A Review of the Research on Pharmacists’ Patient-Communication Views and Practices

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The quantity and quality of pharmacist-patient communication has been discussed and examined by a variety of investigators since the late 1960s. The purpose of this paper is to review 25 years of research on pharmacists’ patient-communication views and practices in North America. The research questions, methods, results of studies published in the pharmacy literature from 1969 to 1994 are analyzed and summarized in this review. More than thirty studies in the pharmacy literature have examined pharmacists’ patient-communication practices. Researchers have primarily used mail surveys and secret shoppers to study pharmacist-patient communication. The literature does not demonstrate that the quantity and quality of pharmacist-patient communication has dramatically improved over the last 25 years. Investigators and scholars are urged to critically examine and question many of the orientations and methods adopted by researchers to study pharmacist-patient communication.

INTRODUCTION
John F. Kennedy, Malcolm X, Martin Luther King Jr. and other leaders during the 1960s challenged individuals in American society to examine and dramatically transform some of their beliefs, norms, values and behaviors; pharmacists during the 1960s, according to Mrtek(1), feeling “over-educated and underutilized,” began to struggle against the restraints of their traditional professional role as medication preparer and dispenser. Various authors in the pharmacy literature rejected the prevailing dogma of the time [the American Pharmaceutical Association’s Code of Ethics from 1922 to 1969 prohibited the pharmacist from discussing “therapeutic effects or composition of a prescription with a patient”(2)] and declared that the pharmacist had a responsibility to provide medication instructions to the patient and answer the patient’s questions(3-6). Researchers in the 1960s began a quest to better understand pharmacists’ patient-communication views and practices. The purpose of this paper is to critically analyze 25 years of research on pharmacist-patient communication in North America.

PHARMACISTS’ PATIENT COMMUNICATION PRACTICES IN THE 1960s
Research published at the end of the 1960s in the Journal of the American Pharmaceutical Association sounded the alarm that some community pharmacists were hazardous to their patients’ health. Knapp, Wolf, Knapp, and Rudy(6), in what they claimed was the first study of pharmacist-patient consultations, used the secret shopper (programmed patient)2 research method to evaluate the performance of metropolitan community pharmacists. In one phase of the study a research assistant visited 36 community pharmacies posing as a diabetic patient who wanted to know if Dristan™ (which is contraindicated for diabetes) would be good for his cold. Only six out of the 36 pharmacists contacted did not sell the Dristan™ to the pseudo-patient. In another phase of the study an investigator posing as a patient approached 12 community pharmacies with a prescription for the monoamine oxidase inhibitor, Parnate™. The package insert of this drug cautions that the patient should be informed about the risk of a variety of side effects. Only one of the 12 pharmacists dispensing this medication provided any warnings to the patient. The authors stated, “It is painfully and deadly obvious that the pharmacists in our sample utterly failed the tasks presented them—failed to the point of exposing their patients to the unnecessary risk of possible death...”

There are a variety of issues involving the Knapp, Wolf, Knapp, and Rudy study that are worthy of consideration and reflection. First, one of their conclusions, “We are equally convinced that a prime reason why the pharmacists in our sample failed was because they were not patient oriented,” is not strongly supported by their data. This is an interesting conclusion considering that understanding the pharmacists’ motives or orientations was not an objective of the study. The researchers neglected to describe the research methods they used to determine the pharmacists’ motives or orientations. The investigators’ primary research method, the programmed patient, can only describe a...
pharmacist’s conduct during the pharmacist-patient interaction. The programmed patient research method alone can not explain why a pharmacist behaves a particular way during the pharmacist-patient interaction. The article does not indicate if the authors' conclusion about the reason for the pharmacists' behavior was supported by comments from interviews with either the pharmacists in the study or others who could claim to know the pharmacists’ states of mind. The researchers' methods, as presented and described in their paper, were not designed to answer questions about the reasons for the pharmacists' actions (or inaction).

Second, the article displays an 'academicocentric' posture in a variety of places. For example, the researchers present their views on the pharmacists' responsibilities during pharmacist-patient interactions3, but they neglect to publish the views of pharmacists in the experiment. There are times that the article, which was highlighted as an experimental analysis, sounds more like missionaries preaching to ‘ignorant’ and ‘barbaric' natives4 than researchers 'objectively' interpreting the results of a scientific, value-free study. Additionally, it appears that the authors judged the pharmacists for not being patient oriented without determining the pharmacists' views of what it meant to be a ‘patient oriented’ pharmacist. There are various perspectives of what is and what is not patient oriented pharmacy practice. With apologies to the late Paul Feyerabend(7,8), one of the most brilliant professors of philosophy in the 20th century, for modifying his colorful prose, why are pharmacy academicians in their well heated offices the only ones who get to judge what is good or bad professional performance and who is and who is not a patient-oriented pharmacist? The researchers should have interviewed the pharmacists in the experiment to determine if the pharmacists shared the researchers’ notions of ‘patient orientation’; if the pharmacists believed they were ‘patient oriented’ by their own standards; or to determine if the pharmacists possessed any type of orientation at all.

It is not clear if the researchers eventually tried to share the results of the study face-to-face with the practitioners in the experiment. A lesson that scientists should have learned from this research is that community pharmacists don’t necessarily live with the same constraints, ideas, norms, preferences, rules, and values as pharmacy researchers. The problem could be framed as one of a clash of cultures: the members of the tribe, ‘Community Pharmacy”, to possess and judge their professional performance and who is and who is not a patient-oriented pharmacist? The researchers should have interviewed the pharmacists in the experiment to determine if the pharmacists shared the researchers’ notions of ‘patient orientation’; if the pharmacists believed they were ‘patient oriented’ by their own standards; or to determine if the pharmacists possessed any type of orientation at all.

Finally, the researchers may have collected their data unethically according to some academic institutions’ current standards of practice involving research on human subjects. Knapp, Wolf, Knapp, and Rudy neglect to mention in their publication if the pharmacists in their study consented to participate in the experiment.

The Knapp, Wolf, Knapp, and Rudy study was valuable in that it identified new problems for pharmacy academicians and researchers to study. However, some researchers may have felt that condemnation, rather than enlightened contemplation and examination, was the most appropriate solution for the emerging pharmacist-communication research problem. Gibson(5) acknowledged the futility of some academician’s criticism, “I think it is little more than verbal calisthenics for us educators to rampage against the pharmacist for being something we would like to see him without providing him with the background to be it.” The profession may have missed an opportunity when it neglected to follow-up to try and better understand the community pharmacists in Knapp, Wolf, Knapp, and Rudy’s study.

PHARMACISTS’ VIEWS AND PRACTICES IN THE 1970s

Nine studies during the 1970s examined the quantity and quality of pharmacist-patient communication in the United States. Six of the nine studies used a ‘programmed patient’ (secret shopper) to evaluate the quality of the pharmacist-patient interaction(9-14), one study observed the pharmacist with the pharmacist’s awareness and consent(15), and two studies collected data from patients(16,17).

Results

The research consistently painted a poor picture of pharmacists’ abilities to improve patient care. Researchers rarely observed pharmacists participating in meaningful therapeutic dialogues with their patients. Wertheimer,
Shefter, and Cooper(14) studied the quality of community pharmacists’ consulting practices in Buffalo, New York with three different scenarios role-played by programmed patients. All of the 86 pharmacists visited by one of the programmed patients recommended a cough preparation even though the client’s problem indicated a referral to a physician. Nineteen (38 percent) of the pharmacists in another scenario sold a product to the programmed patient without warning him that the product should only be used under a physician’s guidance. Finally, 85 percent of the 26 pharmacists studied in the third scenario dispensed quinine capsules without placing any directions for use on the product. Vanderveen, Adams, and Sanborn(13), after studying 72 community pharmacists in Michigan, found that 40 percent of the pharmacists sold a product without warning the client that the product should only be used under a physician’s supervision. The researchers, after comparing their results with Wertheimer, Shefter, and Cooper’s, concluded that pharmacists had not improved their nonprescription drug counseling practices.

Other researchers also identified performance which they felt was deficient. Rowles, Keller, and Gavin(12) reported that only 20 percent of the 100 pharmacists in their study provided any meaningful counseling. Rowles, Keller, and Gavin concluded, “This study finds compounding and counseling to be shambles in the pharmacies studied.” Campbell and Grisafe(9) reported that 53 percent of the 200 Washington community pharmacists in their study did not explain the medication’s directions to the patient. These researchers also noted that the majority of their programmed patients did not perceive the pharmacist to be particularly supportive, empathetic, or helpful. Jang, Knapp, and Knapp (10), after investigating the quality of pharmaceutical services in 24 poverty and 24 nonpoverty metropolitan area pharmacies, concluded that pharmacists had not adopted the role of drug advisor. Puckett, White, Mossberg, and Matchett(11) reported that the 95 Kansas community pharmacists in their study had average counseling scores of 1.2-3.3 compared to optimum scores of 11.0-14.0. The researchers, when they relaxed their counseling standards, still found that pharmacists’ counseling scores were below 50 percent. The investigators noted that there were many instances of ambiguous, incomplete, and incorrect counseling and concluded that the pharmacists’ counseling was of poor quality. Dickson and Rodowkas(15) reported that about 49 percent of the pharmacist-patient communication they observed in twenty chain pharmacies located in a major eastern metropolitan area was professionally trivial.

Patients also indicated that they usually did not receive information from pharmacists. Gurwich and Emmanuel(16) collected data from patients assigned to one of seven community pharmacies participating in a neighborhood health program. The seven pharmacies in the program were supposed to provide patients enrolled in the health program with comprehensive consultation services regarding prescription and nonprescription medications. The principal investigator, after interviewing 23 patients, concluded that only 35 percent of the patients in the study received a comprehensive medication consultation and that 30 percent of the patients in the study left the pharmacy without the pharmacist asking them if they understood their medication directions. McKelvey and Lamy(17), after collecting data from 376 patients receiving care in a primary care clinic at a large military hospital, found that 11 percent of the patients reported receiving verbal prescription drug information from the pharmacist. The authors concluded that the pharmacist played an insignificant role in instructing patients about their prescription medications.

Limitations

Brook(18), in a discussion on the quality of pharmaceutical care, raised concerns about Jang, Knapp, and Knapp’s(10) research that applied to some of the other studies that examined pharmacist-patient communication. First, Brook recommended that it was time for pharmacy researchers to discuss the ethics of sending programmed patients to pharmacists who did not know that they were being tested. All of the pharmacy researchers using the programmed patient method(9-14) failed to indicate if the pharmacists in their studies explicitly agreed to participate in the research. A search through the pharmacist-patient communication literature in the 1970s did not find a single defense or critique of the ethics of the programmed patient research method. Why was an ‘outsider’ (Brook was and is a distinguished physician and researcher for the Rand Corporation) the first person to publicly raise concerns about the ethics of pharmacy researchers using programmed patients?

Second, Brook suggested that Jang, Knapp, and Knapp may have been a little too fascinated with their statistical analyses (p. 61):

The paper continues by employing sophisticated techniques to explain the reasons for the low performance. It is unclear why this complex analysis was undertaken. Virtually all the pharmacists performed so poorly, as judged by the criteria, that there are few, if any good performances in the entire sample of pharmacists. Thus, high powered statistical analysis can only group pharmacists into a category entitled lousy performance and one labeled not-so-lousy performance. Do I really care what characteristics of pharmacists are associated with each category? Does it help me in deciding what to do to improve the quality provided? I sincerely doubt it.

Jang, Knapp, and Knapp’s research was the first indication that research designs and methods influenced by the Logical Positivist paradigm of science had established themselves as pharmacy researchers’ drugs of choice for their research ills.

A limitation of the Gurwich and Emmanuel and McKelvey and Lamy studies is that the results are based on patient reports of the pharmacist-patient interaction. It is possible that pharmacists did provide more comprehensive consultations and/or asked the patient about their directions for use and that the patients in the study simply didn’t remember the interaction particularly well. However, the results obtained by patient self-reports were consistent with those obtained through direct observation of pharmacist-patient interactions.

Various conclusions and recommendations stated by some of the researchers are not supported by their data. Campbell and Grisafe wrote, “The major conclusion that can be made from this study is that it seems obvious that most pharmacists in the state of Washington are not informed as to how to properly follow the Patient Information Regulations.” Campbell and Grisafe’s “major conclusion”
is flawed. The researchers, by stating in their conclusion that pharmacists aren’t following the regulations because of ignorance, are claiming to know the reason for the pharmacists’ behavior. However, the programmed patient research method that Campbell and Grisafe used can only describe pharmacists’ behavior during pharmacist-patient interactions. The programmed patient method alone can not be used to explain pharmacists’ behavior during pharmacist-patient interactions. The investigators did not report in the article if they used additional research methods to determine why pharmacists in the study failed to meet the researchers’ criteria for pharmacist-patient communication. The researchers did not indicate in the article if they bothered to ask the pharmacists (or someone who could claim to know the pharmacists’ states of mind) why they weren’t following the regulations. The study should have only concluded that the pharmacists weren’t following the regulations and that additional research was required to determine why the pharmacists were noncompliant.

Campbell and Grisafe, on the basis of their findings, recommended that a continuing education program be developed for pharmacists in the state. Is it possible that Campbell, who was responsible for continuing education at Washington State University at the time of this study, let a little bias creep into the analysis and interpretation of his study’s results? At best, this is an example of researchers benignly misinterpreting their research results; at worst, it is an example of pharmacy researchers believing that they can solve the problems of community pharmacists that they have never met. Why should researchers and scholars bother talking and listening to community pharmacists to understand their concerns, conflicts, pressures and problems when it is a foregone conclusion that what the practitioners need is a pharmacy academician’s continuing education program?

The researchers who published the nine studies of pharmacists’ patient communication practices in the United States failed to follow their initial research with additional studies to better understand why pharmacist-patient communication was relatively inadequate. Puckett, White, Mossberg, and Matchett noted that they discussed the results of the study with pharmacists during six continuing education seminars. However, Puckett, White, Mossberg, and Matchett did not publish the pharmacists’ reactions to the study or indicate if they learned anything from pharmacists’ comments during the seminars. Overall, pharmacy researchers in the 1970s did not provide the community pharmacists in their studies with an opportunity to explain their behavior during the programmed patient-pharmacist interactions.

INFLUENCES ON PHARMACIST-PATIENT COMMUNICATION

Researchers searched for characteristics that might affect pharmacist-patient communication. Linn and Davis(19) mailed surveys and sent programmed patients to 133 randomly selected pharmacies in the Los Angeles metropolitan area to examine the relationship between the advice that pharmacists offered and their orientation to their occupation (business versus professional). The researchers reported that “...the total picture as reflected by the data presented so far is not sufficient to confirm the hypothesis that business and professional orientations of pharmacists have significant effect on their interactions with patients.”

Watkins and Norwood(20), using data from Watkins, Norwood, and Meister’s study(21), examined relationships between the two independent variables, pharmacists’ year of graduation and type of pharmacy practice, and the three dependent variables of pharmacists’ attitude, knowledge, and consultation behavior. The researchers did not find a significant difference between a pharmacist’s year of graduation and consultation behavior, although the researchers did find that pharmacists who graduated between 1957-1974 had significantly higher attitude and knowledge scores than pharmacists graduating before 1957. Pharmacists practicing in service pharmacies had significantly higher performance scores (5.3/18 points) than pharmacists practicing in discount pharmacies (2.55/18 points). However, these scores indicated that pharmacists failed to appropriately care for their patients.

Beardsley, Johnson, and Benson(22) conducted a study to determine if pharmacists interacted with terminally ill patients differently than other patients. The researchers sent one programmed patient into 15 randomly selected metropolitan pharmacies to ask the pharmacist advice about a cancer chemotherapy agent. Another programmed patient was sent into fifteen other randomly selected metropolitan pharmacies to ask about a diabetic drug product. Two observers recorded how long the pharmacist talked to and what the pharmacist talked about with the programmed patient. The researchers noted that there were no significant differences in the amount of time pharmacists spent talking to patients or in the number of questions pharmacists asked the two different types of programmed patients. However, pharmacists did spend significantly more time talking to the diabetic programmed patient about her disease state compared to the other programmed patient.

Pharmacy researchers during the 1970s examined the effect of the pharmacy environment on pharmacist-patient communication. Beardsley, Johnson, and Wise (23) examined the effects of varying levels of patient education in a private area on: (i) the quantity and quality of pharmacist-patient communication; (ii) patient knowledge; and (iii) patient compliance. The traditional outpatient window was considered to be the ‘low privacy setting’ and an office setting was considered to be the ‘high privacy setting’. The pharmacist in the ‘high education’ setting provided patients with information according to guidelines outlined in drug-specific protocol sheets. Beardsley, Johnson, and Wise found that total conversation times were longer when privacy was high and when pharmacists made a concerted effort to educate patients. The quality of communication (as measured by the number of questions the pharmacist and patient asked, and the patient’s recall and understanding) was best in the high privacy environment. Compliance was highest among patients who had been educated in private.

Ludy, Gagnon, and Caiola(24) studied the effects of pharmacists’ individualized, private counseling on patient satisfaction and drug misuse. Patients were randomly assigned to either a private, satellite pharmacy or the public, open-window setting. The 75 patients who agreed to participate in the study were interviewed immediately after they received their prescriptions and approximately six to nine days after they received their prescription medication. The researchers found that mean compliance scores were significantly higher for patients who were counseled in the private
setting (0.89 out a maximum score of 1.00) than the traditional, open-window setting (0.70). The study also found that patients reported receiving significantly more services from pharmacists in the private pharmacy setting (0.59 out of a maximum score of 1.00) than the traditional open-window setting (0.18). The authors concluded that the physical environment of the open-window setting may have been a barrier to pharmacist-patient communication.

Dickson and Rodowskas (15), in an observational study of pharmacists’ communication behaviors, found that as the number of staff increased in the prescription department, the amount of time pharmacists devoted to patient communication decreased, even when controlling for prescription workload. The researchers concluded that pharmacists should use nonprofessional staff more effectively and that pharmacy managers should shift away from focusing on the pharmacist as a “prescription producing factory” to focusing on the pharmacist as a “health professional providing patient services.” Dickson and Rodowskas were the first pharmacy researchers to recognize that the introduction of environmental changes that are not accompanied by changes in practice orientation may produce unwanted or unintended effects.

Limitations

There are several limitations to Beardsley, Johnson, and Wise’s study. First, a key concept in this study, ‘privacy’, is entirely based on the researchers’, rather than patients’ or practicing pharmacists’, notions of privacy. The researchers express the view that the office setting was more private than the open window setting; however, they did not report how the pharmacists and the patients in their study perceived the privacy of these environments. The researchers’ ideas about privacy are irrelevant because the only issue that should matter in the long run is how patients and pharmacists construct and evaluate the importance of the notion of privacy. Do patients, pharmacists, and researchers view and define privacy exactly the same way? Beardsley, Johnson and Wise do not present any evidence in their paper to suggest that the answer to this question is “yes.” If researchers don’t have the same notions about privacy as patients and pharmacists, then what does the conclusion, “The fact that patient understanding was maximized by privacy (my emphasis) makes the finding of greater communication more significant” mean? If patients, pharmacists and researchers have different definitions of privacy, are researchers studying privacy or something else?

How important is privacy to patients? Beardsley, Johnson, and Wise’s study only selected patients who received antihistamines, analgesics, and other drugs. Do patients care at all that much if somebody else overhears them talking about the medication for their allergies or muscle aches? Do pharmacists withhold information about certain drugs such as antihistamines from patients because they fear that patients might be traumatized if other people in the pharmacy discover that the patient’s drug might make him drowsy? If the pharmacists in the study didn’t feel that there was anything personal or sensitive about the drugs they were dispensing and if the patients in the study didn’t feel that there was anything personal or sensitive about the drugs they received, then the discovery of significant differences between the open-window and office setting could be evidence for a Hawthorne or placebo effect.6

Second, Beardsley, Johnson, and Wise failed to adequately describe the model or theory that guided pharmacists during their interactions with patients. The researchers indicated that the pharmacists followed a protocol sheet when they provided the patient with drug information. However, the researchers did not describe the topics or types of information on the protocol sheets. The implications of the researchers’ finding that patients receiving high amounts of patient education in private had the highest compliance rates are of limited utility because it is not particularly clear what the pharmacists did while they were interacting with patients in the high privacy environment.

Third, the researchers’ measures of patient counseling ‘quality’ are, at best, superficial and at worst, indicate the exact opposite of what they are studying. The primary indicators of communication quality in the study were: (i) the number of questions asked by the pharmacist; (ii) the number of questions asked by the patient; and (iii) the patient’s level of knowledge about the drug(s) he was receiving. According to the first indicator, researchers would conclude that a pharmacist-patient interaction in which a pharmacist obtained little clinically relevant information by asking 25 yes/no questions would be of better quality than an interaction in which a pharmacist obtained more clinically relevant information from a patient by using one open-ended question. According to the second indicator, a pharmacist-patient interaction where the patient had to ask the pharmacist numerous questions because the pharmacist used unfamiliar language and concepts would be judged of higher quality than an interaction where the patient asked fewer questions because the pharmacist used the patient’s language and concepts to explain the patient’s drug therapy. The third indicator is also a weak measure of quality because patients in the study were already relatively well-informed about certain aspects of their medication (90 percent of the patients who were not actively educated by the pharmacist could recall how to take their medication immediately after receiving their drug therapy).

Ludy, Gagnon, and Caiola’s conclusion that the open-window setting may have been a barrier to pharmacist-patient communication may not be particularly well supported by their data. They do not describe the pharmacists who participated in their study so it is unclear if their results indicate that the open-window setting is a barrier to communication or if the individual pharmacist has a substantial influence on pharmacist-patient communication. The only details that the researchers provide about the pharmacists in their study is that the dispensing pharmacists were unaware of the purpose of the study or which patients were being interviewed by the researchers. The study does not say how many pharmacists were involved in the study or if the pharmacists were randomly assigned to the pharmacy settings. The researchers, while comparing the distribution of certain patient demographic variables between the private and open-window settings, neglected to describe and compare the distribution of the pharmacists’ demographic variables. It is unclear if more experienced and/or extroverted pharmacists practiced in the private, satellite pharmacy and

6 Kimberlin and Berardo’s(32) results questioned how important privacy was to patients. Their research found that 87 percent of the patients who agreed to be interviewed felt that they had enough privacy even though they received their pharmacotherapy in pharmacies that did not have private or semi-private consultation areas.
less experienced and/or introverted pharmacists worked in the open-window pharmacy setting. The researchers’ implication that private, satellite pharmacies are better for pharmacist-patient communication than open-window pharmacies is open to alternative interpretations. For example, all this study may be demonstrating is that some pharmacists (i.e., female PharmDs with five years of experience) provide more patient services and are better at improving patient compliance than other pharmacists.

The researchers did not provide baseline reports of pharmacists’ patient consultation activities in the open-window setting. The researchers neglected to describe how much or if the pharmacists changed their behavior when (or even if) they switched from practicing in the open-window setting to the private setting. Pharmacy environment may be a factor that influences pharmacist-patient communication. However, there may be some pharmacists who will not change their consultation behavior even if they interact with patients in a private setting. Given the limited amount of information that Ludy, Gagnon, and Caiola provide about the pharmacists in their study, the results of their research do not provide convincing evidence that the private pharmacy setting influenced the pharmacists to increase their levels of communication or that the open-window setting was a barrier to pharmacist-patient communication.

Dickson and Rodowskas’(15) conclusion deserves further scrutiny (p. 497):

The findings of this study clearly demonstrate the need for two fundamental changes in the community pharmacy practice environment if the profession is to implement the much talked about patient-oriented practice on a significant scale. [Rest of paragraph’s text omitted] ...changes in the physical environment of community pharmacy practice are necessary to remove the prescription counter as a barrier to patient communication” (author’s italics).

The results of this study do not support Dickson and Rodowskas’ position because the researchers failed to use appropriate research methods to thoroughly investigate and test the relative importance of various barriers to pharmacist-patient communication. Dickson and Rodowskas did not publish any interview or survey data with either pharmacists or patients that indicated that the prescription counter was a fundamental or significant barrier to communication. The researchers’ published results do not “clearly demonstrate” that the prescription counter was a significant barrier to pharmacist-patient communication. At best, the statement about the prescription counter by Dickson and Rodowskas is an example of researchers stretching their data to support the conventional wisdom that prescription counters interfere with pharmacist-patient interaction. At worst, this is another example of pharmacy researchers not supporting their conclusions with data obtained from interviews with patients or practicing pharmacists. Dickson and Rodowskas’ devotion to the belief that the prescription counter is a barrier to pharmacist-patient interaction may be quite reasonable and sensible. However, their study generates little, if any, evidence to aver the virtue of their position.

A lesson from this (15,23,24) research is that studies on the effects of environmental variables in the pharmacy on pharmacist-patient communication must be accompanied by efforts to understand the philosophies that pharmacists and patients bring to pharmacist-patient encounters. Researchers

searchers must understand the goals that pharmacists and patients are trying to accomplish during the pharmacist-patient interaction. It is unlikely that providing pharmacists with more time to interact with patients will sufficiently motivate pharmacists to create pharmaco-therapeutic care plans if the pharmacists feel that the only purpose of the interaction is to assure that patients can remember to take their medication without food. It is unlikely that a private counseling area will encourage patients to talk about their pharmaco-therapy if they feel that the primary purpose of the pharmacist-patient interaction is to get their drugs from the pharmacist. Researchers must understand the desires that pharmacists and patients have when they are in the pharmacy before implementing environmental changes that try to force the two parties to pharmaco-therapeutically slow dance together.

PHARMACISTS’ VIEWS AND PRACTICES IN THE 1980s

Fifteen research projects (nineteen publications) during the 1980s examined pharmacists’ views about and behavior during the pharmacist-patient interaction in the United States and Canada(25-43). Researchers used a variety of methods to study pharmacist-patient communication: eight publications described the results obtained by surveys of pharmacists (25-28,33-35,40); the programmed patient method was used in three studies (30,36,42); the results of patient interviews or surveys were discussed in seven publications(31,32,37-39,41,43); and pharmacists knew they were being observed by researchers in one study(29).

Results

Overall, pharmacists had a positive view of patient counseling(33,36,40). Most (82 percent) of the respondents in Oliver and Barnes’(40) survey believed that it was the pharmacist’s, rather than the patient’s, responsibility to initiate communication. While pharmacists indicated that patients wanted to be counseled, they did not feel that patients were willing to pay for counseling(33).

Pharmacists generally made themselves available to patients in the 1980s. Patients usually indicated that pharmacists were accessible. Many (75 percent) of the patients who responded to Carroll and Gagnon’s(31) survey indicated that the pharmacist was available all or most of the time to answer questions about prescription drugs. Morris, Grossman, Barkdoll, Gordon, and Soviero(39) reported that a majority (58 percent) of the people who responded to a Food and Drug Administration-sponsored national telephone survey said the medication was handed to them by the pharmacist. The results of another national telephone survey of consumers indicated that pharmacists had face-to-face interactions with people in the pharmacy to have a prescription filled 56 percent of the time(41). In contrast, only 19 percent of the 300 Mississippi residents who were interviewed in Smith and Sharpe’s(43) study claimed that they had talked to their pharmacist when they had their last prescription filled.

Most of the pharmacists observed by programmed patients were judged to be approachable, friendly and helpful(30,36). Every pharmacist (n-195) in Campbell, Baker, Jinks, and Evenson-St. Amand’s(30) study met with the patient sent to the pharmacy by the researchers. Pharmacists talked to programmed patients in 91 percent of the 80 encounters in Mason and Svarstad’s (36) research. Mason and Svarstad also reported that the pharmacist provided the
prescription medication directly to the secret shopper in 73 percent of the encounters documented in the study. Ross, White, Hogan, and Godwin(42) noted that pharmacists provided prescription medication directly to programmed patients in 62 percent of the pharmacies in their research.

**MAGNITUDE OF COMMUNICATION**

Pharmacists usually did not interview the patients who gave them a prescription order. Most (60 percent) of the forty rural Wisconsin community pharmacists in Mason and Svarstad’s study did not interview programmed patients on two different occasions. Berardo, Kimberlin, and Barnett(29) reported that the eight community pharmacists in Florida that they observed very seldom asked patients about allergies or other medications. Kirking(33) concluded that patient questioning was not a major part of counseling for the Ohio community pharmacists who responded to his mail survey.

Pharmacist-patient communication was relatively limited during the 1980s. Investigators used a variety of indicators to assess the level of communication between pharmacists and patients. The research indicated that pharmacists counseled on a median of: 28 percent of all prescriptions (29,31,38,41,43), 48 percent of new prescriptions (27,32,33), 70 percent of the prescriptions for new medications(30,35,36,42), and 18 percent of all refill prescriptions(27). Finally, most (87 percent) of the pharmacists who responded to a national survey of a random sample of American Pharmacy readers reported that they were engaged in some type of patient counseling activity during the course of an average week(25).

The research indicated that pharmacists spent relatively little time talking to people about their prescription drug therapy. Kirking found that two-thirds of the pharmacist-patient interactions involving new prescriptions in his study took less than one minute and Mason and Svarstad reported that the pharmacist-patient encounters involving a prescription for a new medication in their study lasted less than an average of twenty seconds. Baseline and postintervention pharmacist-patient consultations in Berardo, Kimberlin, and Barnett’s experimental study were completed in an average of 36 and 46 seconds, respectively. Independent community pharmacists indicated that, on average, they spent one hour and 50 minutes out of a 10 hour day counseling patients(26).

Pharmacists occasionally communicated with patients in a private area. Community pharmacists in Michigan reported that they gave 22 percent of their patients private or semi-private counseling(27). A minority (43 percent) of the independent retail pharmacists responding to a survey in a National Association of Retail Druggists’ newsletter indicated that they had a counseling booth(26).

**TYPE OF MEDICATION INFORMATION PROVIDED**

Researchers also examined the type of medication information that pharmacists provided to patients. Researchers examined the type of prescription drug information that pharmacists provided to patients by directly observing pharmacists, by surveying patients and by surveying pharmacists. Berardo, Kimberlin, and Barnett noted that the five most common types of information that pharmacists (before the pharmacists completed a communication training workshop) were observed providing to patients during pharmacist-patient interactions were: (i) directions for use. (ii) side effects, (iii) dosage amount, (iv) number of doses per day, and (v) duration of treatment. Pharmacists very seldom told patients the medication’s purpose or what to expect from their pharmacotherapy(29). Less than half the pharmacists in Mason and Svarstad’s study were observed verbally reinforcing the instructions on programmed patients’ prescription labels.

The most common type of information that people recalled that pharmacists provided was how to take their prescription medication. Half the people who answered Carroll and Gagnon’s mail survey and 38 percent of the patients who obtained their prescriptions from pharmacists (who had not yet completed a communication workshop—Kimberlin and Berardo(3)) indicated that the pharmacist told them how to use the prescription drug therapy. Less than half of the consumers responding to a national survey reported that they were told at the pharmacy: (i) how much prescription medication to take (43 percent); (ii) how often to take the prescription medication (40 percent); or (iii) how long to take the prescription medication (36 percent)(41). Fewer than 20 percent of the people who responded to a Food and Drug Administration-sponsored national telephone survey said that the pharmacist provided them with directions about how to use their medications(37).

Patients also mentioned the drug information that they did not receive when they were in the pharmacy to obtain their prescription drug therapy. Slightly less than half (44.6 percent) of the respondents in Carroll and Gagnon’s study reported that the pharmacist never gave them any information about the side effects of their medication. Additionally, 70 percent of Carroll and Gagnon’s respondents indicated that the pharmacist usually did not tell them how to properly store their prescription medication.

Pharmacists indicated that they usually provided a wide variety of prescription drug information to patients. Most of the Canadian pharmacists who responded to Laurier, Archambault, and Contandriopoulos(35) survey indicated
that they regularly discussed the medication's purpose and mode of administration. Ballard(28) reported that 86 percent of the community pharmacists responding to a survey sponsored by Drug Topics always or frequently caution patients on the interaction of drugs with food, alcohol, other drugs, and sunlight.

Overall, it appears that pharmacist-patient interactions during the 1980s were usually brief, one-way conversations that pharmacists seldom initiated voluntarily(31,33). When pharmacists “counseled” patients, they usually told them how to take their prescription medication. Pharmacists generally did not interview patients or provide patients with other drug information such as the drug’s purpose or potential side effects.

Limitations

The implications of the nineteen publications that discussed the nature of pharmacist-patient communication in North America are limited. It is difficult to interpret the 1980s research on pharmacists’ patient-communication views and practices because researchers either omitted or offered sketchy definitions of key terms such as ‘patient counseling’. Few researchers in the 1980s who studied how much pharmacists were interacting with patients explicitly defined patient counseling or consultation. Carroll and Gagnon acknowledged that their definition of patient counseling as the provision of dosage directions, side effect warnings, and storage instructions was extremely limited. Kirking(33) defined patient counseling as, “...the provision of verbal information that will help patients to use their medications properly.” Ross, White, Hogan, and Godwin(42) defined patient counseling relatively broadly to be, “...any oral and/or written communications, including auxiliary labels, from the practitioner relating to the drug product and its use.” Berardo, Kimberlin, and Barnett rather vaguely defined a pharmacist-patient consultation as, “...the provision of information about the medication beyond a discussion of cost, a statement of the number of tablets or capsules dispensed, or the number of refills remaining.” The diversity of definitions quoted above strongly supports Kirking’s(33) observation that, “In reviewing the relevant literature, one encounters numerous definitions of counseling presented by researchers.” Additionally, other researchers used the terms ‘patient counseling’ and ‘patient education’ interchangeably(27,29).

Some investigators questioned the appropriateness of the indicators of pharmacists’ patient-communication practices (i.e., items of information provided, time of interaction) that researchers were using in their studies. Kirkmg(33) noted, “Unfortunately, until the optimal outcomes of counseling are defined, we cannot begin to determine what the optimal counseling time should be.” Tuckett, Boulton, Olson, and Williams’(44) observations about the emerging problems in the physician-patient communication literature readily applied to pharmacist-patient communication research (p. 18):

The implicit assumption in much of the work so far mentioned has been the empiricist one that all talk in consultations is equal in importance. However, this empiricist assumption that differences in length of time for which someone speaks, or in the number of words or statements he uses, indicate whether a doctor is being more or less informative (or the similar assumption that communication is more successful if patients remember or understand more points) leads to serious problems when one has to try to interpret the conclusions achieved with these methods. For example, when a patient is found to forget a proportion of the information given, how do we know that what is forgotten is of importance? Empiricist methodology provides no guidance for considering these implications.

However, even if one accepts the appropriateness of the outcomes that investigators studied, it is difficult to determine the level of pharmacist-patient communication in the 1980s. First, it is difficult to compare and synthesize the studies that examined pharmacist-patient communication because four different units of analysis were reported in the literature: (i) all prescriptions; (ii) new prescriptions; (iii) prescription for new medications; and (iv) refill prescriptions. The unit of analysis may strongly influence the perception of the amount of communication between pharmacists and patients. Kirking(33) found a significant difference between the average counseling rate on new prescriptions (41.5 percent) and the percent of new prescriptions that the pharmacist counseled on during the pharmacist’s most recent workday (36.7 percent). The magnitude of pharmacist-patient communication in Laurier, Archambault, and Contandriopoulos’ study may be larger than that in Ascione, Kirking, Duzey, and Wenzloff’s, and Kirking’s studies because the researchers used different units of analysis (prescription for a new medication vs. new prescription, respectively).

Second, the representativeness of the studies is questionable because researchers analyzed data from a relatively limited group of pharmacists and patients. The response rates (of the studies reporting response rates) of the surveys in the studies ranged from 58.5 to 76.8 percent(27,31,33,35,38) and a relatively small number of pharmacists were observed, eight to 195(29,30,36,42). Community pharmacists in the Midwest(27,33,34,36,42) were studied more than community pharmacists in other areas(29,30,35). Consumers in southern states(31,32,43) were surveyed more than consumers in other states. Only two surveys (in contrast to publications) involved a national sample of consumers(38,41).

Third, the pharmacist-patient communication in these studies may be different because of the effects of the various methods that the researchers used to collect their data. Ortiz, Walker, and Thomas(45). after studying community pharmacists in Australia with three different data collection methods concluded, “...it seems likely that the major differences between results obtained by the various survey methods is differences in survey techniques not sample characteristics.” (However, Ortiz, Walker, and Thomas’ conclusion is tentative because they did not collect their data concurrently from the same pharmacies.) Berardo, Kimberlin, and Barnett suggested that the pharmacists they observed could have modified their behavior in the researchers’ presence. Morris acknowledged the problems of patient self-reports when he noted, “Studies have shown that even when interviewed a few minutes after leaving the physician’s consulting room, patients fail to report a third to half of the pertinent information provided at the visit.” Additionally, the patient survey findings are limited because some of the data in the studies were generated by people that tried to
Table I. Prescription drug information provided or received at pharmacy

<table>
<thead>
<tr>
<th>Type of prescription drug information observed or reported</th>
<th>Percentage of encounters pharmacists observed providing medication information on all prescriptions n=68 encounters</th>
<th>Percentage of patients reporting the receipt of medication information on new prescriptions n=92 patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directions for use</td>
<td>39.7</td>
<td>38</td>
</tr>
<tr>
<td>Side effects</td>
<td>36.8</td>
<td>14</td>
</tr>
<tr>
<td>Drug purpose</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>Cautions</td>
<td>11.8</td>
<td>11</td>
</tr>
<tr>
<td>Duration</td>
<td>17.6</td>
<td>11</td>
</tr>
<tr>
<td>General/Other information</td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

*aData collected before pharmacists completed communication training workshop Barnett, *Kimbertin, & Berardo (29)*

recall an interaction in the pharmacy that occurred up to six months before the administration of the questionnaire. Patients may remember particular aspects of an interaction that is relatively fresh in their minds better than an interaction that is several weeks or months old. Finally, Ortiz, Walker, and Thomas suggested that pharmacists who respond to surveys may accidentally or intentionally overestimate their reports of the amount of information they provide to patients.

The results of the studies that examined the extent of pharmacist-patient communication in North America during the 1980s may support Ortiz, Walker, and Thomas’ contention that data collection methods can influence the outcomes of a study. If one is willing to combine different units of analysis into one measure and to assume that other influences (i.e., sampling, weighting, etc.) are insignificant, then people responding to surveys tend to report lower levels of pharmacist-patient communication (median 40 percent) than that observed by investigators (median 50.5 percent) or reported by pharmacists (median 52 percent).10

Table I, if one is willing to accept various assumptions, suggests the effects that a research method may have on the assessment of the amount of the specific type of prescription drug information that patients receive when they are in a pharmacy. First, direct observation and patient reports are likely to produce similar results with regards to how often pharmacists tell patients directions for use (39.7 versus 38 percent) and cautions (11.8 versus 11 percent). Second, the data in the table suggest that patients are likely to under-report the amount of information they receive when they are in a pharmacy. First, direct observation and patient reports are likely to produce similar results with regards to how often pharmacists tell patients directions for use (39.7 versus 38 percent) and cautions (11.8 versus 11 percent). Second, the data in the table suggest that patients are likely to under-report the amount of information they receive when they are in a pharmacy. First, direct observation and patient reports are likely to produce similar results with regards to how often pharmacists tell patients directions for use (39.7 versus 38 percent) and cautions (11.8 versus 11 percent).

Studies relying on pharmacist self-reports generally report higher levels of patients being provided with specific types of drug information compared to research relying on direct observation or patient reports. For example, most of the pharmacists responding to surveys indicated that they frequently counseled patients about the side effects of their medications (26-28) while patient-reports and observational research suggest that pharmacists usually do not provide this information. It also appears that pharmacists who respond to surveys may be more likely to counsel patients about a drug’s purpose than pharmacists that are observed by investigators or pharmacists that interact with patients that respond to surveys.

However, data from the 1980s pharmacist-patient communication literature also indicates that the effects of research methods on results is minimal and that other effects, such as sampling, have a greater impact on results. The data from some pharmacist-patient communication studies suggests (if one assumes that other differences between the various studies such as units of analyses are negligible) that similar methods of assessing pharmacist-patient communication produce dramatically different estimates of the level of communication between pharmacists and patients: pharmacists interacted with patients in 20-80 percent of encounters observed by researchers (29,30,36,42); 13-50 percent of patients/consumers responding to surveys or interviews indicated that they received some information about their medication at the pharmacy (32,38,41,43); and patients were counseled on 41.5-70 percent of new prescriptions or prescriptions for new medications according to pharmacists (27,33,35).

Berardo, Kimbertin, and Barnett’s data questioned the value of the programmed patient research method. A comparison of Berardo, Kimbertin, and Barnett’s study where pharmacists were aware of the investigators’ presence with studies where pharmacists were unaware that they were interacting with programmed patients (30,36,42), indicates that (if one grants the assumption that other differences between the studies are negligible) pharmacists do not dramatically increase their communication practices when they are aware that they are being observed by researchers (20, 24 percent versus 31, 70, 80 percent).

Unfortunately, no researchers during the 1980s attempted to concurrently collect data using multiple indicators and methods. The literature was not clear about how a specific indicator or method might affect the interpretation of the results of a research project.

**INFLUENCES ON PHARMACIST-PATIENT COMMUNICATION**

Researchers during the 1980s examined the relationship between various variables and pharmacist-patient communication (27,29,30,31,33-39,42,46,47). Various patient characteristics appeared to significantly influence pharmacists’ behavior during pharmacist-patient interactions. Patients
who requested information from the pharmacist(27), had never
taken the prescription medication before(38), and people that
obtained the prescription medication for another person(39)
were more likely to receive counseling than other patients.
Patients with higher drug expenditures and patients with fewer
years of education were more likely to be counseled by
pharmacists than other patients(31). Elderly patients (60 years
or older) received less verbal information about their drug
therapy at the pharmacy than younger patients (37). Both
elderly female patients and less educated elderly patients were
given less medication information at the pharmacy than the
elderly as a group (37).

Pharmacists also appeared to provide more information to
patients receiving particular prescription medications compared
to others(27,33,36). Pharmacists were most likely to provide
counseling to patients obtaining antibiotics and less likely to
counsel patients receiving oral contraceptives—however, this
result was not statistically significant (27).

Many investigators studied relationships between
pharmacists’ characteristics and their patient counseling
practices. The pharmacist’s attitude toward patient counseling
was found to be an important predictor of whether the
pharmacist would communicate with the patient(34,36).
Kirking(34) concluded, “The results of this investigation
confirm the importance of attitudes and suggest that successful
efforts to modify them have the potential to result in improved
practice.”

Chappell and Barnes(46) examined the relationships
between professional and business role orientations and various
pharmacy practice behaviors by interviewing 309 pharmacists
who practiced in Canada. The researchers found that
pharmacists who had a higher professional role orientation were
more likely to report that they provided patients with
information about prescription drugs. A business role
orientation was not significantly correlated with the provision
of prescription drug information to patients. The researchers
concluded, “While a high professional orientation is therefore
probably “good” for the client, a high business role orientation
while not beneficial for the client in terms of the practice
behaviors studied here, is not obviously detrimental to the client
either…”

The type of pharmacy that a pharmacist worked in appeared to
influence the pharmacist’s counseling behavior. Kirking(34)
found that chain pharmacists counseled less than pharmacists
who practiced in traditional community, apothecary type, or
clinics pharmacies in Ohio. Laurier, Archambault, and
Contandriopoulos reported that pharmacists who practiced in
small community pharmacies (<900 square feet) in Canada
generally communicated more with patients than pharmacists
who worked in larger community pharmacies. The counseling
behavior reported by pharmacists working in small community
pharmacies continued to be significantly different after Laurier,
Archambault, and Contandriopoulos controlled for workload
and computerization.

Pharmacists generally did not perceive that the
arrangement of the pharmacy affected their ability to counsel
patients. Kirking(33) noted, “...pharmacists seem to believe
that the pharmacy layout did not have an inhibitory effect
upon counseling and that privacy was not necessarily a
requirement.”

McBean and Blackburn(47) found that patients who
interacted with the pharmacist in a private setting were
more compliant than patients who interacted with the
pharmacist in a nonprivate setting and concluded. “The results
of this study clearly support the recommendation that
pharmacists provide private areas for consultation with their
patients.” However, McBean and Blackburn’s conclusion is not
strongly supported by data from their study. The researchers did
not disclose if patients were asked if they felt that the ‘private’
area was more confidential than the ‘nonprivate’ setting. It is
not clear if the patients in the study shared the researchers’
views about the ‘privacy’ of the environments under
examination. If researchers wish to better understand how
privacy influences the dynamics of pharmacist-patient
communication, they must recognize that patients’ views are
just as, if not more important than, the researchers’ views about
the privacy of a setting. Additionally, the researchers did not
acknowledge Slama and Gurwich’s(48) observation that. “In
most community pharmacies an element of trust in the
pharmacist’s judgment and knowledge of medications may play
a role in patient acceptance of additional pharmacist
instruction.” The patient’s trust in the pharmacist may be a
more important issue in fostering the pharmacist-patient
relationship than the existence of a researcher declared
“private” area. What good is a private counseling section if the
patient doesn’t feel that the pharmacist can be trusted with
personally embarrassing data?

The pharmacist’s year of graduation was associated with
patient counseling. Pharmacists who had practiced for many
years were less likely to counsel patients than recently
graduated pharmacists(34,35). However, Laurier,
Archambault, and Contandriopoulos noted that the
relationship between years in practice and counseling was not
significant after gender, work setting, and professional
perceptions had been controlled.

The research was not clear about the effects that gender or
employment status had on pharmacists’ patient counseling
practices. Laurier, Archambault, and Contandriopoulos found
that females counseled significantly more than male
pharmacists while Kirking(34) did not find a difference
between male and female pharmacists. Owners, managers, and
staff pharmacists counseled more than assistant managers;
staff pharmacists counseled less than owners(34). Other
researchers did not find a difference between owners and
employees(35).

Laurier, Archambault, and Contandriopoulos suggested
that their study results may have been different from Kirking’s
for three reasons. First, pharmacist-patient communication may
have changed over time—Kirking’s study was conducted in the
early 1980s while the study by Laurier. Archambault, and
Contandriopoulos was conducted later in the 1980s. Second,
community pharmacists in Ohio may be dramatically different
than community pharmacists in Canada. Third, the studies’
dissimilar units of analysis — Kirking asked pharmacists about
their counseling behavior on new prescriptions whereas
Laurier, Archambault, and Contandriopoulos asked pharmacists
about prescriptions for new medications — may account for the
differences between the studies’ results.

The research tentatively indicated a relationship
between workload and patient counseling. Two
studies(34,35) reported that increased prescription workload
was negatively related to patient counseling. In contrast, one
study did not find a significant relationship between workload
and patient counseling(29). Berardo, Kimberlin, and Barnett
Researchers used a variety of methods to study pharmacists’ understand practitioners’ orientations and behaviors. 1994 was dominated by research projects that strived to better study pharmacists’ patient counseling practices. Pharmacists’ views and practices in the 1990s have been the subject of numerous studies. The workload and counseling activities of pharmacists were found to be related to the quality of counseling provided by pharmacists. The pharmacists’ perceptions of how busy they are may be different than those of an outside observer.

Second, the differences between the studies might be due to sampling. The sample size for Berardo, Kimberlin, and Barnett’s study is substantially smaller (n=8) than that of the other two studies—Kirkling (n=506), and Laurier, Archambault, and Contandriopoulos (n=388). The differences might be attributed to regional variation; community pharmacists in Florida may practice differently than community pharmacists in Ohio and Canada. Additionally, the pharmacists in Berardo, Kimberlin, and Barnett’s study, because they agreed to participate in a relatively comprehensive research project, may have been more firmly committed to patient counseling that only the most oppressive workload could dissuade them from counseling their patients.

Third, the research might be showing the existence of a workload threshold effect. Data from Berardo, Kimberlin, and Barnett’s study show that none of the pharmacists in their study filled more than 100 prescriptions a day by themselves. It is possible that workload does not significantly affect patient counseling when a pharmacist fills less than 100 prescriptions a day. The pharmacists in Kirkling’s and Laurier, Archambault, and Contandriopoulos’ studies may have had to fill more than 100 prescriptions a day by themselves and therefore the workload at that level may have adversely affected their abilities to appropriately counsel their patients.

Finally, legislative influences appear to have little effect on pharmacists’ counseling behaviors. Campbell, Baker, Jinks, and Evenson-St. Amand suggested that state regulations on patient counseling had little or no effect on improving the quality of patient counseling in Washington. Ross, White, Hogan, and Godwin concluded, “This study showed that the counseling regulation, two years after its implementation, has had no effect on the quality of counseling provided by pharmacists.” However, the pharmacists that Ross, White, Hogan and Godwin studied may not have counseled their patients because they were adhering to an older state law that required pharmacists to “personally perform all count-and-pour activities.” It is possible that the pharmacists did not make the time to counsel their patients because they were busy completing nonjudgmental functions that the older state law prevented them from delegating to other personnel.

PHARMACISTS’ VIEWS AND PRACTICES IN THE 1990s

The pharmacist-patient communication literature from 1990 to 1994 was dominated by research projects that strived to better understand practitioners’ orientations and behaviors. Researchers used a variety of methods to study pharmacists’ patient-communication views and practices: pharmacists’ self reports, programmed patients, telephone interviews of consumers, and direct observation of pharmacists who were aware of the investigator’s presence.

Views

Six studies in North America examined pharmacists’ views on communicating with patients about prescription drugs. The research indicated that pharmacists had a positive outlook on patient counseling. Stratton and Stewart (56) concluded that pharmacists rated themselves higher than either the public or physicians with regard to counseling patients on prescription drug use. Most (80 percent) of the 200 randomly selected chain and independent pharmacists belonging to the American Pharmaceutical Association’s Academy of Pharmacy Practice and Management indicated in a telephone interview that they would like to have a greater role in patient counseling. (52). An analysis of the data generated by 771 pharmacists who responded to Anderson-Harper, Berger, and Noel’s (49) mail survey of 2,013 state pharmacy association members found that pharmacists desired to spend more of their time (33 percent) counseling and educating patients than they currently devoted (20 percent) to these activities. The average score (43 out of a maximum score of 56) of the 708 Wisconsin pharmacists who completed an eight-item measure of pharmacists’ attitudes toward patient counseling at meetings sponsored by the Wisconsin Board of Pharmacy indicated that the pharmacists had a moderately favorable orientation towards patient counseling.

Pharmacists believed that there were various advantages to patient counseling. More than half of the pharmacists in the study described by Meade (52) indicated that the main advantages of patient counseling for the patient were better understanding of the medication and increased compliance. More than one-third of the pharmacists felt that counseling increased their professional satisfaction. In contrast, Anderson-Harper, Berger, and Noel found that pharmacists who did not want to counsel patients were significantly more satisfied with their jobs than pharmacists who wanted to counsel patients.

Schommer and Wiederholt (54) tried to better understand Wisconsin pharmacists’ conceptual views of patient counseling by using a closed-ended, written questionnaire that asked the pharmacists to indicate how important it would be to provide a patient with specific items of drug information (i.e., name of medication and purpose, directions for use and storage, side effects, interactions, contraindications, etc.,) in one of six different scenarios. The researchers noted that the elements of patient counseling that pharmacists rated as most important varied according to the scenarios and concluded that pharmacists did not consider patient counseling to be limited to simply dispensing objective, drug-oriented information to the patient.  

1Laurier and Poston reported that workload had a curvilinear effect on patient counseling practices in 1992.  

2Situation 1: Original prescription and patient unfamiliar with it; Situation 2: Renewed prescription and patient familiar with it; Situation 3: New prescription for nonsteroidal anti-inflammatory drug available for prescription only; Situation 4: Nonsteroidal anti-inflammatory agent available OTC; Situation 5: New prescription/Pharmacist busy/Serious situation; Situation 6: Renewed prescription/Pharmacist not busy/Not serious situation.
Researchers also asked pharmacists in the United States to identify and evaluate the importance of various barriers to patient counseling. Raisch (53), after analyzing the closed-ended surveys returned by 64 pharmacists (88 percent response rate) who participated in a research project on cognitive services in New Mexico, found that pharmacists felt that an excessive workload was an important barrier to patient counseling (average score 2.9 on a five-point scale where 1-least important and 5-most important). The pharmacists responding to Raisch’s questionnaire indicated that both lack of privacy and uninterested patients were somewhat of a barrier to patient counseling. The results of Raisch’s study are similar to those obtained by Schommer and Wiederholt (55). Schommer and Wiederholt, using an open-ended written questionnaire, found that Wisconsin pharmacists perceived that the most important barrier to patient counseling, as indicated by the frequency of barriers reported, was the lack of time to communicate with patients (43 percent of the 1,187 barriers in the study’s analysis). Other frequently reported barriers to patient counseling included lack of privacy (13 percent) and lack of patient motivation (12 percent).

Beck, Woodruff, Sandman, and Van Tyle (50) explored how comfortable pharmacists were counseling male and female patients on potentially embarrassing antihypertensive drug side effects by analyzing pharmacists’ responses to a closed-ended, written survey. The questionnaire was administered to 46 male and 10 female pharmacists attending an annual meeting of the Indiana Pharmacists’ Association and 128 pharmacy students. The researchers found that pharmacists and pharmacy students classified as androgynous (respondents who scored above the median scores for both femininity and masculinity scales) were more comfortable counseling either male or female patients about potentially sensitive side effects (i.e., impotence, menorrhagia, priapism, vaginal candidiasis) than pharmacists classified as traditionally male or undifferentiated (participants scoring below the median scores for femininity and masculinity). The results suggested that male and female pharmacists and pharmacy students were more comfortable counseling patients of their own sex. Additionally, male pharmacists and pharmacy students felt more comfortable counseling patients about sex-nonspecific side effects (nocturia, flatulence, orthostatic effects, dry mouth, hyperhydrosis, muscle cramps, dizziness and incontinence) than about male- or female-specific side effects.

Some pharmacists were more likely to have specific notions about and predispositions to patient counseling compared to others. Anderson-Harper, Berger, and Noel found that staff pharmacists were significantly more apprehensive about communication than pharmacy owners and less willing to communicate than managers. Schommer and Wiederholt (55) noted that, compared to other pharmacists, staff pharmacists and pharmacists working in higher volume pharmacies were more likely to report that process factors facilitated or impeded their ability to consult with patients. While Anderson-Harper, Berger, and Noel discovered some differences between various groups of pharmacists in their study, they were surprised to find that pharmacists who wanted to counsel patients did not have lower levels of communication apprehension or higher willingness to communicate scores than pharmacists who did not want to counsel patients.

Practices

Laurier and Poston (51) surveyed a national, randomly selected sample of community pharmacists in Canada to examine how often and how long they counseled their patients. The researchers found, after analyzing 894 completed questionnaires (47 percent response rate), that, on average, 16 percent of the pharmacist’s time during a three-hour period was spent counseling patients and that the pharmacists counseled on an average of 52.1 percent of all prescriptions.

Seven studies on pharmacist-patient communication in the United States indicated that pharmacists did not devote a substantial amount of time and effort to communicating with their patients. The pharmacists in Anderson-Harper, Berger, and Noel’s study reported that they spent nine percent of their time in a normal workday engaging in patient education activities and 11 percent of their time counseling patients. Community pharmacists spent an average of 3.9 minutes interacting with a patient who had a prescription for a new medication and 1.5 minutes counseling a patient who was having a prescription refilled (52). The community pharmacists in the study described by Meade counseled an average of 60 percent of their patients. In contrast, Raisch (63), after analyzing 3,766 counseling events reported by 73 pharmacists and four pharmacy students, determined that the mean counseling rate per prescription per pharmacist was 0.355 when students observed pharmacists interacting with patients and 0.242 when pharmacists documented their own patient counseling activities. Mickel et al. (59) reported that 21 of the 52 Tennessee pharmacists (40 percent) investigated in the study did not verbally counsel patients about their metered-dose inhaler. Approximately one-third of the 46 practitioners in a study of southwestern Michigan pharmacists recommended an antidiarrheal OTC product for an 18-month-old infant without a cautionary statement (60).

Most patients in the United States, on average, reported that they were usually not provided with prescription drug information in the pharmacy. A nationwide survey of 500 recent prescription drug consumers (or relatives helping someone in the house hold to administer the pharmacotherapy) found that 62 percent of the people in the survey said that they were not told that a pharmacist was available to talk to them about the prescription medication (61). Slightly more than half (54 percent) of the 2,382 randomly selected Wisconsin residents who answered a telephone survey on individual health conditions, practices, attitudes and behaviors reported that they did not receive a consultation from any pharmacy personnel on their new prescription (62).

1Process barriers were operationally defined as actual procedures, mechanisms, and flow of activities by which the service is operationalized and delivered. Elements include: time, prescription transfer (e.g., pharmacist bands prescription to patient), privacy, reimbursement, resources, and miscellaneous.

2Patient education: “Involves only the provision of information about the patient’s medication regimen and disease. It does not involve checking for understanding or other functions below in counseling. Patient education may simply involve the provision of written information.”

3Patient counseling: “Involves problem solving, which includes assessing the patient’s understanding of the medication regimen, assessing the appropriateness of the medication for the patient, tailoring the medication regimen to the day or lifestyle of the patient, responding to patients in a way that conveys that you understand their problems, etc. Counseling cannot be accomplished without direct interaction with the patient.”
Pharmacists in the United States, when they told patients about their prescription drugs, usually told them how to take their medication(52,62). Pharmacists, according to both patient and pharmacist reports, seldom (<5 percent) told patients about the purpose of the medication(52,62).

Quality
Researchers studied the quality of pharmacist-patient communication in Michigan and the southern United States. Vanderveen and Jirak(60), following up on Vanderveen, Adams and Sanborn’s research(13), concluded that the recommendations pharmacists made to programmed patients “were frequently not the most appropriate for the situation.” Mickle et al reported that 81 percent of the 31 pharmacists in Tennessee who attempted to educate a programmed-patient about a metered-dose inhaler failed to correctly describe half of the steps necessary for successful use of the device.

Eng, Bulfer, Doering, and Kimberlin(58) were the first researchers to examine the safety and appropriateness of the care provided by pharmacists who exercised their right to prescribe drugs authorized by Florida’s Self-Care Consultant Law. The researchers assessed how well 21 community pharmacists in Florida advised programmed patients who reported that they were having problems with either a urinary tract infection, leg cramps, or head lice. Most (90 percent) of the 62 interactions lasted three or less minutes. The programmed patients received verbal counseling (i.e., how to take the medication, how long to take the medication, and how to identify and manage side effects) from pharmacists in 40 percent of the consultations. Although pharmacists in 70 percent of the encounters were judged to be friendly, they failed to come out from behind the prescription counter in 44 percent of the interactions. The pharmacists seldom asked programmed patients about their chronic medical conditions, medication allergies, prescription and nonprescription drug use (17 percent), drugs used to treat the problem (13 percent) or the onset, duration, or frequency of the medical problem (5 percent). Many of the pharmacists’ recommendations were questionable. Three college of pharmacy faculty members evaluating the pharmacists’ recommendations felt that one-third of the pharmacists’ drug product selections were inappropriate for the programmed patients’ problems. Additionally, twenty pharmacists (out of 21) failed to refer the patient to a physician even though that was the most appurtenant course of action for that situation.

In contrast, Barnett, Nykamp, and Hopkins(57) had largely propitious views of the pharmacist-patient interactions in their study. The researchers, after analyzing data from 156 visits to 84 community pharmacies in Atlanta, Georgia found that most of the pharmacists in the study were accessible, friendly, and possessed favorable communication skills. Barnett, Nykamp, and Hopkins concluded that, compared to research in the 1960s and 1970s, that pharmacists had improved their ability to counsel patients on nonprescription medications.

Limitations
The implications of the studies inquiring into practicing pharmacists’ patient-communication views and activities were equivocal. A variety of methodological considerations restrained investigators from immodestly descending about the ramifications of the various research projects that appeared in the pharmacy literature from 1990 to 1994. Investigators may have not used the most optimal research methods to inquire into pharmacists’ views about pharmacist-patient communication. Researchers that examined pharmacists’ perspectives on pharmacist-patient communication used open-ended written questionnaires(55) or closed-ended surveys(49,50,52-54) that may have discouraged pharmacists from clarifying or challenging the relevance of particular questions. For example, the 90 pharmacists in Schommer and Wiederholt’s(55) study who didn’t answer a question about the criteria they used to consult with patients may have ignored the proposition because the terms in the inquiry were unfamiliar to them (i.e., some pharmacists may never ‘consult’ with ‘patients’ in the pharmacy; however, they may ‘educate’ their ‘customers’ in the drugstore).

Most of the researchers who examined pharmacists’ views on pharmacist-patient communication appeared to have made one of two disputable assumptions. The first questionable supposition was that the pharmacists responding to the surveys shared similar conceptions of patient consultation, counseling, and/or education. Stratton and Stewart(56) did not ask the pharmacists in their study to define or describe ‘patient counseling’. Raisch’s(63) definition of a ‘counseling event’—any health or drug topic discussed—is so broad that it is possible that pharmacists with radically differing views of patient counseling could have given identical answers to a question. Hargie and Morrow(64) disputed the position that pharmacists agreed about the meaning of ‘patient counseling’ and declared, “In fact, counselling means different things to different people, with the result that this approach is poorly characterized and understood within pharmacy.”

The results of the studies that examined pharmacists’ views and predispositions may have been more capacious if the pharmacists participating in the research would have been encouraged to describe, using their own terms and meanings, the communication (advising? consultation? counseling? education?) they had with people (customers? clients? patients?) in the pharmacy (apothecary? drugstore?). Schommer and Wiederholt(54) concluded that pharmacists in their study viewed “…patient counseling as a service they provide, using their experience and judgment, and specific to individual patients and their medication needs” without directly asking the pharmacists to define the terms ‘patient counseling’ or ‘patient consultation’ or to explain how they felt that the ideas circumscribed in these terms influenced their daily practices.

The second dubious premise was that pharmacists, when they completed a questionnaire, would abandon their own preconceived notions of patient consultation, counseling, or education and adopt the researchers’ definitions of these terms. Pharmacists, when they were surveyed, were instructed to use the investigators’ definitions of patient consultation(55), patient counseling(49,52), and patient education(49). However, researchers neglected to demonstrate that pharmacists agreed with the definitions of these terms or that pharmacists, when they answered the questions in a survey, readily adopted the investigator’s conceptual framework. Why should anyone expect practicing pharmacists to adopt investigators’ language and meanings when pharmacy researchers and scholars had allowed the pharmacist-patient communication literature to become a model of terminological copiousness?

The contexts in which pharmacists’ views were obtained...
may have influenced the results of some studies. Some of the pharmacists in Schommer and Wiederholt’s studies may have responded to questions with “professionally desirable” answers because they perceived that the Wisconsin Board of Pharmacy was associated with the study. Schommer and Wiederholt(54) acknowledged that some of the distributions of the responses to their 11-point scheme were skewed to the higher end of the rating scale.

The connotations of the research on pharmacists’ patient-communication ideas and activities for pharmacy practice are irresolute because some investigators studied small or potentially nonrepresentative samples of pharmacists, pharmacies, or pharmacist-patient interactions. Pharmacists in the United States had the lowest survey response rate, 38 percent(49), compared to Canada, 47 percent(51). Many investigators acknowledged that their study samples did not represent the views and/or practices of the “average” pharmacist (49,51,53-55,63). The inferences drawn by Beck, Woodruff, Sandman, and Van Tyle about the effects of sex and gender on pharmacists’ patient-communication practices are tenuous because they only studied female and male pharmacists with ten or more years of practice experience and pharmacy students.

Some research subtly revealed the imperfections of various investigators’ approaches to examining pharmacists’ patient communication practices. Laurier and Poston’s research demonstrated the impact that different units of analysis can have on the interpretation of a study’s results. Laurier and Poston found that some variables (i.e., employment status) were significantly related to one unit of analysis (i.e., time spent counseling) but not the other (proportion of prescriptions). The results of their research, as a whole, indicated that investigators should use a variety of indicators to obtain a reasonably commodious representation of the nature of pharmacist-patient communication.

The studies in the literature during the 1990s rarely used more than one research method to investigate pharmacist-patient communication. Some research suggested that specific methods influenced pharmacists’ patient-communication practices. Raisch(63) found that significantly more counseling events were documented when pharmacy students observed pharmacists than when pharmacists recorded their own counseling activities. There are two ways to interpret this result. First, this may suggest that pharmacists do more counseling in the absence of an observer. However, an equally plausible interpretation is that pharmacists, for whatever reasons (i.e., lack of time, lack of desire, temporary amnesia, etc.), under-report their patient counseling practices. Laurier and Poston suggested that a limitation of self-reports was that they may have identified spurious effects.

Researchers also recognized the problems of relying exclusively on patient-reports to evaluate pharmacist-patient communication. Wilson, Robinson, Blenkinsopp, and Panton’s(65) research, which documented that patients remembered 30 percent of the information provided by pharmacists, highlighted the risks of relying on patient reports as the only measure of pharmacist-patient communication. A limitation of the studies that examined consumer-reports of information received at the pharmacy(61,62) is that they relied on respondents to recall interactions which could have occurred six months before the interviewer contacted the respondent. Wiederholt, Clartridge, and Svarstad urged researchers, when they collected data from patients, to take into account the length of time since the patient received their prescription from the physician and had it filled at the pharmacy.

Researchers identified the potential problems of the programmed patient research method. Eng, Buffer, Doering, and Kimbelin observed that, “A downfall in much shopper methodology research is the lack of description of the reliability and validity used to ensure consistency and appropriateness of the trained shopper technique.” While Eng, Buffer, Doering, and Kimbelin and Barnett, Nykamp, and Hopkins described how they established the validity of their technique, other researchers(59,60) neglected to discuss how they demonstrated the validity of their method. Additionally, some investigators may have unethically used programmed patients to collect data from pharmacists. It is not clear if the pharmacists in the studies of Barnett, Nykamp, and Hopkins(57), Mickle et al (59), and Vanderveen and Jirak(60) formally consented to participate in the research.

The results of studies outside of North America (65,66) disputed the conventional wisdom that outcomes such as: (i) the number of items of information provided by pharmacists; (ii) the number of questions asked by pharmacists; and (iii) time spent with clients, were satisfactory indicators of quality. Wilson, Robinson, Blenkinsopp, and Panton(65) reported, “One impression formed during this research was that pharmacists had so many competing demands on their time that information was often offered to customers at a high rate of speed of delivery...” Morrow, Hargie, Donnelly, and Woodman(66) noted that the pharmacist who asked the highest number of questions per interaction in their study spent the least amount of time with clients and that the pharmacist who spent the most amount of time with clients asked the fewest questions.

Laurier and Poston were the first investigators in the pharmacist-patient literature to explicitly grant the limitations of their statistical analyses. The researchers emphasized that their study was an exploratory, not a confirmatory, analysis and warned that, due to the number of tests that they performed, they may have identified spurious effects.

INFLUENCES ON PHARMACIST-PATIENT COMMUNICATION

Researchers examined the relationships between various variables and the quantity and quality of pharmacist-patient interactions. The studies indicated that some patient characteristics significantly influenced pharmacists’ communication practices. Older respondents (especially those between the ages of 40 to 75) were less likely to be consulted by pharmacy personnel about their prescription medications than younger people(62). The type of product that the patient obtained or requested at the pharmacy significantly influenced the amount of communication that the patient received from pharmacy personnel. Patients with new prescriptions or prescriptions for acute medical conditions were more likely to receive counseling from pharmacy personnel than patients obtaining medication refills(62,63). Pharmacists counseled on a lower percentage of prescriptions for capitation patients (7.8 percent) compared to prescriptions for self-pay (19.7 percent) and Medicaid (20.6...
percent) patients(63).

However, some patient variables were not found to significantly influence pharmacist-patient communication. The patient’s educational background, race, or sex did not influence pharmacy personnel’s prescription medication consultation practices in Wiederholt, Claridge, and Svarstad’s study.

Researchers found that pharmacists who possessed particular characteristics were more likely to communicate with patients. Laurier and Poston identified many pharmacist-specific variables that were significantly related to various patient counseling practices. First, the researchers found that counseling varied according to regions (pharmacists in Quebec spent more time counseling patients and counseled on a higher proportion of prescriptions than other pharmacists). Second, female pharmacists counseled on a higher proportion of prescriptions than male pharmacists. Third, pharmacists who received their pharmacy licenses before 1961 counseled on a smaller proportion of prescriptions and spent less time counseling patients than other pharmacists. Finally, pharmacists who reported that they received training on how to counsel patients spent more time counseling patients than pharmacists who reported that they were not trained (however, trained pharmacists did not counsel on a higher proportion of prescriptions than other pharmacists).

The pharmacist’s age and gender generally did not affect the quality of pharmacist-patient non-prescription drug communication. Barnett, Nykamp, and Hopkins noted that there were no significant relationships between the pharmacist’s age or gender and communication skills. However, the researchers found that pharmacists 30 years or younger were more likely to make satisfactory over-the-counter product recommendations than older pharmacists.

The pharmacists’ place of employment had more of an influence on pharmacist-patient communication in Canada than in other countries. Laurier and Poston found in their study of Canadian community pharmacists that independent community pharmacists counseled on a higher proportion of prescriptions than chain pharmacists. In contrast, there were no significant differences between chain and independent pharmacists in the United States with regards to the quality and/or quantity of pharmacist-patient interactions about prescription drugs(49,59,63). Barnett, Nykamp, and Hopkins noted that there were no significant differences between chain and independent pharmacists with regards to nonprescription drug communication skills.

There are several possible reasons for the differences between Laurier and Poston’s and the American studies’ results. First, it is possible that chain community pharmacists in Canada are in an environment (in the broadest sense of the term) that is dramatically different from the one faced by chain community pharmacists in the United States. The incentives and barriers of the health care and economic systems of the two countries may be such that chain pharmacists are rewarded for engaging in specific counseling practices (including minimal or no counseling) in one country while systems in the other country discourage chain pharmacists from adopting particular counseling behaviors. Second, it is possible that sample sizes of the studies in the United States (Barnett, Nykamp, and Hopkins(57) n- 84 pharmacies; Mickle et al.(59) n- 52 pharmacists; Raisch(63) n-73 pharmacists) were too small to detect a difference between chain and independent pharmacists’ counseling practices. Additionally, Anderson-Harper, Berger, and Noel’s study may not have found a difference between chain and independent pharmacists because independent pharmacists and professional association members were over-represented in the survey. It is possible that chain pharmacists who are members of a state pharmaceutical association do not represent the “typical” chain pharmacist. Finally, the differences between the studies might be showing that independent community pharmacists who respond to surveys (51) behave differently than independent community pharmacists who are not aware that they are being observed by researchers (57,59). Additionally, Raisch noted that the pharmacists participating in his study were probably highly motivated to counsel patients.

Other pharmacy- and pharmacist-related variables had various effects on pharmacist-patient communication. While pharmacists practicing in inpatient pharmacies spent less of their time in an average workday counseling patients than pharmacists practicing in outpatient pharmacies, both groups of pharmacists spent comparable amounts of time engaging in patient education activities(49). Peer pressure to not counsel was correlated with patient counseling ($r_s = -0.30$)(53).

Workload was significantly related to patient counseling. Laurier and Poston concluded that prescription workload had a non-linear effect on time spent counseling patients in that pharmacists who filled an intermediate number of prescriptions per hour (7.0 to 11.4) reported that they spent more time counselling patients than pharmacists who either filled less than 7.0, or more than 11.5 prescriptions per hour. Raisch(53) found that workload was negatively correlated with the provision of counseling ($r_s = -0.30$).

Overall, the research indicated that a private counseling area did not dramatically change pharmacists’ or patients’ communication practices during the pharmacist-patient interaction. Laurier and Poston reported that pharmacists who had a private area did not counsel on a larger proportion of prescriptions than other pharmacists. However, Laurier and Poston found that pharmacists who had a private counseling area spent more time interacting with patients than pharmacists who did not have a private counseling area.

Some authors suggested that mandatory consultation laws had little effect on improving pharmacist-patient communication in the United States. Nichol and Michael(67), after interviewing the pharmacy staff board members of twelve states that had enacted mandatory consultation laws prior to 1990, could not identify a single case where a consumer had complained about a consultation to the board of pharmacy or where a pharmacist had only been disciplined for failing to counsel a patient. The researchers concluded, “Until some demonstration of positive patient outcomes can be documented, the potential value of these laws will remain a mystery.’’

**SUMMARY AND CONCLUSIONS**

**Pharmacists’ Views and Practices**

This paper reviewed forty published studies on pharmacists’ patient-communication views and practices. Table II summarizes the methods that researchers used to examine and assess pharmacist-patient communication. The research, on average, shows that pharmacists have favorable views of patient counseling. Pharmacists in North America are accessible and interact for approximately one minute or less with about half of the patients that are in the pharmacy to have a new prescription filled. However, the literature does not convincingly demonstrate that the ‘quality’ (as operationally defined
that a private counseling area has on pharmacist-patient interactions; prescription workload at this level may not result in a higher level of communication(29). One possible reason for this difference is workload has a nonlinear effect on prescription drug counseling while observational research does not indicate that workload is a barrier to pharmacist-patient communication(29). The pharmacists in Berardo, Kimberlin, and Poston, with a 47 percent response rate, did not contact independent community pharmacists in Michigan. Laurier and Poston in Canada that respond to surveys counsel less than independent community pharmacists are more likely to counsel patients than their male counterparts(35,51).

The literature has not reached a consensus on the influence that three factors (chain versus independent pharmacists, workload, private counseling area) have on pharmacist-patient interactions. First, the research is split about whether independent community pharmacists are more likely to communicate with patients than chain pharmacists. Two studies reported that chain pharmacists counseled less than independent pharmacists(34,51) while other researchers did not find differences between the two groups(49,57,59,63). The simplest explanation for this difference is that chain pharmacists in Michigan and Canada that respond to surveys counsel less than independent pharmacists in Michigan and Canada that respond to surveys. Kirking, while checking for response bias on the basis of sex, highest pharmacy degree, current pharmacy position (i.e., staff, owner, etc.,) and years since graduation, did not assess if his sample was representative of chain and independent community pharmacists in Michigan. Laurier and Poston, with a 47 percent response rate, did not contact nonrespondents.

A second divisive area is the influence that workload has on pharmacists’ counseling practices. Pharmacist self-reports(34,35,51,53) show that workload is a barrier to counseling while observational research does not indicate that workload is a significant barrier to pharmacist-patient communication(29). One possible reason for this difference is that workload has a nonlinear effect on prescription drug counseling(51). The pharmacists in Berardo, Kimberlin, and Barnett’s study dispensed less than 100 prescriptions a day by themselves; prescription workload at this level may not adversely affect patient counseling.

Third, the research is also deadlocked over the impact that a private counseling area has on pharmacist-patient interactions. A private area changed the communication practices of pharmacists and patients in the United States(23) but Laurier and Poston in Canada found that pharmacists who had a counseling area did not counsel more patients than pharmacists who did not have a counseling area. A counseling area does not appear to motivate pharmacists to counsel more patients than they usually counsel in the traditional pharmacy environment. However, it appears that pharmacists, once they decide to counsel a patient, spend more time talking to a patient in private.

Trends in the pharmacist-patient communication research literature also identified factors that did not improve pharmacist-patient communication. The research has not demonstrated that mandatory patient consultation regulations significantly improve pharmacists’ practices(9,30,42).

**General Critique of Literature**

A challenge for investigators is to learn more about the language and meanings, rules, strategies, unconscious conflicts, values and economic constraints that practicing pharmacists use and face in their daily practices. Schommer and Wiederholt’s research was a good start down the path to gaining a better appreciation for practitioners’ perspectives and problems. However, written questionnaires, particularly closed-ended surveys(19,33,36,40,49,50,53,54,56) may coerce pharmacists into using the researchers’ rather than their own language and concepts. Practicing pharmacists, while using a language that seems similar to that employed by researchers and scholars, may give different meanings to the terms adopted by academicians.

Investigators must be prepared to encounter and manage the multiple, potentially conflicting realities constructed by pharmacists, patients, and other agents. Just as health care professionals elicit their patients’ clinical realities to achieve optimal therapeutic outcomes, researchers and scholars should elicit pharmacists’ clinical and professional realities in order to help the profession identify and implement strategies that practitioners can use to improve patient outcomes.

There are a variety of answers to the question, “What specifically can pharmacy researchers and scholars do to better understand pharmacist-patient communication?” One recommendation is that researchers critically reflect upon the paradigm(s) of science that they adopt to examine pharmacist-patient communication. While investigators researching pharmacist-patient communication have not explicitly declared their scientific paradigms, it appears that many studies in the literature are guided by Positivist or Quasi-Positivist paradigms of science. Researchers and scholars should question the appropriateness of these two paradigms for studies on pharmacist-patient communication. Are other scientific paradigms better suited for pharmacist-patient communication research? For example, are the axioms of various paradigms such as the Constructivist paradigm of science more consistent with the contemporary realities of pharmacist-patient communication than Positivism or Post-Positivism? Scholars in fields ranging from Economics(68,69) to Gerontology(70) are currently discussing the impacts that scientific paradigms may have on pharmacists’ practices.
research in those areas.

Researchers and scholars studying pharmacist-patient communication are urged to evaluate the merits of the paradigms of science that they have adopted to guide their research. The approaches that have dominated the literature do have a value. However, after more than 25 years of research, perhaps the time has arrived for investigators to begin to examine other strategies to study pharmacist-patient communication. Capra(71) argues for the benefits of critically questioning the dominant paradigm (p. 48):

At the beginning of the century, when physicists extended the range of their investigations into the realms of atomic and subatomic phenomena, they suddenly became aware of the limitations of their classical ideas and had to radically revise many of their basic concepts about reality. The experience of questioning the very basis of their conceptual framework and of being forced to accept profound modifications of their most cherished ideas was dramatic and often painful for those scientists, especially during the first three decades of the century, but it was rewarded by deep insights into the nature of matter and the human mind.

Einstein(72) suggested that by changing paradigms scientists could gain new and wider views. It is possible that nontraditional scientific paradigms and methods may help researchers and scholars to identify paths which lead to an improved understanding of pharmacist-patient communication.

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