: (718) 990-5936

pharmacists. To the best of our knowledge, no studies have assessed Korean pharmacists' perceptions about how the new regulations impact their provision of care. This study aims to explore Korean community pharmacists' perceptions of their roles and provision of patient care after the implementation of the SPD Act.

Theoretical Framework – Role Theory

Role theory was used in this study to guide the exploration of pharmacists' perceptions of their roles and provision of care. Role theory presents a useful framework for examining occupants' expectations (i.e., perceptions) of their roles (i.e., "scripted" behaviors) in service provider-client interactions, such as pharmacist-patient relationships.^{7,8} The theory posits that human beings behave in ways that are different and predictable depending on their respective social identities and the situation.⁹

Biddle (1986) conceptualized a role using five perspectives: structural, organizational, functional, cognitive, and symbolic interactionist. The structural perspective focuses on the social structure (i.e., social environment) in defining a role; the individual is less relevant.⁹ From an organizational perspective, a role is assumed to be associated with identified social positions and generated by normative expectations.⁹ The functional perspective focuses on the characteristics of people who occupy social positions within a stable social system. Investigators examining the functional perspective have concentrated on identifying specific characteristics of a position or people holding the position.⁹ The cognitive perspective centers on relationships between role expectations and behavior. Guided by the cognitive perspective, researchers have examined the social conditions that give rise to expectations, the techniques for measuring expectations, and the impact of expectations on social conduct.⁹ Lastly, the symbolic interactionist perspective highlights the roles of individual actors; attention has been given to the various cognitive concepts through which social actors understand and interpret their own and other's behavior.⁹

Research Objectives

The objectives of this study were to: (1) explore Korean community pharmacists' perceptions of their role in providing care to patients after the SPD Act had been implemented; and (2) investigate pharmacists' perceptions about factors that impact their patient care.

Methods

We conducted semi-structured, face-to-face, in-depth interviews with Korean community pharmacists in the Korean

language from December 2006 to January 2007. The interviews ranged in length approximately from 30 to 75 minutes. Each interview was audio-recorded. Ethical approval to conduct the study was received from the Social and Behavioral Sciences Institutional Review Board at the University of Wisconsin-Madison.

Sampling

Pharmacists were selected using a snowball sampling method.¹⁰ Pharmacists practicing in independent community pharmacies in Seoul were targeted for the study. The primary participant for the study was chosen with the intention of minimizing selection bias. In order to select the primary participant, the researcher chose one metropolitan area in Seoul and walked into every other independent community pharmacy that came within sight until a pharmacist agreed to participate in the study. After the completion of the interview, the participant was asked to identify another community pharmacist who might be interested in participating in this study. The researcher contacted the suggested individual in order to generate additional study participants. This process was repeated to obtain the study sample.

Study Instrument

Interview guide questions were based on the five perspectives of role theory: structural, organizational, functional, symbolic interactionist, and cognitive. The questions were open-ended and designed to stimulate discussions. The specific wording and order of the questions were intended to be redefined depending on the participant's responses. Examples of interview questions within each of the five perspectives are as follows: *Structural Perspective*: How did the SPD Act affect community pharmacy practice?; *Organizational Perspective*: What are pharmacists' main activities in a community pharmacy setting?; *Functional Perspective*: What do you think the pharmacists' roles are in providing patient care?; *Symbolic Interactionist Perspective*: What are patient reactions to pharmacists' provision of patient care?; *Cognitive Perspective*: How much time do you think pharmacists should spend with each patient to provide patient-centered services? The interview guide was first constructed in the English language and then translated into Korean. Next, the Korean version of the instrument was retranslated back into English for accuracy in translating. Two experienced Korean-English translators performed the steps above prior to analysis. The original, Korean, and back-translated versions of the instrument were examined to remedy any discrepancies (no discrepancies were identified).

Data Analysis

The taped interviews were transcribed verbatim in Korean. The transcriptions in Korean were translated into English and then were checked for accuracy in translation. All analyses were conducted using the English version of the interview transcripts. Interviews were analyzed inductively to generate main themes by using a summative content analysis procedure.^{11,12} The summative approach to qualitative content analysis identifies and quantifies certain words or content in the text for the purpose of understanding the contextual use of the words or content.¹² Statements relevant to the study objectives in the transcripts were coded independently by two researchers to increase the credibility of the data (MJH & HNY). Minor discrepancies that arose while coding were discussed among the researchers until consensus was reached. Then, the related statements were combined. Next, frequencies of specific words or contents were counted. Furthermore, in order to achieve auditability, a researcher who was experienced in qualitative methodology (BC) was consulted during data collection and data analysis.

Results

Sample Characteristics

Eight pharmacists participated in this study. Participants' ages ranged from 25 to 64 ($M=39$, $SD=14$), and half were women. Participants' pharmacy practice experience varied from less than three years to 37 years ($M=12.5$, $SD=13.4$). Three participants started their practice before the implementation of the SPD Act, while five participants began their practice afterward. Half of the pharmacists owned or managed their own independent pharmacies. The length of employment at their place of practice varied widely, ranging from 3 months to 30 years (median of 14 months). The average hours worked per week ranged from 11 to 70 hours. Managers/owners reported working for an average of 64 hours per week; employees reported an average of 35 hours per week. All study participants had participated in a continuing education program. Only one participant had been engaged in formal academic study after obtaining the bachelor degree.

The average prescription volume of the participants' pharmacies ranged from 60 to 370 prescriptions per day (median of 135 prescriptions). The average number of prescriptions filled per day by an individual pharmacist ranged from 40 to 70 prescriptions. However, in Korea more than one medication could be written in a single prescription. Therefore, when a Korean pharmacist fills 40 prescriptions, it is more likely that the pharmacist dispenses more than 40 medications.

Community Pharmacists' Roles

The participants' perceptions about their roles and activities were classified into three categories: filling and dispensing prescriptions, educating and counseling patients, and helping patients with OTC products. All participants (eight participants) stated that the community pharmacists' primary role was to dispense prescriptions. Moreover, participants that have been practicing before the implementation of the SPD Act indicated that their role shifted away from diagnosing and prescribing. Six participants explained the role shift as being constrictive, but targeted and professional. For example, participants stated:

"Before SPD Act took place, um... in some instances diagnose... We were able to diagnose patients, so we were able to diagnose and treat..."

"... After the Act took place, it seems as the role of pharmacists had decreased, but at the same time I think physicians' and pharmacists' roles have become more professional."

All eight participants also believed that they should offer counseling to help patients use their prescribed medication appropriately. Participants believed that educating and counseling patients were important activities in providing patient care. Participants indicated that patient education and counseling activities included performing prescription reviews (three participants) and adapting information to meet patients' individual needs (three participants). Adapting information included providing information in a clear and easy to understand manner and modifying font sizes on prescription labels. In addition, many participants (six participants) believed that counseling fostered patient satisfaction. For example, a participant said,

"... when pharmacist provides more counseling, patients are more satisfied and patients think, I am coming back to this pharmacy."

Five of the eight participants mentioned helping patients to select the appropriate OTC medications as one of their roles. When helping patients with OTC medications, pharmacists often considered themselves as health care providers: assessing patient needs and offering suggestions to select appropriate OTC medicines (three participants). For example, participants stated that,

"...most patients usually don't go to a clinic directly, um...they usually visit a pharmacy first and discuss their symptoms then go to a clinic..."

“When I’m selling OTC products I am not dealing with any prescriptions, so I have to listen to patient’s symptoms. Then when I make suggestions on products, I need to explain to the patient what the product would do and other extra information...”

A summary of Korean community pharmacists’ statements regarding their roles can be found in Table 1.

Factors that may Influence Patient Care

Participants indicated that the following five factors influence pharmacist’s patient care: time constraints, patient expectations, type of medication, private space, and collaboration. Time constraints (six of the eight participants), patient expectations (five of the eight participants), and the type of medication (four of the eight participants) were the most frequently stated factors that influenced patient care. Participants stated that time constraints due to prescription volume throughout the day (four of the six participants) impacted patient care. For example, one participant stated, “When there are a lot of prescriptions piling up to be filled, all we can say to patients when counseling is take this 3 times a day. So we need much more time to counsel patients.”

Regarding patient expectations, pharmacists mentioned that their perceptions of patients’ desire for information (one participant) and patients’ open-mindedness towards counseling (one participant) influenced their provision of patient care. In addition, three of the eight participants mentioned that private space influenced the provision of patient care. One participant stated,

“I think one of the important aspect is that even though I want to counsel patients, sometimes it’s hard because there isn’t any privacy area in the pharmacy where we could talk. For example, if the patient is dispensed with medication for tuberculosis, I need to counsel the patient on the medication with sufficient information to provide proper service, but when there are other people around our counseling area, it’s hard to counsel.”

Lastly, two participants mentioned that closer relationships and better collaboration with other healthcare providers and patients would positively affect their provision of patient care. Participants hypothesized that better relationships and enhanced collaboration would result in open conversations among the parties and enhance information sharing.

A summary of factors that may influence Korean community pharmacists’ provision of patient care can be found in Table 2.

Discussion

The objectives of this study were to explore Korean community pharmacists’ perceptions of their roles in patient care after the implementation of the SPD Act and to investigate pharmacists’ perceptions about factors that affected their patient care. The majority of participants indicated that their roles focused on dispensing prescribed medications after the implementation of the SPD Act. None of the participants perceived their role to include prescribing. Participants stated that pharmacy environmental factors and patient factors influenced their provision of patient care. Many of the Korean pharmacists’ concerns regarding the provision of patient care are similar to concerns expressed by pharmacists in the international community.

Korean community pharmacists centered their perceptions about their roles on providing drug products followed by the provision of cognitive services. In our study, the majority of participants stated that their role was to dispense prescription medications followed by counseling patients about drugs and helping patients use OTCs appropriately. Similarly, Schommer et al. found that US pharmacists spent 56% of their time dispensing medication, 19% on consultation, and 9% on drug use management.¹³ These findings suggest that the pharmacists’ role in Korea has become similar to the pharmacists’ role in the US where pharmacists are prohibited from prescribing.

Similarities between pharmacists in Korea and pharmacists in the international community continue with respect to factors perceived to impact patient care. Two environmental factors seem to influence Korean pharmacist’s patient care in the community setting. Some participants stated that during the high prescription volume hours they spent less time counseling patients than they wanted; only informing patients on how to take the medication. In a previous study, community pharmacists in the United Kingdom also noted that a high workload level in medication dispensing resulted in limited time for patient interaction.¹⁴ In addition, researchers have shown that US pharmacists who processed more prescriptions per hour provided less patient counseling.^{15,16} Participants in this study also indicated that the lack of private space in the pharmacy was problematic. McAuley and colleagues explored the opinions of patients with epilepsy and found the lack of privacy to be a potential barrier in patient counseling in community pharmacy settings.¹⁷ Brown and colleagues found that the lack of a

private counseling area, space and insufficient time were the top three barriers to the provision of pharmaceutical care.¹⁸ It may be possible to learn from previous studies conducted in other countries and implement interventions designed to overcome barriers to the provision of patient care in Korea. For example, Korean pharmacists could integrate private space into the pharmacy layout in order to provide a secure environment to foster patients' openness and enhance patients' willingness to share information.¹⁹

Study participants also stated that the type of medication dispensed (e.g., acute vs. chronic medication and therapeutic class of the medication) influenced their patient care. Researchers have found that pharmacists were significantly more likely to counsel those patients who were picking up two or more prescriptions²⁰ and those who had high drug expenditures.²¹ Vainio et al. found that the therapeutic class of a drug was an important determinant which influenced community pharmacists' counseling.²² In addition, patient expectation (i.e., pharmacists perception of patient expectation) was identified as a factor that influenced Korean pharmacists' patient care. Previous research has found that pharmacists were significantly more likely to counsel those patients who they perceived as more active in seeking information.²³ However, pharmacists' perceptions are not always consistent with patients' perceptions²⁴ which may cause ambiguity in the interaction and relationship between pharmacists and patients. Future research should explore patients' perceptions about Korean pharmacists' provision of care in an effort to promote mutual expectations about the pharmacist-patient interaction.

Interestingly, collaboration was mentioned as a factor that influenced provision of patient care. Participants made it clear that it was not just the collaboration between pharmacist and physician, but the collaboration between the patient, pharmacist, and physician that impacted patient care. Previous studies have found that collaboration among healthcare providers and patients enhanced patient outcomes by improving continuity of care and patient safety,²⁵ as well as improving clinical outcomes.²⁶ Also, researchers have found that patients who were involved in their care achieved better health outcomes²⁷ and were more satisfied with the care they received²⁸ than patients who were not involved.

This study has limitations that must be considered when interpreting the results. The first limitation stems from the sampling method and the relatively small number of pharmacists studied. As an exploratory study, a non-probability sampling method with limited sample size was

used to generate hypotheses. A larger study will be needed to assess the generalizability of the results. Second, only community pharmacists practicing in Seoul were targeted for this study. Pharmacists from other regions may have different practice environments and pharmacist-patient interactions that could not be accounted for in this study. Therefore, the results from this study may only be transferable to independent community pharmacy settings in Seoul.

Conclusion

This study suggests that the SPD Act was successful in redefining the traditional pharmacist role in the Korean health care system. Pharmacists' adapted role seems to focus on the dispensation of prescribed medications, with the consultation of patients being secondary. Similar to the international community, the pharmacy environment and patient-level factors seem to influence Korean pharmacists' provision of patient care. Future research should examine the pervasiveness of these themes across Korean community pharmacy practice in order to evaluate the impact of the SPD Act.

References

1. Kim, H. J., Chung, W., & Lee, S. G. (2004). Lessons from Korea's pharmaceutical policy reform: the separation of medical institutions and pharmacies for outpatient care. *Health Policy*, 68(3), 267-275.
2. Cho, H. K. (2002). Challenges and opportunities posed by a new prescription law in South Korea. *Am J Health Syst Pharm*, 59(18), 1780-1782.
3. Kwon, S. (2003). Pharmaceutical reform and physician strikes in Korea: separation of drug prescribing and dispensing. *Soc Sci Med*, 57(3), 529-538.
4. Kang, H. Y., Park, C. Y., & Joong Kim, H. J. (2002). Public attitude and knowledge on a new health policy for pharmaceutical care in Korea. *Health Policy*, 62(2), 195-209.
5. Lee, J. C. (2003). Health care reform in South Korea: success or failure? *Am J Public Health*, 93(1), 48-51.
6. Song, S.G. (2000). Four days prior to the implementation of the SPD Act (in Korean), 2006, from http://news.naver.com/news/read.php?mode=LSD&office_id=0000018612§ion_id=102&menu_id=102
7. Guirguis, L.M., & Chewing, B.A. (2005). Role theory: Literature review and implications for patient-pharmacist interactions. *Res Social Adm Pharm*, 1, 483-507.

8. Worley, M. M., Schommer, J. C., Brown, L. M., Hadsall, R. S., Ranelli, P. L., Stratton, T. P., et al. (2007). Pharmacists' and patients' roles in the pharmacist-patient relationship: Are pharmacists and patients reading from the same relationship script? *Res Social Adm Pharm*, 3, 47-69.
9. Biddle, B. J. (1986). Recent developments in role theory. *Annual Reviews*, 12, 67-92.
10. Hendricks, V.M., & Blanken, P. (Eds.). (1992). *Snowball Sampling: theoretical and practical considerations*. IVO, Rotterdam.
11. Kavale, S. (1996). *Interviews. An introduction to qualitative research interviewing*: Sage Publications.
12. Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288.
13. Schommer, J.C., Pdedersen, C.A., Doucette, W.R., Gaither, C.A., & Mott, D.A. (2002). Community pharmacists' work activities in the United States during 2000. *J Am Pharm Assoc*, 42, 399-406.
14. Gidman, W.K., Hassell, K., Day, J., & Payne, K. (2007). The impact of increasing workloads and role expansion on female community pharmacists in the United Kingdom. *Res Social Adm Pharm*, 3, 285-302.
15. Dickson, W. M., & Rodowskas, C. A. (1975). Verbal communications of community pharmacists. *Medical Care*, 13(6), 486-498.
16. Kirking, D. M. (1984). Evaluation of an explanatory model of pharmacists' patient counseling activities. *J Soc Adm Pharm*, 2(2), 50-56.
17. McAuley, J.W., Miller, M.A., Klatte, E., & Shneker, B.F. (2009). Patients with epilepsy's perception on community pharmacist's current and potential role in their care. *Epilepsy & Behavior*, 14, 141-145.
18. Brown, C.M., Barner, J.C., & Shepherd, M.D. (2003). Issues and barriers related to the provision of pharmaceutical care in community health centers and migrant health centers. *J Am Pharm Assoc*, 24, 1, 75-77.
19. Conard, L.E., Fortenberry, D., Blythe, M.J., & Orr, D.P. (2003). Pharmacists' attitudes toward and practices with adolescents. *Arch Pediatr Adolesc Med*, 157, 361-365.
20. Sleath, B. (1995). Pharmacist question-asking in New Mexico community pharmacies. *Am J Pharm Educ*, 59, 374-379.
21. Carroll, N. V., & Gagnon, J. P. (1983). The relationship between patient variables and frequency of pharmacist counseling. *Drug Intell Clin Pharm*, 17(9), 648-652.
22. Vainio, K.K., Airaksinen, M.S., Hyykky, T.T., & Enlund, K.H. (2002). Effect of therapeutic class on counseling in community pharmacies. *Ann Pharmacother*. 36, 5, 781-786.
23. Ascione, F. J., Kirking, D. M., Duzey, O. M., & Wenzloff, N. J. (1985). A survey of patient education activities of community pharmacists. *Patient Educ Couns*, 7, 359-366.
24. Assa, M., & Shepherd, E.F. (2000). Interpersonal perception: a theory and method for studying pharmacists' and patients' views of pharmaceutical care. *J Am Pharm Assoc*, 40(1), 71-81.
25. Makowsky, M.J., Schindel, T.J., Rosenthal, M., Campbell, K., Tsuyuki, R.T., & Madill, H.M. (2009). Collaboration between pharmacists, physicians and nurse practitioners: a qualitative investigation of working relationships in the inpatient medical setting. *J Interprof Care*, 23(2), 169-184.
26. Carter, B.L, Bergus, G.R., Dawson, J.D., Farris, K.B., Doucette, W.R., Chrischilles, E.A., & Hartz, A.J. (2008). A cluster randomized trial to evaluate physician/pharmacist collaboration to improve blood pressure control. *J Clin Hypertens (Greenwich)*, 10(4), 260-271.
27. Mosen, D.M., Schmittdiel, J., Hibbard, J., Sobel, D., Remmers, C., & Bellows, J. (2007). Is patient activation associated with outcomes of care for adults with chronic conditions? *J Ambul Care Manage*, 30 (1), 21-29.
28. Swanson, K.A., Bastani, R., Rubenstein, L.V., Meredith, L.S., & Ford, D.E. (2007). Effect of mental health care and shared decision making on patient satisfaction in a community sample of patients with depression. *Med Care Res Rev*, 64, 4, 416-430.

Table 1: Community Pharmacists' Roles in Korea

Identified Categories	Occurrence	Examples of Statements
Filling and dispensing prescriptions	8	<p>"After the implementation of the SPD Act, the major role of pharmacists was to fill prescriptions."</p> <p>"...since the SPD Act came in place, so that's after July 2000, main role of pharmacists was to dispense medication according to prescriptions..."</p>
Educating and counseling patients	8	<p>"...we let the patients know of their disease state um... whether they do have a disease or not... um... so we counsel them about their prescription and other ways they could manage their health status."</p> <p>"...counsel the patient on how to take the medication and also let them be aware of the warnings."</p>
Helping patients with OTC products	5	<p>"First selling OTC products, we listen to patients' symptoms and help them with selecting medication."</p> <p>"...to be responsible for curing patients with minor illnesses such as mild fever and cold, and to counsel patients and help them in selecting appropriate medications."</p>

Table 2: Factors that may Influence Pharmacists' Provision of Patient Care

Identified Categories	Occurrence	Examples of Statements
Time constraints	6	"When there are a lot of prescriptions piling up to be filled, all we can say to patients when counseling is take this 3 times a day. So we need much more time to counsel patients."
Patient expectations	5	"Even if I want to spend more time, patients don't have open mind for counseling, so I am unable to spend too much time."
Type of medication	4	"...whether it's just a cold medication or combination of different type of medication such as cholesterol and hypertension."
Private space	3	"To have a more... deep conversation... well there are cases when a question, a question in which we should respect one's privacy, is asked and anyone who walks into the pharmacy can hear that question, we're in that kind of pharmacy environment now."
Collaboration	2	"...pharmacists and patients, and also physicians, all three of them should work together to have a good meaningful conversation in order to provide an ideal patient-centered care for patients."