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**CONSUMER PREFERENCES FOR PRESCRIPTION MEDICATION
PATRONAGE AND PHARMACIST SERVICE ACTIVITIES:
A COMPARISON STUDY**

by

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Abstract

The purposes of this study were to: 1) compare the results of similar prescription medication patronage motives and selected pharmacist services to the 1984 study in Madison, Wisconsin; 2) measure consumers' preferences toward new pharmacist services based upon implementation of pharmaceutical care into practice between 1984 –1999; and 3) explore what the dimensions of pharmacist service activities are since 1984. Data were collected in summer 1999. The survey instrument was developed into seven sections, each of which is related to this research. Section one contained 14 prescription medication patronage factors. Section two contained 30 specific service activities performed by pharmacist. Patronage factors and service activities were identified from the literature search from 1970 to 1997.

After pretesting the questionnaire, it was mailed to a systemic random sample of 200 state government employees and 300 households residing in the Madison, Wisconsin area. The response rate was 55.2%. Using the directional Student t- test, most of the tested general pharmacy patronage dimensions and selected pharmacist services were significantly different ($p > 0.05$) from the 1984 findings. Also, by applying exploratory factor analysis, four pharmacist service activities dimensions were extracted by the maximum likelihood method, followed by Oblimin-Kaiser normalization rotation, which explained 57.9 % of the variation in response.

In conclusion, results suggest that over time, pharmacy patrons perceive most of prescription medication patronage motives and selected pharmacist services in more important attitude than 1983-84 study. Those four underlying factors are 1) Non-prescription

drug consultation and monitoring, 2) Prescription drug consultation and monitoring, 3) Prescription drug administration and management, and 4) Drug-related management and information service activities.

Chapter I

INTRODUCTION

A key to survival in the market place for prescription medications is to understand consumers' evaluation processes about prescription medication patronage and pharmacist service activities that are important to consumers. The pharmacy manager should understand how consumers' perceptions of a prescription medication are related to patronage (Gore, Thomas 1995). In other words, the pharmacist must have knowledge of consumer behavior and decision-making processes to exist in a competitive market.

Consumer behavior can be defined as the processes and activities people engage in when searching for, selecting, purchasing, evaluating, and disposing of products and services so as to satisfy their needs and desires (Belch, Belch 1998). For many products and services, purchase decisions are the result of a long, detailed process that may include an extensive information search, brand comparisons and evaluations, and other activities. Other purchase decisions are more incidental and may result from little more than seeing a product prominently displayed at a discount price in a store.

Most contemporary models of consumer behavior fall into one of two classes. One class involves a number of models that attempt to capture the full range of consumer decision-making processes. The models of Nicosia (1966), Howard and Sheth (1969), and Engel, Kollat, and Blackwell (1982) are all similar in the sense that each conceptualizes buyer behavior to be a complex response to situational stimuli as a function of certain perceptual, learning, motivational, and informational processing variables. The other class contains many theories of consumer behavior that attempt to explain sharply delimited

phenomena. For example, the Fishbein's attitude model (e.g., Lutz 1977), advertising effect models (e.g., Wright 1973), and rational decision-making cognitive models (e.g., Peter, Olson 1996) focus on narrow, well-defined cognitive and affective responses of buyers.

In the Peter and Olson's model of consumer behavior, the decision process is generally viewed as consisting of steps through which the buyer passes in purchasing a product or service (Peter, Olson 1996). The consumer decision-making process involves three important cognitive processes. First, consumers must interpret relevant information in the environment to create personal meanings or knowledge. Second, consumers must combine or integrate this knowledge to evaluate products or possible actions and to choose among alternative behaviors. Finally, consumers must retrieve product knowledge from memory to use in integration and interpretation processes. All three cognitive processes are involved in any decision-making situation. Also, the Peter and Olson model, environmental factors such as unexpected information, prominent environmental stimuli, affective states, and conflict can affect a consumer's decision-making by interrupting or disrupting the ongoing flow of the decision-making process.

Consumer Preferences and Attribute Importance

Since consumers have only limited capacity of the human cognitive system, consumers are selective about which attributes are most meaningful to them. The various products or services identified as purchase options to be considered during the alternative evaluation process are referred to as consumers' evoked sets. Once consumers have identified an evoked set and have a list of alternatives, they evaluate the various products

and services. This involves comparing the choice alternatives on specific criteria important to consumers. Evaluative criteria are the dimensions or attributes of a product or service that are used to compare different alternatives. In this sense the evaluative criteria important to consumers can be defined in term of consumer preferences. Example of theories that address product attribute importance are reasoned action (Ajzen, Fishbein 1980), means-ends chain model (Gutman 1982), and causal modeling (Bagozzi 1982).

It is intuitive to conclude that attributes consumers consider important to them will have a greater impact on attitude development than attributes consumers do not consider important. For example, it is possible that competitive pricing may be the single most important attribute consumers consider when evaluating their satisfaction with a good or service. Although the possibility of a single-attribute model predicting attitude development exists, a more likely scenario is represented by a multi-attribute model developed from expectancy-value theory. Theories based on expectancy-value generally posit that the tendency to act depends upon the strength of expectancy that an act will be followed by a consequence, and that the consequence has value to the individual (Mazis et al. 1975). The notion of "value to individual" is synonymous with importance of product characteristics or attributes to consumers.

Models based on expectancy theory are generally classified as compensatory multi-attribute models, meaning that attitude development measures are conceptualized as the sum of consumer attribute evaluations (Assael 1992; Mazis et al. 1975). All individual attribute scores are averaged together into a composite score that represents an attitude. High scores on one attribute can make up for low scores on another attribute, hence the name compensatory model.

An important aspect of consumers' evaluation of alternatives is the way they combine information about the characteristics of brands to arrive at the purchase decision. Integration processes are the way product knowledge, meanings, and beliefs, are combined to evaluate two or more alternatives (Cohen, Miniard, Dickson 1980). Analysis of the integration process focuses on the different types of decision rules or strategies consumers use to decide among purchase alternatives. Consumers often make purchase selections by using formal integration strategies or decision rules that require examination and comparison of alternatives on specific attributes. This process involves a very deliberate evaluation of the alternatives, attribute by attribute. Sometimes consumers make their purchase decision using more simplified decision rules known as heuristics. Peter and Olson (1996) note that heuristics are easy to use and are highly adaptive to specific environment situations. For familiar products that are purchased frequently, consumers may use price-based heuristics (e.g., buy the least expensive brand) or promotion-based heuristics (e.g., choose the brand for which there is a price reduction through a coupon, rebate, or special deal).

Pharmacy Choice Model

In Lipowski's paper (1993), "*How Consumers Choose a Pharmacy*", she proposed a model of pharmacy consumer choice wherein a consumer's involvement, expertise, and opportunity determine the extent of problem-solving and the types of information considered. Consumers use a multi-attribute decision process when all three factors are present. They use heuristics, choose randomly, or avoid making a decision if involvement, expertise, or opportunity are lacking.

In Lipowski's model of pharmacy choice, consumers make their decision using some form of evaluation process. Like other products, pharmacies are multiple-attribute objects (Roberson, Zielinski, Ward 1988). Consumers attach weights to the relevant attributes and compare products within a class on the sets of attributes relevant to the product class. Purchasing decisions then are made based on the weights of the attributes (Arneson et al 1989).

Domains of Pharmacy and Pharmacist Service Activities

Traditionally, consumer preferences for prescription medication patronage and pharmacist service activities have been probed under the guise of patronage surveys of prescription consumers (Knapp, Knapp 1966; Kabat 1969; Gagnon 1974). Patronage factors are those elements of a general nature that induce people to patronize one store over another. Pharmacy patronage attributes may be thought of as general motivations to shop at a particular pharmacy (Smith, Coons 1990). Evaluative criteria in selecting a pharmacy for obtaining prescription drugs are represented by specific dimensions, which usually are labeled patronage motives by pharmacy researchers. Each dimension is described by related attributes or characteristics. Generally, the research approach has been to identify either the general dimensions, or specific attributes of a single dimension (Wiederholt 1987).

In most pharmacy patronage research, researchers often assume that patronage decisions are the result of an extended problem-solving process in which multiple attributes of alternative choices are assessed and compared. It may be, however, that many consumers select a pharmacy by making a simple heuristic decision or by a random choice. The reasons

that consumers cite for their pharmacy choice when questioned by survey researchers could represent post hoc rationalizations for their behavior (Lipowski 1993). Also, consumer researchers have found that the purchase choice process differs depending on the degree of consumers' involvement, the level of consumers' expertise or ability, and the presence of situational constraints that limit the opportunity to process information (Roedder, Leong 1985).

In 1994 Rupp and Kreling, provided ideas of changes in pharmacy practice over years by stating that the drug product is no longer the social object around which the practice of pharmacy is organized. Rather, the focus of contemporary pharmacy practice has now shifted to an emphasis on the consumer, and to optimize the interaction that occurs between the consumer and the pharmacist.

The term "pharmaceutical care" has been around for many years. However, its most recent use to denote a prescriptive philosophy of pharmacy practice has been credited to Hepler, who described it as "the covenantal relationship between a consumer and a pharmacist in which the pharmacist performs drug-use-control functions.....governed by awareness of and commitment to the consumer's interest," adding that "the term is intended to invoke analogies with the ideals of medical care and nursing care" (Hepler 1987). From the original definition that Hepler stated, pharmaceutical care was not in terms of clinical activities or responsibilities, but rather as a special relationship between the consumer and the pharmacist. Thus, as it was originally defined, pharmaceutical care implied pharmacist care. However, Hepler and Strand in 1990 elaborated on the definition to broaden its roles as "The mission of pharmacy practice is not only what we have come to call clinical

pharmacy... There must also be an appropriate philosophy of practice—pharmaceutical care—and the organizational structure that facilitates the provision of this care—the pharmaceutical care system. The mission of pharmacy practice, which is consistent with its mandate, is to provide pharmaceutical care. Pharmaceutical care is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a consumer's quality of life. Pharmaceutical care involves the process through which a pharmacist cooperates with a consumer and other professionals in designing, implementing, and monitoring a therapeutic plan that will produce specific therapeutic outcomes for the consumer. This in turn involves three major functions: (1) identifying potential and actual drug related problems, (2) resolving actual-related problems, and (3) preventing potential drug-related problems” (Hepler, Strand 1990).

The continuing expansion of pharmacists' professional roles and responsibilities into clinical specialties, long-term care, and a myriad of other areas reflect the consistent response of the profession to the changing needs of society. It also underscores the unique knowledge and services that pharmacists can bring to the health care system.

In response to this changing environment, the pharmacy profession also improvises the process through which a pharmacist works together with a consumer and other professionals in designing, implementing, and monitoring a therapeutic plan that will produce specific therapeutic outcomes for the consumer. Pharmacists accomplish this goal by providing consumers with health-related goods and services, collectively referred to as a client-centered (CCM) or patient-based model of medication decision-making and management involving client (patient) collaboration with the health care provider (Chewning, Sleath 1996).

With changes in pharmacists' professional roles and the implementation of client-centered pharmaceutical care, the pharmacist service product mix has expanded. For example, The American Pharmaceutical Association appears to include non-drug services into its recently revised mission statement for the profession and its taxonomy of pharmacy practice (APhA 1998). The expanded service orientation requires that the pharmacist understands how to market and manage pharmacist service activities (Schwartz, Sogol 1987).

Service products, and pharmacist services, in particular, are different from physical good products for several reasons. Kotler (1988) stated that services have four characteristics that make them different from physical goods those characteristics are *intangibility, inseparability, inconsistency, and not-inventoried*. As stated by Hepler and Strand that pharmaceutical care is a care provided by a pharmacist, it appears to be inextricably linked to drug therapy. For this study, a "pharmacist service" can be defined as an activities that are provided directly by pharmacists who are responsible for the provision of drug therapy, toward a specific consumer's need in order to achieve definite outcomes that improve a consumer's quality of life. Examples of pharmacist service activities are patient counseling and advising for prescription drugs (Wiederholt 1987), and pharmaceutical care provided by pharmacist (Metge, Hendricksen, Main 1998).

Research Problem

The health care market, including pharmacy, continues to change, and consumer preferences is playing a dominant role in this change (Metge, Hendricksen, Maine, 1998). Accurate information on the needs and preferences of consumers is critical if pharmacy and pharmacists are to expand their service roles in the evolving health care system. Expansion of pharmacist service products and activities usually leads to new evaluative criteria that consumers use in the pharmacy and pharmacist choice process.

Moreover, increased competition in the general area of health care and particularly in the offering of pharmacist services suggests a need for a continued awareness of the changes occurring in the market place (Joyce, Hubbard 1988). In response to the outgrowth of changes in the health market and pharmacy practice, there is a need to re-examine the evaluative criteria for prescription medication patronage and pharmacist services.

In monitoring changes that occur in prescription medication patronage motives (consumer preferences), pharmacist service product mix, and service activities over time, there are several problems that occur. First, researchers have not consistently monitored changes over time, so we do not know if changes either have or have not occurred. Second, consistent criteria to define and measure change have not been used which makes it difficult to compare research results. Third, data collection techniques and analyses vary widely among the studies, which may lead to convergent validity of dimensions but also introduces measurement error. Fourth, most studies are done in a single geographic area and not repeated; thereby making it difficult to document changes.

Thus, there are three research questions, which are to be addressed in this study. First, do consumers' ratings of the levels of importance (consumer preferences) for specific prescription medication patronage motives for prescription drugs change overtime? Second, do consumers' ratings of the levels of importance (consumer preferences) for specific pharmacist service activities change over time? Third, how do consumers perceive new pharmacist services based upon implementation of pharmaceutical care into practice?

Chapter II

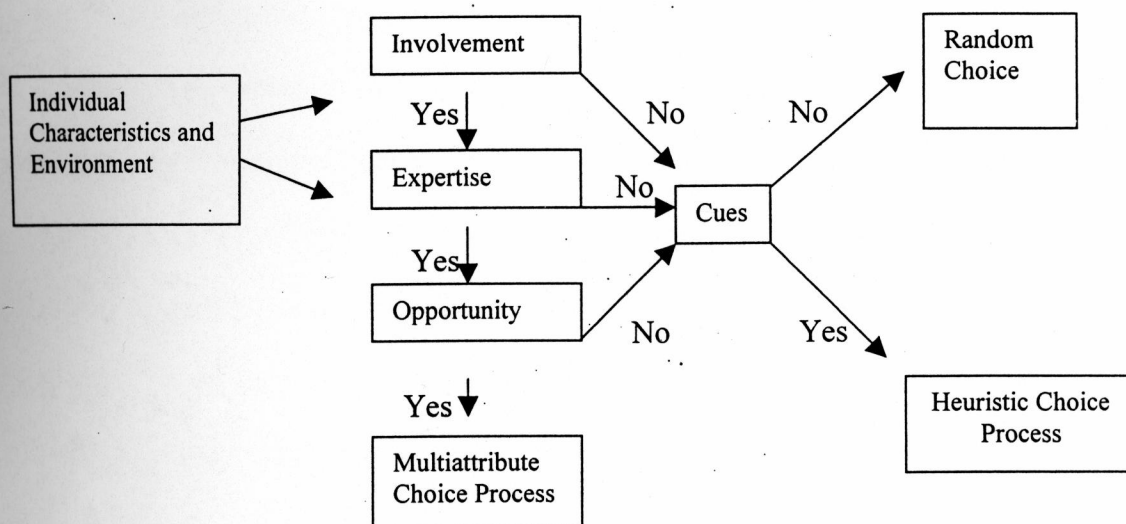
LITERATURE REVIEW

A Model of Pharmacy Consumer Choice

Previous research has often assumed that patronage decisions are the result of an extended problem-solving process in which multiple-attributes of alternative choices are assessed and compared. It may be, however, that many consumers select a pharmacy by making a simple heuristic "rule of thumb" decision (e.g., to seek the lowest price) or by making a random selection (Lipowski 1993; 1990).

Consumer researchers have found that the purchase choice process differs depending on (1) the degree of consumers' involvement or motivation, (2) the level of consumers' expertise or ability, and (3) the presence of situational constraints that limit the opportunity to process information (Roedder, Leong 1985).

In Lipowski's paper (1993), "*How Consumers Choose a Pharmacy*", she proposed a model of pharmacy consumer choice wherein consumers' involvement, expertise, and opportunities determine the extent of problem-solving and the types of information considered. The model shown in Figure I illustrates the relationship of involvement, expertise, and opportunity in the likelihood that a consumer will engage in a multi-attribute decision process when faced with a purchase decision.

Figure 1: Model of Pharmacy Consumer Choice

Note: The model is adapted from Lipowski's 1990 and 1993 paper.

Consumers use a multi-attribute decision process when all three factors are present. They use heuristics, choose randomly, or avoid making a decision if involvement, expertise, or opportunity are lacking. The results from the study showed that, on average, consumers have greater involvement with prescription drugs than with non-prescription products or with other types of consumer goods, including detergents, perfumes, souvenirs, or designer clothing (Zaichkowsky 1985). The results also suggested that it is possible to distinguish among pharmacy consumers on the basis of their involvement and expertise in selecting a pharmacy. Furthermore, involvement and expertise are related in part to demographic characteristics and a consumer experience, as suggested by the proposed model of pharmacy choice.

From the model of pharmacy consumer choice, it involves use of evaluative criteria (an evoked set) for making a choice. These criteria can include prescription medication patronage motives and pharmacist services activities. It can be stated that once pharmacy consumers have identified an evoked set, they can use this evoked set as an evaluative criterion in making a choice based upon a compensatory/non-compensatory model, heuristics, or random selection. In this sense, the evaluative criteria are what a pharmacy consumer considers in making a choice about prescription medication patronage and pharmacist service activities.

Domain of Prescription Medication Patronage Motives/Criteria

“Prescription medication patronage motives” can be defined as general motivations to shop at a particular pharmacy (Smith, Coons 1990). Prescription medication patronage

attributes included convenience, price, location, store appearance, availability of the product in stock, prompt and attentive service, home delivery and emergency service, merchandise selection, pharmacist, hours open, pharmacist technical staff, private area for consultation, and professional pharmacist services (Baldwin, Riley, Wojcik 1979; Zelnio, Gagnon 1979; Darby 1982; Kivikink, Schell, Steinke 1984; Wiederholt 1987; Lipowski, Wiederholt 1987; Carroll, Jowdy 1987; Joyce, Hubbard 1988; Arneson, Jacobs, Scott, Murray 1989; Smith, Coons 1990; Youstra, Birdwell, Schneider, Pfeifer 1993; Gore, Thomas 1995). (See Table I for details).

Research Results from Literature Review

In reviewing thirteen reports, Gagnon (1977) found the general dimensions of evaluative criteria for prescription medication patronage to be: (1) Convenience/Location, (2) The Pharmacist, (3) Price, (4) Parking, (5) Waiting Time, (6) Quality of Merchandise, (7) The Clerk, (8) Habit, (9) Employee in the Family, (10) Services, (11) Advertised Prices, (12) Pharmacy Atmosphere, and (13) Others such as Professional and Convenience Services.

Later, Wiederholt (1987) reviewed the 24 pharmacy-related patronage studies and cataloged the methodologies used. Wiederholt found that the dimensions of service, location, pharmacist, and price were identified consistently by consumers as being important in their pharmacy patronage decision. Also in his summary of previous research methods in measuring evaluative criteria for prescription drug patronage, it is assumed that the methods used and types of measurement instruments were state-of-the-art at the time each study was

conducted. The methods of data collection were self-administered mail questionnaire, telephone/personal household interview or actual distance measurements.

Instruments of measurement included item checklists, open-ended questions, which were content analyzed, closed-ended and Likert type rating scales. A major description of instrument development was reported in the majority of studies, although some of these studies did not report if the instrument was pretested. Only Manasse and Mackowiak (1983) reportedly assessed the reliability of their scales. Also, of those studies, only Haddock (1971) used factor analysis method, which analyzed the domain of evaluative criteria as specified for a group of pharmacy patrons. However, reliability of his rating scale was not assessed.

In Wiederholt's 1987 study, his instrument contained 51 items describing various attributes of evaluative criteria and applied factor analysis in order to group them into 11 general dimensions. The identified dimensions of evaluative criteria in selecting a pharmacy for obtaining prescription drugs were (1) Drug Information/Monitoring Services, (2) Personal Relationship with Pharmacist, (3) Economic, (4) Friendly Personnel, (5) Pharmacist Competence, (6) Temporal Convenience, (7) Shopping Center Location, (8) Tradition, (9) Expeditious Convenience, (10) Near Doctors Office, and (11) Close to home. In addition, instrument and sub-scale reliability was tested by the internal consistency method using Cronbach's alpha as a measure.

In 1990, Smith and Coons reviewed twenty-seven published articles and found some definite trends in pharmacy patronage factors. They then constructed a survey instrument that included seven general patronage factors that were similar to the more important ones elucidated by Wiederholt and early studies, but they substituted "availability of other

products and services” for “professional services” in their study. The seven general patronage factors were (1) Prompt & Helpful Service, (2) Friendly & Reliable Pharmacist, (3) Convenient Location, (4) Convenient Hours, (5) Prices of Prescription, (6) Availability of Other Products, and (7) Availability of Credit.

The prescription medication patronage dimensions and attributes within each dimension from the prescription medication patronage research from 1979-1995 are summarized in Table I.

Table I: Major Studies of Prescription Medication Patronage Dimensions and Attributes (1979-1995)

Author ^a	Labeled Dimensions ^b	Dimension Attributes ^b
Baldwin, Riley, Wojcik (1979)	<p>Convenience Confidence in pharmacist Price Know or like pharmacist Price posting Delivery</p>	-
Darby (1982)	<p>Good location to home Good location to work Attractive appearance Efficient service Good range of products/services Convenient trading hours Know the staff Keep my health records Competitive prices Member of chain of pharmacies</p>	-
Kivikink, Schell, Steinke (1984)	<p>Price Variety of Merchandise Waiting Time Service Delivery Convenience</p>	-
Wiederholt (1987)	Drug Information and Monitoring	<p>The pharmacist tells me what the medicine is and what it's used for The pharmacist tells me when and how to take my medication</p>

Wiederholt (1987)
(continues)

Drug Information and Monitoring

The pharmacist tells me about side effects or precautions while taking my medication

The pharmacist gives me advice and information about my prescriptions

Pharmacist tells me about any dangers of taking drugs together

The pharmacist is available to answer questions about my prescription quickly

The pharmacist places extra labels on the prescription container telling me about my medication

I can talk to the pharmacist by phone about prescription drug

The pharmacist talks to me

The pharmacist checks for drug interactions

The pharmacist keeps a record of my drug allergies

The pharmacist gives me brochures and/or pamphlets about my medicine

Keeps a record of my prescription

Personal Relationship

I know the pharmacist by name

The pharmacist knows my name

The pharmacist knows my family

The same pharmacist always dispenses my prescription

Offers credit

Provides yearly receipts

The pharmacist is concerned about my doctor

Economics

Prices prescriptions over the phone

Offers generic drug

Prescription price are posted in the pharmacy

Low prices for prescription drugs

Prescription price advertised

<p>Wiederholt (1987) (Continue)</p>	<p>Friendly Personnel</p> <p>Pharmacist Competencies</p> <p>Temporal Convenience</p> <p>Shopping Center Location</p> <p>Tradition</p> <p>Expeditious Convenience</p> <p>Near Doctors Office</p> <p>Close to home</p>	<p>Price seldom change Accepts prescriptions covered by my health insurance plan Friendly pharmacist Clerks and other personnel are friendly</p> <p>The pharmacist is competent I trust the pharmacist The pharmacist can always contact my doctor Always has my prescription drugs in stock</p> <p>Open evening Near work Open Sundays and holidays</p> <p>Located in a shopping center or mall Checks my blood pressure</p> <p>My mother and father always went there Delivery services provided</p> <p>The pharmacist dispenses prescriptions quickly Convenient parking</p> <p>Near doctor's office Close to home</p>
<p>Arneson, Jacobs, Scott, Murray (1989)</p>	<p>Customer Service</p>	<p>The employees at this pharmacy always make an extra effort to help me find what I need The pharmacist(s) at this pharmacy is(are) always available to answer my questions about nonprescription and prescription medication The employees at this pharmacy are always friendly to customers</p>

<p>Arneson, Jacobs, Scott, Murray (1989) (Continue)</p>	<p>Professional Service</p>	<p>The pharmacist(s) at this pharmacy provide(s) excellent information about how to properly use each prescription information in selecting nonprescription medication The pharmacist(s) at this pharmacy always review(s) my prescription medication with me to explain possible side effect or problems</p> <p>This pharmacy's prescription medication prices are competitive This pharmacy's nonprescription medication price are competitive</p> <p>The merchandise displays in this pharmacy are always attractive The pharmacy always looks very neat and clean.</p> <p>The hours this pharmacy is open are convenient for me This pharmacy carries the nonprescription medication I need</p>
	<p>Price</p> <p>Pharmacy Atmosphere</p> <p>Convenience</p>	
<p>Ortiz et al. (1987)</p>	<p>Convenience/location Good service Near doctor Know staff Trust pharmacist Like pharmacist Extended trading hours</p>	<p>-</p>
<p>Youstra, Birdwell, Schneider, Pfeifer (1993)</p>	<p>Acceptance of insurance plan Availability of prescription medication Knowledgeable pharmacists Prescription prices Location</p>	<p>-</p>

<p>Youstra, Birdwell, Schneider, Pfeifer (1993) (Continue)</p>	<p>Hours of operation Professional atmosphere Friendly staff Ability to talk to pharmacist Waiting time for prescription Explanation of medication by pharmacist Available parking Availability of non-prescription medication</p>	
<p>Prichard & Perri III (1997)</p>	<p>Tangibles</p> <p>Reliability</p> <p>Responsive</p> <p>Assurance</p> <p>Empathy</p>	<p>The pharmacy has up-to-date equipment The pharmacy's physical facilities are physically appearing The pharmacy employees are well dressed and appear neat</p> <p>When you have problems, the pharmacy is sympathetic and reassuring The pharmacy is dependable The pharmacy provide its services at the time its promises to do so The pharmacy keeps its records accurately</p> <p>You do not receive prompt service from the pharmacy employee. Employees of the pharmacy are too busy to response to customers' requests promptly</p> <p>You feel safe in your transactions with the pharmacy employees Employees of the pharmacy are polite</p> <p>Employees of the pharmacy do not give you personal attention Employees of the pharmacy do not know what your needs are</p>

Prichard & Perri III (1997)	Empathy	The pharmacy does not have your best interests at heart The pharmacy does not have operating hours convenient to all of their customers The pharmacy always has the prescription medication needed to fill my prescription
Joyce, Hubbard (1988)	<p>Personnel provide fast and efficient service</p> <p>Ability to take care of all prescription needs</p> <p>Friendly and courteous treatment by personnel</p> <p>Convenient location</p> <p>Convenient hours of operation</p> <p>Pharmacist is readily available for personal consultation</p> <p>Prices are lower</p> <p>Recognition as a person not just an account number</p> <p>Records provided for tax and insurance purposes</p> <p>Generic brands are readily available</p> <p>Offer discounts or other purchase incentives</p> <p>Store supports community activities</p> <p>Locally owned business</p> <p>Charge accounts available</p> <p>Free delivery available</p>	
Zelino, Gagnon (1979)	<p>Drug store is located close to home</p> <p>Driving time to the drug store is short</p> <p>Fast check-out</p> <p>Pharmacist(s) are courteous</p> <p>Easy to find a parking space</p> <p>Easy to return or exchange purchases</p> <p>Parking is inexpensive</p> <p>Prices are lower than other stores</p> <p>Drug store has bright, colorful lighting</p> <p>Drug store is large</p> <p>Drug store has many colorful, attractive displays</p> <p>Drug store has few non-pharmacists clerks</p> <p>Drug store carries easy to find merchandise</p>	

Lipowski & Wiederholt (1987)	<p>Physical Features</p> <p>Personnel</p>	<p>Attractive décor Bright colorful store Neat Attractive displays</p> <p>Courteous clerks Friendly pharmacist</p>
Lipowski & Wiederholt (1987) (continues)	<p>Personnel</p> <p>Advertising</p> <p>Reputation</p> <p>Price</p> <p>Merchandise Mix</p> <p>Location and Convenience</p> <p>Retail Service</p> <p>Emergency Service</p>	<p>Helpful clerks Well-informed pharmacist Dependable pharmacist</p> <p>Ads seen frequently Helpful ads for planning purchases</p> <p>Well liked by my friends Well known to my friends</p> <p>High price comparing to other stores High prescription prices</p> <p>Wide selection of different kinds of items Large number of brands to chose from</p> <p>Near to home Long time needed to reach store</p> <p>Adequate credit arrangements available Easy to exchange goods Clear price labeling</p> <p>Slow delivery services Adequate emergency services available</p>
Gore and Thomas III (1995)	<p>Reasonable prices Quality of products stocked by the store</p>	-

<p>Gore and Thomas III (1995) (continues)</p>	<p>Open during convenient hours Convenience of store location Availability of a wide variety of brands Good store layout for fast and easy shopping Friendly staff Knowledgeable staff Access to a pharmacist Availability of parking close to the store Short checkout time Neat and attractive store Pleasant atmosphere and décor Store promotions on, or advertising of, needed products Access to a health professional Acceptance of credit cards or charge accounts</p>	
<p>Smith and Coons (1990)</p>	<p>Prompt & helpful service Convenient location Convenient hours Prescription price Friendly & reliable pharmacist Availability of products & service Availability of credit</p>	
<p>Carroll and Jowdy (1987)</p>	<p>Prescription price Pharmacist tells consumer the purpose of the drug Pharmacist tells consumer directions for use Pharmacists are friends Prescriptions are dispensed quickly Pharmacy is close to consumer's home</p>	
<p>Carroll and Jowdy (1987) (Continue)</p>	<p>Convenient parking Evening hours Pharmacy maintains patient medication records Pharmacists warns consumer about possible side effects and precautions</p>	

Smith and Kryscio (1990)	<p>Convenient location Convenient hours Prescription price Friendly & reliable pharmacist Availability of products & service Availability of credit</p>	
Smith and Coons (1993)	<p>Advice on how and when to take medication Maintains computerized patient profile Providing information on drug & health matters Maintains record of Rx for taxes and insurance Provides emergency Rx service (after hours) Honors Medicaid and insurance cards</p>	
Feros (1984)	<p>Displayed more professionalism Interested in encouraging the use of preventive medicine Worth consulting than other pharmacies More supportive than other pharmacies Helpful to their customers</p>	

Note: a. Ordered by date.

b. Grouped by whether independent dimension or dimensional attribute Method Used.

Method Used

The studies reviewed by Gagnon span the period from 1959 to 1977 and included 6,291 consumers. Four studies selected pharmacies and questioned consumers patronizing these pharmacies (Jowdy, Smith 1962; Liquori 1972; Keckler, Gagnon, Nelson 1975; Herman, Wills 1974). The remaining studies interviewed random samples of consumers. None of the studies used all 13 patronage motives categorized by Gagnon. Two studies covered less than five reasons for pharmacy selection by consumers (Ohvall 1959; Parker 1975). Three studies were dissertations, which had much to add to the surveys (Liquori 1972; Ohvall 1959; Amarinthnukrowh 1975).

In ten of the 13 studies, convenience was the primary reason for pharmacy selection (Jowdy, Smith 1962; Keckler, Gagnon, Nelson 1975; Ohvall 1959; Parker 1975; Amarinthnukrowh 1975; Cooke 1962; Kabat 1969; Jackson, Ryan, Treas, Smith 1974; Wills 1973; Gagnon 1974; Stewart, Kabat, Purohit 1977). "Like the Pharmacist" as a patronage reason was ranked second or third in six studies (Jowdy, Smith 1962; Keckler, Gagnon, Nelson 1975; Ohvall 1959; Cooke 1962; Jackson, Ryan, Treas, Smith 1974; Dieter 1973). The influence of prices on patronage was not very significant in early studies; it was ranked fourth or not at all (Jowdy, Smith 1962; Ohvall 1959; Cooke 1962). In later studies, however, prices had a higher rating (Parker 1975; Amarinthnukrowh 1975; Wills 1973; Gagnon 1974; Stewart, Kabat, Purohit 1977). Pharmaceutical services ranked third overall in most of the studies.

In Wiederholt's study, the instrument contained 51 items describing various attributes of evaluative criteria. The measurement scale Wiederholt developed asked consumers how important the services were to them when selecting a pharmacy to get

prescription filled. The attributes were ranked by importance to the consumers. After pretesting the instrument, it was mailed to a systematic random sample of 500 households in Madison and Middleton, Wisconsin. The response rate was 69.5%. Using multivariate analysis, eleven dimensions (factors) were identified which explained 64.9% of the variance. The top five most important factors ranked in order are (1) Pharmacist Competence, (2) Drug Information/Monitoring Services, (3) Close to home, (4) Expeditious Convenience, and (5) Friendly Personnel.

Smith and Coons (1990) selected three different geographic areas representing a range of socioeconomic strata. Telephone directories for each area were used to draw systematic samples of 1,000 households for each region. A mail survey was sent to the sample of 3,000 households and yielded 1,248 (42%) usable responses. Their multivariate analysis showed that the top five mean scores for patronage factors were (1) Prompt & Helpful Service, (2) Friendly & Reliable Pharmacist, (3) Convenient Location, (4) Convenient Hours, and (5) Price of Prescriptions.

The methods and instruments used by previous prescription medication patronage research are summarized in Table II. The Table is divided into two sections: studies, which measured general dimensions of evaluative criteria, and studies, which analyzed attributes of a specific dimension. Also included in Table II are the nature of the sample, sample area, sampling unit, methods of data collection, number of subjects, and whether or not development of the instrument development was described in the article.

Table II: Summary of Previous Selected Research Methods in Measuring Evaluative Criteria for Prescription

Medication Patronage Motives

Author	Nature of Sample, Area	Sampling Unit	Method of Data collection	Responding # of subject	Type of Instrument or Measurement Characteristic	Development of Instrument Described
I. General Dimension						
Willis Jr. (1973)	Probability, Statewide	Households				
Balwin, Riley, Wojcik (1979)	Probability, City	Prescription Purchasers	Structured Interview	200	Item Check List	Yes
Darby (1982)	Probability, City	Pharmacy Patrons	Structured Interview	174	Item Check List	Yes
Kivikink, Schell, Steinke (1984)	Convenience, City	Pharmacy Patrons	In-store Questionnaires	128	Item Check List	Yes
Wiederholt (1987)	Systematic random sampling, Cities	Households	Self-administered mail Questionnaires	500 (69.5%)	Likert-Type Scale	Yes
Arneson, Jacobs, Scott, Murray (1989)	Convenience, Statewide	Pharmacy Patrons	In-store Questionnaires	1488	Likert-Type Scale	Yes
Stratton, Marten (1994)						

Fahey (1996)	Probability, Nationwide	Households	Field Survey	4250 (85%)	N.A	N.A
II. Specific Dimensions						
<u>Pharmaceutical Service</u>						
Gagnon (1976)	Convenience, Statewide	Households	Self-Administered Survey	934 (31.6%)	Likert-Type Scale	Yes
Ortiz et al. (1987)	Probability, City	Households	Structured Interview	N.A	Item Check List	N.A
Youstra, Birdwell, Schneider, Pfeifer (1993)	Convenience, Hospital	Patients, Pharmacists	Self-Administered Survey	102 (52.8%)	Item Check List	Yes
<u>Quality of Service</u>						
Prichard & Perri III (1997)	Random-digit dialing, Cities	Pharmacy Patrons Chain Pharmacists	Telephone Interview	409 (63%) 35 (100%)	Likert-Type Scale	Yes
<u>Income</u>						
Joyce, Hubbard (1988)	Convenience, 2 metropolitan areas	Households	Self-Administered Survey	584 (22.05%)	N.A	N.A
<u>Pharmacy Image</u>						
Zelnio, Gagnon (1979)	Convenience and Probability, City	Prescription Purchaser & Households	Self-Administered Survey, In-store Questionnaires	262 (22.9%) 282 (33.4%)	Item Check List Item Check List	Yes Yes

Lipowski & Wiederholt (1987)	Systematic Random Sample, Cities	Households	Self-administer Mail Questionnaires	485 (67.2%)	Semantic Differential Scale	Yes
Gore and Thomas III (1995)	Probability, City	Households	Self-Administered Survey (response) Telephone Survey (non-response)	245 (49%) 32 (42.67%)	Likert-Type Scale	Yes
<u>Health Insurance Plan</u>						
Kreling & Wiederholt (1987)	Systemic random sampling, Cities	State government employee, University employee	Self-Administered Mail Questionnaires	428 (58.5%)	Rating Scale & Operationalized Anchors	Yes
<u>Source of Prescription Purchase</u>						
Smith and Coons (1990)	Probability, 3 Counties	Households	Self-Administered Survey	1403 (46.8%)	Item Check List	Yes
<u>Socioeconomic and Shopping Characteristic</u>						
Carroll and Jowdy (1987)	Convenience, Cities	Pharmacy Patrons	Interview	978	Rating Scale	No
Lipowski (1991)	Stratified random sampling, Cities	Pharmacy Patrons	Self-Administered Mail Survey	485 (67.2%)	Semantic Differential Scale	Yes

Smith and Kryscio (1990)	Probability, 3 Counties	Households	Self-Administered Survey	1405 (46.8%)	Item Check List	Yes
Smith and Coons (1993)	Convenience, 3 Counties	Households	Indep ^t - Telephone Interview	67 (95.7%)	Open-ended Questions and Likert-Type Scale	N.A
<u>Advice</u>						
Feros (1984)	N.A, National	Households	Structured Interview	N.A	N.A	N.A

Domain of Pharmacist Service Criteria

The role of the pharmacist has changed dramatically over the past century from an "apothecary" whose rudimentary task was to procure, prepare, and evaluate medicinal drugs to one of a sophisticated clinical specialist utilizing a formalized knowledge base to maximize patient benefits (Strand, Cipolle, Morley 1992). Accordingly, so has the pharmacy profession changed (Hepler 1987). A beneficial outcome of this transition has been the advent of the pharmaceutical care paradigm. Hepler and Strand (1990) define pharmaceutical care as "the responsible provision of drug therapy for the purpose of achieving definite outcomes." Perhaps one of the most important tools needed to achieve pharmaceutical care is the provision of pharmacist services. Pharmacist services have been defined as "all services the pharmacist requires to resolve a patient's drug-related problems" (Strand, Cipolle, Morley 1992).

Pharmacist services have been distinguished from pharmaceutical goods on four dimensions (Kotler 1988; Schwartz, Sogol 1987). First, pharmaceutical services are intangible, and thus unable to be seen, held, or used as are pharmaceutical goods. This intangibility is often troublesome as it precludes a consumer's ability to fully comprehend and value pharmacist services. Second, pharmacist services are not easily standardizable. Hence, the quality of pharmacist services, as perceived by consumers, varies depending on the pharmacist's unique ability to meet individual needs and demands. Third, the dissemination and development of pharmacist services is inseparable from the pharmacist-consumer service relationship. In other words, at the moment a pharmacist service is produced, it is being simultaneously consumed. Fourth, pharmacist services cannot be easily

inventoried. Because of this, the responsibility ultimately rests on the pharmacist to ensure an adequate supply of pharmacist services is provided wherever and whenever needed. Upon reviewing the dimensions cited above, it becomes self-evident that pharmacists, do indeed, play an integral role in both the development and successful provision of pharmacist services (Rosowski 1994).

For this study, “pharmacist service” can be defined as an activity that is provided directly by pharmacists who are responsible for the provision of drug therapy, toward specific consumer’s need in order to achieve definite outcomes that improve a consumer’s quality of life.

Research Result from Literature

In Wiederholt’s study (1987), the pharmacist service attributes or activities were: the pharmacist checks for drug interactions, I can talk to the pharmacist by phone about prescription drugs, the pharmacist keeps a record of my drug allergies, the pharmacist is available to answer questions about my prescription drugs, the pharmacist gives me advice and information about my prescription, the pharmacist tells me when and how to take my medication, the pharmacist keeps a record of the types of illnesses I have, the pharmacist places extra labels on the prescription container telling me about my medication, the pharmacist talks to me, the pharmacist gives me brochures and/or pamphlets about my medicine, the pharmacist tell me about side effects or precautions while taking medication, the pharmacist tells me what the medicine is and what it’s used for, Keeps a record of my prescriptions, and the pharmacist tells me about any dangers of taking drugs together.

Later, due to the implementation of pharmaceutical care, pharmacists started to incorporate new service activities into their practices. Examples of new pharmacist service activities are: reminding you, either by mail or telephone, that it is time to have your prescription refilled, calling you to find out how the prescribed medication is working, giving you information on what to do if you miss taking a dose of the medication, discussing how to properly store the medication, telling what drugs, if any, to avoid while taking your medication, and discussing what foods, if any, to avoid while taking your medication (Youstra, Birdwell, Schneider, Pfeifer 1993; Gore, Thomas 1995; Fain 1996; Metge 1996; Metge, Hendricksen, Maine, 1998; APhA Pharmacy Practice Activity Classification 1998). (See Table III for details)

Table III: Major Studies of Pharmacist Service Dimensions and Attributes (1987 - 1998)

Author	Labeled Dimensions	Dimension Attributes
Wiederholt (1987)	Drug Information and Monitoring	<p>The pharmacist tells me what the medicine is and what it's used for</p> <p>The pharmacist tells me when and how to take my medication</p> <p>The pharmacist tells me about side effects or precautions while taking my medication</p> <p>The pharmacist gives me advice and information about my prescriptions</p> <p>Pharmacist tells me about any dangers of taking drugs together</p> <p>The pharmacist is available to answer questions about my prescription quickly</p> <p>The pharmacist places extra labels on the prescription container telling me about my medication</p> <p>I can talk to the pharmacist by phone about prescription drug</p> <p>The pharmacists talk to me</p> <p>The pharmacist checks for drug interactions</p> <p>The pharmacist keeps a record of my drug allergies</p> <p>The pharmacist gives me brochures and/or pamphlets about my medicine</p> <p>Keeps a record of my prescription</p>
Arneson, Jacobs, Scott, Murray (1989)	Professional Service	<p>The pharmacist(s) at this pharmacy provide(s) excellent information about how to properly use each prescription</p> <p>The pharmacist(s) at this pharmacy provide(s) me with useful information in selecting nonprescription medication</p> <p>The pharmacist(s) at this pharmacy always review(s) my prescription medication with me to explain possible side effect or problems</p>
Gagnon (1977)	Pharmaceutical Service	<p>Pharmacist should contact a physician when he discovers a possible patient-drug reaction</p> <p>Pharmacist should explain prescription storage conditions and side effects</p> <p>Pharmacist should provide a receipt with each prescription</p> <p>Pharmacist should have a poison antidote chart available</p> <p>Pharmacist should mark number of renewals remaining on prescription label</p> <p>Pharmacist should verbally check a patron's understanding of a prescription's dosage directions</p> <p>Pharmacist should reopen pharmacy for an emergency prescription</p>

Gagnon (1977) (Continue)	Pharmaceutical Service	Pharmacist should call physician if no renewals remain on prescription Pharmacist's home telephone number should be displayed on pharmacy door Pharmacist should be able to supply total amount spent on prescription drugs at end of year if patron supplies his prescription number
Youstra, Birdwell, Schneider, Pfeifer (1993)	Service offerings	The pharmacist tells me if I can or cannot eat certain foods at the same time I take my medication The pharmacist explains how to take my medication The pharmacist is aware of the other medications I take Upon presenting a prescription the pharmacist explains any prescription filling delay The pharmacist talks to me privately The pharmacist compounds any medication that is not made by a drug company The pharmacy provides information on health topics The pharmacy offers screening for diseases such as high blood pressure, high cholesterol, diabetes, glaucoma
Fain (1996)	Drug Information & Monitoring	Keeping a record of your prescriptions Talking to you about your medication Telling you about the dangers of taking drug together Explaining the possible side effects that your medication may cause Telling you what your medication is used for Giving brochures and/or pamphlets about your medication
Metge (1996)	Attention to Safety Prescription Counseling	The name on the prescription to be sure it is for you To see that the drug's strength and dose are correct for you With your doctor if the prescription is unclear Pointing out the name and purpose of the medication Explaining how your medication should be taken Describing the effects you should expect from your medication Explaining what to do in the event you miss a dose Helping you decide the best time to take your medication Explaining the use of a complicated dosage form Providing you with printed advisories about taking your drug Providing you with printed warnings about certain effects of your drug

<p>Metge (1996) (Continue)</p>	<p>Starting & Maintaining a Medication History</p> <p>Patient Medication Review</p> <p>Non-prescription Medication Advice</p>	<p>Interviews you to obtain a list of medications you have taken and are currently taking; the list includes both prescription & non-prescription medication</p> <p>Collects information about your allergies and medical conditions</p> <p>Enters the information into a computer record that is specific for you</p> <p>Assures you that the list is kept confidential.</p> <p>Checking to see if you have had any side effects from your medication</p> <p>Providing the physician with a list of the medications you are taking</p> <p>Calling your doctors to make recommendations for changes in your therapy</p> <p>Explaining to you how to take all your medications together</p> <p>Taking any physical measurements that need to be taken to monitor your drug therapy</p> <p>Helping you to select and explain the use of medication you can purchase without prescription</p>
<p>Metge et al. (1998)</p>	<p>Pharmacist service</p>	<p>Refill reminders</p> <p>Follow up on new prescriptions</p> <p>Missed dose information</p> <p>Medication storage information</p> <p>Drug interaction warnings</p> <p>Food to avoid</p>
<p>Gore and Thomas III (1995)</p>	<p>Nonprescription</p>	<p>Availability of explanations of label directions on nonprescription medications</p> <p>Availability of advice on side effects associated with nonprescription medication use</p> <p>Availability of advice on any precautions to be followed while using nonprescription medications</p> <p>Availability of generic nonprescription medications</p> <p>Availability of a person who is aware of the prescription medications that you are currently taking</p> <p>Availability of information about any new nonprescription products</p> <p>Availability of information on nonprescription medications which were previously available only on prescription</p> <p>Availability of advice on whether you should see a doctor rather than treat yourself with a nonprescription medications</p>

<p>Gore and Thomas III (1995) (Continue)</p>	<p>Nonprescription</p>	<p>Assistance in choosing among various brands of the same nonprescription medication Availability of advice on self-treatment without medication, as well as with nonprescription medications Assistance in choosing among various types of nonprescription medications</p>
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Objectives

As the practice of pharmacy evolves in the health care system, one can hypothesize that the evaluative criteria or preferences used by consumers in determining prescription medication patronage for a prescription drug and pharmacist services also evolve. The goals of this study were to investigate within the same geographic area and using the same methodology if there were changes in consumers' ratings of prescription medication patronage and pharmacist services evaluative criteria. Specific objectives of this study were:

- (1) To compare the results of general patronage criteria (consumer preferences) for prescription medication between 1984 and 1999,
- (2) To compare the top ranked and rated prescription medication patronage criteria for 1999 study,
- (3) To compare the results of consumer preferences toward the pharmacist service activities between 1984 and 1999, and
- (4) To measure consumer preferences toward new pharmacist service activities based upon implementation of pharmaceutical care into practice between 1984 and 1999.

Hypotheses

Two research hypotheses were generated from the research questions stated earlier (pg. 9 & 10). The first hypothesis relates to the first question, do consumers' ratings of the levels of importance (preference) for prescription medication patronage motives change over time (e.g. between 1984 to 1999) within the same geographic area is represented below:

H₁: "Consumers' ratings of the levels of importance (preference) for specific prescription medication patronage motives are positively different for 1999 as compare to the 1984 study"

The other research hypothesis is for question two, did consumers' ratings of the levels of importance (preference) for specific pharmacist service activities change over time within the same geographic area? , The hypothesis is stated:

H₂: "Consumers' ratings of the levels of importance (preference) for specific pharmacist service activities positively change over time in the same market area."

Chapter III

METHODOLOGY

The methods used in this research follow a research process proposed by Churchill.

His process involves (1) to specify the domain of the construct consistent with the marketing literature and thereby avoid the use of a definition which would make it difficult to compare and accumulate findings with those of previous researchers; (2) to evaluate the adequacy of existing measures in order to establish the need to develop and evaluate a measure for the construct of prescription medication patronage; (3) to provide information about the number and identity of the dimensions of prescription medication patronage and suggest items which could be used to represent those dimensions (Churchill 1979). Also, the descriptive cross-sectional and longitudinal review of previous research related to prescription medication patronage was used for this study. Then the research design applied for this study was cross-sectional via self-administered mail survey send to residents and state employees residing around Dane County, Wisconsin. (See Table II for details)

Development of Scale Items

Section I: Prescription Medication Patronage Motives: Specification of Domains

Based upon the review of the literature, the construct of prescription medication patronage was defined as the integral components of evaluative criteria used by consumers in determining patronage and applied to pharmacy prescription medication (Assael, 1984; Lusch, Darden 1981; Engel, Blackwell, Kollat 1982).

The review of the literature showed that the prescription medication patronage in general is composed of a variety of dimensions (Wiederholt 1987; Joyce, Hubbard 1988; Arneson, Jacobs, Scott, Murry 1989; Smith, Coons 1990, 1993; Stratton, Marten 1994; Fain 1996; Metge 1996; APhA Pharmacy Practice Activities Classification 1998). Wiederholt (1987) proposed that there were 11 dimensions of prescription medication patronage. His eleven dimensions of prescription medication patronage were obtained by a factor analysis of responses to a uni-polar Likert-type scale. The identified dimensions (factors) explained 64.9% of the variance. The factors in rank order of importance were: competent and reliable pharmacist, drug information and monitoring services, low price, convenient location I (close to home), expeditious service, friendly personnel, temporal convenience, economics, convenient location II (shopping center location), bifocal factor (annual receipts and credit, personal/family relationship with concerned pharmacist), delivery service, and convenient location III (near doctors office). The pharmacist-related factors of drug information and monitoring, and relationship with the pharmacist accounted for approximately 39% of the variance.

In addition to the literature review (see Table I in Appendix A for details), the personal work experience of the researcher and discussions with academic advisors were used to define the dimensions of prescription medication patronage. A set of fourteen relevant dimensions was proposed. The dimensions were: (1) Location, (2) Pharmacists, (3) Other Store Personnel, (4) Prices of Prescriptions, (5) Accepts Prescriptions Covered by My Health Plan, (6) Merchandise Selection of Other Health Care Products, (7) Pharmacist Professional Services, (8) Store Services, (9) Promptness and Attention to Service, (10) Store Décor, (11) Hours Opened, (12) Private Area to Speak with Pharmacist About My

Prescriptions, (13) Always Has My Prescription in Stock, and (14) Other. (The details of the dimensions are shown in Table II in Appendix A)

For comparison purpose to the 1984 study, only exact or similar wording in either dimensions or items to the 1984 study were used to test the difference in mean importance rating. Those testing dimensions and/or items are shown in Table IV.

Table IV: Comparisons of Similar Prescription Medication Patronage Dimensions 1984 to 1999 Studies

1984 Study	1999 Study
Economics	
(16) Accepts prescriptions covered by my health insurance plan	Accepts prescription covered by my health plan
(7) Low prices for prescription drugs	Price of prescription medication
Friendly Personnel	
(13) Clerks and other personnel are friendly	Pharmacy Technical Staff
Pharmacist Competence	Pharmacist (competence, knowledgeable)
(51) Always has my prescription in stock	Always has my prescription medication in stock
Temporal Convenience	Hours Open
Tradition	
(39) Delivery Service Provided	Home Delivery and Emergency Services

- The number in the bracket is referred to the number of attribute in 1984 study.
- The bold characters referred to the prescription medication patronage dimensions in 1984 study.

Section II: Pharmacist Service Activities: Specification of Domains

The practice role of the pharmacist has evolved and expanded dramatically over the past decades from focusing on the prescription medication task to one of the consumer-oriented task. Accordingly, so has the pharmacy profession changed (Hepler 1987).

Pharmacist services have been defined as "all services the pharmacist requires to resolve a consumer's drug-related problems"(Strand, Cipolle, Morler 1992).

This is the first study since 1970 that attempts to gather a list of pharmacist service activities. A list of thirty items was identified primarily from previously developed scales for community pharmacy patronage by Wiederholt (1987), Lipowski and Wiederholt (1987), Smith and Coons (1990), Gore and Thomas III (1995), Fain's Dissertation (1996), Metge et al. (1998) and also from Pharmacy Practice Activity Classification (American Pharmaceutical Association 1998). (For a list of items for the pharmacist services see Table III in Appendix A for details) These 30 items represent the domain of pharmacist service activity.

Also, similar pharmacist service activities between 1984 and 1999 study were used to compare for mean differences in importance rating. Those pharmacist service activities were shown in Table V.

Table V: Comparisons of Similar Pharmacist Service Activities 1984 to 1999 Studies

1984 Study	1999 Study
The pharmacist tells me what the medicine is and what it is used for.	Tells me what the prescription medicine is and what it is used for.
The pharmacist tells me when and how to take my medication.	Tell me when and how to take my prescription medicine.
The pharmacist tells me about side effects or precautions while taking my medication.	Tells me about side effects or precautions about my prescription medicine.
The pharmacist tells me about any dangers of taking drug together.	Tell me any dangers in taking prescription medicines together.
The pharmacist places extra labels on the prescription container telling me about my medication.	Put extra labels on the container telling me about my prescription medicine.
The pharmacist can always contact my doctor.	Contacts my doctor if needed.
The pharmacist gives me brochures and/or pamphlets about my medicine.	Given written information about my prescription medicine.
The pharmacist keeps a record of my drug allergies.	Keeps a computerized record of my prescription medicines and allergies.
The pharmacist checks for drug interaction.	Checks for medication interactions.
I can talk to the pharmacist by phone about prescription drugs. The pharmacist is available to answer questions about my prescription drugs	Answers my question either in person or by phone.

Scale Construction

Prescription Medication Patronage Motives

Each of 14 prescription medication patronage dimensions was written as a positively worded statement. Subjects were asked how important are the following reasons to them in selecting a pharmacy for obtaining medications. Then the subjects were also asked to rank the three most important reasons from the above dimensions.

Pharmacist Service Activities

Each of 30 pharmacist service activities was written as a positively worded statement. Subjects were asked to rate "how important 30 pharmacist service activities were to them when selecting the pharmacy for purchasing their medications." They also were asked to check an "experienced" box provided next to each activity importance scale, if they knew they used or experienced that specific service before. These data will be used in another analysis and are not related to this research.

Subjects rated the importance of each dimension/item using uni-polar importance scale. The scale was presented in a forced choice format and labeled:

- 1 = Of No Importance
- 2 = Little Importance
- 3 = Moderate Importance
- 4 = Considerable Importance
- 5 = Great Importance

The scale was chosen for its summative properties (McIver, Carmine 1981; Nunally 1994), importance measurement properties (Meyers, Alpert 1977), ranking properties, and also for general preference comparison of results to the 1984 study.

Survey Instrument Content

The survey instrument contained six sections. Section I and II were focused for this research. The other sections were part of a funded project and conducted by Sonderegger Research Center. Section I: Prescription Medication Patronage: contained the 14 general pharmacy patronage motives dimensions as mentioned previously. Using the uni-polar importance scale, respondents were asked to evaluate the importance of each dimension when selecting a pharmacy to purchase a prescription drug. Also, at the end of the section, the directions asked respondents to rank the three most important dimensions when selecting the pharmacy. (See Appendix B for details)

Section II: Pharmacist Service Activities: contained 30 pharmacist service activities. These pharmacist service activities were derived from a review of the pharmacy literature. (See Table I in Appendix A for details) Respondents were asked to evaluate the importance of each criterion related to prescription medications, non-prescription medications and also other self-care items. The pharmacist service activities were rated using the uni-polar importance scale. Also, the directions asked the respondents to check the "experienced" box next to the importance scale if they knew they experienced that pharmacist service activity before.

Section III; "Talking to Your Pharmacist;" contained 19 questions asking the respondents to rate pharmacist(s) on "Talking to Your Pharmacist" questions. Section IV; "Working with Pharmacist;" included five questions to probe how respondents feel in working with pharmacist(s). The "Quality of Pharmacist Service," Section V, consisted of 3 general questions asking the respondents about things the pharmacist did that may bother them and also how they rate the quality of service pharmacist(s) provided to them. The last Section consisted of general questions relating to the respondents, prescription medication and pharmacy they used. The respondents were asked if they have ever obtained the prescription drug for themselves, how many prescription medications they have obtained in the past month, how much a month they spend on their prescription, how many pharmacies they usually shop at for their prescription drugs (listing the names), how long they have shopped at their favorite pharmacy. The respondents were also asked about demographic variables such as age, gender, health status, number of persons living in the same household, education, working hours and income.

Study Location

The data collection site was the Metropolitan Statistical Area (MSA) representing Dane County, Wisconsin. The U.S. Bureau of Census (1990) reported the total resident population of Dane County, Wisconsin was 367,085, with median ages of 30.8 years, including 9.2% of 65 years and over, with a median household income approximately \$32,703. For persons older than 24 years of age, 88.9% graduated from high school and 34.2% graduated from college. Females represented approximately 50.7% of the population.

The civilian work force included 241,050 non-farm, salaried workers. Specific areas of employment were: manufacturing 10.3%, construction 3.7%, transportation and utilities 4.6%, trade 17.5%, finance and insurance 7.8%, services and miscellaneous 33.8%, and government 22.5%. Unemployment rates ranged between 3.5 and 5% annually. The University of Wisconsin-Madison is located in Madison with approximately 40,000 students enrolled.

During the study, there were 24 independent (i.e. traditional prescription pharmacies), 24 chain pharmacies (more than 10 units under the same ownership) and 14 clinic pharmacies operated by health maintenance organizations (HMOs) in the county. Traditional third party prescription drug benefit programs were available to consumers in this MSA as well as similar plans offered by health maintenance organizations (HMOs). Pharmacists' participation in these prescription benefits plans was universal. Thus, consumers' freedom of choice in selecting a pharmacy for obtaining prescription drugs was universal.

Pretest

The first draft of the questionnaire was reviewed by a panel of five pharmacy administration faculty and eight graduate students. Opinions were gathered regarding the face validity, clarity, format and overall evaluation of the instrument. The time required to complete the questionnaire was noted to be approximately 30 minutes. Based on comments received during this exercise, instructions and format were revised. (See Appendix B for details) The second draft of the questionnaire was offset printed onto 11 by 17 inch paper

with the word "draft" on the background of every page and folded into a four-page, 8.5 by 11 inches, booklet form.

The booklet was ivory colored and contained the 14 general pharmacy patronage dimensions and 30 pharmacist service activities item instrument with uni-polar importance scale, questions about drug purchases and demographic information, space for written comments and suggestions, and direction for returning the booklet. Also included were 1) a draft cover letter and 2) additional letter eliciting respondents' evaluation the questionnaire. (See Appendix B for Details)

Using a purchased Dane County Wisconsin Resident Mailing List and State Employee Directories, a systematic random sample of 15 consumers from Madison and 15 state employees are selected. A \$1.00 token was placed in each cover letter in order to enhance the response rate. Questionnaires were sent out to the selected subjects. Seven days after the booklet mailing, each subject was mailed a follow-up postcard reminder.

Pretest Demographic Information and Results

The response rate was 53.33% (N=30) and 86% was female. The average age was 53.8 years old. They rated their health as fair (14.3%), good (42.9%), and very good (42.9%). The mean for education level was high school graduate with some college degree. About 71% of the subjects worked about 40 hours per week.

Every respondent obtained his or her own prescriptions. Most people (85.7%) obtained 1 to 5 prescriptions in the past month. They spent between \$ 4 and \$150 per month for their prescriptions. All of them shopped at only one primary pharmacy. The length of

time they had been consumers of that specific pharmacy ranging from 3 to 30 years. (See

Table VI for details)

Table VI: Pretest Study Demographic Characteristics

AGE	n	%	Cumulative %
21 – 34	1	14.3	14.3
35 – 44	0	0.0	0.0
45 – 54	3	42.9	57.2
55 – 64	1	14.3	71.5
65 and over	2	18.6	100.0
Total	7		

GENDER	n	%	Cumulative %
Male	1	14.29	14.29
Female	6	85.71	100.00
Total	7		

HEALTH	n	%	Cumulative %
Poor	0	0.0	0.0
Fair	1	14.3	14.3
Good	3	42.9	57.1
Very Good	3	42.9	100.0
Excellent	0	0.0	100.0
Total	7		

EDUCATION	n	%	Cumulative %
Elementary School	0	0.0	0.0
Some High School	0	0.0	0.0
High School Graduate or G.E.D.	1	14.3	14.3
High School Graduate with some Collage	3	42.9	57.1
Technical, Bachelor's Degree	2	28.6	85.7
Masters, Ph.D. or Professional	1	14.3	100.0
Total	7		

From the results of the pretest, the major change in the survey booklet was the directions for the pharmacist services section. Some respondents were confused about how to answer the question about their experiences. From the pretest results, the directions in Section II were changed to instruct respondents first to circle their choice on the importance scale, then "*check the box if you know you have experienced that service.*" This information will be used in another study. The other results from the pretest suggested that the format and directions were easy and clear for respondents to follow; and the time for answering the questionnaire was appropriate. (See Appendix B for details)

Populations Sampled

Again, using the purchased Dane County Wisconsin Resident Mailing List and State Employee Directory, a systematic random sample of 300 consumers from purchased Dane County Wisconsin Resident Mailing List and 200 employees from the State Employee Directory was selected.

The selected subjects from the resident mailing list were categorized by age and gender. The reasons for age and gender stratification are that, first, previous studies found that there were relationships between consumers' ages and gender to general pharmacy preferences and prescription drug use. Second, in previous pharmacy patronage studies, about 60% of the pharmacy consumers were female. The purchased Dane County Wisconsin Resident Mailing List also was stratified by age and gender, so the ratio of male vs. female sample were assigned as 40%(male): 60%(female). Also, within each gender category, age was divided into greater and equal to or less than 50 years of age groups. The proportion of

60% : 40% of age range for each gender were given for this study. Then the total number of 300 residences residing around Dane County were randomly selected from the mailing list. (See Table VII for details)

For the sample of 200 state employees, a systematic sampling technique was used. From the State Employee Phone Directory, the total number of state employees in Dane County was counted (13,800 total) and divided by 200. The first name in the directory was selected along with every 69th name that followed. This process provided 200 names.

Table VII: Selected Subject (Residence and State Employee) by Age and Gender

Subject		Sent out	Percent
Residence	=	300	60
Female age \geq 50	=	108	60*
Female age < 50	=	72	40*
Male age \geq 50	=	72	60*
Male age < 50	=	48	40*
State Employee	=	200	40

Note: * the percent is calculated from each gender

Data Collection

Since the pretest, targeted response rate was greater than 50%, a \$1.00 token was placed in each booklet. The final sample size of 200 was determined by the sufficient number of respondents needed for factor analysis and the amount of funding available.

For the Dane County resident sample, on February 5, 1999 a notification postcard was sent to the 300 selected residences. Subjects received a notification postcard informing them about the study's purpose, how they were selected and asking for their participation. Three days after the notification postcard was mailed, subjects were mailed the booklet and business reply envelope in a School of Pharmacy envelope. Then a week after the survey booklet was mailed, the follow-up postcard was sent to subjects to remind them about the survey and response. (See Appendix B for Details)

Also, on February 17, 1999, the first survey was sent to the 200 selected state employees via inter-departmental mail. Subjects received the first survey booklet and business reply envelope in a School of Pharmacy envelope with a cover letter informing them about the study's purpose, how they were selected and asking for their participation. A week after the first survey booklet was sent out, the second survey booklet with the same content was sent to subjects again. One exception for the second survey, is that it did not include a \$1 token. The objective for using two different methods for the two different groups is that the researcher in another study would like to compare the response rate between the two methods used.

Data Analysis

The responses were coded for computer analysis. A copy of the code book and instructions are in Appendix C. The Statistical Package for the Social Sciences PC 8.0 for Windows was used for conducting all statistical tests (SPSS, Inc. 1998). The mean value of the item responses was substituted for the missing responses for reliability and factor analysis.

Section I: Prescription Medication Patronage

Similar dimensions of prescription medication patronage motives (pharmacy preference) to the 1984 study were tested for differences in the means by using Student *t*-test at $\alpha = 0.05$. Those prescription medication patronage dimensions were: Always has my prescription medication in stock, Home delivery and emergency services, Accepts prescriptions covered by my health plan, Prices of prescription medications, Pharmacist, Hours open, and Pharmacy technical staff. (See Table IV for details)

To determine which three prescription medication patronage motives dimensions (determinant dimension) were most important to the respondents, data collected on the importance rankings of selected prescription medication patronage dimensions were analyzed by calculating frequencies and overall mean rating scores of the prescription medication patronage dimensions to place them in order of importance. Overall mean importance rating scores also were calculated to find out the three general categories of prescription medication dimensions. Mean weighted importance scores were calculated by weighing most important by 3, second most important by 2, and third most important by 1,

and then summing these weighted important values for each prescription medication patronage dimension.

Section II: Pharmacist Service Activities

Again, the pharmacist service activities that were similar to 1984 study were tested for the mean differences by using student *t*-test at $\alpha = 0.05$. Those similar pharmacist service activities were: Tells me what the prescription medicine is and what it is used for, Tells me when and how to take my prescription medicine, Tells me about side effects or precautions about my prescription, Tells me of any dangers in taking prescription medication together, Puts extra labels on the container telling me about my prescription, Contacts my doctor if needed, Gives written information about my prescription, Keeps a computerized record of my prescription and allergies, Checks for medication interaction, and Answers my questions either in person or by phone. This is to determine changes of consumer preferences toward pharmacist services over time. However, for Keeps a computerized record of my prescription and allergies in the 1984 study this specific pharmacist service activities was defined in two separate attributes, so does the Answers my question either in person or by phone attribute. Then, the average mean importance and average standard deviation of these two specific pharmacist service activities in 1984 were used for comparison. (See Table V for details)

For new pharmacist service attributes i.e. over-the-counter drug, self-care etc, descriptive statistics for each specific attribute were calculated to determine how respondents perceived these new services.

Evaluation of the construct and sample of items

Factor analysis was conducted as an exploratory technique to examine the dimensional structure of the constructs and the designation of individual items to measure the dimensions (Kom, Mueller 1978; Nunally 1994). Because of the exploratory nature of this procedure, the data set was evaluated to determine if it was suitable for factor analysis (Stewart 1981; Norusis 1985).

To prevent the inappropriate application of factor analysis, several criteria were applied (Stewart 1981; Norusis 1985). These criteria included:

1. an examination of the off-diagonal elements of the anti-image covariance matrix where the presence of many non-zero elements indicates the matrix is not suitable for factoring due to heterogeneity of the items;
2. Barlett's test of sphericity which tests the hypothesis that the correlation matrix came from a population of variables which are independent. While failure to reject clearly implies an inappropriate data set, rejection is not conclusive of an appropriate set, especially with large samples and a large number of items;
3. The Kaiser-Mayer-Olkin measure of sampling adequacy (MSA) which provides a measure of the extent to which variables belong together and thus are appropriate for factor analysis. The calibration of this test is : $\geq .9$, marvelous; $\geq .8$, meritorious; $\geq .7$, middling; $\geq .6$, mediocre; $\geq .5$, miserable; $\geq .4$, unacceptable;
4. A plot of the latent roots obtained from the matrix decomposition which should contain at least one sharp break;

5. An examination of the communality estimates.

Factor extraction was performed by Maximum Likelihood Method followed by Oblimin Kaiser Normalization Rotation.

Missing data were coded with the mean value for that statement being substituted. If the percentage of "no response" responses for any item was greater than 9% then, the item was not included in the data analysis. Such criteria for inclusion were set arbitrarily.

Factors representing the dimensions of the evaluative criteria were identified using scree-plot and the requirement of an eigen-value greater than or equal to one (Stewart 1981). Item or variable loading to the factor was accepted at 0.4 and above (Nunally 1994). Also, corrected-item to total correlation coefficients were used to further confirm a dimension's characteristics (Nunally 1994).

If an item loaded on two or more dimensions, assignment of the item was determined by corrected-item to total correlation (0.3 or above), by assignment to the dimension with the highest loading (determined by a difference of 0.1 or more), by logical assignment decided by panel of five social and administrative pharmacy faculty and eight graduate students, or a combination of each of these methods. If a dual loaded item could not be assigned using one of the above criteria, then the item was deleted. The panel of faculty and graduate students also helped in labeling each dimension.

After reloading the items by the above criteria, the dimensions and items within that dimension were tested again under the reliability analysis to determine whether the corrected-items to total correlation of each item was still appropriate.

Instrument and sub-scale reliability was tested by the internal consistency method using Cronbach's alpha as a measure (Nunnally 1994; Carmines, Zeller 1979). A mean score was calculated for each dimension using only those attributes that loaded on the dimension.

Chapter IV

RESULTS

Respondent Demographics and Patronage Characteristics

Of 500 surveys in the initial mailing, 483 (96.6%) were delivered, and 284 (58.8%) were returned. The response rates from residences and state employees were 51.33% and 61.00% accordingly. Eight responses were unusable leaving 276 surveys available for data analysis. (See Table VIII for details)

Table VIII: Return Result of Selected Subject by Age and Gender

Subject		Sent out	Return	Percent
Residence	=	300	154	51.33
Female age > 50	=	108	66	61.11
Female age < 50	=	72	28	38.89
Male age > 50	=	72	44	61.11
Male age < 50	=	48	16	33.33
State Employee	=	200	122	61.00

Demographics of the respondents were shown in Table IX. The median age of respondents was 52 years, and 71% were females. About 73 % of respondents rated their health as good to very good. Almost half of them (43.3%) had two persons currently living in their household. Over 81 % had at least a high school graduate or equivalent degree, and more than 50 % earned at least technical or bachelor's degree or higher education. The median income was in the \$ 35,000 to \$ 49,900 category.

Almost 98.1 % indicated they had obtained at least one prescription for themselves in the past month, and 62.3 % had obtained from one to five prescriptions in the preceding month. The range of prescription cost per month was \$ 0 to \$ 400 with an average expense for prescription drugs per month of \$ 28.48. Most respondents (70.5%) usually went to one specific pharmacy for purchasing prescription medications. The most mentioned pharmacy from this survey was Walgreens Pharmacy. The average time that respondents were loyal to the pharmacy where they purchase most of their medications was about 11 years. Almost 59 % of the respondents stated they purchased most of their non-prescription medications and other types of self-care remedies from the pharmacy where they obtained their prescription medications.

There are somewhat differences in age, education and income between residents and state employee samples. The reason for age difference was that 60% of the resident we sent the survey to were the elderly group, while the state employee group were still working in the government section that could be assumed that their age should be not more than 60 years old, that caused the age difference. In term of education, most state employees have pursued higher education comparing to resident sample, which in turn resulted in higher income.

Table IX: Descriptive Respondent Demographics and Patronage Characteristics

AGE	n	State		Total %	Cum %
		Resident (%)	Employee (%)		
21 - 34	32	18 (6.69)	14 (5.20)	11.89	11.89
35 - 44	53	20 (7.43)	33 (12.27)	19.70	31.59
45 - 54	89	34 (12.64)	55 (20.45)	33.09	64.68
55 - 64	36	23 (8.55)	13 (4.83)	13.38	78.06
65 and over	58	56 (20.82)	3 (1.12)	21.94	100.00
Total	269				

GENDER	n	State		Total %	Cum %
		Resident (%)	Employee (%)		
Male	78	38 (14.13)	40 (14.87)	29.00	29.00
Female	191	113 (42.01)	78 (28.99)	71.00	100.00
Total	269				

HEALTH	n	State		Total %	Cum %
		Resident (%)	Employee (%)		
Poor	2	2 (0.75)	0 (0.00)	0.75	0.75
Fair	29	19 (7.09)	10 (3.73)	10.82	11.57
Good	90	51 (19.03)	39 (14.55)	33.58	45.15
Very Good	105	58 (21.64)	47 (17.53)	39.17	84.32
Excellent	42	21 (7.84)	21 (7.84)	15.68	100.00
Total	268				

EDUCATION	n	State		Total %	Cum %
		Resident (%)	Employee (%)		
Elementary School	0	0 (0.00)	0 (0.00)	0.00	0.00
Some High School	5	5 (1.86)	0 (0.00)	1.86	1.86
High School	46	34 (12.64)	12 (4.46)	17.10	18.96
Graduate or G.E.D.					
High School Graduate	64	38 (14.13)	26 (9.67)	23.80	42.76
with some Collage					
Technical,	95	46 (17.10)	49 (18.22)	35.32	78.08
Bachelor's Degree					
Masters, Ph.D.	59	27 (10.03)	32 (11.89)	21.92	100.00
or Professional					
Total	269				

INCOME	n	State		Total %	Cum %
		Resident (%)	Employee (%)		
Less than \$ 10,000	6	6 (2.35)	0 (0.00)	2.35	2.35
\$ 10,000 - \$ 14,999	7	6 (2.35)	1 (0.39)	2.74	5.09
\$ 15,000 - \$ 24,999	26	25 (9.80)	1 (0.39)	10.19	15.28
\$ 25,000 - \$ 34,999	43	25 (9.80)	18 (7.06)	16.86	32.14
\$ 35,000 - \$ 49,999	52	28 (10.98)	24 (9.41)	20.39	52.53
\$ 50,000 - \$ 64,999	42	20 (7.85)	22 (8.63)	16.48	69.01
\$ 65,000 - \$ 79,999	32	9 (3.53)	23 (9.02)	12.55	81.56
\$ 80,000 or more	47	20 (7.85)	27 (10.59)	18.44	100.00
Total	255				

Note: Totals do not add up to 276 due to missing data.

Section I: Prescription Medication Patronage Motives Dimensions

An overview of the responses to the survey is provided in Table X. The range of responses, the mean rating and standard deviation for each item are given. The mean item responses were on the great importance end of the importance rating scale. Twelve of the fourteen (85.71 %) mean item responses were greater than three. The mean response was moderate importance. The standard deviation of the mean item responses ranged from 0.68 to 1.50. Seven mean item responses had standard deviations less than one.

Instances of unusable or missing responses randomly were dispersed throughout the scale portion of the questionnaire. (See Table VIII) A total of 44 item responses were affected, involving 9 of the 276 respondents. (Exclude item 14) The maximum number of missing responses for any item was nine, or not greater than 3.3 % of the total number of responses. The only item, which had five or more missing responses, was Pharmacy technical staff.

Table X: Descriptive Statistics of Prescription Medication Patronage Dimensions

Item	No. Response	No. Missing	Mean ^b	Std. Dev.	Range
1. Always has my prescription medication in stock.	273	3	4.32	0.86	1 - 5
2. Private are to speak with pharmacist about my prescriptions.	273	3	2.95	1.04	1 - 5
3. Convenient location.	275	1	4.47	0.72	2 - 5
4. Store appearance. (layout, decor, well lit, clean)	273	3	3.66	0.94	1 - 5
5. Prompt and attentive service.	272	4	4.41	0.68	1 - 5
6. Home delivery and emergency services.	272	4	2.84	1.18	1 - 5
7. Pharmacist professional services such as consultation.	273	3	3.42	1.10	1 - 5
8. Merchandise selection for other health care products.	274	2	3.23	1.02	1 - 5
9. Accepts prescriptions covered by my health plan.	273	3	4.59	0.90	1 - 5
10. Prices of prescription medications.	272	4	4.04	1.16	1 - 5
11. Pharmacist. (competent, knowledgeable)	273	3	4.60	0.85	1 - 5
12. Hours open.	274	2	4.05	0.85	1 - 5
13. Pharmacy technical staff.	267	9	3.66	1.04	1 - 5
14. Other.	43	233	3.42	1.50	1 - 5

Note:

a. Totals do not add up to 276 due to missing data.

b. Include insertion of aggregate mean score for missing data.

Hypothesis I Testing

The research hypothesis for research question one was represented as:

"Consumers' ratings of the levels of importance (preference) for specific prescription medication patronage motives are positively different for 1999 as for 1984 study"

Based on Hypothesis I, four prescription medication patronage dimensions were not significantly different from the 1984 study. The student *t*-test comparing for a difference in the mean scores for this study and the 1984 were not significant (See Table XI). The four prescription medication patronage dimensions were:

- Item 1, Always has my prescription medication in stock.
- Item 6, Home delivery and emergency services.
- Item 10, Prices of prescription medications.
- Item 13, Pharmacy technical staff.

Thus, for these four prescription medication patronage dimensions, hypothesis I was accepted (At $\alpha = 0.05$, one- tailed test).

The prescription medication patronage dimensions that were significantly different from the 1984 study ($\alpha = 0.05$, one- tailed test) were:

- Item 9, Accepts Prescriptions Covered by My Health Plan
- Item 11, Pharmacist
- Item 12, Hours Open.

Since these three prescription medication patronage dimensions were significantly different from the 1984 study, the hypothesis was not accepted for them.

Table XI: Comparison of Similar Prescription Medication Patronage Dimensions**1984 and 1999 Studies**

Dimensions/Items	1999 Study		1984 Study		t-test ^a
	Mean (S.D.)	N = 276 ^c	Mean (S.D.)	N = 335 ^c	
1. Always has my prescription medication in stock.	4.325	0.86	4.33	.89	-0.14
2. Private are to speak with pharmacist about my prescriptions. ^d	2.950	1.04	-	-	-
3. Convenient location. ^d	4.473	0.72	-	-	-
4. Store appearance. (layout, decor, well lit, clean) ^d	3.660	0.94	-	-	-
5. Prompt and attentive service. ^d	4.414	0.68	-	-	-
6. Home delivery and emergency services.	2.840	1.18	2.73	1.32	1.09
7. Pharmacist professional services such as consultation. ^d	3.420	1.10	4.03	-	-
8. Merchandise selection for other health care products. ^d	3.230	1.02	-	-	-
9. Accepts prescriptions covered by my health plan.	4.592	0.90	4.10	1.14	5.94 ^b
10. Prices of prescription medications.	4.040	1.16	4.12	0.95	-0.92
11. Pharmacist. (competent, knowledgeable)	4.601	0.85	4.51	0.22	1.71 ^b
12. Hours open.	4.050	0.85	3.16	0.51	15.28 ^b
13. Pharmacy technical staff.	3.660	1.04	3.65	1.01	0.12
14. Other. ^d	3.420	1.50	-	-	-

Note:

- a. Formula for t test of a difference between means: $t = \frac{(Y1 - Y2) - E(Y1 - Y2)}{\text{Est. SE diff.}}$
- b. Significance at alpha = 0.05 (p value = 1.645) one-tailed test.
- c. The testing dimensions/items are 1, 6, 7, 9, 10, 11, 12, and 13 respectively.
- d. Items not studied in 1984
- e. Include insertion of aggregate mean score for missing data.

Respondents were asked to rank the importance of those prescription medication patronage factors that they considered important. The frequencies of factors rated most important, second most important, and third most important are summarized in Table XII.

The total importance scores and rank by total importance score for each factor are shown in Table XII. Accepts prescriptions covered by my health plan was selected as the most important factor, Pharmacist was ranked second and Always has my prescription medication in stock was come in third closely followed by Convenient Location as fourth.

To confirm the ranking of the most important dimension of prescription medication patronage motives, the mean scores also are included in Table XII. (Only in difference in order of the top 5 dimensions resulted via the different method of calculation) It can be concluded that their results are consistent, even when done a bit differently.

It is interesting in the way that pharmacist dimension was perceived to be the most important dimension in ranking score or the second highest mean in rating score. One way to interpret this result is that consumers rely on pharmacist in the prescription task, or pharmacist may be perceived as the gate keeper who provide access to the prescription medication, since consumers need a pharmacist present to have their prescription filled. It would be worthwhile to conduct the research to find out what role of the pharmacist that consumers expect.

Table XII: Respondents Ranking Specific Prescription Medication Patronage Factors as First, Second, and Third Most Important.

Item	Most Important	Second Important	Third Important	Total Importance Score	Ranking	Ranking
					By Total Score	By Mean Score
1. Accepts prescriptions covered by my health plan.	68	53	31	311	1	2
2. Pharmacist. (competent, knowledgeable)	59	28	44	277	2	1
3. Always has my prescription medication in stock.	61	36	14	269	3	5
4. Convenient location.	32	53	41	243	4	3
5. Prompt and attentive service.	17	34	52	171	5	4
6. Prices of prescription medications.	15	20	24	109	6	7
7. Pharmacist professional services such as consultation.	4	22	11	67	7	10
8. Hours open.	2	11	29	57	8	6
9. Private are to speak with pharmacist about my prescriptions.	3	8	3	28	9	13
10. Store appearance. (layout, decor, well lit, clean)	4	2	11	27	10	8
11. Home delivery and emergency services.	5	1	2	19	11	14
12. Other.	2	3	2	12	12	10
13. Pharmacy technical staff.	-	-	5	5	13	8
14. Merchandise selection	-	1	3	5	13	12

for other health care products.

Note: Total weighed importance score were calculated by multiplying:

Most Important by 3

Second Most Important by 2

Third Most Important by 1

Section II: Pharmacist Services

An overview of the responses to the survey is provided in Table XIII. The range of responses, the mean rating and standard deviation for each item are given. Most of the mean item responses were on the great importance end of the scale. Twenty-nine of the thirty (96.67 %) mean item responses were greater than three. The lowest mean score was 2.57, which was item 28: "Keep a computerized record of non-prescription and self-care treatment I use." The reason might be that this activity was quite confidential and personal issue that consumers might not want pharmacist to know. The mean response was moderate importance. The standard deviation of the mean item responses ranged from 0.70 to 1.21. Fifteen mean item responses had standard deviations less than one.

Instances of unusable or missing responses involved 30 different items randomly dispersed throughout the scale portion of the questionnaire. (See Table XIII) A total of 309 item responses were affected, involving 23 of the 276 respondents. The maximum number of missing responses for any item was twenty-three, or not greater than 8.3 % of the total number of responses. Twelve items had fourteen or more missing responses or greater than five percent of the responses. These items were:

- Checks for medication interaction,
- Keeps a computerized record of illnesses I have,
- Teaches me how to use special devices to administer my medicine,
- Teaches me how to use equipment such as a glucose meter,
- Gives my doctor(s) a list of medicines that I take,

- Interviews me to record a prescription history and any medication allergies I have,
- Helps me coordinate taking my prescription when I have more than one prescription medicine to take daily,
- Gives advice on whether or not I should see a doctor rather than treat the problem with non-prescription or self-care treatments,
- Gives advice on precautions to follow when using non-prescription other self-care treatments,
- Keeps a computerized record of non-prescription and self-care treatment I use,
- Helps me select non-prescription or self-care treatment that meet my need,
- Gives advice on side effects and medication interactions with non-prescription or self-care treatment.

Table XIII: Descriptive Statistics for Pharmacist Service Activities

Item	No. ^a Response	No. Missing	Mean ^b	Std. Dev.	Range
1. Tells me what the prescription medicine is and what it is used for.	274	2	4.25	0.94	1 - 5
2. Tells me when and how to take my prescription medicine.	274	2	4.61	0.87	1 - 5
3. Tells me about side effects or precautions about my prescription.	274	2	4.57	0.71	1 - 5
4. Tells me of any dangers in taking prescription medicines together.	274	2	4.58	0.71	2 - 5
5. Puts extra labels on the container telling me about my prescription.	273	3	3.97	0.98	1 - 5
6. Checks my understanding of prescription dosage directions.	273	3	3.98	1.01	1 - 5
7. Contacts my doctor if needed.	273	3	4.33	0.83	1 - 5
8. Marks refills on my prescription label.	272	4	4.31	0.80	1 - 5
9. Checks if the prescription strength and dose are correct for me.	271	5	4.22	0.91	1 - 5
10. Explains any prescription filling delays if they occur.	273	3	3.95	0.90	1 - 5
11. Gives an emergency supply of prescription medicine if needed.	266	10	4.16	0.98	1 - 5
12. Describes the effect I should expect from my prescription.	270	6	4.21	0.91	1 - 5
13. Explains what to do if I miss a dose.	271	5	3.87	1.01	1 - 5
14. Gives written information about my prescription.	274	2	4.00	1.05	1 - 5
15. Keeps a computerized record of my prescription and allergies.	267	9	4.44	0.75	1 - 5
16. Checks for medication interaction.	261	15	4.39	0.77	1 - 5
17. Answers my questions either in person or by phone.	265	11	4.50	0.79	1 - 5
18. Keeps a computerized record of illnesses I have.	260	16	3.21	1.11	1 - 5
19. Teaches me how to use special devices to administer my medicine.	258	18	3.83	1.06	1 - 5
20. Teaches me how to watch for side effects of my prescription.	264	12	4.00	0.97	1 - 5
21. Teaches me how to use equipment such as a glucose meter.	253	23	3.56	1.17	1 - 5
22. Gives my doctor(s) a list of medicines that I take.	253	23	3.36	1.21	1 - 5
23. Keeps my computerized records confidential.	264	12	4.56	0.76	1 - 5
24. Interviews me to record a prescription history and any medication allergies I have.	258	18	3.51	1.15	1 - 5
25. Helps me coordinate taking my prescription when I have more than one prescription medicine to take daily.	259	17	3.53	1.17	1 - 5
26. Gives advice on whether or not I should see a doctor rather than treat the problem with non-prescription or self-care treatments.	260	16	3.47	1.16	1 - 5
27. Gives advice on precautions to follow when using non-prescription or other self-care treatments.	260	16	3.66	1.07	1 - 5

Item	No ^a Response	No. Missing	Mean ^b	Std. Dev.	Range
28. Keeps a computerized record of non-prescription and self-care treatment I use.	257	19	2.57	1.15	1 - 5
29. Helps me select non-prescription or self-care treatment that meet my needs.	261	15	3.53	1.08	1 - 5
30. Gives advice on side effects and medication interactions with non-prescription or self-care treatment.	259	17	3.83	1.05	1 - 5

Note:

a. Totals do not add up to 276 due to missing data.

b. Include insertion of aggregate mean score for missing data.

Hypothesis II Testing

The hypothesis for research question three was represented by

"Consumers' ratings of the levels of importance (preference) for specific pharmacist service activities positively change over time in the same market area."

Total of 10 pharmacist service activities were compared for 1999 and 1984 study.

The results, from the mean differences tested between this study and 1984 study on the same items, showed that there were only three items that were not significantly different. These three pharmacist service activities were:

- Tells me about side effects or precautions about my prescription.
- Tells me of any dangers in taking prescription medicines together.
- Contact my doctor if needed.

The test of mean difference were not significant for these three pharmacist services activities ($\alpha = 0.05$). (See Table XIII for detail) In conclusion, for these three specific pharmacist service activities, research Hypothesis II was accepted.

Even though, the mean importance rating of these three pharmacist service activities were not significantly different, but since the 1984 study, they were rated high for the importance rating score already. This implied that consumer perceived these pharmacist service activities important since the beginning of these services implementation.

The research Hypothesis was not accepted for the other seven pharmacist service activities attributes. They were:

- Tell me what the prescription medicine is and what it is used for.
- Tell me when and how to take my prescription medicine.

- Puts extra labels on the container telling me about my prescription.
- Gives written information about my prescription.
- Keeps a computerized record of my prescription and allergies.
- Checks for medication interaction.
- Answers my questions either in person or by phone.

Over a 15-year period, subjects perceived each of the significant pharmacist service activities more important than did respondents in the 1984 study.

Table XIV: Test of Mean Differences of Specific Pharmacist Services Activities between 1984 and 1999 Studies.

Item	1999 Study		1984 Study		t-Test ^a
	Mean	(S.D.)	Mean	(S.D.)	
	N = 276 ^c		N = 235 ^c		
Tells me what the prescription medicine is and what it is used for.	4.25	0.94	4.05	1.05	2.48 ^b
Tells me when and how to take my prescription medicine.	4.61	0.87	4.18	0.98	5.74 ^b
Tells me about side effects or precautions about my prescription.	4.57	0.71	4.49	0.73	1.37
Tells me of any dangers in taking prescription medicines together.	4.58	0.71	4.49	0.90	1.38
Puts extra labels on the container telling me about my prescription.	3.97	0.98	3.75	1.13	2.58 ^b
Contacts my doctor if needed.	4.33	0.83	4.33	0.90	0.00
Gives written information about my prescription.	4.00	1.05	3.26	1.14	8.34 ^b
Keeps a computerized record of my prescription and allergies. ^c	4.44	0.77	4.06	1.16	4.84 ^b
Checks for medication interaction.	4.39	0.79	4.20	1.10	2.04 ^b
Answers my questions either in person or by phone. ^d	4.50	0.70	4.04	0.99	6.71 ^b

Note:

- Formula for t test of a difference between means: $t = \frac{(y_1 - y_2) - E(y_1 - y_2)}{\text{Est. SE diff.}}$
- *Significance at alpha = 0.05 (p value = 1.645) one-tailed test.
- For Keeps a computerized record of my prescription and allergies in 1984 study the results were calculated by averaging item 5 and 44 mean and standard deviation.
- For Answers my questions either in person or by phone in 1984 study the results were calculated by averaging item 4 and 12 mean and standard deviation.
- Include insertion of aggregate mean score for missing data.

Exploratory Factor Analysis Results For Pharmacist Service Activities Dimensions

Multiple procedures suggested that the data were suitable for factor analysis. First, the 9:1 ratio of subjects to items exceeded the 5:1 minimum ratio recommended by Nunnally (1994) for factor analysis, but was less than the optimum ratio of 10 : 1. Second, an examination of the anti-image covariance matrix found only 4.88 percent of the off-diagonal elements were greater than 0.09. (2 % after deleting item 23) Third, based on Bartlett's test of sphericity, the hypothesis that the correlation matrix came from a population of independent variables was rejected at a significance level of 0.001. Fourth, the Kaiser-Mayer-Olkin Measure of Sampling Adequacy for the entire data set was computed to be 0.92. Fifth, the post hoc communality estimates for individual scale items ranged from 0.377 to 0.759. (After deleting item 23: "Keeps my computerized records confidential") The final instrument contained 29 items.

Four factors above the break in the scree-plot were found to explain 57.936 percent of the variation. (See Appendix D for detail) Eigenvalues for each of these four factors were equal or greater than 1.225. Table XVII contained the final statistics for the factor analysis. The factors extracted represented four dimensions and were labeled as non-prescription drug consultation and monitoring activities, prescription drug consultation and monitoring, prescription drug administration and management activities, and drug-related management and information activities.

Table XV listed the factors by grouping the items with the factors where they had the highest loading. Factor loadings on other factors which were greater or equal to 0.3 are also

shown. Some items with multiple loadings clearly loaded higher on a single dimension. For example, "Checks my understanding of prescription dosage directions," had a factor loading of 0.497 on Factor 2 and 0.357 on Factor 3.

Only one item had no factor loadings greater than 0.3 on any of the four factors. This item was: "Keeps my computerized records confidential." The reason why this item factor loading was low might be that consumers thought this service activities have nothing to do with pharmacist professional service, also they might perceived that this is quite a personal issue and did not want anyone else know about. This item was deleted before further analysis.

Table XV: Results of Exploratory Factor Analysis, Matrix of Factor Loadings ≥ 0.3

	Factor			
	1	2	3	4
<u>Factor 1 "Non-prescription Drug Consultation and Monitoring Activities" (4 items)</u>				
Teaches me how to watch for side effects of my prescription.	.399		.303	
Gives advice on precautions to follow when using non-prescription or other self-care treatments.	.527			-.383
Helps me select non-prescription or self-care treatment that meet my needs.	.616			
Gives advice on side effects and medication interactions with non-prescription or self-care treatment.	.533			
<u>Factor 2 "Prescription Drug Consultation and Monitoring Activities" (6 items)</u>				
Tells me what the prescription medicine is and what it is used for.		-.759		
Tells me when and how to take my prescription medicine.		-.939		
Tells me about side effects or precautions about my prescription.		-.815		
Tells me of any dangers in taking prescription medicines together.		-.505		
Puts extra labels on the container telling me about my prescription.		-.395	.331	
Checks my understanding of prescription dosage directions.		-.497	.357	
<u>Factor 3 "Prescription Drug Administration and Management Activities" (11 items)</u>				
Contacts my doctor if needed.			.507	
Marks refills on my prescription label.			.570	
Checks if the prescription strength and dose are correct for me.			.543	
Explains any prescription filling delays if they occur.			.625	
Gives an emergency supply of prescription medicine if needed.			.574	
Describes the effect I should expect from my prescription.		-.330	.531	
Explains what to do if I miss a dose.			.547	

	Factor			
	1	2	3	4
<u>Factor 3 “Prescription Drug Administration and Management Activities” (11 items) (continue)</u>				
Gives written information about my prescription.				.327
Keeps a computerized record of my prescription and allergies.				.501
Checks for medication interaction.				.405
Answers my questions either in person or by phone.				.522
<u>Factor 4 “Drug-related and Information Activities” (8 items)</u>				
Keeps a computerized record of illnesses I have.				-.579
Teaches me how to use special devices to administer my medicine.				-.303
Teaches me how to use equipment such as a glucose meter.				-.568
Gives my doctor(s) a list of medicines that I take.				-.825
Interviews me to record a prescription history and any medication allergies I have.				-.635
Helps me coordinate taking my prescription when I have more than one prescription medicine to take daily.				-.700
Gives advice on whether or not I should see a doctor rather than treat the problem with non-prescription or self-care treatments.	.402			-.554
Keeps a computerized record of non-prescription and self-care treatment I use.				-.620

Purification: Internal Consistency

For internal reliability analysis, items were grouped as suggested by the exploratory factor analysis with two exceptions. First, in one case of multiple loadings of similar magnitude, items were placed in the sub-scale, which they had been designed to measure. Second, items which did not have factor loadings greater than 0.4 on any of the four significant factors were added to the sub-scale to which they were conceptually related. For example, "Teaches me how to watch for side effects of my prescription" was moved from non-prescription consultation sub-scale (factor loading .399) to the medication administration and management sub-scale (factor loading .303).

Table XVI listed the items which comprised the restructured subscales and the corrected item to total score correlation. The number of items contained in the respective subscales were: non-prescription consultation and monitoring activities, 3 items; prescription consultation and monitoring activities, 6 items; prescription drug administration and management activities, 12 items; and drug-related management and information activities, 8 items. Coefficient alpha for the final composition of the subscales ranged from 0.8321 for the non-prescription drug consultation and monitoring activities scale to 0.8920 for the education and informatics activities scale.

In Table XVI, Cronbach's alpha for the entire instrument for the entire instrument was 0.948. Average importance scores for each dimension ranged from 4.2984 for prescription drug consultation activities to 3.3858 for drug-related management and information activities. Also, the result of variance explained by the Non-prescription drug

consultation and monitoring activities was 39.528%, which implied that these activities were still unfamiliar to consumer that in turn created the high percent variance in this dimension.

Table XVI: Reliability Analysis of Restructured Sub-scales Listing Chronbach's Coefficient and Item to Total Score Correlation

	Item-Total Score Correlation	Coefficient Alpha
Factor 1 "Non-prescription Drug Consultation and Monitoring Activities" (3 items)		
Gives advice on precautions to follow when using non-prescription Or other self-care treatments.	0.6511	0.8321
Helps me select non-prescription or self-care treatment that meet my needs.	0.7044	
Gives advice on side effects and medication interactions with non-prescription or self-care treatment.	0.7204	
Factor 2 "Prescription Drug Consultation and Monitoring Activities" (6 items)		
Tell me what the prescription medicine is and what it is used for.	0.6264	0.8842
Tell me when and how to take my prescription medicine.	0.7268	
Tell me about side effects or precautions about my prescription.	0.7102	
Tell me of any dangers in taking prescription medicines together.	0.5097	
Puts extra labels on the container telling me about my prescription.	0.4118	
Checks my understanding of prescription dosage directions.	0.5284	
Factor 3 "Prescription Drug Administration and Management Activities" (12 items)		
Contacts my doctor if needed.	0.5627	0.8845
Mark refills on my prescription label.	0.4955	
Checks if the prescription strength and dose are correct for me.	0.6339	
Explains any prescription filling delays if they occur.	0.5677	
Gives an emergency supply of prescription medicine if needed.	0.4684	
Describes the effect I should expect from my prescription.	0.7166	
Explain what to do if I miss a dose.	0.7295	
Gives written information about my prescription.	0.5192	
Keeps a computerized record of my prescription and allergies.	0.5550	
Checks for medication interaction.	0.5794	
Answers my questions either in person or by phone.	0.5938	
Teaches me how to watch for side effects of my prescription	0.6235	

Item-Total Score Correlation	Coefficient Alpha
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	0.8920
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**Factor 4 "Drug-related Management
and Information Activities" (8 items)**

Keeps a computerized record of illnesses I have.	0.6282
Teaches me how to use special devices to administer my medicine.	0.6098
Teaches me how to use equipment such as a glucose meter.	0.6898
Gives my doctor(s) a list of medicines that I take.	0.6806
Interviews me to record a prescription history and any medication allergies I have.	0.6371
Helps me coordinate taking my prescription when I have more than one prescription medicine to take daily.	0.7365
Gives advice on whether or not I should see a doctor rather than treat the problem with non-prescription or self-care treatments.	0.6893
Keeps a computerized record of non-prescription and self-care treatment I use.	0.6727

Table XVII: Identified Dimensions of Professional Pharmacist Service Activities

Dimension	No. of Attributes	Eigenvalue	%	Mean	S.D.	Subscales
			Variance Explained	Importance Rating		Reliability
1. Non-prescription Drug Consultation.....	3	11.463	39.528	3.6705	0.153	0.8321
2 Prescription Drug Consultation.....	6	2.336	8.056	4.2984	0.279	0.8842
3. Prescription Drug Administration	12	1.777	6.128	4.1963	0.197	0.8845
4. Drug-related and Information Activities.....	8	1.225	4.224	3.3858	0.365	0.8920

Chapter V

DISCUSSION

Respondent Demographic and Patronage Characteristics

In order to overcome the problems in monitoring changes that occurred in prescription medication patronage motives and pharmacist service activities over time, this study was conducted in the same geographic area (Dane County, Wisconsin) and used the same methodology as the 1984 study. The purpose of the study was to investigate changes in consumers' rating of prescription medication patronage and pharmacist service activities criteria. In the pretest, by using a small number of subjects, it was possible that a non-representative group of respondents resulted. However, since the objective for the pretest study was to determine the validity, clarity and appropriateness of the questionnaire, there was little concern about representativeness of the pilot sample.

In the data collection, the sample size was expanded in order to provide an adequate number of respondents, and a systematic random sampling of subjects was used to provide the distribution of respondents across the demographic and geographic types.

Based on Table IX, the sample of respondents was quite consistent with the pretest in gender (more female), age (52-53 years old), and education (high school or above) and health (good or above). Both samples of respondents were somewhat representative of the sample population based on level of education, and income. Reasons why the sample was not representative to sample population in age and gender categories could be due to method of sampling used (age and gender stratification as mentioned in methodology section), and

sampling error. Also, the sample in this study is somewhat different from the sample in the 1984, since the sample drawn from the 1984 study were limited to Madison, Wisconsin, but for this study the sample were drawn from Dane County, Wisconsin. Also, the 1984 sample was not satisfied by age and gender. The percentage of female respondents (71%) compared with 51% of the population sample were more representatives of prescription consumers by gender. The difference in median ages, 52 years and 31 years, could be due to either users of prescription drugs being generally older when compared to non-users, or the sample age group appeared older because no children were included. (See Table VI and Table IX for more details)

Prescription Medication Patronage Motives Dimensions

In this section, the mean importance of four dimensions, "Always has my prescription medication in stock", "Home delivery and emergency services", "Prices of prescription medication", and "Pharmacy technical staff" were not significantly different from the 1984 study.

For the "Always has my prescription in stock" dimension, the means of the "Always has my prescription in stock" dimension for this study and the 1984 study were both high in mean importance. (4.32, 4.33 respectively) It could be interpreted that this dimension was still the determinant dimension as confirmed in Tables XI and XII.

For "Home delivery and emergency service" dimension, as both studies showed that the means importance ratings were quite low (2.84, 2.73 respectively), implied that this dimension was considered not important in the first place. Perhaps due to the fact that most consumers (especially in these two studies) did not use this service, it did not matter how

well the pharmacy provided this patronage dimension. However, it might be important for the elderly. Further analysis must be conducted in order to find out how the elderly group of consumers consider this "Home delivery and emergency service" dimension.

The explanation for "Price of prescription medication" dimension was related to the proliferation of third-party prescription drug plans and the increasing number of people covered by those plans. A plan subscriber often pays the same co-pay regardless of which store filled the prescription; therefore, the price of the prescription was not of concern (Pritchard, Perri 1997, Schondelmeyer, Trinca 1983). Especially, for this study, 40% of the sample was drawn from the state employees who had prescription drug coverage, so they might judge "Price of prescription medication" dimension less important than other selected dimensions. In other words, it could be stated that the "Price of prescription medications" dimension was substituted indirectly by the implementation of third-party prescription drug plans. As shown in Table XII, "Accepts prescriptions covered by my health plan" was placed as the first most important in the ranking score of this study. This implied that the evoked sets of consumer preferences that once used to included "Price of prescription medication" has been replaced by "Accepts prescriptions covered by my health plan". However, due to the fact that consumers were not aware that almost all pharmacies accept prescription benefit plan that is why consumers perceived this dimension important. Thus, they would fear losing coverage if they went to another pharmacy.

Finally, for the "Pharmacy technical staff" dimension, respondents might perceive the staff in the pharmacy just performing the routine work in a retail environment and not responsible for building relationships with consumers. Also consumers of prescription drug might prefer to deal directly with the pharmacist if they had a choice, which in turn the

“Pharmacy technical staff” was considered not as important and did not change much in term of mean differences over time.

The “Pharmacist” and “Hours open” dimensions increased in mean importance rating. “Pharmacist” dimension was considered more important over time, due to pharmacists continuing to improve and implement new services in order to serve consumers better. Moreover, Rupp and Kreling (1994) stated that the focus of contemporary pharmacy practice has now shifted to an emphasis on the consumer, to optimize the interaction that occurred between the consumer and the pharmacist, which in turn creates more potential contacts between the pharmacist and consumers, together with the increasing rate of prescription drug used by consumers recently, that might have caused the increase in the mean importance rating for the “Pharmacist” dimension. Alternative view of interpretation this result was that consumers need a pharmacist present to have their prescription filled. Instead, it was related to the access issue that pharmacist acts as the gate-keeper for prescription patronage.

For “Hours open” dimension, since most people have to work, and the consequence of the working schedule might limit the chance to visit the pharmacy, it seemed reasonable if the pharmacy could provide convenient hours for consumer to get their prescription filled. In turn this may have made this dimension more important over time.

I determined the five most important dimensions in selecting the pharmacy for prescription medication. The results showed consistency for the top five most important dimensions but their order of importance changed due to method of calculation.

The first determinant dimension was “Accept prescriptions covered by my health plan”. One explanation is that the current cost of prescription medication is so expensive, therefore

people rely on a prescription drug insurance benefit. Since almost half of the respondents were state employees that had health plan coverage, they tended to select this dimension as their first choice. However, due to the fact that consumers were not aware that almost all pharmacies accept prescription benefit plan, that why consumers perceived this dimension important. Thus, they would fear losing coverage if they went to another pharmacy.

More interesting was that in the 1999 study the "Pharmacist professional service" dimension was not included in the top five most important dimensions. The result did not imply that consumers did not consider pharmacist professional service as not important as other dimensions. (As consumers rated almost all pharmacist service activities higher than three on the importance rating scale) It may be as Kotler (1988) found that service was difficult to identify by the consumers and especially pharmacist service activities were not consistently provided in the practice. Perhaps consumers did not know what the pharmacist professional services were, and so they did not expect it, even though they wanted it. The point is that since the pharmacist professional services were not easily identified (known), the consumers were going to key on other general pharmacy patronage dimensions such as convenient location and the pharmacist because those factors were more tangible.

In Lipowski' pharmacy choice model (Figure I), the expertise factor was one of the important determinant factors when consumers select a pharmacy using multi-attribute choice process. However, it seemed that consumers did not have enough knowledge in this area (as mentioned above), so they had to rely on the pharmacist (agent) to judge what was the best alternative for them. So that is probably why "Pharmacist" dimension was selected in the top three ranked dimensions. Additionally, besides relying on the pharmacist, consumers relied on other general pharmacy patronage dimensions. They acted as cues in

alternative choice processes such as heuristic choice process or even a random selection (if they had no cue) when determining consumer preferences prescription medications.

Moreover, other factors, for example: environment, competition, pharmacy regulations, and new pharmacist services could cause changes in consumers' evoked sets of pharmacy patronage preferences. As can be shown from this study, "Accepts prescriptions covered by my health plan" was ranked first in importance rating in 1999 study. One major influence that probably caused this change was due to managed care and the high cost of medication that forced consumers to rely on prescription drug coverage plan (Pritchard, Perri 1997, Schondelmeyer, Trinca 1983). Thus, other factors in the retail environment created a situation in which consumers re-evaluated and re-defined their evoked set of the five most important preferences for patronage.

Pharmacist Service Activities 1984 - 1999

The results from Hypothesis II testing showed that most of the pharmacist services activities provided today seemed to be perceived more important by respondents compared to similar pharmacist service activities in 1984 study. It could be explained by a number of factors such as enforcement of pharmacy regulations, The Wisconsin Pharmacy Examination Board Self-Inspection Project, Wisconsin Pharmacy Examination Board (PEB) Practicum Exam for Licensure, Wisconsin Pharmacy Internship Broad Consultation Project, changes in pharmacy school curriculum, and practice evolution towards a pharmaceutical care.

Based on Levitt's Total Product Concept, which is composed of four components: 1) Generic Core Product/Service, 2) Expected Product/Service, 3) Augmented Product/Service, and 4) Potential Product/Service (Levitt 1983), it could be stated that in 1984, similar pharmacist service activities that once could be grouped as augmented products/services became to be expected by all consumers. In other words, services activities such as "Tell me what the prescription medicine is and what it is used for", "Tell me of any dangers in taking prescription medications together", "Check my understanding of prescription dosage directions", etc. now are expected by consumers.

Pharmacist Service Activities Dimensions

By applying exploratory factor analysis, the four underlying pharmacist service activities dimensions were found to explain 57.936 % of the variance. The four pharmacist service activities dimensions were (1) Non-prescription Drug Consultation and Monitoring Activities, (2) Prescription Drug Consultation and Monitoring Activities, (3) Prescription Drug Administration and Management Activities, and (4) Drug-related Management and Information Activities.

The three attributes in the Non-prescription Drug Consultation and Monitoring Activities, Factor I (Gives advice on precautions to follow when using non-prescription or other self-care treatment, Helps me select non-prescription or self-care treatment that meet my needs, and Gives advice on side effects and medication interactions with non-prescription or self-care treatment) were fitted perfectly to the extended non-prescription medication services provided in community pharmacy. The reason why the dimension

accounted for 40% of the variance could be due to the fact that most consumers were not familiar with the services yet.

In Factor II, Prescription Drug Consultation and Monitoring Activities, the first five attributes (Tells me what the prescription medicine is and what it is used for, Tells me when and how to take my prescription medicine, Tells me about side effects or precautions about prescription, Tells me of any dangers in taking prescription medicines together, and Puts extra labels on the container telling me about my prescription) were found to be loaded in the same factor called "Drug Information and Monitoring" Dimension in the 1984 study. "Check my understanding of prescription dosage direction" attributes in that factor was implemented later and included in this study. As the percent variance explained for this dimension was 8.056, together with the mean importance rating was equaled to 4.29 which was very consistent comparing to the 1984 study, it seemed that the Prescription Drug Consultation and Monitoring Activities were well known by consumers and they had stable preference over the attributes under this dimension. Again, these service activities were expected and preferred by consumers.

In Prescription Drug Administration and Management Activities, Factor III, were the activities that most pharmacists regularly provided to every consumer in daily basis. Even though some attributes, for example: "Describe the effect I should expect from my prescription," seemed to fit into the prescription drug consultation and monitoring activities factor. However, if considered from a consumer's point of view, the activities might be perceived as general medication administration and management activities. Again, Factor III attributes were familiar to consumers so that the percent variance explained for this dimension was just 6.128.

Finally, Factor IV, Drug-related Management and Information Activities was composed of eight underlying attributes (Keeps a computerized record of illnesses I have, Teaches me how to use special devices to administer my medicine, Teaches me how to use equipment such as a glucose meter, Gives my doctor(s) a list of medicines that I take, Interviews me to record a prescription history and any medication allergies I have, Helps me coordinate taking my prescription when I have more than one prescription medication to take daily, Gives advice on whether or not I should see a doctor rather than treat the problem with non-prescription or self-care treatments, and Keeps a computerized record of non-prescription and self-care treatment I use). It was logical to have all these attributes loaded into this Education and Informatics Activities Dimension, since they were all related to health related information and instruction.

It was interesting to learn that pharmacist service activities that generally were implemented and labeled by pharmacists could be perceived by consumers to have different meanings and perspectives. Thus, perhaps due to perspective and labeling, pharmacists and consumers have different "evoked sets" of service activities. It would be worthwhile if pharmacists could communicate and promote their expanded services to consumers so that consumers would have clear understanding of the role of pharmacist in providing professional services. Lastly, again based on Levitt's model of the Total Product Concept, the Non-prescription Drug Consultation and Monitoring Activities could fit well into the Augmented or even Potential Product/Service Components, while Prescription Drug Consultation and Monitoring Activities and Medication Administration and Management, and Education and Informatic Activities Dimensions fitted better in the Expected Product/Service components.

Future Research

The results of this study suggest several areas for future research. First, multivariate analysis would be applied in order to find out relationship between socioeconomic variables of the sample and prescription medication patronage factors. Second, changes in preferences towards the prescription medication patronage motive dimensions tested for this studies compared to 1984 study showed that preference is dynamic, so that future follow-up study should be conducted in order to understand the trends in retail pharmacy practice. Third, The pharmacist professional service activities included in this study seem to capture most new expanded pharmacist service activities provided in retail pharmacy; however development of new pharmacist services continues to evolve, so adjustment of pharmacist service activities for this questionnaire should be updated. Fourth, because non-prescription medication and self-care service activities were perceived by most respondents as moderately important, extensive research on this topic should be conducted to explore how the role of non-prescription and self-care service affects consumer preferences in selecting the pharmacy. Fifth, from this study, prescription drug coverage becomes an essential issue and included in the evoked sets when consumers make decision about purchasing medication, it would be worthwhile for future research to study how important is prescription drug coverage to consumers in selecting their pharmacy. Sixth, the results from this study showed that consumer of prescription medication perceived the pharmacist service activities in different view from pharmacists expect or even misunderstood what pharmacist professional services were, so the research should be conducted to find the effective way how to communicate directly with consumer about pharmacist professional services.

Finally, pharmacist service activities dimensions found from this study can serve as hypothesized dimensions for confirmatory factor analysis. Likewise, other measures of consumer preferences of pharmacist service criteria should be designed and tested for convergent validity to ensure dimensions of pharmacist services are accurate.

Limitations

There are some limitations to this study. First, the sample for this study was limited to one metropolitan statistical area (MSA), Dane County, Wisconsin. A comparison of the demographic characteristics of the study sample with the MSA population revealed the sample distribution to be slightly different from the MSA population on two of the four demographic variables examined together with the sample from this study were somewhat different from the 1984 study in term of sample geographic area representation. Therefore, caution should be used in generalizing beyond the study sample. Second, all of the data were based on respondents' reported recall of their past patronage patterns. Any errors in respondent recall may have affected the results. Third, consumers reported a generally positive score importance of the pharmacist service attributes, in other words, created ceiling effects of scale. This limited the amount of variance in scores on any single item and reduced the validity of factor analysis to group items. Also, the restricted distribution of responses may have attenuated the correlations of the sub-scale scores and pharmacist services and consumers' characteristics. New items should be sought that produce a wider distribution of responses and thereby measure pharmacist service components in a finer increment (Chapko et al 1985), or the scale need to be redesigned to decrease the ceiling

effect of scale. Fourth, there are limitations in using a summative scale (Nunally 1984).

Jaccard, Brinberg and Ackerman (1986) have found that conclusions about the importance of a dimension may be quite different depending upon the method used to assess importance. Fifth, the School of Pharmacy letter-head might cause the bias result.

Respondents might want to please the researcher in some ways.

Finally, this study did not take into account consumers' past experiences with other pharmacies, and therefore was not able to determine what effect those past experiences had on the pharmacy patronage motive and pharmacist services assessment of their current pharmacy.

Chapter VI

SUMMARY AND CONCLUSION

The health care market, including pharmacy, continues to change, and **consumer preferences** are playing a dominant role in this change (Metge, Hendricksen, Maine, 1998). Accurate information on the needs and preferences of consumers is critical if pharmacy and pharmacist are to expand their service roles in the evolving health care system. Expansion of pharmacist service products and activities usually leads to the new evaluative criteria that consumers use in the pharmacy and pharmacist choice process.

The goals of this study are to investigate within the same geographic area and using the same methodology if there were changes in consumers' rating of prescription medication patronage and pharmacist services activities evaluative criteria. Specific objectives of this study were to: 1) compare results of similar prescription medication patronage criteria (consumer preferences) between 1984 and 1999, compare results of consumers' preferences toward the pharmacist services criteria from 1984 to 1999, and measure consumers' preferences toward new pharmacist services based upon implementation of pharmaceutical care into practice between 1984-1999.

A scale to measure consumer preferences toward pharmacy patronage motive and pharmacist services was designed and evaluated according to the cross-sectional, longitudinal reviews, and the procedure for developing measures of marketing constructs proposed by Churchill (1979).

Prescription medication patronage was defined as the integral components of evaluative criteria used by consumers in determining pharmacy patronage for prescription

drugs. A set of fourteen relevant dimensions was examined. Also, for this study, pharmacist services was defined as a service that provided directly by pharmacists who are responsible for the provision of drug therapy, toward a specific consumer's need in order to achieve definite outcomes that improve a consumer's quality of life. Since no other pharmacy researchers attempted to categorize the dimensions of pharmacist service, this was the first study that attempted to gather a list of pharmacist service activities since 1977. The published literature was the primary source used to generate a pool of 30 items to be incorporated in a self-report scale.

Subjects were asked how important are the fourteen prescription medication motives to them in selecting a pharmacy for obtaining medications. Then the subjects were also asked to rank the three most important reasons from the above dimensions. Subjects were also asked how important the thirty pharmacist service activities were to them when selecting the pharmacy for purchasing their medications.

The first draft of the questionnaire was reviewed by pharmacy administration faculties and graduate students for face validity, clarity, format and overall evaluation of the instrument. Then the questionnaire was offset by the printing center, placed into a self-administered mail survey booklet with draft cover letter, \$1 token, and additional written comment about the questionnaire, and sent to the selected samples for pretesting the questionnaire. Only small changes in direction were made due to some respondents being confused on how to answer the question. Subsequently, for data collection, a systematic random sample of 300 purchased from the Dane County Wisconsin Resident Mailing List and 200 State Employee Directories stratified by age and gender was selected. Of 500

surveys in initial mailing, 483 (96.6%) were presumed delivered, and 281 (58.8%) were returned, eight responses were unusable, leaving 276 surveys available for data analysis.

In Hypothesis I testing, three out of seven tested prescription medication patronage dimensions were significantly different in mean importance rating between the 1999 and the 1984 study. ($\alpha = 0.05$, directional *student t-test*) For the Hypothesis II testing, only three out of ten pharmacist service activities were not significantly different in mean importance rating between the 1999 and the 1984 study. This implied that, over time consumer preferences towards these prescription medication patronage motives and pharmacist service activities had changed somewhat.

For service dimensions, four factors were extracted by maximum likelihood method, following by Oblimin-Kaiser normalization rotation, which explained 57.936 percent of the variation in response. These four dimensions were: (1) Non-prescription Drug Consultation and Monitoring Activities, (2) Prescription Drug Consultation and Monitoring Activities, (3) Prescription Drug Administration and Management Activities, and (4) Drug-related Management and Information Activities.

In conclusion, changes in preferences towards the prescription medication patronage motives dimensions tested for this study compared to the 1984 study, showed that preferences are dynamic. As explained by Lipowski's Model of Pharmacy Choice, cues or preferences for pharmacy choice have changed. Second, the product mix of pharmacist services continues to evolve and expand in practice. Third, because non-prescription medication and self-care services were perceived by most respondents in this study as moderately important, extensive research on this topic should be conducted to explore how the role of non-prescription and self-care service affect in consumer preferences in selecting

the pharmacy. Fourth, from this study, prescription drug coverage becomes an essential issue and included in the evoked sets when consumers make decision about purchasing medication, it would be worthwhile for future research to study how important prescription drug coverage is to consumers in selecting their pharmacy. Finally, It seems that consumers do not understand the general preference cues for professional services. Thus, pharmacists must develop promotional tools to educate consumers about professional services and communicate their expanded services (especially those services that are grouped in augmented or potential categories) to consumers so that consumers would have clear understanding of the role of pharmacist in providing professional services.

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APPENDICES

Appendix A

Tables:

- Table I: List of Major Studies of Prescription Medication Patronage Motives and Pharmacist Service Activities (1973-1998).
- Table II: Prescription Medication Patronage Dimension References.
- Table III: Pharmacist Service Activities References.

Table I: List of Major Studies of Prescription Medication Patronage Motives and Pharmacist Service Activities (1973-1998)

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Table II: Prescription Medication Patronage Dimension References

Items	Exact wording	Similar meaning
1. Always has my prescription medication in stock.	5. Always has my prescription medication in stock. (pharmacist competence)	6. The pharmacy is rarely out of the merchandise I come here to buy. 11. Availability of prescription medication. 12. The pharmacy always has the prescription medication needed to fill my prescription. (empathy) 18. Availability of products and service. 21. Availability of products and service.
2. Private area to speak with a pharmacist about my prescriptions.		11. The pharmacist talks to me privately.

<p>3. Convenient location.</p>	<p>13. Convenient location (Store characteristics)</p> <p>16. Convenience of store location</p> <p>18. Convenient Location</p> <p>21. Convenient location.</p>	<p>2. Convenience.</p> <p>3. Good location to home/work.</p> <p>4. Convenience.</p> <p>5. Near work (Temporal convenience), Located in shopping center or mall. (Shopping center location), Near doctor's office. (Near doctor's office)</p> <p>6. Parking at this pharmacy is convenient.</p> <p>10. Convenience/location. Near doctor.</p> <p>11. Location, Available parking.</p> <p>14. Drug store is located close to home.</p> <p>15. Near home, Long time needed to reach store. (Location and Convenience)</p> <p>17. Location, Convenience.</p> <p>19. Pharmacy is close to consumer's home, Convenient parking.</p>
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4. Store appearance (layout, décor, clean, well lit).

3. Attractive appearance.

6. The merchandise displays in this pharmacy are always attractive.

12. The pharmacy's physical facilities are physically appearing. (Tangible)

14. Drug store has bright, colorful lighting. Drug store has many colorful, attractive displays.

15. Attractive décor. Bright colorful store. Attractive Display. (Physical feature)

16. Good store layout for fast and easy shopping.

5. Prompt and attentive service.

18. Prompt and helpful service.

3. Efficient service.

4. Service.

5. The pharmacist is available to answer questions about my prescription quickly. The pharmacist dispenses prescriptions quickly.

6. My prescriptions at this pharmacy are prepared in a reasonable of time. The pharmacist(s) at this pharmacy is (are) always available to answer my questions about non-prescription and prescription medication.

10. Good service.

12. The pharmacy provides its services at the time its promises to do so.

(Responsive). You do not receive prompt service from the pharmacy employee.

(Responsive). Employees of the pharmacy are too busy to response to customers' requests promptly.

14. Fast checkout.

17. Scope of services.

<p>6. Home delivery and emergency service.</p>	<p>2. Delivery. 4. Delivery. 5. Delivery services provide. (Tradition) 17. Rx delivery. 22. Provide Rx emergency service (after hours)</p>	<p>6. The pharmacist(s) at this pharmacy will provide emergency prescription medication. 9. Pharmacy should reopen pharmacy for an emergency prescription. 13. Free delivery available. 11. The pharmacy delivers my medication to my home or office. 15. Slow delivery services. Adequate emergency services available. (Emergency service)</p>
<p>7. Pharmacist professional service such as consultation.</p>		<p>5. Drug information and monitoring dimension. 9. Pharmaceutical service. 25. Professional services. 26. Drug information and monitoring. 27. Pharmaceutical service.</p>

<p>8. Merchandise selection for other health care products.</p>		<p>3. Good range of products/services. 4. Variety of merchandise. 6. This pharmacy carries the non-prescription medication I need. 11. The pharmacy sells medical devices. The pharmacy has a wide selection of non-prescription medication. 14. Drug store carries easy to find merchandise. 15. Wide selection of different kinds of items. (merchandise mix) 16. Availability of generic non-prescription medications.</p>
<p>9. Accepts prescriptions covered by my health plan.</p>	<p>5. Accepts prescriptions covered by my health plan. (Economic)</p>	<p>9. Acceptance of insurance plan.</p>

<p>10. Prices of prescription medications.</p>	<p>2. Price. 3. Competitive price. 4. Price. 11. Prescription price. 15. Price dimension. 16. Reasonable price. 17. Cost. 18. Prescription price. 19. Prescription price. 21. Prescription price.</p>	<p>5. Low price for prescription drug. (Economic) 6. This pharmacy's prescription medication prices are competitive. 13. Prices are lower. 14. Prices are lower than other store.</p>
<p>11. Pharmacist (competent, knowledgeable).</p>	<p>5. Pharmacist Competence Dimension. 17. The pharmacist.</p>	<p>2. Confidence in pharmacist. 10. Trust pharmacist. 11. Knowledgeable pharmacist. 12. The pharmacist is dependable. (Reliability) 15. Well-informed pharmacist. Dependable pharmacist. (Personnel) 18. Friendly & reliable pharmacist. 21. Friendly & reliable pharmacist.</p>

<p>12. Hours open.</p>	<p>3. Convenient trading hours.</p> <p>11. Hours of operation.</p> <p>13. Convenient hours of operation.</p> <p>16. Open during convenient hour.</p> <p>18. Convenient hours.</p> <p>21. Convenient hours.</p>	<p>5. Open evening. Open Sunday and Holiday. (Temporal convenience)</p> <p>6. The hours this pharmacy is opened are convenient for me.</p> <p>19. Evening hours.</p>
<p>13. Pharmacy technical staff.</p>	<p>17. Pharmacy personnel.</p>	<p>3. Know the staff.</p> <p>5. Clerks and other personnel are friendly (Friendly personnel).</p> <p>6. The employees at this pharmacy always make extra effort to help me find what I need.</p> <p>10. Know staff.</p> <p>11. Friendly staff.</p> <p>12. Employees of the pharmacy do not give you personal attention. Employees of the pharmacy do not know your needs are. (Empathy) Employees of the pharmacy are polite. (Assurance)</p> <p>15. Courteous clerks. Helpful clerks. (Personnel)</p> <p>16. Friendly staff. Knowledgeable staff.</p>

14. Other.		
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- The number listed in front of the sentence represents the researcher and research article published in Table I.

Table III: Pharmacist Service Activities References

Items	Exact Meaning	Similar Meaning
1. Tells me what the prescription medicine is and what it is used for.	5. (Drug information and monitoring dimension)	<p>6. The pharmacist(s) at this pharmacy provide(s) excellent information about how to properly use each prescription.</p> <p>19. Pharmacist tells consumer the purpose of the drug.</p> <p>26. Telling you what your medication is used for.</p> <p>27. Pointing out the name and purpose of medication. (Prescription counseling)</p>
2. Tells me when and how to take my prescription medicine.	5. (Drug information and monitoring dimension)	<p>11. The pharmacist explains how to take my medication.</p> <p>19. Pharmacist tells consumer directions for use.</p> <p>22. Advice on how and when to take medication.</p> <p>26. Talking to you about your medication.</p> <p>27. Explaining how you medicine should be taken. (Prescription counseling)</p>

<p>3. Tells me about side effects or precautions about my prescription medicine.</p>	<p>5. (Drug information and monitoring dimension)</p>	<p>6. The pharmacist(s) at this pharmacy always review(s) my prescription medication with me to explain possible side effect or problems.</p> <p>9. Pharmacist should explain prescription storage condition and side effects.</p> <p>19. Pharmacist warns consumer about possible side effects and precautions.</p> <p>26. Explaining the possible side effects that your medication may cause.</p> <p>27. Describing the effects you should expect from your medication.</p>
<p>4. Tells me any dangers in taking prescription medicines together.</p>	<p>5. (Drug information and monitoring dimension)</p> <p>26. Telling you about the danger of taking drugs together.</p>	<p>27. Explaining to you how to take all your medications together.</p> <p>28. Drug interaction warning.</p>
<p>5. Puts extra labels on the container telling me about my prescription medicine.</p>	<p>5. (Drug information and monitoring dimension)</p>	

<p>6. Checks my understanding of prescription dosage directions.</p>		<p>9. Pharmacist should verbally check a patron's understanding of a prescription's dosage directions.</p>
<p>7. Contacts my doctor if needed.</p>		<p>5. The pharmacist can always contact my doctor.</p> <p>9. Pharmacist should contact a physician when he discovers a possible patient- drug reaction.</p> <p>9. Pharmacist should call physician if no renewal remains on prescription.</p> <p>26. With your doctor if the prescription is unclear.</p> <p>27. Calling your doctors to make recommendations for changes in your therapy.</p>
<p>8. Marks refills on my prescription label.</p>		<p>9. Pharmacist should mark number of renewals remaining on prescription label.</p> <p>28. Refill reminder.</p>
<p>9. Checks if the prescription medicine strength and dose are correct for me.</p>		<p>27. The name on the prescription to be sure it is for you. (Attention to safety).</p> <p>27. To see that the drug's strength and dose are correct for you. (Attention to safety)</p>

<p>10. Explains any prescription filling delays if they occur.</p>		<p>11. Upon presenting a prescription, the pharmacist explains any prescription delay.</p>
<p>11. Gives an emergency supply of prescription medicine if needed.</p>		<p>6. Pharmacist(s) at this pharmacy will provide emergency prescription medication. 9. Pharmacist should reopen pharmacy for an emergency prescription. 15. Adequate emergency services available. 22. Provide emergency Rx service (after hours)</p>
<p>12. Describes the effects I should expect from my prescription medicine.</p>	<p>27. Describe the effect you should expect from your medication.</p>	
<p>13. Explains what to do if I miss the dose.</p>	<p>27. Explaining what to do in the event you miss a dose.</p>	

<p>14. Give written information about my prescription medicine.</p>		<p>5. The pharmacist gives me brochures and/or pamphlets about my medicine.</p> <p>27. Providing you with printed advisories about taking your drug.</p> <p>27. Providing you with printed warnings about certain effects of your drugs.</p>
<p>15. Keeps a computerized record of my prescription medicines and allergies.</p>		<p>5. The pharmacist keeps a record of my drug allergies.</p> <p>12. The pharmacist keeps its records accurately.</p> <p>19. Pharmacy maintains patient medication records.</p> <p>26. Keeping a record of your prescriptions.</p>
<p>16. Checks for medication interactions.</p>		<p>5. The pharmacist checks for drug interaction.</p> <p>27. Checking to see if you have any side effects from your medication.</p>

<p>17. Answers my questions either in person or by phone.</p>		<p>5. The pharmacist is available to answer questions about my prescription quickly.</p> <p>5. I can talk to the pharmacist by phone about prescription drugs.</p> <p>6. The pharmacist(s) at this pharmacy is (are) always available to answer my questions about non-prescription and prescription medications.</p> <p>11. Ability to talk to pharmacist.</p> <p>13. Pharmacist is readily available for personal consultation.</p>
<p>18. Keeps a computerized record of illnesses I have.</p>		<p>2. Keep my health record.</p> <p>22. Maintains computerized patient profile.</p>
<p>19. Teaches me how to use special devices to administer my prescription medicine. (For example, how to use an inhaler.)</p>		<p>27. Explaining the use of complicated dosage forms.</p>

<p>20. Teaches me how to watch for side effects of my prescription medicine.</p>		<p>27. Describing the effect you should expect from your medication.</p>
<p>21. Teaches me how to use equipment such as a glucose meter or blood pressure cuff.</p>		<p>27. Explaining the use of a complicated dosage forms</p>
<p>22. Gives my doctor(s) a list of medications that I take.</p>		<p>27. Providing the physician with a list of medications you are taking.</p>
<p>23. Keeps my computerized record confidential.</p>		<p>27. Assure you that the list is kept confidential,</p>

<p>24. Interviews me to record a prescription medicine history and any medication allergies I have.</p>		<p>27. Interviews you to obtain a list of medications you have taken and are currently taking: the list includes both prescription and non-prescription medications.</p> <p>27. Collects your information about your allergies and your medical conditions.</p> <p>27. Enters the information into a computer record that is specific for you.</p>
<p>25. Helps me coordinate taking my prescription medicines when I have more than one prescription medicine to take daily.</p>		<p>27. Explaining to you how to take all medications together.</p>
<p>26. Gives advice on whether or not I should see a doctor rather than treat the problem with non-prescription or self-care treatments.</p>		<p>16. Availability of advice on whether you should see a doctor rather than treat yourself with a non-prescription medication.</p>

<p>27. Gives advice on precautions to follow when using non-prescription or other self-care treatments.</p>		<p>16. Availability of advice on any precautions to be followed while using non-prescription medications.</p>
<p>28. Keeps a computerized record of non-prescription and self-care treatments I use.</p>		<p>27. Interviews you to obtain a list of medications you have taken and are currently taking: the list includes both prescription and non-prescription medications.</p>
<p>29. Helps me select non-prescription or self-care treatments that meet my needs.</p>		<p>16. Assistance in choosing among various brands of the same non-prescription medication.</p> <p>27. Helping you to select and explain the use of medication you can purchase without prescription.</p>

Appendix B

First Draft Questionnaire

Cover Letter

Comment and Suggestion

Questionnaire Booklet

Second Draft Questionnaire

Cover Letter

Comment and Suggestion

Postcard

Questionnaire Booklet

Final Questionnaire

Cover Letter

Invitation and Follow-up Postcard

Questionnaire Booklet

First Draft Questionnaire

July 1998

Dear Sir or Madam:

A good understanding of your attitudes and opinions is important for pharmacists to improve services they provide to you. In 1983, the University of Wisconsin School of Pharmacy completed a series of studies in Dane County about pharmacy and pharmacist services. Results provided valuable information on how pharmacists and insurers could serve consumers better.

We now are repeating those studies and need your help. We want to learn your opinions about:

- 1 -factors you use in selecting a pharmacy or pharmacist for your prescription drugs,
- 2- services pharmacists provide now and in the future,
- 3 -talking with pharmacists, and
- 4 -prescription drug plans and insurance.

You are one of a representative sample of consumers who is being contacted. Your address was chosen from a random sample of the addresses listed in local telephone directories. Your responses are anonymous. The form will take about 26 minutes to complete. If you wish to comment on any questions please do so on the last page.

Thank you for your time and help. Your cooperation is greatly valued and appreciated.

Sincerely,

Pharmacist Burin T. Sriwong
Graduate Student,
Pharmacy Administration

Pharmacist Joseph B. Wiederholt, Ph.D.
Professor, Pharmacy Administration

P.S. Please enjoy a beverage of your choice while completing this form.

We are pretesting the survey and would appreciate your help. As you complete the survey, we also are interested in the following questions:

1. Do the directions in each sections is clear to you to follow?
2. How long does it take to complete the questionnaire? (minutes)
3. What do you think about the ordering of the sections?
4. How do you feel when answering the survey? (appropriate, interesting, boring, complicate, etc)
5. Does the format of the questionnaire is easy to follow?
6. Is there any questions make you confused or do not want to answer?
7. Other?

THANK YOU

Please Complete This Form Even If You Have Not Obtained a Prescription Recently

Section I: Prescription Drug Patronage

How important are the following reasons to you or your family in selecting a pharmacy to obtain prescription drugs?

There is a rating scale opposite each reason. Please circle your choice.

A. Reason

	Importance Scale				
	Of No Importance	Little Importance	Moderate Importance	Considerable Importance	Great Importance
1. Convenient location.	1	2	3	4	5
2. Pharmacist(s).	1	2	3	4	5
3. Other store personnel.	1	2	3	4	5
4. Prices of prescriptions.	1	2	3	4	5
5. Accepts prescriptions covered by my health plan.	1	2	3	4	5
6. Merchandise selection for other health care products.	1	2	3	4	5
7. Pharmacist professional services such as consultation.	1	2	3	4	5
8. Home delivery and emergency services.	1	2	3	4	5
9. Prompt and attentive service.	1	2	3	4	5
10. Store appearance (layout, decor, clean, well lit).	1	2	3	4	5
11. Hours open.	1	2	3	4	5
12. Private area to speak with a pharmacist about your prescriptions.	1	2	3	4	5
13. Always has my prescription in stock.	1	2	3	4	5
14. Other _____	1	2	3	4	5

B. Now from the above list of reasons select three that are most important to you. Place the reason's number in the box

	Most Important
	Second Most Important
	Third Most Important

Section II: Pharmacist Service Activities

Next we want to learn your opinion about how important specific pharmacist services are to you and your family.

Below is a list of pharmacist services related to prescription drugs, over-the-counter drugs (OTCs) and also other self-care items such as herbal or homeopathic remedies. The list was compiled from pharmacist service activities either advertised or offered by pharmacists in Dane County between 1983 and 1997.

Using the importance rating scale next to each service circle your choice on the scale. After you rate the importance of the service let us know whether you have ever used or experienced the service by circling yes, no or don't know (DK).

Prescription Service Activities	Importance Scale					Experience with this service		
	Of No Importance	Little Importance	Moderate Importance	Considerable Importance	Great Importance	Yes	No	DK
The pharmacist:								
1. Tells me what the prescription medicine is and what it is used for.	1	2	3	4	5	Yes	No	DK
2. Tells me when and how to take my prescription medicine.	1	2	3	4	5	Yes	No	DK
3. Tells me about side effects or precautions about my prescription medicine.	1	2	3	4	5	Yes	No	DK
4. Tells me any dangers of taking prescription medicine together.	1	2	3	4	5	Yes	No	DK
5. Puts extra labels on the container telling me about my prescription medicine.	1	2	3	4	5	Yes	No	DK
6. Checks my understanding of prescription dosage directions.	1	2	3	4	5	Yes	No	DK
7. Contacts my doctor if needed.	1	2	3	4	5	Yes	No	DK
8. Marks renewals on my prescription label.	1	2	3	4	5	Yes	No	DK
9. Checks if the prescription medicine strength and dose are correct for me.	1	2	3	4	5	Yes	No	DK
10. Explains any prescription filling delays if they occur.	1	2	3	4	5	Yes	No	DK
11. Gives an emergency supply of prescription medicine if needed.	1	2	3	4	5	Yes	No	DK
12. Describes the effects I should expect from my prescription medicine.	1	2	3	4	5	Yes	No	DK
13. Explains what to do if I miss a dose.	1	2	3	4	5	Yes	No	DK
14. Gives written information about my prescription medicine.	1	2	3	4	5	Yes	No	DK
15. Keeps a computerized record of my prescription medicines and allergies.	1	2	3	4	5	Yes	No	DK

	Importance Scale					Experience with this service?		
	Of No Importance	Little Importance	Moderate Importance	Considerable Importance	Great Importance			
The pharmacist:								
16. Checks for drug interactions.	1	2	3	4	5	Yes	No	DK
17. Answers my questions either in person or by phone.	1	2	3	4	5	Yes	No	DK
18. Keeps a computerized record of illnesses I have.	1	2	3	4	5	Yes	No	DK
19. Teaches me how to use special devices to administer my prescription medicine (for example how to use an inhaler).	1	2	3	4	5	Yes	No	DK
20. Teaches me how watch for benefits or side effects of my prescription medicine.	1	2	3	4	5	Yes	No	DK
21. Teaches me how to use equipment such as a glucometer or blood pressure cuff.	1	2	3	4	5	Yes	No	DK
22. Gives my doctor(s) a list of medications that I take.	1	2	3	4	5	Yes	No	DK
23. Keeps my computerized records confidential.	1	2	3	4	5	Yes	No	DK
24. Interviews me to record a prescription drug history and any medication allergies I have.	1	2	3	4	5	Yes	No	DK
25. Helps me coordinate taking my prescription medicine when I have more than one prescription medicine to take daily.	1	2	3	4	5	Yes	No	DK
26. Gives advice whether or not I should see a doctor rather than treat the problem with OTC or self-care treatment.	1	2	3	4	5	Yes	No	DK
27. Gives advice on precautions to follow when using OTC or other self-care treatment.	1	2	3	4	5	Yes	No	DK
28. Keeps a computerized record of OTC and self-care treatment I use.	1	2	3	4	5	Yes	No	DK
29. Helps me select OTC or self-care treatment that meet my needs.	1	2	3	4	5	Yes	No	DK
30. Gives advice on side effects and drug interactions with OTC or self-care treatment.	1	2	3	4	5	Yes	No	DK

Go to The Top of Page 5

We have learned from consumers that sometimes there are things that pharmacists do (or do not do) that bother consumers.

Has there ever been a time that something has bothered you about your pharmacist or his/her services?

No

Yes (If yes please tell us what bothered you)

Section III: Innovative and Expanded Pharmacist Services

Below are descriptions of two expanded pharmacist services that pharmacists could offer at a pharmacy. Please read each description and answer the questions after each service. Remember you are giving us your opinion. There are no right or wrong answers.

A. Complete Drug Record Service

A pharmacist interviews patients to collect information about OTC drugs, self care herbal and homeopathic remedies they use; then combine that information with the patients prescription drug record.

At each visit, the pharmacist would update the complete drug profile for changes in prescription and OTC drugs or self-care remedies. The pharmacist would use the information in the complete drug record:

- 1) to work with patients and their doctors in reducing risk of serious drug interactions or side effects, and
- 2) to help patients properly use their prescription drugs, OTC drugs or other self-care remedies

After reading the description, please answer the following questions marking your answer in the space.

1. In general how useful would this Complete Drug Record Service be to you or someone in your family?

Not at All Useful Slightly Useful Moderately Useful Very Useful Extremely Useful

2. What price would be appropriate (per month) for this Complete Drug Record Service? \$ _____

3. If the Complete Drug Record Service was available now at the pharmacy you patronize would you use it?

Yes No Don't know

4. Should the Complete Drug Record Service be covered in your health insurance plan?

Yes No

B. Drug Therapy Management Planning

By appointment, a pharmacist would meet with a patient, patient's family or care givers to develop a plan for managing a patient's drug therapy. At this special meeting a pharmacist would work with with patient to:

- 1) learn a patient's therapy needs, preferences and goals related to drug and self-care treatment
- 2) teach a patient how to manage and monitor his/her drug therapy and self care treatment
- 3) develop strategies and methods to avoid drug therapy problems in cooperation with your doctor
- 4) coordinate a dosing schedule to match the patient's lifestyle and activities

After reading the description, please answer the following questions marking your answer in the space.

1. In general how useful would this Drug Therapy Management Planning Service be to you or someone in your family?

Not at All Useful Slightly Useful Moderately Useful Very Useful Extremely Useful

2. What price would be appropriate for this Drug Therapy Management Planning Service? \$ _____

3. If the Drug Therapy Management Planning Service was available now at the pharmacy you patronize would you use it?

___ Yes ___ No ___ Don't know

4. Should this Drug Therapy Management Planning Service be covered in your health insurance plan?

___ Yes ___ No

Go To The Top Of Page 7

Please think about the pharmacist who talks with you at your pharmacy. If you do not know a pharmacist, think about the pharmacists in general at the pharmacy you patronize. Below is a list of statements we want you to rate by using this scale.

Note: If you have NEVER spoken to a pharmacist, then do not answer this section. Skip to Section V on Page 8.

Awful	Poor	Fair	Good	Very Good	Excellent	Outstanding
1	2	3	4	5	6	7

Write one number (1-7) in each blank space.

How would you rate the pharmacist(s) on...?

_____ ... how easy s/he is to talk to

_____ ... how s/he has your best interest in mind

_____ ... how s/he allows you to be yourself with her/him

_____ ... how sincere s/he is

_____ ... how trustworthy s/he is

_____ ... how complete s/he is in addressing your concerns

_____ ... how s/he asks if you have any questions

_____ ... how s/he trusts you in making decisions about your health

_____ ... how s/he believes what you say

_____ ... how s/he explains what is happening

_____ ... how s/he takes time to explain things to you

_____ ... how patient s/he is with you

_____ ... how relaxed s/he makes you feel

_____ ... how s/he shows concern for you

_____ ... how s/he respects you as a person

_____ ... how s/he listens to what you have to say

_____ ... how comfortable s/he makes you feel sharing your deepest concerns with her/him

_____ ... how s/he tries to understand your feelings

_____ ... how s/he respects what you say

_____ ... how special s/he makes you feel

_____ ... how s/he puts your best interest first

Section V: Prescription Drug Plans and Insurance

In this section we want to learn about how you pay for your prescription drugs, the value of prescription drug benefits to you, and some of your experiences with prescription drug insurance coverage.

This section has two parts. To answer each question, please read the directions by it.

A. Insurance Questions

Do you have any health insurance? Yes (please continue) No (skip to Section VI on Page

What health insurance plan are you using now? _____

In selecting your health insurance plan, on a scale of zero to ten, how much importance did you place on prescription drug coverage? Specifically, how important was the prescription drug coverage to you? (Circle the appropriate number below.)

0	1	2	3	4	5	6	7	8	9	10
No Weight (Was not considered at all in my decision)										Total Weight (my decision was based on this alone)

How is the cost of prescriptions covered by your insurance plan? (check one)

- The entire cost of my prescription medications is paid by the insurance plan.
- Part of the cost of my prescription medications is paid by the insurance plan (also check one that apply).
- I pay a copayment for each prescription
- I pay a percent of the cost for each prescription
- None of the cost of my prescription medications is paid by my health insurance plan. (please skip to Section VI on Page 10)

Go to The Top of Page 9

B. Coverage Questions:

Listed below are some events related to prescription drug insurance coverage that you may have experienced. Read each event. Then

Please circle:

- a) How often an event has occurred to you?: Never Occasionally Frequently
- b) If it has occurred, then let us know how much it bothered you by circling: Never Occasionally Frequently

<u>Event</u>	<u>How often occurred?</u>			<u>How much bother?</u>		
	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Having to change pharmacies to get prescriptions covered.	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Having to switch drugs because of coverage changes.	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Needing to get drugs via mail in order to continue receiving them.	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Going without medication(s) due to a gap or delay in coverage.	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Having to pay more to get a brand name instead of a generic drug.	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Having to pay more to get a non-formulary drug.	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Having the quantity of medication dispensed at a time decreased.	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Waiting at the pharmacy while the pharmacist contacts the insurer about my prescription and coverage.	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Having the quantity of medication dispensed at a time increased.	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Being contacted by the insurer about changing my medication(s) to continue coverage.	Never	Occasionally	Frequently	Never	Occasionally	Frequently
Other (describe) _____	Never	Occasionally	Frequently	Never	Occasionally	Frequently

Are there any other comments about your insurance or Prescription Drug Coverage that you would like to share with us?

Section VII: General Information

Finally, your answers to some questions about yourself will help us categorize the results of the study. Please circle or write in your response.

1. In your lifetime, have you ever obtained a prescription at a pharmacy for yourself? (Please circle a number)

(1) Yes → Continue on to Question 2 (2) No → Go to Question 7

2. About how many new and refill prescriptions have you obtained for yourself in the past month?
(Please circle a number)

(1) 0 (2) 1-5 (3) 6-10 (4) 11 or more

3. About how much a month do you pay for purchase of prescription medications?
\$ _____

4. How many pharmacies do you use for your prescription drug needs?

_____ Number of pharmacies

Please list all the names and location of the pharmacies you patronage to obtain prescription drugs.

(For example: Kmart on East Washington Ave., Physician Plus at West Towne, or Gerhardt Drugs on Cottage Grove Rd.)

Name

Location

- 1. _____
- 2. _____
- 3. _____
- 4. _____

From the list of above pharmacies select the one which you obtain your prescription drugs most often: _____

5. Do you have any children living with you (18 years old or less)?

(1) Yes → If yes, how many? _____

(2) No

6. How many persons currently are living in your household on a full-time basis, including yourself?

_____ number of persons

7. How do you rate your health? (Please circle a number)

- (1) Poor
- (2) Fair
- (3) Good
- (4) Very Good
- (5) Excellent

8. About how long have you lived at your present address? (Please circle a number)

- 1. less than 1 year
- 2. 1 to 2 years
- 3. more than 2 years, up to 5 years
- 4. more than 5 years, up to 10 years
- 5. more than 10 years

9. What is your age?

_____ years (please write in your age)

10. What is your gender? (1) male (2) female

11. How many years of formal education have you completed? (please circle only one number)

- | | | | | | | | | | | | | |
|---------------------------------------|----|----|----|----|----|-------------|------------|---|---|----|----|----|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Grade school | | | | | | High school | | | | | | |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 or more | | | | | |
| College or post high school education | | | | | | | | | | | | |

12. Please describe your present occupation (consider homemaker as an occupation).

Title _____

Type of work you do _____

Type of company or business _____

10. If you have any additional comments about your pharmacist, pharmacy or prescription drug insurance coverage, please feel free to include them here.

AGAIN, THANK YOU FOR YOUR HELP.

Directions for returning this form are on the inside of the back cover

DIRECTIONS FOR RETURNING THE BOOKLET

Please fold and insert booklet in postage paid envelope and mail.

THANK YOU

Second Draft Questionnaire

Fall 1998

Dear Sir or Madam:

Understanding your attitudes and opinions about pharmacists and their services is important for pharmacists to better serve you. In 1983, we conducted a series of studies in Dane County about pharmacy and pharmacist services. People like you provided valuable information on how pharmacists and insurers could serve consumers better.

Now we are repeating those studies and need your help. We want to learn your opinions about:

- Factors you use in selecting a pharmacy or pharmacist for your prescription medications,
- Services pharmacists provide now and in the future, and
- Talking and working with pharmacists.

You are one of a representative sample of consumers who are being contacted. Your address was chosen from a random sample of the addresses listed in directories.

The form will take about 10 to 20 minutes to complete. If you wish to comment on any questions please do so on the last page. Your responses are anonymous.

Your participation is voluntary. You agree to participate in the study when you return the form in the self-addressed, stamped envelope.

Thank you for your time and help.

Sincerely,

Pharmacist Joseph B. Wiederholt, Ph.D.
Professor
Pharmacy Administration

Pharmacist David H. Kreling, Ph.D.
Associate Professor
Pharmacy Administration

P.S. Please enjoy a beverage of your choice while completing this form.

School of Pharmacy

October 1998

Dear Sir or Madam:

We are preparing a survey about consumer's attitudes and opinions toward pharmacy and pharmacist services. We need your help to test the survey prior to sending it to a large sample of consumers in Dane County. The survey includes a cover letter and the survey booklet.

You were selected by a random sample of names from directories. Your responses are anonymous. Your participation is voluntary.

Please read the cover letter and complete the survey booklet. When completing the survey think about the following questions.

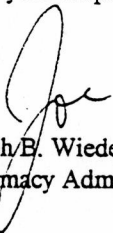
- * Did the cover letter answer your questions about the survey and your participation?
- * Was the format of the booklet easy to follow?
- * Were there any questions that were confusing to you?
- * Were the directions for each section clear and easily understood?
- * How many minutes did it take to complete the survey?
- * Are there other comments you wish to share with us about the survey?

There is space on the back side of this letter for you to answer these questions. Or, if you wish, just write your comments in the booklet. Your responses to the survey questions and comments about the survey will help us refine the survey before we send it to the final sample of consumers.

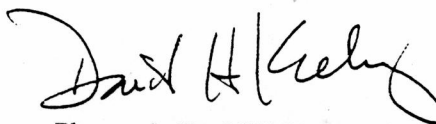
There is a self-addressed, stamped envelope for you to return the survey. Place your completed survey and your comments in that envelope and mail.

Thanks again for your help.

Sincerely,



Pharmacist Joseph E. Wiederholt, Ph.D.
Professor of Pharmacy Administration
Ph. 262-0452



Pharmacist David H. Kreling, Ph.D.
Associate Professor of Pharmacy
Administration, Ph. 262 -3454

School of Pharmacy

HERE IS SPACE TO ANSWER THE FOLLOWING QUESTIONS:

1. Did the cover letter answer your questions about the survey and your participation? Yes No
Comments:

2. Was the format of the booklet easy to follow? Yes No
Comments:

3. Were there any questions that were confusing to you? Yes No
If yes, please tell us which ones.

4. Were the directions in each section clear and easily understood? Yes No
Comments:

5. About how many minutes did it take to complete the survey? _____ minutes
Comments:

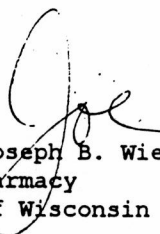
6. Are there other comments you wish to share with us about the survey? Yes No
Comments:

Dear Sir or Madam:

Last week a form was mailed to you asking your opinions about pharmacy, pharmacist services and prescription drug plans.

If you already have completed and returned the form, THANK YOU VERY MUCH FOR YOUR HELP! If you have not mailed the completed form, please do so today.

Sincerely,


Pharmacist Joseph B. Wiederholt, Ph.D.
School of Pharmacy
University of Wisconsin at Madison

**Survey
of
Consumer Attitudes and Behaviors
Toward
Pharmacy and Pharmacist Services**

The University of Wisconsin



**SONDEREGGER
RESEARCH CENTER**

Interdisciplinary Research in Social and Administrative Pharmacy

School of Pharmacy

General Instructions

Please complete this form even if you have not obtained a prescription recently.

For each section there are instructions on how to answer questions by circling, checking or writing in your responses.

CONTINUE TO NEXT PAGE →

How **important** are the following reasons to you in selecting a pharmacy to obtain prescription medications?

There is an **importance scale** opposite each reason. Please **circle** your choice.

Importance Scale

A. Reason to Select a Pharmacy	<u>Of No</u> <u>Importance</u>	<u>Little</u> <u>Importance</u>	<u>Moderate</u> <u>Importance</u>	<u>Considerable</u> <u>Importance</u>	<u>Great</u> <u>Importance</u>
1. Always has my prescription medication in stock.	1	2	3	4	5
2. Private area to speak with a pharmacist about my prescriptions.	1	2	3	4	5
3. Convenient location.	1	2	3	4	5
4. Store appearance (layout, decor, clean, well lit).	1	2	3	4	5
5. Prompt and attentive service.	1	2	3	4	5
6. Home delivery and emergency services.	1	2	3	4	5
7. Pharmacist professional services such as consultation.	1	2	3	4	5
8. Merchandise selection for other health care products.	1	2	3	4	5
9. Accepts prescriptions covered by my health plan.	1	2	3	4	5
10. Prices of prescription medications.	1	2	3	4	5
11. Pharmacist (competent, knowledgeable)	1	2	3	4	5
12. Hours open.	1	2	3	4	5
13. Pharmacy Technical Staff.	1	2	3	4	5
14. Other	1	2	3	4	5

B. Now from the list of reasons above select the three that are most important to you. Place the reason's number in the box below.

Most Important

Second Most Important

Third Most Important

We want to learn your opinion about how important specific pharmacist services are to you and your experiences with a service.

Below is a list of pharmacist services related to prescription medications, non-prescription (over-the-counter) medications and also other self-care items such as herbal or homeopathic remedies. The list was compiled from pharmacist service activities either advertised or offered by pharmacists in Dane County between 1983 and

There is an importance scale next to each service. Circle your choice on the scale. Then check the box if you experienced that service.

Importance Scale

Prescription Service Activities

Pharmacist:

	<u>Of No</u> <u>Importance</u>	<u>Little</u> <u>Importance</u>	<u>Moderate</u> <u>Importance</u>	<u>Considerable</u> <u>Importance</u>	<u>Great</u> <u>Importance</u>	<u>Experienced</u> <u>Service</u>
Tells me what the prescription medicine is and what it is used for.	1	2	3	4	5	<input type="checkbox"/>
Tells me when and how to take my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>
Tells me about side effects or precautions about my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>
Tells me of any dangers in taking prescription medicines together.	1	2	3	4	5	<input type="checkbox"/>
puts extra labels on the container telling me about my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>
Checks my understanding of prescription usage directions.	1	2	3	4	5	<input type="checkbox"/>
Contacts my doctor if needed.	1	2	3	4	5	<input type="checkbox"/>
Marks refills on my prescription label.	1	2	3	4	5	<input type="checkbox"/>
Checks if the prescription medicine strength and dose are correct for me.	1	2	3	4	5	<input type="checkbox"/>
Explains any prescription filling delays if they occur.	1	2	3	4	5	<input type="checkbox"/>
Gives an emergency supply of prescription medicine if needed.	1	2	3	4	5	<input type="checkbox"/>
Describes the effects I should expect from my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>
Explains what to do if I miss a dose.	1	2	3	4	5	<input type="checkbox"/>
Gives written information about my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>

Importance Scale

	<u>Of No Importance</u>	<u>Little Importance</u>	<u>Moderate Importance</u>	<u>Considerable Importance</u>	<u>Great Importance</u>	<u>Experienced Service</u>
1. Keeps a computerized record of my prescription medicines and allergies.	1	2	3	4	5	<input type="checkbox"/>
2. Checks for medication interactions.	1	2	3	4	5	<input type="checkbox"/>
3. Answers my questions either in person or by phone.	1	2	3	4	5	<input type="checkbox"/>
4. Keeps a computerized record of illnesses I have.	1	2	3	4	5	<input type="checkbox"/>
5. Teaches me how to use special devices to administer my prescription medicine. (For example, how to use an inhaler.)	1	2	3	4	5	<input type="checkbox"/>
6. Teaches me how to watch for side effects of my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>
7. Teaches me how to use equipment such as a glucose meter or blood pressure cuff.	1	2	3	4	5	<input type="checkbox"/>
8. Gives my doctor(s) a list of medications that I take.	1	2	3	4	5	<input type="checkbox"/>
9. Keeps my computerized records confidential.	1	2	3	4	5	<input type="checkbox"/>
10. Interviews me to record a prescription medication history and any medication allergies I have.	1	2	3	4	5	<input type="checkbox"/>
11. Helps me coordinate taking my prescription medicines when I have more than one prescription medicine to take daily.	1	2	3	4	5	<input type="checkbox"/>
12. Gives advice on whether or not I should see a doctor rather than treat the problem with non-prescription or self-care treatments.	1	2	3	4	5	<input type="checkbox"/>
13. Gives advice on precautions to follow when using non-prescription or other self-care treatments.	1	2	3	4	5	<input type="checkbox"/>
14. Keeps a computerized record of non-prescription and self-care treatments I use.	1	2	3	4	5	<input type="checkbox"/>
15. Helps me select non-prescription or self-care treatments that meet my needs.	1	2	3	4	5	<input type="checkbox"/>
16. Gives advice on side effects and medication interactions with non-prescription self-care treatment.	1	2	3	4	5	<input type="checkbox"/>

Please think about the pharmacist(s) who talks to you at your pharmacy. Rate each factor by circling your choice on the following rating scale.

If you have NEVER spoken to a pharmacist, then do not answer this section. Skip to Section IV on Page 6.

How would you rate the pharmacist(s) on the following factors?

Rating Scale

	<u>Awful</u>	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very Good</u>	<u>Excellent</u>	<u>Outstanding</u>
Easy to talk to.	1	2	3	4	5	6	7
Has your best interest in mind.	1	2	3	4	5	6	7
Allows you to be yourself with her/him.	1	2	3	4	5	6	7
Is sincere.	1	2	3	4	5	6	7
Is trustworthy.	1	2	3	4	5	6	7
Completely addresses your concerns.	1	2	3	4	5	6	7
Asks if you have any questions.	1	2	3	4	5	6	7
Trusts you in making decisions about your health.	1	2	3	4	5	6	7
Believes what you say.	1	2	3	4	5	6	7
Takes time to explain things to you.	1	2	3	4	5	6	7
Is patient with you.	1	2	3	4	5	6	7
Makes you feel relaxed.	1	2	3	4	5	6	7
Shows concern for you.	1	2	3	4	5	6	7
Respects you as a person.	1	2	3	4	5	6	7
Listens to what you have to say.	1	2	3	4	5	6	7
Makes you feel comfortable sharing your deepest concerns with her/him.	1	2	3	4	5	6	7
Tries to understand your feelings.	1	2	3	4	5	6	7
Respects what you say.	1	2	3	4	5	6	7
Makes you feel special.	1	2	3	4	5	6	7

Please share with us any written comments you have about talking with your pharmacist.

In the past we have learned from people about how they have worked with pharmacists, and how pharmacists helped them with their medications. Below are a list of questions asking you how you work with pharmacists.

Rate each statement by circling your choice on the scale.

How likely are you to:	Rating Scale		
	Not at all <u>Likely</u>	Somewhat <u>Likely</u>	Very <u>Likely</u>
1. Talk to the pharmacist when you are bothered by your medications.	1	2	3
2. Talk to the pharmacist when you are bothered about other health concerns.	1	2	3
3. Talk to the pharmacist about things other than your health.	1	2	3
4. Tell to the pharmacist when you forget to take your medications.	1	2	3
5. Ask the pharmacist when you have a question about your medications.	1	2	3
6. Ask for help from the pharmacist when you need it.	1	2	3
7. Talk to the pharmacist when you are dissatisfied with your medications.	1	2	3
8. Tell the pharmacist when you do not agree with him/her.	1	2	3
9. Talk to the pharmacist about your medications.	1	2	3

10. Recall during the last month, did you speak to a pharmacist (for example, in person at the pharmacy, on the phone, or somewhere else) about any of the following topics? Circle all that apply.

(1) Prescription medications

(2) Non-prescription medications

(3) Self-care herbal or homeopathic remedies

(4) Health concerns

(5) Other _____

CONTINUE →

How well do you know your pharmacist? (Circle your choice)

Not At All Slightly Moderately Very Extremely

How well does your pharmacist know you? (Circle your choice)

Not At All Slightly Moderately Very Extremely

Sometimes there are things that pharmacists do (or do not do) that bother consumers.

Has there ever been a time that something has **BOTHERED** you about your pharmacist or his/her services? Circle your choice and write in your response if applicable.

(If yes, please tell us what bothered you).

In general, how would you rate the quality of service pharmacists provide to you? Circle your response.

- = Awful
- = Poor
- = Fair
- = Good
- = Very Good
- = Excellent
- = Outstanding

Please share any written comments you have about working with your pharmacist.

Comments:

CONTINUE →

Section IV: General Information

A. Your responses to some questions about your use and purchase of medications is ¹⁵⁸important.

Please circle your choice or write in your response.

1. In your lifetime, have you ever obtained a prescription medication at a pharmacy for yourself?

No → Go to Question 7, Page 9

Yes

2. About how many prescription medications, both new and refill, have you obtained for yourself in the past month?

0

1-5

6-10

11 or more

3. About how much a month do you spend on prescription medications? \$ _____ per month

4. How many pharmacies do you use for your prescription medication needs? _____ # of pharmacies

5a. Please list all the names and locations of the pharmacies where you obtain your prescription medications.

(For example: Kmart on East Washington Ave., Physician Plus at West Towne, Gerhardt Drugs on Cottage Grove Rd, or ProVantage mail order.)

Name

Location

1. _____

2. _____

3. _____

4. _____

5b. If you listed more than one pharmacy above, circle the number of the pharmacy where you obtain most of your prescription medications.

6. About how long have you been a customer of the pharmacy where you purchase most of your medications?

_____ years or _____ months

Where do you purchase most of your non-prescription medications and other types of self-care remedies?
Circle all that apply.

- (1) Only at the pharmacy where I obtain my prescription medications.
- (2) Grocery/food store(s) (e.g. Woodmans, Pick & Save).
- (3) Convenience store(s) (e.g. PDQ, Stop & Go, Kwik Trip).
- (4) General merchandise store(s) which do not have pharmacies (e.g. Sams, Target).
- (5) Mail order outlet.
- (6) Other pharmacies where I Do Not obtain my prescription medications.
- (7) Other, please list _____.

Finally, your answers to some questions about yourself will help us categorize the results of the study. Circle or write in your response.

What is your gender? M F

What is your age? _____ years

In comparison to other people your age how do you rate your health?

- (1) Poor
- (2) Fair
- (3) Good
- (4) Very Good
- (5) Excellent

How many persons currently are living in your household on a full-time basis, including yourself?

_____ number of persons

About how long have you lived at your present address? _____ years

What is your zip code at your home address? _____ zip code number

Do you have any children under the age of 18 who regularly live in your household?

Yes

No

What is your highest level of formal education? (Circle only one number)

- (1) Elementary School
- (2) Some High School
- (3) High School Graduate or G.E.D.
- (4) High School Graduate/Some College
- (5) Technical/Bachelor's Degree
- (6) Masters, Ph.D. or Professional Degree

Are you currently employed?

(1) Yes → About how many hours per week do you work? _____ hours per week

(2) No

Please describe your present occupation (consider homemaker as an occupation).

Title _____

Type of work you do _____

Type of company or business _____

Your Comments

We welcome your comments about pharmacists, pharmacy, or related topics.

THANK YOU FOR YOUR HELP.

SEE NEXT PAGE FOR DIRECTIONS TO RETURN BOOKLET

DIRECTIONS FOR RETURNING THE BOOKLET

Please fold form, place in enclosed envelope.

**The envelope is already self-addressed
and stamped for your convenience**

THANK YOU FOR YOUR HELP

Final Questionnaire

Winter 1999

Dear Sir or Madam:

Understanding your attitudes and opinions about pharmacists and their services is important for pharmacists to better serve you. In 1983, we conducted a series of studies in Dane County about pharmacy and pharmacist services. People like you provided valuable information on how pharmacists and insurers could serve consumers better.

Now we are repeating those studies and need your help. We want to learn your opinions about:

- Factors you use in selecting a pharmacy or pharmacist for your prescription medications,
- Services pharmacists provide now and in the future, and
- Talking and working with pharmacists.

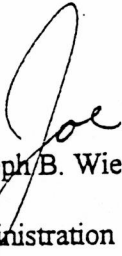
You are one of a representative sample of consumers who are being contacted. Your address was chosen from a random sample of the addresses listed in phone and mail directories.

The form will take about 10 to 20 minutes to complete. If you wish to comment on any questions please do so on the last page. Your responses are anonymous.

Your participation is voluntary. You agree to participate in the study when you return the form in the self-addressed, stamped envelope.

Thank you for your time and help.

Sincerely,



Pharmacist Joseph B. Wiederholt, Ph.D.
Professor
Pharmacy Administration



Pharmacist David H. Kreling, Ph.D.
Associate Professor
Pharmacy Administration

P.S. Please enjoy a beverage of your choice while completing this form.

School of Pharmacy

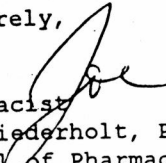
Dear Sir or Madam:


In the next few days you will receive a packet in the mail that asks your opinions about prescription medication plans and pharmacist services.

You are one of a representative sample of consumers who are asked to complete and return the form. Your address was chosen from a random sample of addresses listed in phone or mail directories. Your participation will be voluntary and your responses will be anonymous.

Thank you for your help.

Sincerely,


Pharmacist
Joe Wiederholt, Ph.D.
School of Pharmacy
University of Wisconsin
Madison
608-262-0452

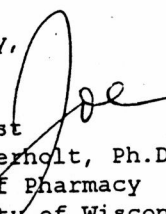

Pharmacist
Dave Kreling, Ph.D.
School of Pharmacy
University of Wisconsin
Madison
608-262-3454


Dear Sir or Madam:

Last week a packet was mailed to you asking your opinions about pharmacy and pharmacist services.

If you already have completed and returned the form, THANK YOU VERY MUCH FOR YOUR HELP! If you have not mailed the completed form, please do so today. Also, if you need another form please us call at one of numbers below.
Thank you.

Sincerely,


Pharmacist
Joe Wiederholt, Ph.D.
School of Pharmacy
University of Wisconsin
Madison
608-262-0452


Pharmacist
Dave Kreling, Ph.D.
School of Pharmacy
University of Wisconsin
Madison
608-262-3454

**Survey
of
Consumer Attitudes and Behaviors
Toward
Pharmacy and Pharmacist Services**



**SONDEREGGER
RESEARCH CENTER**

Interdisciplinary Research in Social and Administrative Pharmacy

**The University of Wisconsin
School of Pharmacy**

General Instructions

Answering the survey will take 10 to 20 minutes of your time.

Please answer the questions even if you have not obtained a prescription recently.

For each section, there are instructions on how to answer questions by circling, checking or writing in your responses.

Do Not write your name anywhere on the booklet. Your responses are anonymous.

People like you provide valuable information on how pharmacists and insurers can serve consumers better. Your responses are very important to us.

CONTINUE TO NEXT PAGE →

Section I: Prescription Medication Patronage

How important are the following reasons to you in selecting a pharmacy to obtain prescription medications?

There is an importance scale opposite each reason. Please circle your choice.

A. Reason to Select a Pharmacy	Importance Scale				
	<u>Of No</u> <u>Importance</u>	<u>Little</u> <u>Importance</u>	<u>Moderate</u> <u>Importance</u>	<u>Considerable</u> <u>Importance</u>	<u>Great</u> <u>Importance</u>
1. Always has my prescription medication in stock.	1	2	3	4	5
2. Private area to speak with a pharmacist about my prescriptions.	1	2	3	4	5
3. Convenient location.	1	2	3	4	5
4. Store appearance (layout, decor, clean, well lit).	1	2	3	4	5
5. Prompt and attentive service.	1	2	3	4	5
6. Home delivery and emergency services.	1	2	3	4	5
7. Pharmacist professional services such as consultation.	1	2	3	4	5
8. Merchandise selection for other health care products.	1	2	3	4	5
9. Accepts prescriptions covered by my health plan.	1	2	3	4	5
10. Prices of prescription medications.	1	2	3	4	5
11. Pharmacist (competent, knowledgeable)	1	2	3	4	5
12. Hours open.	1	2	3	4	5
13. Pharmacy technical staff.	1	2	3	4	5
14. Other	1	2	3	4	5

B. Now from the list of reasons above select the three that are most important to you. Write the reason's number in the box below.

Most Important

Second Most Important

Third Most Important

Next, we want to learn your opinion about **how important specific pharmacist services are to you and your experiences with services.**

Below is a list of pharmacist services related to prescription medications, non-prescription (over-the-counter) medications and also other self-care items such as herbal or homeopathic remedies. The list was compiled from pharmacist service activities either advertised or offered by pharmacists in Dane County between 1983 and 1998.

There is an **importance scale** next to each service. Circle your choice on the scale. Then check the box if you know you have experienced that service.

Importance Scale

Service Activities	<u>Of No</u> <u>Importance</u>	<u>Little</u> <u>Importance</u>	<u>Moderate</u> <u>Importance</u>	<u>Considerable</u> <u>Importance</u>	<u>Great</u> <u>Importance</u>	<u>Experienced</u> <u>Service ?</u>
The Pharmacist:						
1. Tells me what the prescription medicine is and what it is used for.	1	2	3	4	5	<input type="checkbox"/>
2. Tells me when and how to take my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>
3. Tells me about side effects or precautions about my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>
4. Tells me of any dangers in taking prescription medicines together.	1	2	3	4	5	<input type="checkbox"/>
5. Puts extra labels on the container telling me about my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>
6. Checks my understanding of prescription dosage directions.	1	2	3	4	5	<input type="checkbox"/>
7. Contacts my doctor if needed.	1	2	3	4	5	<input type="checkbox"/>
8. Marks refills on my prescription label.	1	2	3	4	5	<input type="checkbox"/>
9. Checks if the prescription medicine strength and dose are correct for me.	1	2	3	4	5	<input type="checkbox"/>
10. Explains any prescription filling delays if they occur.	1	2	3	4	5	<input type="checkbox"/>
11. Gives an emergency supply of prescription medicine if needed.	1	2	3	4	5	<input type="checkbox"/>
12. Describes the effects I should expect from my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>
13. Explains what to do if I miss a dose.	1	2	3	4	5	<input type="checkbox"/>
14. Gives written information about my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>

Importance Scale

	<u>Of No Importance</u>	<u>Little Importance</u>	<u>Moderate Importance</u>	<u>Considerable Importance</u>	<u>Great Importance</u>	<u>Experienced Service?</u>
15. Keeps a computerized record of my prescription medicines and allergies.	1	2	3	4	5	<input type="checkbox"/>
16. Checks for medication interactions.	1	2	3	4	5	<input type="checkbox"/>
17. Answers my questions either in person or by phone.	1	2	3	4	5	<input type="checkbox"/>
18. Keeps a computerized record of illnesses I have.	1	2	3	4	5	<input type="checkbox"/>
19. Teaches me how to use special devices to administer my prescription medicine. (For example, how to use an inhaler.)	1	2	3	4	5	<input type="checkbox"/>
20. Teaches me how to watch for side effects of my prescription medicine.	1	2	3	4	5	<input type="checkbox"/>
21. Teaches me how to use equipment such as a glucose meter or blood pressure cuff.	1	2	3	4	5	<input type="checkbox"/>
22. Gives my doctor(s) a list of medications that I take.	1	2	3	4	5	<input type="checkbox"/>
23. Keeps my computerized records confidential.	1	2	3	4	5	<input type="checkbox"/>
24. Interviews me to record a prescription medication history and any medication allergies I have.	1	2	3	4	5	<input type="checkbox"/>
25. Helps me coordinate taking my prescription medicines when I have more than one prescription medicines to take daily.	1	2	3	4	5	<input type="checkbox"/>
26. Gives advice on whether or not I should see a doctor rather than treat the problem with non-prescription or self-care treatments.	1	2	3	4	5	<input type="checkbox"/>
27. Gives advice on precautions to follow when using non-prescription or other self-care treatments.	1	2	3	4	5	<input type="checkbox"/>
28. Keeps a computerized record of non-prescription and self-care treatments I use.	1	2	3	4	5	<input type="checkbox"/>
29. Helps me select non-prescription or self-care treatments that meet my needs.	1	2	3	4	5	<input type="checkbox"/>
30. Gives advice on side effects and medication interactions with non-prescription self-care treatment.	1	2	3	4	5	<input type="checkbox"/>

Section III: Talking to Your Pharmacist

Now, please think about the pharmacist(s) who talks to you at your pharmacy. Rate each factor by circling your choice on the rating scale.

Note: If you have NEVER spoken to a pharmacist, then do not answer this section. Skip to Section V on Page 7.

How would you rate the pharmacist(s) on the following factors?

Rating Scale

	<u>Awful</u>	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very Good</u>	<u>Excellent</u>	<u>Outstanding</u>
1. Easy to talk to.	1	2	3	4	5	6	7
2. Has your best interest in mind.	1	2	3	4	5	6	7
3. Allows you to be yourself with her/him.	1	2	3	4	5	6	7
4. Is sincere.	1	2	3	4	5	6	7
5. Is trustworthy.	1	2	3	4	5	6	7
6. Completely addresses your concerns.	1	2	3	4	5	6	7
7. Asks if you have any questions.	1	2	3	4	5	6	7
8. Trusts you in making decisions about your health.	1	2	3	4	5	6	7
9. Believes what you say.	1	2	3	4	5	6	7
10. Takes time to explain things to you.	1	2	3	4	5	6	7
11. Is patient with you.	1	2	3	4	5	6	7
12. Makes you feel relaxed.	1	2	3	4	5	6	7
13. Shows concern for you.	1	2	3	4	5	6	7
14. Respects you as a person.	1	2	3	4	5	6	7
15. Listens to what you have to say.	1	2	3	4	5	6	7
16. Makes you feel comfortable sharing your deepest concerns with her/him.	1	2	3	4	5	6	7
17. Tries to understand your feelings.	1	2	3	4	5	6	7
18. Respects what you say.	1	2	3	4	5	6	7
19. Makes you feel special.	1	2	3	4	5	6	7
20. Please share with us any written comments you have about talking with pharmacists.							

In the past we have learned from people about how they have worked with pharmacists, and how pharmacists helped them with their medications.

In general, how often do you talk to your pharmacist about your medications?

Never Rarely Sometimes Usually Always

Below are a list of questions asking you how you work with pharmacists.

Rate each statement by circling your choice on the scale.

Working with the pharmacists How likely are you to:	Rating Scale		
	Not at all <u>Likely</u>	Somewhat <u>Likely</u>	Very <u>Likely</u>
Talk to the pharmacist when you are bothered by your medications.	1	2	3
Talk to the pharmacist when you are bothered about other health concerns.	1	2	3
Talk to the pharmacist about things other than your health.	1	2	3
Tell the pharmacist when you forget to take your medications.	1	2	3
Ask the pharmacist when you have a question about your medications.	1	2	3
Ask for help from the pharmacist when you need it.	1	2	3
Talk to the pharmacist when you are dissatisfied with your medications.	1	2	3
Tell the pharmacist when you do not agree with him/her.	1	2	3
Talk to the pharmacist about your medications.	1	2	3

Recall during the last month, did you speak to a pharmacist about any of the following topics? (for example, in person at the pharmacy, on the phone, or somewhere else) Circle all that apply.

- (1) Prescription medications
- (2) Non-prescription medications
- (3) Self-care herbal or homeopathic remedies
- (4) Health concerns
- (5) Other _____

CONTINUE →

How well do you know your pharmacist? (Circle your choice)

Not At All Slightly Moderately Very Extremely

How well does your pharmacist know you? (Circle your choice)

Not At All Slightly Moderately Very Extremely

Section V: Quality of Pharmacist Service

Sometimes there are things that pharmacists do (or do not do) that bother consumers.

Has there ever been a time that something has **BOTHERED** you about your pharmacist or his/her services? Circle your choice and write in your response if applicable.

No Yes (If yes, please share with us what bothered you).

Four horizontal lines for writing a response to the 'BOTHERED' question.

In general, how would you rate the quality of service pharmacists provide to you? Circle your response.

- 1 = Awful
- 2 = Poor
- 3 = Fair
- 4 = Good
- 5 = Very Good
- 6 = Excellent
- 7 = Outstanding

Please share any written comments you have about working with your pharmacist.

Comments:

Three horizontal lines for writing comments about working with the pharmacist.

CONTINUE →

Your responses to some questions about your use and purchase of medications is important. Please circle or write in your response.

In your lifetime, have you ever obtained a prescription medication at a pharmacy for yourself?

No → Go to Question 7, Page 9

Yes

About how many prescription medications both new and refill have you obtained for yourself in the past month? (Circle your response)

- 0
- 1-5
- 6-10
- 11 or more

About how much a month do you spend on prescription medications? \$ _____ per month

How many pharmacies do you use for your prescription medication needs? _____ # of pharmacies

Please list all the names and locations of the pharmacies where you obtain your prescription medications.

(For example: Kmart on East Washington Ave., Physician Plus at West Towne, Gerhardt Medications on Cottage Grove Rd, or ProVantage mail order.)

Name	Location
------	----------

1. _____
2. _____
3. _____
4. _____

If you listed more than one pharmacy above, circle the number of the pharmacy where you obtain most of your prescriptions.

About how long have you been a customer of the pharmacy where you purchase most of your medications?

_____ years or _____ months

Where do you purchase most of your non-prescription medications and other types of self-care remedies?
Circle all that apply.

- (1) At the pharmacy where I obtain my prescription medications.
- (2) Grocery/food store(s) (e.g. Woodmans, Pick & Save).
- (3) Convenience store(s) (e.g. PDQ, Stop & Go, Kwik Trip).
- (4) General merchandise store(s) which do not have pharmacies (e.g. Sams, Target).
- (5) Mail order outlet.
- (6) Other pharmacies where I Do Not obtain my prescription medications.
- (7) Other, please list _____.

Finally, your answers to some questions about yourself will help us categorize the results of the study. Circle or write in your response.

What is your gender? Male Female \

What is your age? _____ years

In comparison to other people your age how do you rate your health?

- (1) Poor
- (2) Fair
- (3) Good
- (4) Very Good
- (5) Excellent

How many persons currently are living in your household on a full-time basis, including yourself?

_____ number of persons

About how long have you lived at your present address? _____ years

What is your zip code at your home address? _____ zip code number

Do you have any children under the age of 18 who regularly live in your household?

Yes

No

What is your highest level of formal education? (Circle only one number)

- (1) Elementary School
- (2) Some High School
- (3) High School Graduate or G.E.D.
- (4) High School Graduate with some College
- (5) Technical, Bachelor's Degree or
- (6) Masters, Ph.D. or Professional Degree

Are you currently employed?

(1) Yes → About how many hours per week do you work? _____ hours per week

(2) No

Please describe your present occupation (consider homemaker as an occupation).

Title _____

Type of work you do _____

Type of company or business _____

What was your approximate annual **household** income, before taxes in 1998?

(Please check one.)

- _____ less than \$10,000
 _____ \$10,000 to \$14,999
 _____ \$15,000 to \$24,999
 _____ \$25,000 to \$34,999
 _____ \$35,000 to \$49,999
 _____ \$50,000 to \$64,999
 _____ \$65,000 to \$79,999
 _____ \$80,000 or more

CONTINUE TO NEXT PAGE →

DIRECTIONS FOR RETURNING THE BOOKLET

Please fold form, place in enclosed envelope.

**The envelope is already self-addressed
and postage paid for your convenience.**

THANK YOU FOR YOUR HELP

Appendix C

Coding Book

Coding Scheme.

Identification Number. (0 - 500)

Section I. Prescription Drug Patronage.

- 1 = Of No Importance
 2 = Little Importance
 3 = Moderate Importance
 4 = Considerable Importance
 5 = Great Importance

Variable:

	Coding Reason	Score
1. Convenient location	= Convenient	1 - 5
2. Pharmacist(s).	= Pharmaci	1 - 5
3. Other store personnel.	= Personne	1 - 5
4. Price of prescriptions	= Price	1 - 5
5. Accepts prescriptions cover...	= Covered	1 - 5
6. Merchandise selection....	= Selectio	1 - 5
7. Pharmacist professional services	= PPS	1 - 5
8. Home delivery	= Home,	1 - 5
9. Prompt and attentive services	= Prompt	1 - 5
10. Store appearance	= Appearan	1 - 5
11. Hours open.	= Hour	1 - 5
12. Private area to speak.....	= Private	1 - 5
13. Always has my prescription	= Stock	1 - 5
14. Other	= Other	1 - 5

B. Rank of Dimension Importance

	Coding	Dimension	Weight
Most Important	= First	1 - 14	3
Second Most Important	= Second	1 - 14	2
Third Most Important	= Third	1 - 14	1

Section II. Pharmacist Service Activities.

Variable:

		Coding	Score
1.	=	Vari 0001 Exper1	1-5
		Yes	1
		No	0
2.	=	Vari 0002 Exper2	1-5
		Yes	1
		No	0
3.	=	Vari 0003 Exper3	1-5
		Yes	1
		No	0
4.	=	Vari 0004 Exper4	1-5
		Yes	1
		No	0
5.	=	Vari 0005 Exper5	1-5
		Yes	1
		No	0
6.	=	Vari 0006 Exper6	1-5
		Yes	1
		No	0
7.	=	Vari 0007 Exper7	1-5
		Yes	1
		No	0
8.	=	Vari 0008 Exper8	1-5
		Yes	1
		No	0
9.	=	Vari 0009 Exper9	1-5
		Yes	1
		No	0
10.	=	Vari 00010 Exper10	1-5
		Yes	1
		No	0

11.	=	Vari 00011 Exper11	Yes No	1-5 1 0
12.	=	Vari 00012 Exper12	Yes No	1-5 1 0
13.	=	Vari 00013 Exper13	Yes No	1-5 1 0
14.	=	Vari 00014 Exper14	Yes No	1-5 1 0
15.	=	Vari 00015 Exper15	Yes No	1-5 1 0
16.	=	Vari 00016 Exper16	Yes No	1-5 1 0
17.	=	Vari 0001 Exper17	Yes No	1-5 1 0
18.	=	Vari 00018 Exper18	Yes No	1-5 1 0
19.	=	Vari 00019 Exper19	Yes No	1-5 1 0
20.	=	Vari 00020 Exper20	Yes No	1-5 1 0
21.	=	Vari 00021 Exper21	Yes No	1-5 1 0

22.	=	Vari 00022 Exper22	Yes No	1 - 5 1 0
23.	=	Vari 00023 Exper23	Yes No	1 - 5 1 0
24.	=	Vari 00024 Exper24	Yes No	1 - 5 1 0
25.	=	Vari 00025 Exper25	Yes No	1 - 5 1 0
26.	=	Vari 00026 Exper26	Yes No	1 - 5 1 0
27.	=	Vari 00027 Exper27	Yes No 0	1 - 5 1 2
28.	=	Vari 00028 Exper28	Yes No	1 - 5 1 0
29.	=	Vari 00029 Exper29	Yes No	1 - 5 1 0
30.	=	Vari 00030 Exper30	Yes No	1 - 5 1 0

Section III. General Information.

Variable:	Coding	Score
A.		
1. In your lifetime.....	= lifetime	yes = 1 no = 0
2. About how many....	= refill	0 = 1 1 - 5 = 2 6 - 10 = 3 11 or more = 4
3. About how much....	= purchase	open
4. How many pharmacies	= number	1-99
5a. Please list all the names...	= names	= open
5b. Where do you obtain..	= most	= open
6. How long have you...	= loyal	= 1-999
7. Where do you purchase...	= non-rx	= 1-7
B.		
1. What is your gender?	= gender	male = 1 female = 0
2. What is your age?	= age	1-99
3. How do you rate....	= health	poor = 1 fair = 2 good = 3 very good = 4 excellent = 5
4. How many persons....	= person	1-99
5. About how long...	= live	= 1-99

6. What is your zip code...	=	zipcode	=	open
7. Do you have children..	=	children	yes	= 1
			no	= 0
8. What is your education...	=	educate	Elementary	= 1
			High	= 2
			High or GED	= 3
			High/Collage	= 4
			Tech/Bachelor	= 5
			M.S/Ph.D/Prof	= 6
9. Are you employed?...	=	employ	yes	= 1
			no	= 0
9a.How many hour...?	=	hour	=	1-99
10. Please describe..				
	=	Title	=	title
	=	Type of work	=	type
	=	Type of company	=	company
11. Annual income...	=	income	<\$10,000	= 1
			\$10,000-\$14,999	= 2
			\$15,000-\$24,999	= 3
			\$25,000-\$34,999	= 4
			\$35,000-\$49,999	= 5
			\$50,000-\$64,999	= 6
			\$65,000-\$79,999	= 7
			\$80,000 or more	= 8

C.

1. Final comment = final open

Appendix D

Scree-Plot

Scree Plot

