RELATING OWNERSHIP TYPE TO THE ORGANIZATIONAL BEHAVIOUR, ROLE ORIENTATION AND AUTONOMY OF COMMUNITY PHARMACY MANAGERS IN CANADA

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ABSTRACT

Community pharmacists are unique amongst professionals as they practice their profession in a commercial environment. This environment, where the dichotomy between the professional and business aspects of community pharmacy practice intersect, can place the professional objectives of pharmacy at odds with the business objectives. At the same time, ownership of community pharmacies is transitioning from pharmacist-owned and -operated establishments, to corporate-owned and -operated.

The objective of this study was to investigate whether ownership type influences the pharmacists', or in this case the pharmacy managers', organizational behaviour, role orientation and professional autonomy. Specifically, exploring whether ownership type (independent, franchise, corporate) impacts the professional, business and environmental (organizational) aspects of community pharmacy practice.

This study employed both quantitative and qualitative research methods. A cross-Canada, self-administered postal survey of community pharmacy managers was conducted in the spring of 2007. Contact information was obtained from individual provincial regulatory bodies across Canada and a stratified, random sample of community pharmacy managers was compiled. Items centred on professional and employer authority, manager autonomy, level of managerial control, orientation to professional and business aspects of practice and the manager role, affinity to professional and business characteristics of community pharmacy practice, and innovation. The survey was followed by semi-structured, in-depth telephone interviews with select self-identified respondents from the survey portion of the study.

The random, stratified sample consisted of 2,000 community pharmacy managers. Of the 2,000 questionnaires mailed out, 39 were returned as

undeliverable. A total of 646 responses were received, for a response rate of 32.9 percent (646/1,961); while the response rate may not be ideal, the sample size was purposely made larger to account for the possibility of a low response rate. Seven interviews were conducted following the survey.

Ontario, as the largest province, had the most responses with 289 (44.7%), and the majority of respondents were male (393, 60.8%). The greater part of respondents indicated their sole degree was their Bachelor of Pharmacy practice degree (499, 77.2%). A larger majority of respondents were either the pharmacy manager (398, 61.6%) or owner (215, 33.3%). Just under half of respondents practiced in independent pharmacies (44.6%), while 35.4 percent practiced in corporate pharmacies and 18.4 percent practiced in franchise pharmacies.

As a whole, respondents were more likely to have access to information required for making clinical rather than business decisions. One quarter (24.4%) of respondents were never or rarely willing to go against company policies to carry out their professional duties, while one third (33.4%) were often or always willing to do so. Less than one-fifth (17.4%) of respondents had to follow policies (professional and business) developed by non-professionals, while 42.6 percent had to follow policies only with regard to business practices. The majority (89.5%) agreed that it is possible to be both a good professional and a successful businessperson.

Fifteen distinct constructs emerged regarding (1) professional and (2) employer authority, (3) manager autonomy, (4) decision-making, (5) managerial control, (6) professional characteristics, orientation to (7) professional and (8) business aspects of the manager role, affinity to (9) professional and (10) business characteristics of community pharmacy practice, (11) connection to the employer, (12) role conflict, (13) innovation, (14) bureaucracy and (15) manager requests. The main independent variable was ownership structure: independent, franchise, or corporate. In analyzing the independent variable by the above constructs,

significant differences ($p < 0.05$) arose for all constructs except for three related to the professional nature of practice: professional practice standards, professional orientation and professional affinity.

Independent and franchise respondents were more likely to agree that the employer should influence practice standards than corporate respondents ($p < 0.001$). When exploring the level of autonomy respondents had in their pharmacy, significant differences arose among all three respondent types ($p < 0.001$); respondents in independent pharmacies felt they had the highest level of autonomy followed by franchise respondents and then corporate respondents, with more than one standard deviation difference between independent and corporate respondents.

Significant differences also emerged among the three respondent types with regard to the amount of control the respondent had in their pharmacy ($p < 0.001$); independent respondents felt they had the most control followed by franchise respondents and then corporate respondents, with almost one standard deviation difference between independent and corporate respondents. With regard to business orientation and affinity to business related aspects of practice, independent and franchise respondents were significantly ($p < 0.001$) more likely to place higher importance on such activities than corporate respondents. Results of the interview portion of the study were used to bring a greater understanding to the survey portion of the research.

There were a total of seven interviews conducted, with each interview lasting between 30 and 90 minutes in length. A total of nine themes emerged from the interviews: (1) autonomy, (2) behaviour, (3) environment, (4) future, (5) human resources, (6) image, (7) incentives, (8) professional standards and (9) role as manager.

Finding of this study suggest that regardless of ownership structure, respondents emerge as professionally orientated and focused. Independent respondents appear to have more autonomy, control and decision-making capabilities than corporate respondents. Despite being professionally orientated and focused, corporate respondents appear cognizant of the restrictions placed on pharmacy practice in their pharmacy. On top of ownership structure, the dependent variables of age, gender, geographic region and years with employer appear to play a role in answers provided by community pharmacy managers.

As ownership of community pharmacy continues to transition from pharmacist-controlled to corporate-owned, managers, owners and the profession must acknowledge the professional implications that may result. While this study adds to the community pharmacy practice literature, there is recognition that additional research is necessary pertaining to the dynamic nature and culture of community pharmacy practice.

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DEDICATION

This journey that I have completed would not have been possible without one extraordinarily special person – my Mom! Mom, though you may not know it, the work ethic and determination that you exhibit has guided me throughout my life, including my graduate studies. You have taught me that if you are determined and put in the time and effort into something you are passionate about, good things will follow. The accomplishments you have achieved, despite the many obstacles, have always served, and will continue to serve, as motivation in all I do.

To my number 1.00001 fan, Grandma Clemens; I made it and hope that you enjoy reading this dissertation and feel free to share it with your pharmacist! Your questions and comments, whether in person or via e-mail, served as encouragement to me.

Finally, within a twenty-four hour span, before I had a chance to finish this dissertation, I lost two people who are deeply important to me: Grandpa Clemens and Grandpa Perepelkin. This dissertation is dedicated to the memories of these two outstanding individuals.

I have no special talents. I am only passionately curious.

- Albert Einstein

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1.1 Overview

Amongst health professions, pharmacy is in a unique position as the large majority of community pharmacists practice their profession within an overtly commercial environment. This commercial setting is a constant reminder of the intimate connection to commerce that exists for most community pharmacists. Within community pharmacy exists a profound dichotomy between the professional and business aspects of practice. On a daily basis the community pharmacist must balance professional and commercial obligations: providing a skilled service in the preparation and dispensing of medications, while selling commodities for profit in distributing that medication[1]. As a result, corporate objectives are generally more pronounced for community pharmacists than for other Canadian health care professionals, such as physicians and nurses.

Along with the challenges of practicing the profession in a commercial environment, there are diverse changes occurring in the way the profession of pharmacy is practiced. The profession has evolved from a time when apothecaries ground and created compounds using various unregulated properties, to its current state where pharmacists are integral to the delivery of sophisticated drug products and services. Although community pharmacy's main focus has been, and continues to be, the dispensing of prescriptions and related medication counselling, many of the pharmacists currently working in community practice are seeking a more service-oriented, patient-focused

approach with greater emphasis on the use of their clinical skills[2-7]; in effect, transforming the social object – the focus of the profession – of pharmacy, from the product (medication) to the patient.

As the profession seeks to re-define its role within health care, the business structure in which community pharmacists practice is also changing. The number of pharmacist-owned pharmacies is decreasing while the number of corporate-owned pharmacies is increasing[8]. As a result, community pharmacy is moving from practitioner entrepreneurs and small-scale providers toward corporate, non-pharmacy owned and directed operations.

While the community pharmacy has been viewed much like a general store since the early nineteenth century, providing groceries, medications and photo supplies and services, community pharmacies today are moving progressively toward a one-stop-shop where people can purchase everything from cosmetics to consumer electronics[9]. As large corporations come to dominate the evolving marketplace, opportunity to develop and introduce cognitive services in line with the professional ideal of pharmacy, with less reliable revenue potential, may be limited[10-12]. Furthermore, corporate objectives and a business orientation focusing on maximizing shareholder value may not be in line with the professional objectives and ideals of pharmacy[13].

The dispensing of medications, an activity that is intimately linked with the sale of a tangible product, is commonly viewed as the primary role of a pharmacist[14, 15]. While the eventual consequences of this continuing public perception are unclear, an increasingly non-professional orientation to community pharmacy practice by non-pharmacist employers may limit the ability of pharmacists to adopt a stronger clinical focus within their practices. Moreover, historically there has been conflict between the professional and commercial aspect of the profession, especially for pharmacists practicing in the community setting[16, 17].

An emphasis on the more commercial aspects of pharmacy practice may result in fewer interactions between the patient and pharmacist in favour of exchanges between the patient and pharmacy technicians, or even front store staff[16, 18]. At the same time, opportunities to provide clinical, patient-focused care may increase as time spent on the more technical task of dispensing decreases[19].

There is also the concern that independent pharmacies have traditionally focused on the more professional responsibilities of pharmacists, while corporate pharmacies are thought to discourage the professional activities if these activities are perceived to take up too much of the pharmacists' time[20]. The increasing use of technicians is seen as one way to free pharmacists' time; while there are efforts to establish certification requirements for pharmacy technicians in Canada, there is currently no set standard for training or regulating pharmacy technicians. With no set training and regulatory mechanisms for pharmacy technicians, the current phenomenon of increasing technician to pharmacist ratios may not be advised[21].

A business approach to the delivery of pharmacy services may see the use of technicians as a way to accommodate a larger number of prescriptions. As pharmacists are currently required to oversee expanded dispensing activities and non-professional staff, this may curtail the pharmacist's ability to provide clinical services, whether through the individual provision of pharmaceutical care or as a member of a primary health care team.

Already, there are documented examples where increasing the number pharmacy technicians in the dispensary and using automated dispensing equipment improved the pharmacists' dispensing efficiency and productivity, but did not free the pharmacists' time and allow them to perform other activities such as clinics on various disease states or providing medication management services to patients[22]. Therefore, the idea of rationalization and

efficiency through standardizing the dispensing process is clearly a threat to the profession of pharmacy[10, 23]:

> The contrasts between business and professional ethics are striking. Business ethics accepts health care as a commodity, its primary principle is non-maleficence, it is investor- or corporate-oriented, its attitude is pragmatic, and it legitimates self-interest, competitive edge, and unequal treatment based on unequal ability to pay. Professional ethics, on the other hand, sees health care not as a commodity but as a necessary human good, its primary principle is beneficence, and it is patient-orientated. It requires a certain degree of altruism and even effacement of self-interest[24].

Role strain/ambiguity, resulting from the demands of commercialism and professional altruism, can occur when pharmacists are required to practice in a commercial environment while attempting to maintain their sense of professionalism[16, 25-27]. "Pharmacists must declare that their interests may differ from their employers' whenever patient welfare is in question"[28]. If non-professional objectives dominate, pharmacists may find themselves (if not already) in the unenviable position of being both underutilized and overworked.

Moreover, as the percentage of community pharmacies owned by large corporations increases, organizations become more bureaucratic[29]. The result may be frustration and greater stress within the profession and, in turn, burnout, decreased job satisfaction and poorer health for members of the profession[30-33]. Within the community setting there is also the chance that pharmacy's status as a profession may be questioned, as some may view pharmacy as an occupation, as opposed to a profession[3, 5, 34-36]. As well, "commitment to the dignity and welfare of patients can be compromised when pharmacists allow business objectives to influence and control their conduct"[11].

> … pharmacy is engaged in a professional project to extend its roles within the health care system. However, its ability to do so has been circumscribed by its link with commerce which (at least historically) has been seen to compromise its professional status[2].

What is left unanswered is whether ownership type influences the pharmacists', or in this case the pharmacy managers', organizational behaviour, role orientation and professional autonomy. As well, negative consequences to the profession and other stakeholders may occur if pharmacy managers do not have the autonomy, control and decision-making capabilities that they should have as professionals.

1.2 Research Questions

- Does ownership type affect the orientation of pharmacy managers toward the professional aspects of pharmacy?
- Does ownership type affect the orientation of pharmacy managers toward the business aspects of pharmacy?

1.3 Terms

BUREAUCRATIZATION: the process of bureaucracy where an organizational structure is created that follows a division of labour, specialization/expertise, strict rules, and a hierarchy of subordination to higher levels of management, composed of a vertical, top-down structure[37-40].

COMMODIFICATION: results when a good/service is not perceived to differ from one supplier to the next; therefore, consumers select the good/service based on features such as cost and location.

CORPORATIZATION: an organizational form typically found in industrial corporations, characterized by clearly articulated corporate objectives and a division between corporate and operational levels[41].

PATIENT: throughout, the patient may also be referred to as the client, consumer and/or customer, particularly when direct quotes are used; however, the identity of this person remains the same regardless of the term used – the person who ultimately uses/consumes the products and/or services of the pharmacist. Depending on the nature of the area of inquiry, the actor takes on different terms despite being one and the same.

PHARMACY: throughout, will be in reference to community pharmacy unless otherwise stated. The term may also be used in reference to the physical location where community-pharmacists practice, or in regard to the profession itself.

PROLETARIANIZATION: seeks to explain the process by which an occupational category is divested of control over certain prerogatives relating to the location, content, and essentiality of its task activities, thereby subordinating it to the broader requirements of production under advanced capitalism[42].

RATIONALIZATION: tends to occur when a variety of factors come together that reward methodical ways of life or actions[43]. By making something rational, one aims to focus perceptions "by ordering them into comprehensible and 'meaningful' regularities"[43].

> There is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage than the creation of a new order of things…. Whenever his enemies have the ability to attack the innovator they do so with the passion of partisans, while the others defend him sluggishly, so that the innovator and his party alike are vulnerable.
>
> - Niccolo Machiavelli, *The Prince*

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LITERATURE REVIEW

Both the peer-reviewed literature and the grey literature were evaluated and are presented in this review, beginning with the social transformation of community pharmacy. The literature review then addresses the issues of corporatization and commercialism, followed by an assessment of commodification, rationalization, bureaucratization, proletarianization and professionals in organizations. The literature review concludes with the defining of professions and an examination of pharmacy's claims for professional status. Deficiencies in the literature formed the basis and justification for conducting this study.

What is also considered in this review is the changing nature of ownership within community pharmacy, and how practice is shaped by influence outside of the profession, and even outside of health care. The commercial setting of community pharmacy influences the actual and perceived role pharmacists play in patient health care, and in this commercial environment, changes in technology and management have impacted, and continue to impact, pharmacy practice. While the shifting practice setting has occupied a primary role in shaping and changing the practice of pharmacy, the education and training of future and current pharmacists are also significant factors affecting the evolution of the profession.

2.1 Social Transformation of Community Pharmacy

Community pharmacy practice is undergoing significant changes. Although the profession may be viewed as ever changing, it was not always at such a rapid pace. A cursory review of the history of pharmacy practice gives one a sense of the evolutionary processes experienced by the profession, and where the profession may be headed in the future.

Pharmacy has been an independent branch of medicine since the thirteenth century[35]. Dating back to pre-confederation, the practice of pharmacy in Canadian health care was primarily shaped by European and American influences[9]. While the First Nations people practiced the procurement of medicines long before colonial influence, modern pharmacy in Canada is primarily based on the European model, in particular that of the United Kingdom[44].

Within community pharmacy there has long been a contradiction between the professional mandate of practice and the fact that the profession practices in a commercial environment. As well, the success of many pharmacies has centred on how well the commercial, non-professional objectives are met[45]. There has also been the close connection between medicine and pharmacy that "has meant an interconnected association in business activities that has been fundamental (at times detrimental) to the pharmacy profession"[9]. The history of pharmacy, in many respects, is the profession's efforts to create legal and ethical boundaries between its role and the role of medicine[46].

There is little in the way of literature that comprehensively addresses the history of pharmacy in Canada[12]. The Hudson's Bay Company is credited with a large role in pioneering the practice of pharmacy in Canada, especially in the West after the completion of the Canadian Pacific Railway[47].

Since the arrival of the first apothecary in Canada, Louis Hebert in 1604[48], pharmacy practice has made dramatic advances. At the same time the profession of pharmacy has arrived at its current state through an

evolutionary rather than a revolutionary process. In Canada, the Pharmacy Act (1871) was the first time the profession began to organize[9]. Since this time, two factors that have changed and continue to change the way pharmacists practice are the increasing presence and influence of the pharmaceutical industry and the increase in chain (corporate) pharmacies and the resulting decrease in independent pharmacies[20, 46].

Gone are the days when medicinal preparations were manufactured using various unregulated properties and methods. While compounding continues to be an important function in some practice settings, the majority of prescription medications are pre-manufactured[1]. As well, the fact that community pharmacies provide more than medications and associated health care services continues to bring into question the legitimacy of the profession:

> This calls into question whether business behaviour can be associated with professional conduct, since typically, professionals are expected to bestow a certain extent of public interest ahead of private gain. If business behaviour is motivated out of private interest, can a pharmacist be a true professional?[9]

The practice of pharmacy today involves pharmacists dispensing and counselling patients on various prescription and non-prescription medications. However, the patients that pharmacists attend to are often not aware of the scope-of-practice of a pharmacist[49]; "the public in general is not aware of the typical pharmacist's involvement in the overall health and well being of the populace he or she serves"[15]; "… it should be noted that however enthusiastically pharmacists embrace the 'advice-giving' activities outlined in the extended role, the public still needs convincing that they have a need for such advice"[5].

The average person might be taken aback to discover the divide that exists between what pharmacists know and are trained to do, and what services are generally provided or offered[50]. This is not to say that some

people do not understand and appreciate what pharmacists can contribute to their health and well-being; however, many people are unaware of the role pharmacists can play in patient care. This lack of appreciation is exacerbated by the fact that other health care practitioners, such as physicians and nurses, are not fully aware of, nor have an appreciation for, pharmacy's scope-of-practice[51].

How pharmacy is perceived from the vantage point of policy makers also affects the role of the profession in health care. On the one hand, pharmacy may be viewed as a business; on the other hand, it may be viewed as a health care profession. If the business view of pharmacy is dominant, then policy makers are likely to make decisions based on reducing costs or improving efficiency, as opposed to enhancing the quality of services provided[52]. However, if policy makers view pharmacy as a health care profession, decisions are more likely to be based on ways to improve the quality of care provided and the outcomes achieved[52].

Some within pharmacy have attempted to refocus the profession by shifting from dispensing duties to patient centred care, or the 'extended role' of pharmacists:

> This 'extended role' involves pharmacists interacting directly with the public, offering a range of services including diagnostic testing, health care advice, information, therapeutic recommendations, directions and instructions, in addition to ensuring that people receive the appropriate medication and understand how to use their medicines correctly[5].

However, public and private insurers have been slow to remunerate such cognitive activities. Lack of awareness of, or appreciation for, the services pharmacists are capable of providing may contribute to this trend. Yet, in the end, lack of awareness may be seen as the failure of the profession to promote itself rather than the failure of others in not seeking a larger role for the profession; "pharmacists cannot look to the drug industry or government

regulators to be their champions. They must be their own instruments of change"[6].

2.2 Pharmacy Education and Practice Change

The practice of pharmacy in Canada, and North America as a whole, experienced three distinct changes in the orientation of practice during the twentieth century, centring on the formal education of pharmacy students as they were socialized and prepared to enter the profession. These changes reflected three distinct practice ideologies: 1) the scientific foundation of the profession; 2) clinical pharmacy; and 3) pharmaceutical care[12, 27, 53-61]. Pharmacy practice continues to evolve as pharmacists expand their role in primary care, especially as members of primary health care teams[14, 27, 62].

The first of these practice ideologies, centring on the scientific foundation of the profession, sought to establish a science-oriented practice. At this time, pharmacy education centred on a strong groundwork of chemistry and the basic sciences[16]. Prior to this, concentration in the pharmacy curriculum was tailored to pharmaceutical research, to which the science orientation to practice was an extension[9]. However, this focus lasted only until the late 1960s due to the divergence between the formal education of pharmacy students, and the realities of pharmacy practice[12]. With the suitability of the science-based orientation increasingly questioned, it was eventually supplanted by clinical pharmacy in the late 1960s.

Clinical pharmacy allowed pharmacists to become 'therapeutic advisors' by having access to patient drug profiles and, as a result, the ability to conduct prescription drug reviews[12]. This was also the time when pharmacotherapeutics and pharmacokinetics were introduced into the curriculum at Canadian schools of pharmacy, leading to a more clinical orientation to pharmacy education in anticipation of pharmacy practice also undergoing change.

Although clinical pharmacy allowed hospital pharmacists to extend their role as health care professionals, such an extended role was not easily implemented into community pharmacy, where the majority of pharmacy graduates continued to practice. As well, "spending time with patients is commercially inefficient when systems of reimbursement are tied to sale of a product"[12].

The ideology of pharmaceutical care was adopted to support the introduction of clinical pharmacy into community practice. Pharmaceutical care focuses on the pharmacist's responsibility to provide appropriate drug therapy, detect drug complications and interactions, ensure appropriate drug dosing, and identify and report on drug related complications to achieve definite outcomes to improve the patient's quality of life[4].

While pharmaceutical care provided pharmacists with the ability to expand the profession's scope-of-practice, the expansion of this role continues as pharmacists work in collaboration with other health care practitioners as members of primary health care teams[14, 62]. Becoming members of primary health care teams allows pharmacists to position themselves and the profession in a manner that further demonstrates the abilities and value of pharmacy in patient health care.

The Romanow Commission on Health Care (2002) called for an expanded role for pharmacists in patient health care[63], bringing further recognition to the valuable role pharmacy can occupy in patient health care. Yet that expanded role in primary health care generally is not incorporated or compensated in regular community pharmacy practice[64], and the health care system is primarily structured for the treatment of acute illness, as opposed to disease prevention[65, 66].

Some countries, such as Australia, have embraced and expanded the role of pharmacists, and are remunerating pharmacists for this extended role[67-71]. However, the nature of the health care system in Australia often differs from Canada in that community pharmacy jurisdiction in Australia falls

under the national health care system. In Canada, jurisdiction of community pharmacy primarily falls under provincial/territorial legislation, resulting in diverse regulations and funding mechanisms regarding pharmacy practice; for example, remunerating pharmacists for medication reviews in some provinces and not in others. Although hampering the development of national programs such as those in Australia, diversity does allow legislation in each respective jurisdiction to match the specific needs of the patient population.

The traditional ties to dispensing medications may limit expansion of pharmacy's scope of practice. It has been suggested that pharmacists should distance themselves from the technical process of dispensing, which can be completed by technicians and dispensing technology; otherwise pharmacy's benefit to society may come into question[72]. The realities of the commercial setting in the community pharmacy practice environment may be limiting pharmacists' ability to be integrated into primary health care teams. While some pharmacists are proving their worth in a more clinical setting such as physicians' offices and outpatient clinics, many of these initiatives are pilot projects and not part of regular patient care[73-85].

The profession may evolve such that there may be a need to have two streams of community pharmacy practice: one where pharmacists are solely dispensing, or over-seeing dispensing, in a commercial setting, and the other where pharmacists are not involved with dispensing at all, only with the care surrounding medications, which could be done within the pharmacy setting, or elsewhere such as the patient's home[16, 86]. However, this would serve to further divide the profession beyond the current divisions that exist, most notably between hospital and community pharmacy: not an ideal outcome for those seeking to strengthen the voice, role and prominence of the profession.

2.3 Corporatization and Commercialism

Recognition that two streams of community pharmacy practice could become a reality may be linked to corporate influence seeking the maximum

return on investment by focusing on prescription volumes, whereas the professional side of pharmacy seeks to distance itself from the technical, dispensing aspect of practice. However, corporate influence cannot be ignored as corporatization of pharmacy may be occurring, increasing the commercial component of community pharmacies in order to increase profits.

Within the Canadian health care system, pharmacy is the profession influenced most by corporatization. Corporatization is "an organizational form typically found in industrial corporations, characterized by clearly articulated corporate objectives and a division between corporate and operational levels"[41]. As the ownership structure of community pharmacy changes from practitioner-entrepreneurs toward corporate-owned and -operated pharmacies[8], the pharmacy practice environment becomes increasingly corporatized. Regardless of ownership structure, at the operational level community pharmacy managers manage pharmacies. However, within a corporate-owned pharmacy, the corporate level that handles organization-wide policy is separate from the operational level.

The extent of corporatization is not as pronounced in Canada as in the United States, due in part to the high degree of public funded and not-for-profit operation of the Canadian health care system; for example, while there are private clinics and talk of moving toward increasing privatization of medical services, the Canada Health Act (CHA) restricts the provision of private medical services to services outside of those deemed medically necessary[87]. In the United States, privatization of medical services began to gain momentum in the mid-1960s – just as Medicare was being established in Canada – and has since dramatically changed the manner in which health care is delivered in that country[88, 89].

Medicare, under the CHA, ensures that Canadians receive publicly funded, medically necessary health care; however, there are many areas, for one reason or another, deemed not medically necessary and are not reimbursed through the public health care system. In addition to the majority

of dental and eye care services, most outpatient services provided by a pharmacist are not part of the CHA, and are open to private insurance mechanisms, as well as private ownership of pharmacies.

Falling outside the scope of the CHA, community pharmacy in Canada exists to a far greater extent in the free market pursuit of profit than other sectors of the health care system. Less constrained by public policies designed to control health care costs in the publicly funded portion of the health care system, growing demand for pharmaceuticals represents a significant opportunity for private investment and ownership in community pharmacies.

Although pharmacies have always been commercial in their operation, the commercial nature, as well as changes in legislation allowing ownership of pharmacies to extend beyond pharmacists (with the exception of Quebec[90]), allows for the corporatization of pharmacies (Table 1). As the ownership of pharmacies moves from independent, pharmacist-owned establishments toward more corporate-owned pharmacies[8], the influence of corporatization and business models of operation are sure to follow[89].

While stand-alone pharmacies continue to dominate the retail drug market in Canada, they are losing market share to pharmacies located in food and general merchandise stores[90]. In 1998, stand-alone pharmacies accounted for 84 percent of all retail drug sales, but by 2005 their market share fell 7.1 percentage points to 76.9 percent[90]. Drug sales increased annually by 6.5 percent over this period in pharmacies, while food and general merchandise stores more than doubled the annual growth of pharmacies at 13.8 percent[90]. This is serving to change where patients have their prescription medications filled.

Community pharmacy is in a unique situation amongst professions. While all professions receive financial compensation for the services they provide, a community pharmacist's compensation, particularly the insured portion, is currently tied directly to the provision of a product, namely

prescription medications. Moreover, in concluding the interaction between pharmacist and patient, many times the final exchange results in a financial transaction. As a consequence, within the public health care system in Canada, pharmacy has been the profession most influenced by corporatization.

Table 1: Regulations Regarding Canadian Community Pharmacy Ownership[91]

	BC	AB	SK	MB	ON	PQ	NL	NS	NB	PEI
Pharmacy must be managed by a pharmacist	X	X	X		X	X	X	X	X	X
Pharmacy must be owned by a pharmacist or pharmacist partnership					X*	X				
Drug prescriber cannot own or operate a pharmacy	X				X					
Pharmacy many not be located in an establishment that sells tobacco products					X	X		X		X
Pharmacy must surrender licence when ownership or manager changes				X			X	X		X
Pharmacist may only manage one pharmacy								X		
Pharmacy required to be open a minimum number of hours				X				X	X	
Majority of shareholders or directors in a corporation must be pharmacists	X		X		X	X				

* Regulation not as strict as that in Quebec

"The re-branding of 'retail pharmacy' as 'community pharmacy' suggests the profession's own awareness of a tension between commerce and professionalism"[92]. The corporatization of pharmacy may represent a threat to professional autonomy. While community pharmacy has always been a business *per se*, the ownership of community pharmacies is changing; independent, pharmacist-owned pharmacies are falling in number as corporate-owned pharmacies increase[8]. The trend of corporatization may be accelerated by pharmacists who become managers identifying more with the corporate objectives of the organization than the professional objectives of their profession[42].

"Of all medical practitioners, pharmacists are the most overtly involved in entrepreneurism"[35]. As well, the majority of community pharmacies have a commercial feel to the environment where pharmacists practice their profession, which differs from the more clinical environment of a physician's office or the hospital setting. This environment creates conflict as any corporate entity is profit driven, whereas pharmacists have an obligation to uphold the profession's ethical and moral obligations to the patients they serve and society as a whole[10, 11, 16, 92]. This conflict between corporate and professional interests may serve as a detriment to the profession, leading to role strain/ambiguity amongst community pharmacists[16, 25].

Community pharmacies are also a convenience for patients who seek health care related service and products. When patients visit a pharmacy they tend to be seeking a product to relieve symptoms and/or a product to prevent symptom or disease progression; for example, an antihistamine to treat and/or prevent symptoms related to allergic rhinitis (hay fever). While many times there is an interaction with a pharmacist, the patient pays for the product (commodity), not the service and expertise provided by the pharmacist.

2.4 Commodification

A loss of professional orientation results when health care is treated like a commodity[93]. Commodification results when consumers do not perceive a difference between a good/service from one supplier to the next; therefore, consumers select the good/service based on features such as cost and location. If the relationship between pharmacists and patients is seen as a commercial one, that relationship is likely to follow the "rules of commerce and the laws of torts and contracts rather than the precepts of professional ethics"[24]. The professional ethic of a corporate employee can start to be displaced by the ethic of the market, which is less demanding[24, 93].

As with corporatization, the Canadian health care system as a whole differs in terms of the level of commodification that can, or has, occurred in

comparison to the United States. However, community pharmacy in Canada is open to corporatization, and in a similar vein it is also subject to the market forces of commodification.

In the United States, managed care organizations tend to treat health care like any other commodity: costs, price, availability and distribution are left to the influences of the free market[24]. In Canada these market forces are more restricted due to the CHA. However, some sectors of the Canadian health care system are open to free market forces: community pharmacy is one such sector.

If patients select the pharmacy they frequent by its location and price (such as dispensing fee and product mark-up), and not the care provided by pharmacists, then community pharmacy may be viewed as providing a commodity. This is exacerbated if one views the drug (product) as the reason for visiting a pharmacy, and not the accompanying care (professional service). As self-care and increasing access to medical information continues, through such mediums as the Internet, patients may in fact search for the most convenient and economical location in which to obtain the commodities to treat their condition[94].

The primary characteristic of health care is the personal relationship that is formed between the health care practitioner and a patient[95, 96]. This characteristic may be lost if health care is treated solely as a commodity. However, "commodities may be used in the process of providing care, but the totality of health care itself is not a commodity"[24].

> When patients are renamed as "customers" and professionals as "providers", when quality of care is based on measures of customers' satisfaction, when health care is regarded as business, the question becomes more and more urgent to articulate what it means to be a care-giver[97].

In some pharmacies, there is in essence an 'assembly line' approach to handling the patient transaction: from patients presenting their prescription, to the final step when patients receive their prescriptions. Sometimes patients may interact with the same pharmacist each time they visit the pharmacy, and at each stage of the transaction, but if increased efficiency were the goal, the pharmacist would only interact with patients if necessary.

2.5 Rationalization

To measure productivity and efficiency, rational, ordered ways of completing aspects of a job are many times followed. As the professional ownership of community pharmacies decreases, corporate ownership may seek to standardize methods of completing work to measurable pieces to more accurately forecast and budget sales and human resource requirements and to ensure a wider span of control.

Rationalization tends to occur when a variety of factors come together that reward methodical ways of life or actions[43]. By making something rational, one aims to focus perceptions "by ordering them into comprehensible and "meaningful" regularities"[43]. For one outside the realm of a particular culture, rationalizing the process allows one to perceive and perhaps understand the process itself.

Much of the work by sociologist Max Weber centred on the development of rationality and its impact on the Occident (Western culture). Weber examined various factors that led to the rise of rationality and its structures[98]. There are four types of rationality drawn from Weber's work: practical, theoretical, substantive and formal[38, 43] (Table 2). However, two types of rationality specific to the work of Weber[38], substantive and formal, are highlighted as they are most closely tied to the nature of community pharmacy practice.

Substantive rationality is the capacity to make a value-rational action or judgement[38, 43]. Therefore, the actor (person) attempts to follow the most

rational decision shaped by his/her social values[99]. These social values may develop as a result of various social relationships, such as religious affiliation, cultural background, or profession.

Table 2 – Types of Rationality and Mental Processes[43]

Type of Rationality	Mental Processes	Reference for Mental Processes
Theoretical	Various abstract processes	Values or purely theoretical problems
Practical	Means-end calculation	Interests
Formal	Means-end calculation	Rules, laws, regulations
Substantive	Subordination of realities to values	Values

Formal rationality is the ordered actions made with regard to rules, regulations and laws in relation to the economy and society[38, 43, 100]. Formal rationality focuses on rationality at the macro-level and its impact on how individuals act[99]. The focal point is a means-end calculation as a way to accomplish a task in the most efficient manner.

Historically, formal rationality has been regarded as most antagonistic to substantive rationality[43]. As well, professions have traditionally been characterized by substantive rationality as professionals tend to be guided by social values to make rational choices[99].

Within community pharmacy practice there is influence from both formal and substantive rationality, which may create conflict for pharmacists. This may be heightened if corporate ownership and control does not understand and/or appreciate the process of substantive rationality that a pharmacist goes through to arrive at a decision, and focus is on shareholders.

For example, explaining the logic behind monitoring vitamin K consumption and maintaining a consistent intake to a patient when on warfarin

therapy may be viewed as an inefficient use of a pharmacist's time from a formal rationality standpoint; after all, the patient leaflet should have this information on it. However, from a substantive rationality standpoint, as well as from the professional ethic perspective, taking the time to explain the reason to monitor and not substantially increase vitamin K intake while on warfarin therapy is required. Moreover, the time taken to counsel also provides the pharmacist the opportunity to identify other potential drug interactions and develop a patient-pharmacist relationship.

2.6 Rationalizing Pharmacy Practice

Pharmacy practice is much like business in that what appears to work well in one sector, if possible, will be adapted and utilized in another. The move to pharmaceutical care, for example, is an adapted version of clinical pharmacy borrowed from the hospital environment in community practice. However, a broader perspective should be taken when considering influences to pharmacy practice.

Since the industrial revolution – late 18th and early 19th centuries – changes in society have focused on creating a more efficient, productive and healthier population. The advent of the assembly line, motor vehicles, and personal computers are all born out of efforts to make life easier and more efficient. Ritzer described the changing nature of society in general as *McDonaldization*, in that much like the fast food chain McDonald's®, dimensions used within the restaurant are being applied to other organizations[101]. In relation to the types of rationality, Ritzer's *McDonaldization*[101] premise is intimately tied to formal rationality.

Many organizations, whether auto-manufacturers, fast food restaurants or other, have become *McDonaldized*, in that they subscribe to the idea of total quality management, where through standardizing procedures, customers are almost certain to receive the same product and overall experience each time they consume the product[101]. In essence, community pharmacies,

especially corporate chains, provide these experiences to patients by standardizing pharmacies in terms of product selection, lay-out of the pharmacy, uniforms worn by pharmacists, and even the scripting of what pharmacists are supposed to say, outside of professional duties, when communicating with patients[23].

There are four areas described as rationally inherent in *McDonaldization*: efficiency, calculability, predictability and control[101]. In general, individuals aim to be efficient in life. Being efficient can mean different things to different people/organizations. With respect to pharmacy, efficiency refers to the optimal method of getting from one point, presenting the prescription, to another point, receiving and paying for the prescription. In an attempt to operate in the most efficient manner, many tasks and duties are made routine.

The dispensing task of pharmacy is one area where a routine procedure can be followed. This is highlighted by the fact that pharmacy technicians, as opposed to pharmacists, can complete the filling of prescriptions. While the pharmacist is required to make the final checks on prescriptions, technicians can carry out the filling of the prescription. As well, employees can be trained in a manner to follow specific procedures throughout their encounter with the patient. This routine procedure becomes familiar to patients as they begin to get used to the process of having a prescription filled.

The second area is calculability, and is in reference to the quantitative aspects of products provided and the services offered. Where quality used to be emphasised in product and service delivery, quantity and speed of service are now the aspects many customers desire. Dominant western culture has come to expect maximum return on its investment. The idea around ‘bonus packs’ or ‘buy one, get one free’ is centred on consumers being able to calculate the extra utility they are receiving for their investment. Incrementally, the consumer is ‘better off’ purchasing the larger size, for example, by having

their fast food meal up-sized, or by choosing the jumbo bottle of multi-vitamins, increasing their incremental utility.

Western culture has come to expect processes, products, etc. to be provided in a predictable manner. The third theme of *McDonaldization*, predictability, is when the organization strives to ensure that services and products are provided in the same manner, no matter the location or time customers visit the establishment. For instance, many chain pharmacies generally have the same look, feel and product selection regardless of location. As well, many train their employees to behave in a predictable manner that is familiar to patients, even using scripted protocols. This does allow patients to know what should be discussed and the questions they will be asked, but it also allows pharmacists to tailor their counselling to the patient, fulfilling their professional function.

There is also a greater use, and in a sense reliance, on technology within the dispensary. The technological developments in pharmacy and health care "… have imposed greater uniformity and predictability in the work situation of the pharmacist"[102]. It has also increased efficiency in the pharmacy.

As the final theme, control is maintained by carrying out many tasks through technological means that are more accurate than humans. There are also some instances where skilled activities performed by an employee are limited and/or restricted to small, measurable parts of a process[23, 101]. In the pharmacy setting, automatic dispensing machines are used for high-volume drugs both to speed up prescription processing and to reduce the chances of human error.

Control may also be employed through other means, such as having patients wait a set amount of time before their prescription is ready, no matter how busy the dispensary is at the time, to allow patients to 'look around' the pharmacy, thus increasing the chances of further purchases. However, these protocols are also in place so that the pharmacist has enough time to process

the prescription, including making sure it is the right drug prescribed for the patient, verifying the patient has drug coverage, identifying any drug interactions and possibly clarification with the physician on the therapy prescribed. In addition, time is allowed for the possibility of other patients requesting the pharmacist's attention, not to mention other health care professionals and drug plans.

In relation to *McDonaldization,* the nature of community pharmacy practice is changing, primarily through influence from corporate pharmacy, or *McPharmacy*[23]. While not all pharmacies have transitioned to "*McPharmacies*"[23], there has been a definite trend of pharmacies to provide standardized products and services centring on efficiency, calculability, predictability and control. In some high volume pharmacies, there is an assembly line approach to filling prescriptions where technicians 'produce' the product and the pharmacist checks it to ensure accuracy.

In light of pharmacy's professional status, legal and regulatory policies are in place to safeguard its autonomy and to protect patients and the greater society. The goal of creating a *McPharmacy* may influence the business decisions of community pharmacy, but the legal, moral and ethical aspects must ultimately take precedence over any business model if pharmacy is to maintain its professional status.

By default, all businesses look to maximize profits, and this can place the pharmacist's professional objectives at odds with the business (non-professional) objectives of the pharmacy. As well, with increasing prescription volumes and a shortage of pharmacists (actual or perceived), pressures are increasing on practicing pharmacists to work faster, harder and longer to ensure patient needs are being addressed. However, this environment may result in increased levels of stress and potentially decreased job satisfaction leading to increased pharmacist turnover, prescription errors, and improper patient counselling and pharmacist burnout.

On the health care team pharmacists are presented as the drug and drug therapy experts who work with the diagnostic and prescribing expert, the physician. By dividing the prescribing and supplying of medications the process is rationalized into separate components that are easier to measure and in a more objective manner[103]:

> Large corporations maximise profit by ruthlessly rationalising and standardising products and services. Within pharmacies this is achieved by imposing routines on processes such as dispensing, by standardising products, services and store design, by emphasising cost rather than quality and by ensuring employees undertake simple tasks, follow written procedures and use computer technology where possible[18].

The industrialization of services through rationalizing processes in knowledge based work, such as pharmacy, resulted in quantitative indicators of service quality in an attempt to measure the quality of the output[104-107]. In comparison to the ability to construct a production process that is efficient and measurable when creating tangible goods, the production and processes involved with producing intangible goods (services) are many times viewed as inefficient[108, 109].

The service provision process can be difficult to standardize and therefore manage due to human behaviour[110]. Rationalizing services is further complicated by the client variable, where each interaction between the service provider and client is unique, and therefore ambiguous[104, 111]. However, if service quality, or customer service, is thought of as 'manufacturing in the field', then "it will be carefully planned, controlled, automated where possible, audited for quality control, and regularly reviewed for performance improvement and customer reaction"[108]. The implementation of policy and procedure manuals and the use of 'secret shoppers' to measure the quality of the service encounter are examples of areas an organization can attempt to bring form to, standardize and audit the service provision process.

2.7 Bureaucratization

When organizations seek to rationalize the processes of their employees, formal procedures and policies are put in place. As levels of authority and procedures in place increase, bureaucracy follows. Bureaucracy is used interchangeably to describe formalization[112], and is closely linked with formal rationality[37, 38]. As an organizational structure, bureaucracy follows a division of labour, specialization/expertise, strict rules, and a hierarchy of subordination to higher levels of management, composed of a vertical, top-down structure[37-40]. Bureaucracies are organizations that rely primarily on formalization of employee behaviour to achieve coordination[113]; the bureaucratic structure – a common form of organizational structure – is utilized by many corporations, governments, universities and profit and not-for-profit organizations.

Weber analyzed the tendencies of bureaucracies to accompany the increasing rationalization of social life; he also identified reasons for the technical superiority of bureaucracy over other organizational forms[114]. Seven characteristics make up the ideal type of bureaucracy: specialization, formalization and standardization, decentralization, hierarchy, limited rewards to officeholders, universalistic performance standards, and career advancement opportunities[38, 114, 115]. In analyzing bureaucracies, one should acknowledge that the seven characteristics of the ideal type of bureaucracy are present to varying degrees in any given organization[38, 114-116]. Therefore, all seven characteristics do not need to be present within an organization for it to be considered a bureaucracy.

Specialization involves duties and roles of members/employees focused on a specific job/task to increase organizational efficiency. Specialization also reduces the chances for error and uncertainty if all employees were authorized to complete any task in the organization[114]. In pharmacy, pharmacists specialize in drugs and drug therapy management, but

can also get caught up in the technical dispensing tasks that detract from their capabilities and expertise.

The management of many organizations is based on written documents and files, lending to the notion of *formalization and standardization*. Formalization of duties, through such mechanisms as policy and procedure manuals, reduces uncertainty that would result with variability in organizational tasks[114]. While all types of organizations, including community pharmacy organizations, have policy and procedure manuals, the larger the organization the increased likelihood these guides are in place in an attempt to standardize operating procedures across all departments/locations; moreover, they are not only a function of standardization, but of coordination.

Initially one may view *decentralization* as counterintuitive to bureaucratic organizations; however, delegation of tasks and authority are required for organizational efficiency[114]. Routine operating decisions are delegated to various departments or locations, while centralization of authority is focused on important policy decisions and planning[114]. In corporate pharmacies, operations in the pharmacy itself are separate from upper management. As a result, decentralization is necessary for local operations to proceed efficiently.

A bureaucratic organization typically consists of a *hierarchy* of authority with an ordered system between management and subordinates[114, 115]. This hierarchy serves as a structure of power, as well as a channel through which organizational decisions are made[114]. Each organizational member is subject to the authority of a member above him/her in the hierarchy[114]. For instance, within a pharmacy, pharmacy technicians are subordinate to pharmacists, but rank higher than a general store clerk.

As an employee progresses along the organizational hierarchy certain rewards acknowledge the increased role and responsibility within the organization, and many times the employee possesses the qualifications required for the position. However, the bureaucratic structure is in place to

limit rewards to officeholders so that employees do not gain personally from the position they hold within the organization[114]. Hiring and promotion in bureaucratic organizations are based on competence and *universalistic performance standards*. Competence can be one's educational qualifications, organizational performance, and training, all of which should be based on a non-personal basis. Therefore, efficiency is achieved by having the person with the greatest ability and technical knowledge in the position[114]; for example, restricting the position of pharmacy manager to a licensed pharmacist.

Within bureaucratic organizations the requirements for *career advancement opportunities* are clearly set out, thereby increasing efficiency as employees understand what is required to advance within the organization[114]. While these advancement opportunities are evident in bureaucratic organizations, smaller, family-owned organizations (such as independent pharmacies) leave little or no room for career advancement for employees, unless they are presented the opportunity to eventually own part or all of the business.

Bureaucracy is an administrative structure that is characterized by belief in rules and legal order to carry out organizational tasks[114]. Bureaucracies became the dominant organizational structure as a result of its technical superiority over other forms of organization and the trend to rationalize social life[115]. Weber noted that bureaucracy contributed to the levelling of social differences, while acknowledging the tendency for administrative control to be held by a select few[38, 114, 115].

Pharmacists are experiencing greater bureaucratization due to the changing nature of community pharmacy ownership. Pharmacy ownership is moving away from pharmacist-entrepreneurs toward corporate-owned and -operated pharmacies[8]. It is this change toward corporate ownership that is contributing to the increased bureaucratization of community pharmacy. As

bureaucratic employees, pharmacists are “separated from ownership of the means of production or administration”[38].

The design of pharmacy organizations is moving from a simple structure, where the owner has direct supervision and control over the firm, toward a professional bureaucracy, with separate ownership and management[40]. Within the simple structure, where the pharmacy manager is the owner and highest level of management, innovation and adaptation to the local market is more likely than in a larger, corporate-owned operation where division occurs between ownership and management[40].

Bureaucracy has been described as the most rational and efficient mode of organizing work, but is also linked with the degradation of working life for bureaucratic employees[38, 42]. Bureaucratization, as a result of capitalistic expansion, such as the increasing corporate ownership of community pharmacies, undermines competitive activity and results in costlier alternatives – which may provide better services – being forced from the market[117]. As well, professions and those that provide a service are generally thought of as inefficient due to the human nature of the work[108, 109].

Bureaucratic organizations exercise forms of social control over their employees. Three levels of social control are:[117]

- First level, where capitalism sets the overall goals of the organization (profit making) and the prevailing capitalist ideology creates the cultural context which determines the way in which particular organizational tasks must be accomplished;
- Second level, the behaviour of individual employees within any formal organization is severely constrained (despite their level of training, skill, and specialization) by pre-existent hierarchical structures and a set of regulatory norms; and
- Third level, the activities of recipients of service (clients) are largely constrained by the processes at the other two levels, of which, they are most likely unaware.

With professionalism and bureaucracy based on different principles of organization, conflict can arise[118]. Bureaucracy aims to achieve

standardization of tasks and functional specialization, while professionals focus on unique problems of clients/patients with the belief that they possess the requisite skills to perform the job[119]. Professionals are guided by the needs of the client/patient, and bureaucracies are guided by the goals of the organization[119]. As well, bureaucracies recognize authority based on one's position within the organizational hierarchy, while professionals are recognized for their professional expertise[119]. Corporate organizational structures have been described as bureaucratic and vertical, while professionals have traditionally been viewed as possessing a horizontal relationship[120].

While bureaucracy itself may not be inherently negative, the degree of bureaucracy has been shown to influence professional autonomy[121, 122]. Mintzberg distinguished between *machine* and *professional* bureacracy[113]. Machine bureaucracy centres on the concepts Weber[38] used to describe bureaucracy: primarily the routine, highly standardized work processes found in industrial/manufacturing industries[113]; whereas the professional bureaucracy relies on the skills and knowledge of the operator (professional) to function, making it difficult to standardize the work and its processes[113]. A professional bureaucracy recognizes that an organization may be bureaucratic without being centralized[113]. Not only is a professional's work complex, but his/her services are usually in high demand, providing professionals with mobility in terms of where they choose to practice their profession[113].

Professional managers are often left between meeting the needs of the professionals they manage and the needs of those outside the profession, such as upper management[113]. However, society allows professions the right to self-regulate and therefore professionals must follow the policies of their professional associations. As a result, the professional bureaucracy may be limited in controlling and standardizing aspects of professional work within the organization, but can adapt the strategies to meet the organization's needs and interests[113].

Unlike many large professional organizations, such as accounting and law firms where professionals are often in close geographic proximity to a centralized authority, community pharmacies are dispersed throughout various locales, and not generally concentrated in one centre. Therefore, community pharmacies are in essence *dispersed professional bureaucracies*, where pharmacists are physically removed from the larger organization[113].

Attempting to standardize professional work often impedes and discourages professionals[113]. The more bureaucratic the organization, the greater the likelihood of conflict and job dissatisfaction[123]. "Rationalization in the machine bureaucracy leaves the client with inexpensive outputs. In the case of professional work, it leaves him [her] with impersonal, ineffective service"[113].

2.8 Proletarianization

In addition to reduced responsiveness and less inclination toward innovation, bureaucratization as a process can lead to the proletarianization of the occupational category. Proletarianization, born out of Marxist theory[124], is a complex historical process that creates a working class (proletariat), placing it in subordination to, and conflict with, a capitalist class[125]. Specifically, proletarianization denotes "the process by which an occupational category is divested of control over certain prerogatives relating to the location, content and essentiality of its task activities and is thereby subordinated to the broader requirements of production under advanced capitalism"[42].

Research has been conducted with regard to the proletarianization of medicine, especially concerning the move to a market system of health care in the United States which began in the 1960s[42, 66, 89, 117]. In the United States, with a move to a market-based system of health care, physicians are increasingly employees of associations such as health maintenance organizations (HMOs). As physicians become employees, and not entrepreneurs, the control over their work diminishes.

Pharmacists have traditionally been the owners of pharmacies; however, the changing nature of pharmacy ownership in Canada, with the number of pharmacist-entrepreneurs decreasing and corporate-owned pharmacies increasing[8], may lead to pharmacists becoming subordinated to the broader requirements of capitalist control, with a focus on attaining the maximum financial return on investment. While there continues to be many independent pharmacies that are owned by a pharmacist, the economic and competitive influences of the marketplace are leaving many pharmacists little choice but to practice their profession as employees[126].

The net effect of proletarianization is the reduction of workers to some common level to service the broader interests of capital accumulation[117]. Proletarianization is a gradual process in that there is not a sudden moment of change and therefore may be difficult to recognize[42]. However, in witnessing the increasing bureaucratization of pharmacy as a result of the changing ownership structure, it could be argued that pharmacy is experiencing the proletarianization of the profession.

As employment opportunities for pharmacists continue to transition from small-scale, professionally controlled and focused operations toward larger, corporate-controlled and directed operations, more pharmacists are becoming professional employees within larger organizations.

2.9 Professionals in Organizations

The quality of the organizational setting often dictates the quality of care provided to patients[97]. One must be aware that quality does not just imply structural arrangements, regulations and procedures, but also issues of culture and professional environment[97].

When a professional practices within an organizational setting, professional ideals may conflict with the principles of the employing organization[127]. Gradually, but at an increasing rate, health professionals, including pharmacists, are becoming employees in non-professional

organizations, organizations where professional employees are outnumbered by non-professional employees[128-131]; this shift in employment status supports the notion of proletarianization[131]. Because most pharmacists are employed in an organizational setting there also exists an increasing likelihood of conflict between professional and organizational objectives[132, 133].

This conflict may arise from two sources of authority: one deriving from the formal authority of the employer organization and the other from the professional expertise held by the professional and enforced by collegial authority[130]. More than one type of authority can result in these effects: 1) the disruption of an individual's orientation to his/her organization or to his/her profession by requiring him/her to choose between the two; 2) criticism of the organization by individuals orientated toward their professional norms and therefore more likely to ignore administrative details; and 3) stress experienced by professionals in such organizations as a result of being 'caught in the middle'[130].

Managers may also experience conflicting demands when trying to heed requests from both superiors and subordinates within the hierarchy of the organization. Added to the pressure of conflicting demands is the moral complexity and moral conflict that may result when considering demands from superiors and subordinates[130]. When questions of who controls the work environment are brought forth, they also question the professional legitimacy of the professional manager[132].

The stronger the organizational setting, the more likely inherent situational pressures exist for employees to behave in a particular manner[132]. As a result, organizational employees may adopt the attitudes and behaviours encouraged by the organization regardless of their professional code of ethics or personal attitudes[134]. Moreover, "organizational influences can be expected to significantly influence ethical behavior"[132]. Research has shown that pharmacists employed in larger organizations perceive themselves to have

less autonomy and less job satisfaction, which may be the result of the more bureaucratic structures of chain organizations[119].

As members of what has been described as a marginal profession[3, 5, 34-36], individual community pharmacists are often forced to choose between conflicting expectations[45]. While conflict is inherent in all social situations, formal or informal, it is said to be higher for marginal professions since they are expected to satisfy two sets of expectations: professional and organizational[45].

Community pharmacy practice contains elements that are professional, such as providing pharmaceutical care, as well as those that are non-professional, such as selling magazines and other non-health related items. This dual environment may result in ethical ambivalence[135], where "the behaviours, attitudes, and norms that are shaped and maintained by the organizational reward system conflict with the behaviours, attitudes, and norms congruent with the ethical values and judgements of organizational stakeholders"[135].

As well, rewards based on something other than comprehensive patient care increase the chances that shortcuts are taken in patient care[132]. Therefore, if a manager is evaluated on the prescription volume of the pharmacy and not on the number of adverse reactions avoided or on the lowering of a patient's cholesterol, the result may be that the pharmacists will focus more on volume, a business orientation, as opposed to patient care, a professional orientation (Table 3).

Professionals employed in an organization where professionals are in the minority are confronted with pressures not faced by non-professionals. While all organizational employees should behave in an ethical, moral manner, the situational pressures for professionals are exacerbated by the oath to their profession[133, 137, 138].

Table 3 – Distinguishing Professional and Organizational Influences on Pharmacy Practice[136]

Key Distinguishing Issue	Manifestations of Professional Influence	Manifestations of Organizational Influence
Preferred use of expertise	Case-specific application for handling non-routine problems	Standardized strategies for handling routine problems
Focus of service orientation	Commitment to providing quality client care	Commitment to satisfying customers to retain business
Dominant form of control	Professional self-regulation	Centralized bureaucratic control
Locus of responsibility and legal enforcement mechanisms	Individual malpractice liability and licensing	Organizational liability and licensing

2.10 Professions

Traditionally, professionals attained a higher status within society through the exclusive domain the profession held. "Professional society is based on human capital created by education and enhanced by strategies of closure, that is, the exclusion of the unqualified"[139]. Professionals lived a life of privilege that afforded luxuries that those outside professional society could not generally obtain. While professionals remain in the upper class of most cultures, their socio-economic domain is not as exclusive as in the past.

There are two models to view professions: the objectivist and the process perspectives. The objectivist perspective views professionals as distinct from non-professionals and aims to determine what it is that makes professional occupations different from non-professional occupations[46]. The process perspective examines the process of how occupations become professions[46]. Professions are discussed below from both the objectivist and process perspective.

It is difficult to objectively define what a profession is because many group all professions together in an attempt to find a common denominator[140].

While no definitive definition of what a profession is exists, there are common traits exhibited by most professions:[3]

- A profession determines its own standards of education and training.
- The student professional undergoes an extensive training and socialization process.
- Some form of licensure legally recognizes professional practice.
- Members of the profession run licensing and admission boards.
- Most legislation that affects a profession is shaped by that profession.
- A profession commands high income, power and status and can demand high calibre students.
- The professional is relatively free from lay evaluation.
- The norms of practice enforced by the profession are often more stringent than legal controls.
- A profession is likely to remain a life-time occupation.

As western culture progressed from an industrial society to one based on intellectual property, processes and techniques became more specialized. With increasing specialization, groups of individuals assemble together based on a common body of knowledge. As the knowledge held by these occupational groups becomes more esoteric in nature, many of these groups organize and establish themselves as professionals. This specialized body of knowledge that professionals hold may be distinguished by the difference between professionals that provide services in their area of speciality, and those that they serve using that body of knowledge[5]. Professions supply a service to society that society cannot provide for itself[52].

"Occupations aspiring to professional status do so in order to gain and protect certain privileges such as monopoly of practice, autonomy of action and enhanced remuneration"[3]:

> …occupations achieve their status as professions as the result of political struggles and power conflicts between different interest groups. An occupation becomes a profession, not so much because of improvements in its skills and knowledge but rather because the profession's leaders are successful in convincing the State that autonomy and self-regulation are desirable[5].

There are well-established professions historically, like medicine and law, which have lain claim over hundreds of years to specialized knowledge and boast a 'pre-eminent' status amongst professions. Over time new groups have emerged with their own specialized knowledge and lain claim to a more in-depth knowledge of a particular area of practice historically dominated by a profession; one instance is the profession of pharmacy with its focus on the pharmacological aspects of medical care/intervention. Pharmacy has moved into an area of specialization traditionally under the monopoly of medicine, taking some of medicine's clinical autonomy. Despite the advances pharmacy has made, medicine's authority over pharmacy in Canada has been in place since the early twentieth century[141], and all health professionals have historically been subordinate to medicine[52].

To achieve professional status, those within a profession must possess skills and knowledge that individuals outside the profession cannot legitimately claim. Pharmacists are highly educated and trained in the practice of pharmacy. Within health care, pharmacists are the drug and drug therapy experts; while other professionals within health care, such as physicians and nurses, may have knowledge in this area, the focus of pharmacy is almost exclusively within this area. The formal education of those practicing pharmacy focuses on areas such as pharmacotherapeutics, pharmacokinetics, medicinal chemistry, and other relevant basic, clinical and applied sciences. The changing focus of pharmacy practice, as highlighted above in relation to the work of Muzzin and colleagues[12], is undeniably rooted in identifying pharmacy's evolving role as a health care profession.

The unique body of specialized knowledge that a profession lays claim to allows members of the profession to exhibit professional judgement; while some of this knowledge can be obtained by others, some is specific to the practitioner and his/her experiences. Jamous and Peloille described professional knowledge and judgement as coming from two sources: indeterminate knowledge and technical knowledge[142]. While technical

knowledge is obtained through textbooks and other rational methods, the practitioner, through professional experience, acquires indeterminate knowledge. Technical knowledge can be viewed as a form of formal rationality, while indeterminate knowledge follows the idea of substantive rationality.

In essence, indeterminate knowledge is the result of practical, hands-on experiences of professionals obtained as professional students become socialized into their future profession, and built upon as they practice their profession; for example, clinical rotations and internships allow pharmacy students the opportunity to gain experiential learning that cannot be replicated in a more formal, academic setting. The students obtain indeterminate knowledge from the guidance of their preceptors and through various experiences while in the practice setting, a setting where students apply what is learned in a formal, academic setting.

Licensed pharmacists have almost exclusive rights to the distribution of prescription, and many non-prescription medications, as granted by the provincial/territorial government to licensed pharmacists; much as prescribing medicines is afforded primarily to physicians. While pharmacists are granted the authority to dispense prescription medications, the profession itself, through organizations such as the provincial pharmacy associations, the Canadian Council for Accreditation of Pharmacy Programs, and the Pharmacy Examining Board of Canada self-regulates and determines the educational standards and scope-of-practice for the profession.

It is one thing for a group of practitioners to obtain professional status, but it is another for that profession to maintain its status. Therefore, "professions must be sensitive to social, political and technological change which may undermine their claims to privileged status"[3]. The information revolution has resulted in numerous new technologies, such as the Internet, from which the layperson can seek information on a variety of subjects.

The accuracy of the information obtained will vary tremendously, with the general population not always able to distinguish accurate, credible information from questionable information. While this information may empower laypersons, it also allows them to question a profession's specialized body of knowledge, even though they may not able to completely interpret the difference between information obtained through personal sources and that which they receive from a professional.

This privileged knowledge is not only being questioned with regard to pharmacy, but other professions such as medicine, especially when an increasing amount of medical knowledge is derived from commercial sources[143]. However, medicine's knowledge is not just based on how best to manage a given condition, but on the diagnosis of that condition. "Medical expertise and decision making is not simply the possession of facts and figures, it is based on implicit, intuitive clinical competence gained over time which cannot be rationally explained"[2]. It is therefore vital for the profession of pharmacy to relay that pharmacists do not just provide medications; they understand and interpret the physiological actions of the drugs.

The idea of professions today centres on the body of knowledge those within a profession hold. However, there is constant debate between pharmacy and medicine with regard to drugs and drug therapy; while pharmacists are trained to a far greater extent in this area, physicians are the "gatekeepers" when it comes to drug therapy simply by their almost exclusive authority over prescribing. If true market forces were to play out, where the most economical method of providing prescription medications to patients were followed, physicians would control the supply of prescription medications to a greater extent by dispensing the drugs they prescribe[144]. There are instances where pharmacists, and even nurses, have and are obtaining prescribing rights, yet physicians continue to retain the majority of this control in most jurisdictions[145].

Within Canada some physician groups are challenging the need for pharmacists to counsel patients and obtain demographic information with regard to emergency contraception which moved from prescription to non-prescription (Schedule II) status in April, 2005[146]. In essence, this challenge brings into question the status of pharmacists as health care professionals. "The profession [pharmacy] should face up to its well-entrenched dispensing stereotype and public scepticism about an advanced role for pharmacists"[6]. As well, with regard to pharmacists expanding their role in prescribing, groups such as the Saskatchewan Medical Association are calling the proposal a 'recipe for disaster'[147]. This reaction may be the result of misinformation, or lack of information in understanding the extent of the proposal and the potential benefits to patient care.

There are ongoing arguments that pharmacy is an incomplete, or quasi-profession[3, 5, 34-36, 148]. These arguments are based on the observation that pharmacy does not completely control the nature of its work, as is the case for physicians. For instance, pharmacists may be able to fill a physician's prescription with a therapeutically equivalent drug to what is on the prescription, or even refuse to fill the prescription, but the pharmacist is not the one who writes the prescription; pharmacy is reliant on the physician's prescription[9].

There is also the argument that pharmacists must pursue non-professional objectives to survive economically[45]. With an increase in the number of drugs pre-manufactured, resulting in a decreased demand for compounded medications, the specialist role of pharmacists in the community is harder to define among the general public. However, these changes may be the catalyst for pharmacists to expand their role beyond dispensing medications toward more cognitive services: services that may or may not be tied to a tangible product. It also provides pharmacists with the opportunity to specialize their practice in areas such as cardiovascular risk reduction or

diabetes management, thereby showcasing the role of the pharmacist beyond dispensing medications.

Despite debates on what constitutes a profession and pharmacy's status as a profession, pharmacy currently maintains the core features of a profession; pharmacy retains control over its education before licensure, delivers a monopolistic service, and as an occupational body is self-regulating[103].

2.11 Summary

Pharmacy continues to transform the way its practitioners practice their profession. The changing nature of pharmacy practice is a process that will continue as the profession adapts to the changing nature of health care, ownership structure and also to the shifting needs of society as a whole. Change is a constant and if the profession were to sit by watching the changes and not adapting as a profession, the fading social contribution to society would chart its eventual downfall. However, the changes to pharmacy practice are not only influenced by the self-regulating, autonomous members of the profession, but also by a broad array of stakeholders, including other health care professionals, governments, patients, insurance organizations and employers.

Economic, organizational and technical aspects of practice are three areas where a profession may progressively lose autonomy[125]. With regard to the economic aspect, when members of a profession become employees of an organization that is not owned by a member of the profession, the profession loses some autonomy[125]. One can see this with community pharmacy, as pharmacists are increasingly becoming employees or corporate-owned and -operated pharmacies.

In terms of the organizational component, when the employer seeks ways to increase the productivity and efficiency of a profession, some autonomy is removed from the profession[125]. As ownership of community

pharmacy transitions to corporate ownership, agency theory highlights that the sole social responsibility of a corporation is to increase profits[149] and this is commonly accomplished by increasing productivity and efficiency in the dispensing process; especially with regard to receiving the maximum benefit of expensive human capital, pharmacists. Moreover, by putting technical processes in place, aspects of the decision-making processes of the professional are removed or curtailed[125].

Traditionally employers of pharmacists, unless self-employed, have been fellow pharmacists, as legislation often dictated a pharmacist must be the owner of a pharmacy[60]. However, changes in legislation throughout Canada, with the exception of Quebec, have allowed non-pharmacists, and most notably corporations, to own and operate pharmacies, so long as a licensed pharmacist is working while the dispensary is open. This change has resulted in pharmacists increasingly becoming employees in corporate-owned and -operated pharmacies[46].

Community pharmacists in large chain pharmacies rank stress as the reason for leaving the employer more often than pharmacists in independent and small chain pharmacies[32]. At the same time, community pharmacists in independent and small chain pharmacies were more likely to leave their employers due to salary concerns than large chain pharmacists[32].

With changing ownership come the different organizational structures within which pharmacists practice their profession. As well, conflict can arise when professionals are employed in large, bureaucratic organizations as professionalism and bureaucracy centre on fundamentally different principles of organization[118].

As in the United States, ownership of community pharmacies in Canada is becoming concentrated in a limited number of owners as corporations increase their market share. To increase power and control over the market, organizations modify the situations of economic competition[114]. While organizations are a vital part of society, people do not tend to think of the

control organizations exert over society until a problem or crisis occurs[114]. As well, direct-to-consumer advertising of community pharmacy in Canada is primarily focused on what specific pharmacies/organizations offer, not on what the profession or individual pharmacists are capable of providing.

Many times patients are not cognizant of the vital information they should obtain from their pharmacists with regard to medications, drug therapy, and associated risks[92]. In reducing the 'patient' to a 'consumer', corporate pharmacy may take on the view that it needs to attend to the desires of the consumer, and if the consumer does not want to hear all that the pharmacist has to say, does conflict arise between the professional obligations of pharmacists and the corporate objectives of employers? While service quality may be a good measure of retail service[105-107, 150], the services pharmacists provide are not easily measured as the very reason for professions – specialized knowledge that the lay person lacks – is hard for the non-professional to assess.

It may be hard for a patient, or even employer, to evaluate the services provided by all health care professionals, including pharmacists. "The specialization of knowledge and the delivery of a service by the professional on the basis of skill and expertise are accompanied by the absence of specialized consumption by the client"[151]. Moreover, "clients must be educated about what criteria to use in evaluating professionals and how to employ professionals productively. In some cases, people must even be educated about what they need to seek out in the services of a professional"[152]. However, if there is a lack of appreciation for the scope-of-practice of pharmacists by the patient, or a non-pharmacist employer, and therefore only the most basic services are offered, a continued move to efficiency and rationalization may occur where pharmacies compete on volume, and not necessarily on what may benefit the patient, the profession, and society at large.

While education, training and the objectives of pharmacy as a professional body may be focusing on pharmaceutical care, integration into primary health care teams and better knowledge and utilization of pharmacists' competencies, there does not appear to be sufficient demand for this vision[14]. And if patients do not demand more from pharmacists, then a focus on increasing prescription volume would appear to be a logical business plan for corporate pharmacy.

Institutional mechanisms may be used to guide practice change within community pharmacy. Corporate owned pharmacies may be used as channels in which to change the way pharmacy is practiced in order to create the greatest profit potential and dividends for shareholders. When market influences are extended to medical care, and community pharmacy practice, providers may be relegated to a secondary role, especially once ownership dictates who to treat and how much to charge[153].

If there is not a perceived value to what a pharmacist can do, then the profession may lose credibility and experience further barriers in establishing itself as a valued member of the health care team. As well, if patients, amongst others, begin to view pharmacy as a commodity (if it is not the case in some respects already)[24, 94, 95, 154, 155], the profession will continue to face scepticism as to its role in health care.

In the United States Wal-Mart® has introduced a four-dollar prescription program where a one month supply of 300 commonly prescribed generic prescription medications are available for a flat fee of four dollars, regardless of whether the patient has prescription drug insurance; one might view this as a move to the commodification of community pharmacy[156, 157]. In fact, these programs have increased prescribing trends toward prescription medications included in the program, regardless of payer type, providing evidence that prescribing habits can be influenced by corporations advertising discounted prescription medications[158].

Corporate pharmacies tend to have larger front shop, general merchandise offerings than independent pharmacies[26]. This larger, non-health related offering may lead to the public viewing the "pharmacist as a glorified grocer rather than a health professional"[20]. There is also the chance that ownership of community pharmacies will be restricted to a few corporate chains, creating a monopoly of sorts, affecting the labour market[20]. One might argue that this has already occurred with the shortage of pharmacists being the result of too many pharmacies being open in larger, urban centres.

With a shortage of pharmacists comes recognition of the profession and the struggles it faces in meeting the demand for practitioners[159]. However, as supply of qualified pharmacists remains below demand, other providers of medication-related care, such as nurses or even pharmacy technicians, may seize the opportunity to expand their scope-of-practice.

Zellmer poses an important question that the profession needs to consider: "if traditional pharmacies (and the pharmacists they employ) continue to be perceived as conveying only a commodity, not a professional service, will the rate of evolution of alternative sources of that commodity accelerate?"[6] Moreover, if pharmacists are relegated to being over-educated technicians who carry out the policies of their corporate employers, and are forced into a preoccupation with low-bid service delivery, can they be held in high regard by patients or other health care professionals[160]?

Pharmacists rate high on opinion polls regarding trusted professions[14, 27], but if someone is unaware of the potential of the profession, it is not difficult to score high when patients have a positive interaction with their pharmacist. As well, pharmacists are the most accessible health care professional, and patients do not have to go through a bureaucratic process to access pharmacists' expertise and services.

Pharmacists are in a unique position in that the profession is overworked and underutilized. The services that many community pharmacists provide are routine and do not fully exploit the expertise of

pharmacists, leading to an inefficient use of a valuable resource[14]. The overworking and underutilization of pharmacists may be leading to the deprofessionalization of pharmacy. However, there are recent changes, such as prescribing authority of certain prescription medications in Alberta, without requiring authorization from physicians, that are making better use of pharmacists' expertise[161, 162].

It is clear that there is changing ownership with regard to community pharmacies in Canada, with a reduction in the number of pharmacist-owned pharmacies as corporate-owned pharmacies increase in number[8]. With the move to corporate-owned and -operated pharmacies comes the recognition of a more intimate link between the profession and the profit motive of a corporation.

Focus must also be placed on the fact that pharmacists are increasingly becoming employees of large, corporate organizations. The influence of the employer must not be ignored as "employers have the power to define and supervise work activities, thus affecting the amount of freedom or autonomy open to occupational members"[163]. As well, there is evidence that bureaucratically-based professionals eventually become dedicated to the advancement of their bureaucracy by looking to advance personally within the organization[117].

Pharmacy managers in corporate-owned pharmacies are agents of the principal (company and its shareholders), not the principal themselves as is the case with independent pharmacy owners[149]. The obligation of health care professionals, including pharmacists and pharmacy managers, is to the needs and welfare of patients, not to the health care system, the organization, or management[97]. However, making the commitment to the patient may not be in line with the commitment of the organization's management[97].

Restrictions of professional autonomy as the result of management structures have been criticized as ethically problematic[155]. They tend to weaken professional commitment to beneficence and non-maleficence, while

failing to protect patients against substandard care in order to increase profits[155]. Moreover, the incentive to innovate can be reduced by external controls, and as a result professionals can become passive[113].

Community pharmacists have always been faced with the dual role of professionals and merchants[45], and that fact remains. What is unknown is the orientation that pharmacy managers of corporate-owned pharmacies take: do they identify more strongly with the objectives of their profession, or does the role of manager/management take precedence? With pharmacies increasingly coming under the control of corporate ownership, if managers who are professionals themselves gravitate toward the corporate objective of maximizing shareholder value, pharmacy as a profession may be reduced to providers of a commodity and stripped of its social value. Alternatively, if managers in corporate-owned pharmacies are ensuring the interests of the profession and patients are being considered when policies are implemented in their pharmacy, the social value and benefits of pharmacists' expertise in patient health care is more likely to survive, and possibly flourish, amid the changing ownership of pharmacies.

2.12 Hypotheses

Ho1: Community pharmacy managers' alignment to professional aspects of practice is not related to ownership type.

> Ho1a: Community pharmacy managers' alignment to professional aspects of practice is related to ownership type.

Ho2: Community pharmacy managers' alignment to business aspects of practice is not related to ownership type.

> Ho2a: Community pharmacy managers' alignment to business aspects of practice is related to ownership type.

Ho3: Community pharmacy managers' authority over environmental (organizational) aspects of practice is not related to ownership type.

> Ho3a: Community pharmacy managers' authority over environmental (organizational) aspects of practice is related to ownership type.

3.1 Study Population

Community pharmacy managers across Canada constituted the study population, with the exception of those in the province of Quebec. Currently in the province of Quebec, ownership of a pharmacy is restricted to licensed pharmacists. This study assessed the impact of various ownership structures (independent, franchise and corporate) on community pharmacy managers and pharmacy practice, and the regulatory environment in Quebec does not currently allow for corporate owned pharmacies. While acknowledging that the inclusion of pharmacies in Quebec would allow for a comparison with pharmacies in the rest of Canada, it was not considered financially and logistically feasible to include Quebec.

This study used mixed research methods: a self-administered postal survey followed by in-depth interviews with select, self-identified respondents to the survey. The order of methods selected, while not common, has been successful in previous research[164]. The intent was to first understand *what* is occurring in community pharmacies across Canada, followed by seeking to better understand *why* it is occurring.

Before implementation of the self-administered postal survey, an ethics application was submitted to the University of Saskatchewan's Behavioural Research Ethics Board. Approval was granted on February 28th, 2007 (BEH #07-26; Appendix 9). A separate ethics application was submitted for the

interview portion of the study; however, the Ethics Board viewed the interview portion as an extension of the original research project and recognized the adjustments to the research protocol and approved the changes under the same study code.

3.2 Self-administered Postal Survey

3.2.1 Design

The initial method of data collection consisted of a self-administered postal survey. A modified version of the Tailored Design Method[165] was used to ensure the writing of questionnaire items, construction of the questionnaire and survey implementation was carried out in a manner to maximize the response rate.

There were four mailings involved in the postal survey: (1) pre-notice letter informing the study sample of the impending questionnaire they were to receive and its purpose; (2) the first mailing of the questionnaire along with an introductory letter one week after the pre-notice letter; (3) a reminder postcard for those who had not responded two weeks after the first mailing; and (4) a second mailing, including another copy of the questionnaire and a cover letter, to those who had not responded two weeks after the reminder postcard.

3.2.2 Sample

The study sample consisted of 2,000 community-pharmacy managers in Canada, which represented just over 25 percent of all community pharmacies (7,778) in Canada[166]. A sample size of 2,000 was chosen to increase the chance of receiving the desired 600 completed questionnaires, or a 30 percent response rate. The figure of 600 completed questionnaires was based on the calculation of a population size of 6,342, with a confidence level of 99% and a margin of error of +/- 5 percent[167]. Similar studies have received responses rates between 30 and 50 percent [22, 164, 168-170], and therefore the

sample size was conservative and made large enough to account for the possibility of receiving a response rate at the low end, or 30 percent.

Pharmacy manager contact information was obtained from nine provincial regulatory agencies, for example the Saskatchewan College of Pharmacists. When contact information was obtained from each regulatory agency, it was transferred into a common file. While it was not critical to have the name of the pharmacy manager in each pharmacy, it was desired to personalize the mailings to the pharmacy manager as personalizing communication has been shown to increase the response rate[165].

A master list was composed of 6,342 community pharmacy managers in Canada (outside Quebec). From the total population of 6,342 community pharmacy managers, a random, stratified sample of 2,000 was compiled based on the number of community pharmacy managers in each province. For example, British Columbia, with 962 community pharmacies, had 15.2 percent of the total population of 6,342 (Table 4); therefore, 304 (15.2%) community pharmacy managers of the sample of 2,000 pharmacy managers were from British Columbia.

Table 4 – Breakdown of Stratified, Random Sample

Province	Number of Community Pharmacies*	Percent of Total Mailed Out	Number of Total Mailed Out
British Columbia	962	15.2%	304
Alberta	911	14.4%	288
Saskatchewan	350	5.5%	110
Manitoba	317	5.0%	100
Ontario	3,056	48.1%	962
New Brunswick	200	3.2%	64
Newfoundland & Labrador	201	3.2%	64
Nova Scotia	305	4.8%	96
Prince Edward Island	40	0.6%	12
Total	6,342	100%	2,000

* Based on contact information obtained from provincial regulatory agencies

Sampling errors provide the opportunity for chance differences to arise and are correlated positively to the number of items and correlated negatively to the number of subjects[171, 172]. To reduce the likelihood of sampling errors, sample sizes should range between five and ten subjects per item in the instrument[171, 172].

3.2.3 Instrument Development

The questionnaire was developed through an extensive review of the literature (Appendix 1). Some of the items were adapted from previous studies, while others were developed solely for the purposes of this study. As well, basic demographic indicators such as age, gender, pharmacy type, geographic region and years with current employer were collected.

In 2004 in the United States, a countrywide survey of community pharmacists entitled the *2004 National Pharmacist Workforce Study* was conducted; the results of this research have begun to be disseminated. The investigators were contacted with regard to the instruments used, as there were supplements to the main instrument, and copies were obtained of all instruments. Despite a relatively low response rate (33.8%[168, 169] for the core questionnaire, and 33.1%[22] for the supplement), the instruments served as a guide. The lower response rate may have been due to each respondent being required to complete at least two separate questionnaires, as well as the length of each.

The nature of this study was a one-time only survey where respondents were not asked to participate in the survey portion of the study beyond the completion of the questionnaire. As well, the literature was further consulted with regard to questionnaire design and measurement[1, 17, 22, 27, 39, 121, 122, 163, 165, 168-170, 173-191].

It was desired to make the area of inquiry broader than what is presented here, to include such areas as job satisfaction, role strain and role ambiguity; however, due to the financial constraints, as well the increased

length and therefore time taken to complete the questionnaire, it was not possible. For example, while analysis of the initial survey results may have supported a supplementary questionnaire being sent out, it was not feasible at the time of the study. As well, this study was undertaken not only for the purposes of the research presented here, but to build the basis of a research program for the author. Therefore, it is anticipated that results from this study will inform and shape future pharmacy practice research.

3.2.3.1 Professional Practice Standards

This section of the questionnaire included twelve items, based primarily on the work of Schack & Helpler[170], Clark, Grussing & Mrtek[126], and Snizek[189], and all three research teams based their studies on Hall's Professionalism Scale[187]. These items centred on self-regulation and professional practice.

The wording of the first ten items was almost exactly the same as Schack & Helpler[170] with some minor differences, and differed somewhat more than the wording used by Clark, Grussing & Mrtek[126]. For example, Schack & Helpler[170] worded one item as *the only professional standards I will accept are those established by my pharmacy colleagues* and Clark, Grussing & Mrtek[126] worded it as *the only professional standards a pharmacist should accept are those established by his/her colleagues*, while the wording for this study was *the only professional practice standards I will accept are those established by my profession*. As well, the five-point Likert scale ranging from Strongly Agree to Strongly Disagree was the same for this study as for the other two.

Clark, Grussing & Mrtek[126] examined the differences in role perceptions of pharmacy managers and pharmacists toward the pharmacist's role in chain pharmacies, while Schack & Helpler[170] examined the professional nature of hospital pharmacists. Therefore, Schack & Helpler[170] worded items with regard to the pharmacist completing the questionnaire, while Clark, Grussing & Mrtek[126] worded items with regard to how the respondents considered pharmacists should perform as professionals.

The two items borrowed from Snizek varied somewhat from this study as the sample population for his study was aeronautical, nuclear and chemical engineers, physicists and chemists[189]. As an example, one item was worded by Snizek[189] as *a basic problem for the profession is the intrusion of standards other than those which are truly professional*, while it was worded in this study as *a basic problem in community pharmacy practice is the intrusion of standards/policies other than those which are truly professional*. The re-wording was done to more accurately reflect the community pharmacy manager population of this study. As well, the five-point Likert scale for the Snizek[189] study ranged from Very Well to Very Poorly, while this study used to Strongly Disagree to Strongly Agree five-point Likert scale.

3.2.3.2 Manager Autonomy

This section included six items, centring on professional autonomy, that were developed for the purposes of this project; therefore, items were not based on any one study or grouping of studies. Items in this section were developed to examine the amount of autonomy respondents possessed, as manager, in their pharmacy. The five-point Likert scale used to measure responses ranged from Never to Always.

3.2.3.3 Decision Making

Subject matter for this section, consisting of four items, centred on professionals in bureaucracies, and was based on the work of Carroll & Jowdy[119] who used the work of Quinn & Shephard[190] as the basis for the four items. The wording of the four items differed very little from Carroll & Jowdy[119]; for example, one item was worded by Carroll & Jowdy[119] as *how much is your job one where you have a lot of say over what happens on your job*, while for this study it was worded as *how much is your position one where you have a lot of say over what happens in your pharmacy?*

Carroll & Jowdy were examining community pharmacists' perceived autonomy and job satisfaction as employees in large chain pharmacies[119]; therefore, the wording for this study was changed to reflect the study population of community pharmacy managers. As well, the four-point Likert scale was retained from the Carroll & Jowdy[119] study, but the wording of each point was slightly modified; Carroll & Jowdy[119] had None At All, A Little, Somewhat, and A Lot as their response categories, while this study used None, Little, Moderate, and Lots.

3.2.3.4 Pharmacy Profession Characteristics

This section was composed of six items, based on the work of Ralph & Langenbach[164, 192] centring on the satisfaction toward various characteristics of the profession. The study population for Ralph & Langenbach[164, 192] was pharmacists and explored the professional satisfaction and dissatisfaction of pharmacists in all practice settings (independent, chain, hospital, etc.).

The wording of the items was almost identical, with minor adjustments, and the Very Dissatisfied to Very Satisfied five-point Likert scale was retained. As an example, Ralph & Langenbach[164, 192] worded one item as *freedom from outside intervention or ability to make professional judgements*, while the wording for this study was *freedom from outside intervention in making professional judgements*; this item was changed to focus on one concept with each item to reduce confusion by respondents.

3.2.3.5 Amount of Control

This section was composed of five items centring on the level of control a manager had, and was based on the work of Doucette and colleagues[22, 168, 169, 181, 193, 194]. The study population for Doucette and colleagues[22, 168, 169, 181, 193, 194] was pharmacists in all practice settings (independent, chain, government, hospital, etc.) and explored a number of issues including workload, stress and job satisfaction.

All but one item was word-for-word; the one item by Doucette and colleagues[22, 168, 169, 181, 193, 194] was worded as *the responsibilities delegated to support staff*, while for this study it was worded as *the responsibilities delegated to staff*. The change in wording was to better reflect the fact that the study population for this study – community pharmacy managers – are responsible for both support and professional staff. As well, the five-point Likert scale was slightly modified for this study; for example, Doucette and colleagues[22, 168, 169, 181, 193, 194] had A Little Control and A Lot of Control, whereas this study used Little Control and Lots of Control.

3.2.3.6 Orientation to Practice

The subject matter for the eleven items in this section surrounded role orientation, and was based on work by Quinney[17] and Kronus[163, 195]; in her study, Kronus[163, 195] used the same items and wording as Quinney[17]. Both Quinney[17] and Kronus[163, 195] were examining the role strain, role orientation and occupational values of community (retail) pharmacists.

Quinney[17] and Kronus[163, 195] utlized a four-point Likert scale from Very Important to Of No Importance, while this study used a five-point Likert scale from Very Unimportant to Very Important. As well, some of the wording in this study was slightly changed; for example, Quinney[17] and Kronus[163, 195] worded one item as *using and encouraging the use of official drugs*, while for this study the item was worded as *encouraging the proper use of medications*. The changes were done to better reflect the study population of community pharmacy managers, as well as the change in time (1960s and 1970s compared to 2007).

There were also two items added to this section for the purposes of this study: *public service, such as presentations to community groups, etc.* and *mentoring students and interns*. These items were added to reflect the role pharmacists and pharmacy managers have in providing health care advice

outside of the pharmacy, as well as participating in socializing and training future pharmacists.

3.2.3.7 Practice Affinity

This section was comprised of eleven items and centred on role orientation, based on the work of Hornosty[191] who utilized and adapted the work of Quinney[17]. For his study, Hornosty[191] examined the subjective role orientation, conflict and satisfaction of pharmacy students as they prepared to enter into the profession.

Hornosty[191] used a five-point Likert scale from Like Very Much to Dislike Very Much; while the five-point Likert scale with the same labels was used for this study, the scale was reversed to Dislike Very Much to Like Very Much. The wording of items used by Hornosty[191] was changed somewhat to reflect the study population of community pharmacy managers; for example, one item by Hornosty[191] was worded as *accumulation of information regarding new developments in pharmaceutical and medicinal products, methods, etc.*, while the item for this study was worded as *keeping abreast on health and drug-related matters*.

3.2.3.8 Organizational Identity

Comprised of four items centring on organizational commitment, this section was primarily based on the work of Doucette and colleagues[22, 168, 169, 181, 193, 194]. As stated above, the study population for Doucette and colleagues[22, 168, 169, 181, 193, 194] was pharmacists in all practice settings (independent, chain, government, hospital, etc.) and explored a number of issues including workload, stress and job satisfaction; this particular section examined respondent roles and organizational commitment.

The four items were worded the same; however, Doucette and colleagues[22, 168, 169, 181, 193, 194] used a seven-point Likert scale with Strongly Disagree, Moderately Disagree, Slightly Disagree, Neither Agree Nor

Disagree, Slightly Agree, Moderately Agree, and Strongly Agree as the response categories, while this study utilized a five-point scale Likert scale with Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree as the response categories.

3.2.3.9 Community Pharmacy Practice

This section was composed of five items dealing with role perceptions, and was created primarily using the work of Clark, Grussing & Mrtek[126]. As discussed above, Clark, Grussing & Mrtek[126] examined the differences in role perceptions of pharmacy managers and pharmacists toward the pharmacist's role in chain pharmacies; the subject matter of the items in this section surrounded management of pharmacy operations, processing the prescription and providing information.

The five-point Likert scale of Strongly Disagree to Strongly Agree used by Clark, Grussing & Mrtek[126] was also used in this study. Wording of the items was changed to better reflect the study population in this study of community pharmacy managers; as an example, Clark, Grussing & Mrtek[126] worded one item as *the goal of the pharmacist is to attain regular increases in both prescription sales and customer counts*, while in this study the item was worded as *a goal of the pharmacy manager is to attain regular increases in both prescription sales and patient counts*.

3.2.3.10 Organizational Experience

The six items in this section centred on the work environment, predominately based on the work of Doucette and colleagues[22, 168, 169, 181, 193, 194]. As a reminder, the study population for Doucette and colleagues[22, 168, 169, 181, 193, 194] was pharmacists in all practice settings (independent, chain, government, hospital, etc.) and explored a number of issues including workload, stress and job satisfaction; this particular section examined respondents' work environment.

Doucette and colleagues[22, 168, 169, 181, 193, 194] used a seven-point Likert scale with Strongly Disagree, Moderately Disagree, Slightly Disagree, Neither Agree Nor Disagree, Slightly Agree, Moderately Agree, and Strongly Agree as the response categories; in this study, the measurement scale was a five-point Likert scale with Never, Rarely, Sometimes, Often, and Always as the response categories. The change was done to reflect if and how often respondents may find themselves in a particular situation.

While most of the six items were worded the same in this study as was done by Doucette and colleagues[22, 168, 169, 181, 193, 194], some minor changes were made to bring clarity to the item and to reflect the change in measurement scale; for example, Doucette and colleagues[22, 168, 169, 181, 193, 194] worded one item as *I have to "buck" a rule or policy in order to carry out my duties*, while in this study the item was worded as *I am willing to "buck" a company rule or policy to carry out my professional duties*.

3.2.3.11 Organizational Characteristics

Also based on the work of Doucette and colleagues[22, 168, 169, 181, 193, 194], this section was composed of eight items and centred on innovation. Once again, the study population for Doucette and colleagues[22, 168, 169, 181, 193, 194] was pharmacists in all practice settings (independent, chain, government, hospital, etc.) and explored a number of issues including workload, stress and job satisfaction; items in this section examined the characteristics of the respondents' practice site.

Items in this section were measured using a five-point Likert scale that was the same as that used by Doucette and colleagues[22, 168, 169, 181, 193, 194]. Each of the items was worded almost identically to those by Doucette and colleagues[22, 168, 169, 181, 193, 194]; an example of a minor change was the wording of one item by Doucette and colleagues[22, 168, 169, 181, 193, 194] as *our pharmacy usually takes action in anticipation of future market conditions*, while in this

study it was worded as *this pharmacy usually takes action in anticipation of future market conditions*.

3.2.3.12 Implementing Professional Services

This section was composed of thirteen items developed specifically for the purposes of this project. The first seven items centred on situations in which a professional service/clinic was not implemented and the reasons for it not being implemented. Items were developed to gain a greater appreciation for factors that may impact whether the respondent's pharmacy expanded the professional services offered to patients. As a result, items examined issues such as inadequate funding, not enough staff, and unmotivated staff. The three response categories for these seven items were Yes, No and Not Applicable.

As an extension of the first seven items, the eighth item explored where the idea to offer a new professional service came from. Interest for this item was to consider what impact various stakeholders had on implementing a new professional service, from the pharmacy manager and pharmacists in the store, to outside management and patients.

Also developed specifically for this study, the next two items dealt with policies and procedures developed by non-pharmacists and whether the respondent's pharmacy served as a preceptor site. Interests for these two items was to explore if there was non-professional influence in the practice setting for respondent's, as well as if the respondent's pharmacy participated in preparing and socializing pharmacy students and interns into the profession.

The last three items in this section centred on the decision to offer a new professional service. Again, these items were not developed using a specific study or group of studies; the reason for including the items in the questionnaire was to gain a better understanding as to why a new professional service would be implemented. The response categories were a five-point

Likert scale ranging from Strongly Disagree to Strongly Agree, with a sixth response category of Not Applicable.

3.2.3.13 The Pharmacy and Its Manager

Also not based on any one study or grouping of studies, the first ten items in this section centred on the pharmacy and its manager, and manager preferences if offered the position as pharmacy manager again. Items were included to bring further understanding of the practice environment for respondents', as well as what they may personally change if they were able to consider the position again.

The first five items were measured using three response categories which were Yes, No and Not Applicable. For the next five items the response categories were a five-point Likert scale ranging from Strongly Disagree to Strongly Agree, with a sixth response category of Not Applicable.

The last item, based on the work of Hornosty[191], asked respondents whether it is possible to be both a good professional and successful businessperson. The five-point Likert scale response categories ranging from Strongly Agree to Strongly Disagree were the same for this study as for the study by Hornosty[191]. However, the wording of the item changed to better reflect the change in times; Hornosty[191] worded the item as *it is possible to be both a very good professional and a highly successful businessman (or woman) in community pharmacy today*, while for this study the item was worded as *it is possible to be both a good professional and a successful businessperson in community pharmacy today*.

3.2.3.14 Demographics

Demographic indicators were collected to analyze whether differences occurred between various groups. For instance, *Pharmacy Type* was collected in order to develop the independent variable. As well, gender, age,

geographic region, years with employer, respondents' position and education were collected.

3.2.4 Pre-testing Instrument

After developing and modifying potential items for the questionnaire, it was condensed to reduce its length and focus on the issues described above. Once it was felt that the questionnaire was ready to be taken into the field, it was pre-tested with five community pharmacists who were not part of the study. Each individual was asked to go over the questionnaire and fill it out as they would when completing any questionnaire. However, they were asked to provide any questions and/or comments directly on the questionnaire; for example, if the wording of an item were ambiguous, the pre-tester would state that by writing their comment directly on the questionnaire. Data from the pre-test were not included in the results of the study. As well, the six members of the author's advisory committee also screened and provided feedback on the questionnaire.

The pre-test was done in an attempt to have the wording of the items in a manner that was easily comprehended. As well, the pre-test was completed so that the order of the items and respective sections had a logical, natural flow. After receiving and taking into consideration all questions, comments and suggestions by reviewers, the final questionnaire was developed.

3.2.5 Data Collection

One week prior to the questionnaire being sent out, an overview of the study and reasons for it were sent to the sample population (Appendix 2). This provided the individual with an overview and reasoning behind the study, why they were selected for the study, how their contact information was obtained, the voluntary nature of the study, and contact information should they have wished to contact the study authors.

The first wave of questionnaires (Appendix 1) were mailed out one week after mailing the study overview letter and were sent along with a cover letter (Appendix 3) and a pre-stamped, return envelope. The cover letter included information on why the study was being conducted, the approximate amount of time it would take to complete the questionnaire, the voluntary nature of the study and why there was a code on the questionnaire, where completed questionnaires would be stored, how the information would be analyzed and mediums of dissemination for the study findings. There was also contact information for the study authors, a statement that completing and returning the questionnaire was the respondent consenting to their responses to be used in aggregate form, declaration that the study was ethically approved, and contact information for the Ethics Office at the University of Saskatchewan.

Two weeks after the first wave of the survey had been sent out a reminder postcard (Appendix 4) was mailed to those that had not responded. The reminder postcard restated what the initial cover letter stated regarding the reason behind the study, the voluntary nature of the study and the author's contact information. Two weeks after the reminder postcard was mailed out the last mailing was sent to those who had not yet responded and included a copy of the questionnaire (in case it was misplaced), a cover letter (Appendix 5), and a pre-stamped return envelope. The cover letter that accompanied the last mailing was similar to the initial cover letter except it opened with clarification as to why they were being contacted again. Four weeks after the second wave of the survey was sent out data collection concluded.

Each questionnaire was coded for administrative purposes, and only the authors knew the codes that linked the questionnaire to respondents. Data collection occurred between April 2nd, 2007 and June 4th, 2007 according, to the following schedule:

- April 2nd – Pre-notice, overview letter sent to entire sample (Appendix 2)
- April 9th – Initial mailing sent to entire sample, including a cover letter (Appendix 3), questionnaire (Appendix 1) and stamped, return envelope
- April 23rd – Reminder postcard sent to sample who had not responded as of this date (Appendix 4)
- May 7th – Second mailing to sample that had not responded as of this date which included a cover letter (Appendix 5), questionnaire (Appendix 1) and stamped, return envelope
- June 4th – Data collection concluded

3.2.6 Data Analysis

All statistical tests were performed using *SPSS 15.0* for Windows®. Analyses using descriptive statistics were conducted to explore means, medians, modes, standard deviation, and ranges.

Exploratory factor analysis and reliability tests were performed, and where applicable constructs were developed and analyzed. Factor analysis is employed to reduce the number of items measured and used for analysis by combining two or more items that are related to create a single variable (construct)[171, 196].

The extraction method used in this study was principal component analysis, and the orthogonal rotation method used was varimax with Kaiser normalization. Principal component analysis allows one to reduce the information obtained from a number of items into a set of weighted linear combinations[197, 198]. The goal of varimax is to maximize the variance of items in a construct/factor by making high loading items higher and low loading items lower for each construct/factor[197, 198]. When analyzing results of the principal component analysis, items in a section that broke into distinct groups were extracted and reliability tests were performed to assess the likelihood of loading those groups into a construct.

Internal consistency assesses whether different items within an instrument, which are thought to measure the same idea/concept, produce similar scores. The reliability of the internal consistency coefficient increases

as the item-total score increases[199]. Cronbach's (coefficient) alpha is the measure commonly used to assess internal consistency[107, 171, 172, 196, 200, 201]. A Cronbach's alpha of > 0.70 (α > .70) was used in order for items in a grouping to be loaded into, and kept, in a construct[171, 172, 198, 200-202]. Alpha can be used for scales containing at least three items[171, 172]. In early stages of research an alpha level 0.50 and 0.60 is adequate, but an alpha greater than 0.70 was desired to increase internal consistency[171, 172, 200]. If results for item-total statistics stated that if an item was deleted the alpha score would be higher, it was deleted; in cases where the Cronbach's alpha was close to 0.70, the inter-item correlation matrix was examined, and if warranted, the construct was retained.

In combination with the item-total statistics, and in line with measuring internal consistency, inter-item correlation matrices were analyzed with scores between 0.3 and 0.5 being kept for the construct[171, 199]. If the numbers were slightly above (0.5 – 0.6) or below (0.25 – 0.3) the item-total statistic results were reviewed to ensure that the item did not lower the Cronbach's alpha level; for example, if the Cronbach's alpha increased if the item was deleted, it was removed.

Once a construct was developed, frequencies, one-way ANOVA, and post-hoc tests – Scheffe – were performed to identify the mean, median, standard deviation, and range, as well as whether significant differences were present among groups. For all test, statistical significance was set at $p < 0.05$. For each construct its item-total statistics are displayed in the results section, as well as histogram displaying the breakout. Where a statistically significant difference among groups arose, the level of significance is provided, as well as a table highlighting the homogeneous subsets.

The premise of the central limit theorem states when sample sizes are large enough (> 5 – 10 per item measured) the means will be normally distributed regardless of the shape of the distribution[203]. Therefore, if using means to make statistical inferences, as is the case in this study, one can use

parametric statistics to do the computations, regardless of whether the original data is normally distributed[203]. However, for the sake of clarity and to increase the validity of the results, non-parametric tests were conducted.

The assumptions of ANOVA call for data to be normally distributed[204]. When the assumptions of distribution are not met, non-parametric analysis should be conducted to ensure the validity of the results using ANOVA. Non-parametric analysis was conducted for all constructs using the Bonferroni test. Parametric and non-parametric independent t-tests were also performed. And finally, a general linear model was developed including the independent variable *Pharmacy Ownership Structure*, as well as the dependent variables *Age*, *Gender, Region* and *Years With Employer*.

3.2.7 Assessing Potential Non-response Bias

As with any survey research there is the potential for non-response bias between responders and non-responders, as well as the population as a whole. For this study a non-responder survey was not conducted. However, to assess the potential for non-responder bias the method of *early* versus *late* responder analysis was completed[132, 205-207]. In this method of assessing non-responder bias, the assumption is that late responders respond similar to non-responders. Therefore, if any statistically significant differences are established between early and late responders, the same difference is assumed to occur between responders and non-responders[132, 205-207].

By keeping track of when responders responded, either up to and including May 11 (subsequent to sending out the last mailing) or after May 11, the potential for non-responder bias was assessed using *early* versus *late* responder analysis.

For all fifteen constructs, independent t-tests were performed to assess any difference in responses from those who responded up to and including May 11, and those responding after May 11. Independent t-tests were also performed to examine whether there were any differences with regard to the

Age, Region and *Years With Employer* dependent variables. For the independent variable, *Pharmacy Ownership Structure,* chi-square tests were performed to assess any differences; as well, chi-square analysis was performed for the *Gender* dependent variable.

3.2.8 Description of Pharmacy Type

There were ten pharmacy type response categories on the questionnaire: independent, small chain, banner, franchise, large chain, grocery store, department store, mass merchandiser, mail order and other. Mail order and other were not included for analysis purposes, as they did not fit into the focus of the study; the contact information obtained from the provincial regulatory agencies did not distinguish between pharmacy type, and therefore these response categories were collected in order to identify respondents that did not fit into the inclusion parameter.

Independent and small chain pharmacies are those that have fewer than five pharmacies under the same owner(s). They may or may not belong to a buying group. Banner pharmacies are those that are affiliated with a central office, pay fees for the right to use a recognized name, and they participate in centralized functions such as buying, marketing and professional programs that allow for greater economies-of-scale than independent pharmacies[208]. The pharmacies remain independently owned, with owners retaining autonomy with regard to local marketing, merchandising and professional services[208].

Franchise pharmacies vary in terms of the ownership structure: franchisees do not usually own the store or fixtures, and master leases are usually held by the franchisor[208]. There is generally some form of revenue sharing with head office for the franchisee, with buying, marketing, professional services, training and merchandising centrally directed by head office; there may be some autonomy in local marketing, buying, merchandising and professional services[208]. Large chain pharmacies have five or more

pharmacies under a single ownership and employ pharmacy managers who are generally salaried employees of head office[208], where head office directs all marketing, merchandising, buying and professional programs, there is little to no adapting to the local market[208].

Grocery store, department store, and mass merchandise pharmacies are pharmacies that are a single department within a greater outlet with other departments. As in large chain pharmacies, managers are typically salaried employees of head office, with all marketing, merchandising, buying and professional programs centrally directed through head office[208].

3.2.9 Description of Construct Labels

Following statistical analysis using the procedures described above, distinct constructs were extracted from the principal component analysis and each construct was labelled according to the items comprising the construct, which also aligned with the hypotheses of this study. For each construct the name and description is provided below.

- *Professional Authority* – items centred on the profession establishing practice standards
- *Employer Authority* – items surrounded employer influence in establishing practice standards
- *Manager Autonomy* – items dealt with the manager having the power to manage his/her pharmacy without outside influence
- *Decision Making* – items centred on the ability of the manager to make decisions in his/her pharmacy
- *Pharmacy Characteristics* – items in this construct focused on characteristics of the profession
- *Control Amount* – items surrounded the manager's ability to control the work environment
- *Professional Orientation* – items dealt with aspects that focus on being professionally orientated
- *Business Orientation* – items centred on aspects that are orientated toward business practices
- *Professional Affinity* – items focused on the level of enjoyment respondents had for professional aspects of practice

- *Business Affinity* – items surrounded the level of enjoyment respondents had for business aspects of practice
- *Pharmacy Relationship* – items dealt with the personal connection respondents had toward the pharmacy/organization
- *Role Conflict* – items centred on the conflicting professional and business role managers may encounter
- *Innovation* – items dealt with the level of innovation in the respondent's pharmacy
- *Red Tape* – items centred on bureaucracy in the respondent's pharmacy
- *Manager Preferences* – items surrounded the requests managers would make if offered his/her position as manager again

3.2.10 Description of Rubrics

There are three rubrics used in the *Results* and *Discussion* sections below that align with the three hypotheses of this study: professional, business and environmental (organizational). The professional rubric refers to the professional aspects of practice, while the business rubric is in reference to the business aspects of practice. The third rubric is environmental (organizational) and refers to the aspects of practice that may be impacted by the environment or organization in which the respondent practices.

3.3 One-on-one Interviews

3.3.1 Introduction

Interviews were conducted to interpret, supplement and qualify the findings of the survey portion of the study[209]. While the survey portion provided a broad, quantitative approach to further understanding the impact of ownership type, the interviews complemented and added depth and insight to the survey results, as well as the discussion.

The qualitative research paradigm used for the interview portion of the study was ethnography. Ethnography is a method used to explore cultural groups[210]; cultural groups have shared meaning and values[210]. In this case, the cultural group was community pharmacy, and in particular community

pharmacy managers. Ethnography explores the cultural group in terms of the emic (internal) perspective[210].

> Because cultural assumptions, beliefs, and behaviors are embedded within a cultural group, they are not always evident to those who are a part of the group. Thus ethnography is best conducted by researchers who are no part of the cultural group (i.e., from the etic perspective)[210].

An ethnographic approach can incorporate a range of data collection methods, both qualitative and quantitative[210, 211]. This study used mixed methods of inquiry: a quantitative survey and qualitative interviews.

The study used focused ethnography as the topic of interest was the experiences of community pharmacy managers[210]. As well, data collection focused on interviews, and not other qualitative methods such as participant observation. Interviews were used to complement the survey portion of the study to bring insight and understanding to the experiences of community pharmacy managers[211, 212].

3.3.2 Research's Story

It is suggested that in qualitative inquiry the researcher's potential bias (or position), values and judgements be reflected on because of the interpretive nature of the research[213]. Therefore, this portion of the qualitative methods is presented in first-person.

The way that I came about this research does not follow one logical path. First, I am not a pharmacist; my undergraduate education consists of a Bachelor of Arts in Human/Social Geography and a Bachelor of Commerce in Marketing. However, I did earn a Master of Science in Pharmacy (Pharmaceutical Policy).

My father has worked, and continues to do so, in the pharmaceutical industry – as a sales representative – since the early 1980s. Growing up I was not too sure what that meant, just that at times I was not able to see him

on regularly scheduled dates (my parents are divorced) because he was 'on the road' working. As I matured and started to take notice of the world around me, I realized my father went to a lot of exotic locales – Cancun, for instance – for 'sales meetings' in which he brought some select physicians and their families. I never understood why I was not allowed to go!

What grew out of a child's interest in a parent's job was a genuine interest in working in the pharmaceutical industry. It provided a comfortable living, a company car with an expense account, a chance to travel, and the opportunity to work from home. I just needed to figure out how I could get a job in the pharmaceutical industry.

My first personal experience with the realm of pharmacy dates back to when I was in the twelfth grade. I sent my resume to a post office box in response to a posting in the local paper. It called for a delivery driver and general helper in a community pharmacy. Well, I went for the interview, which happened to be in a less-than-desirable part of town – that is probably why they had you send the application to a post office box – and ended up getting the job. This job allowed me to interact with pharmacists, as well as the customers to whom I delivered prescriptions. However, it also opened my eyes to the 'retail' environment in which community pharmacists practiced.

After taking a few years off after I completed high school to earn some money and figure out my path in life, I decided I needed to go to university: gone were the days when one could get a 'good' job without post-secondary education. Initially I enrolled in Arts and Science, and in particular Social/Cultural Geography. It was at this point that I needed to switch disciplines to increase my chances of entering the pharmaceutical industry. My options: Pharmacy or Commerce.

In considering which discipline I would go into, I recalled my days delivering prescriptions and the experiences I had working in that community pharmacy. In my narrow minded opinion at the time, I then thought I did not want to work in a 'convenience store' environment the rest of my life, if I could

not get into the pharmaceutical industry, and therefore did not want to enter Pharmacy. Therefore, the choice was clear: Commerce.

As I neared the completion of my Commerce degree, I began to increase the amount of research I conducted on the pharmaceutical industry and on how to gain entry. Of course my main source of information was my father, but I soon began to realize that most pharmaceutical companies are large, with thousands of employees, and nepotism would not work in my favour. My Commerce degree would not be enough. I had to get experience first in another industry, and then try to get in. But after working in non-pharmaceutical industries I started to desire a return to university to pursue a Master's degree.

On beginning my Master's, in Pharmacy, I slowly started to change my career aspirations from that of wanting to enter the pharmaceutical industry, to wanting to become an academic. It was also at this time that I started to take a different, not completely utopian view of the pharmaceutical industry.

The research for my Master's focused on prior authorization/approval, and how administrative measures impact pharmacists' work. I suppose it was at this point that I started to focus more on the profession of pharmacy and the forces external to the profession that impact how pharmacists practice. In this way, I was able to blend my business background with my background in pharmaceutical policy to focus my research in a manner that would also make me marketable to various academic disciplines with my interdisciplinary background.

In talking with pharmacists in various settings, whether in community pharmacies, conferences and the like, as well as with my own background and experiences, I began to question who controlled community pharmacies: the profession or the owners? This led to the study presented here. As well, it became clearer to me as I began to collect, analyze and synthesize the literature, on top of personal conversations, that this study was best conducted by someone who is not themselves a pharmacist, but has an intimate

understanding of and appreciation for the pharmacy profession, as well as an in-depth understanding and appreciation for business and business operations.

This is how I came about developing and implementing this study. I came into this study thinking that there must be some influence on pharmacy practice depending on who owns the pharmacy, and I suppose that this is some form of bias. However, one cannot completely remove one's thoughts and opinions from qualitative or quantitative inquiry; I also do not possess that first-hand experience as a pharmacist working in a community pharmacy, under any ownership. As well, there were no leading questions in the quantitative or qualitative portions of this study. Also, I do not stand to benefit personally from my findings and perhaps some of my discussion and conclusions can be viewed as distancing me from some players in the pharmacy world.

All in all the interviews were completed to give a better sense of what it is like to be a community pharmacy manager in Canada. In many ways this was necessary as I am not a pharmacists and to bring credibility to my interpretation of the findings and discussion, these interviews were necessary. At the same time, the interviews also added to the comprehensive nature of this study. Of note is that the richness of the conversations are not always apparent when one places quotes and such in a form for others to read. However, the interviews were invaluable and brought a much greater understanding of, and appreciation for, the role of community pharmacy managers.

3.3.3 Sampling Procedures

Purposeful sampling was used to deliberately select persons to provide important information that was relevant to the research in question[214]. Participants were selected based on their practice type (independent, franchise, or corporate) and geographical location so that interviewees were

not all from one practice type or geographical location; for example, not all independent owners or all corporate managers.

To maintain the anonymity of respondents' answers to the survey portion of the study, their willingness to participate in the interview portion of the study, via the self-identification portion on the final page of the questionnaire, was separated from the questionnaire before inputting any answers into the database. Therefore, sampling could not be based on how a respondent answered the questionnaire. However, when completed questionnaires were returned that provided the respondent's willingness to potentially be contacted for an interview, the database separated potential interviewees by pharmacy practice type: independent, franchise or corporate.

While some have suggested that six participants are a suitable number to interview[210], others have stated that with qualitative inquiry it is not appropriate to suggest a fixed number of participants[215]. Statistical representation is not typically sought in qualitative research, and sample size depends on the purpose of the study[216].

3.3.4 Recruiting Procedures

In qualitative studies participants tend to be selected based on their knowledge and/or experience with the area of inquiry[217]. The sample selected for the interviews was drawn from self-identified individuals from the survey portion of the study (see Appendix 1 for self-identification section of questionnaire). While 172 respondents to the survey self-identified themselves as being willing to be interviewed, not all contacted were willing. Representation of all geographical regions in Canada was sought.

3.3.5 Data Collection Procedures and Participant Interviews

In-depth interviews were conducted following the survey portion of the study. A pilot interview was conducted to assess the author's ability to conduct the interviews and test the interview protocol. Due to the semi-

structured nature of the interviews, which are explained below, questions are added to and subtracted from the interview protocol to maintain a conversational tone to the interview. Data obtained from the pilot interview was included in the study as there were no problems encountered with the interview. The only issue brought forth was to rephrase a question, which was to bring clarity to the question as it related to the interviewee's practice environment.

Interview participants were contacted via telephone at a mutually agreeable time. For this study, the telephone interviews were conducted until saturation occurred, a point where no new data emerges[215]; therefore, seven interviews were conducted for this study. The interviews were conducted between June 17th and June 27th, 2007.

Each interview, lasting between thirty and ninety minutes in length, was voice recorded and, once all interviews were completed, transcribed by an experienced transcriber at the University of Calgary.

All voice recordings were transcribed verbatim, and each transcript de-identified participants. Once the interviews were transcribed, a copy of the transcript was sent electronically to each participant to ensure that what was said, recorded and transcribed was in fact his/her intended response. Moreover, participants had the opportunity to take out portions of the transcript they did not want to be included, as well as clarify what they meant to say if they felt it did not 'come out right' during the interview. After the participants approved the transcripts, data analysis commenced.

3.3.6 Interview Protocol and Question Type

The protocol (Appendix 6) for the interview portion of the research was based on the design of the questionnaire (Appendix 1). However, in moving from the quantitative instrument of the questionnaire to the qualitative instrument of the interview, changes were required. While developing the protocol, literature specific to qualitative research and, in particular interviews,

was consulted to ensure the protocol was developed in a manner to capture the required data[68, 70, 179, 180, 210, 218-224].

3.3.7 Study Design and Interview Process

As stated in the recruiting procedure, at the end of the questionnaire respondents were asked to self-identify if they were willing to set time aside for an in-depth interview on the topics of the questionnaire. By self-identifying and providing their contact information, the respondents agreed to being contacted.

The interview portion of this project followed a semi-structured format, with each interview lasting between thirty and ninety minutes in length. Semi-structured interviews are "interviews in which the same general questions or topics are brought up to each of the subjects involved"[225].

Semi-structured interviews allow for conversational, two-way communication in a focused, but open structure. Unlike structured interviews or questionnaires, semi-structured interviews begin with more general questions or topics and naturally flow through the conversation of the interviewer and interviewee. As well, the questions used during the interview are many times not developed or phrased ahead of time; "the majority of questions are created during the interview, allowing both the interviewer and the person being interviewed the flexibility to probe for details or discuss issues"[226]. This also allows for the use of unplanned and/or unanticipated probes to be used[210], with the effect of a more natural dialogue or conversational tone so that it does not have a 'research feel' to the discussion.

As outlined in the interview protocol (Appendix 6), general themes and questions were developed to correspond to the survey portion of the project. The semi-structured approach of the interview/conversation allowed participants to discuss aspects of their profession and role as a community pharmacy manager they felt to be relevant and worthy of discussion.

Semi-structured interviews are less formulaic and intrusive than structured interviews as they allow for two-way communication, so the interviewees do not feel they are being interrogated or are supposed to be providing specific responses. As well, this feeling is supported by the ability of the interviewee to ask the interviewer questions. In this study, interviews were conducted as an extension of the survey portion of the study, confirming the data obtained in the survey by not just allowing interviewees another form to provide answers, but to give reasons for the answers.

In reporting responses from the interviews, all participants have been de-identified, and a pseudonym used for any direct quotations. Only the author has access to the information linking the pseudonym to each participant.

Before each interview, interviewees were sent a consent form (Appendix 7), as well as descriptive results of the survey portion of the study (Appendix 8, the questionnaire with the percentages in each category/response). After a general overview of the nature of the research project, participants were asked if they wanted to expand upon and explain answers to specific items in the questionnaire. While their responses were separated from their survey responses, some interviewees made a copy of their responses. Interviewees were also asked if anything surprised them in terms of the results of the survey. The author broadly went over the subject matter of the questionnaire in the order of the questionnaire unless the interviewee exhibited a desire to structure it in a different manner. While the participant may not have had an expanded answer to all items on the questionnaire, the session allowed for a discussion to develop around the subject matter of the study.

The goal of the in-depth interview portion of the research project was to gain an enhanced understanding and further explanation of how pharmacy managers orient themselves in their role as pharmacists and managers; the in-depth interviews supplemented and supported the findings of the survey.

While the survey portion of the data collection allowed for a broader, more statistically significant interpretation of pharmacy managers' practice experiences, the interviews added a more in-depth understanding to the findings, and therefore the two methods complemented each other.

3.3.8 Analytical Process

NVivo7® software was used to conduct all qualitative analysis. Software such as this has the ability to track responses in a manner that a human may not, such as to identify similar responses in different sessions[227]. Before any analysis, each participant received a copy of the transcript to ensure accuracy of his or her responses in the session. Once the transcription was complete, and each participant agreed to the transcript's accuracy, analysis began by coding responses for all interview sessions.

Each transcript was read over so that the author could be re-orientated to the discussion. This reading also allowed the author to ensure that any comments/statements that could possibly identify any person and/or organization were removed. Once this was completed, the transcripts were uploaded into the *NVivo7*® program for analysis.

When reviewing the interview transcripts and coding the interviews, themes were added creating a reference, or a interviewee statement that is coded into a theme. As well, some references were coded into more than one category if deemed appropriate.

3.3.9 Trustworthiness

To keep track of the qualitative research process an audit trail was created. The audit trail traces evidence of the events and decisions that transpired during qualitative data collection[210]. It allows one to keep track of one's thoughts and decisions as one analyzes, interprets and develops conclusions regarding the process and findings.

An audit of the coding of interview transcripts was done to assess whether another person – not connected to the project – would come to the same general conclusions[210]. Although no two people would come up with exactly the same themes because of the close connection between researcher and research and the interpretation of the data[210], the outsider 'audit' provides feedback on the relevancy of the process and confirms if the auditor would, given the information, come to the same general conclusion.

The auditor was an experienced qualitative researcher, as well as a practicing community pharmacist. The auditor was provided with five to eight consecutive pages, randomly selected, of each of the seven transcripts. As well, a copy of the interview protocol and a brief write-up on the study was provided to give background and context of the interviews. Also, a copy of the coding for all themes was provided to the auditor – in a sealed envelope – for comparison. Once the audit was completed, the auditor agreed with the coding and themes developed by the author (Appendix 10).

4.1 Quantitative/Survey

4.1.1 Response Rate

At the end of data collection, a total of 646 responses were received (Table 5). The sample of 2,000 community pharmacy managers was reduced to 1,961 when the package proved undeliverable (38) or the pharmacy was in a long-term care home and the pharmacy manager felt the questionnaire did not reflect the practice (1). The final response rate was 32.9 percent (646/1,961).

Table 5 – Survey Respondents

Province	Proportion of Sample N (%)	Respondents N (%)
British Columbia	304 (15.2%)	89 (13.8%)
Alberta	288 (14.4%)	94 (14.6%)
Saskatchewan	110 (5.5%)	58 (9.0%)
Manitoba	100 (5.0%)	30 (4.6%)
Ontario	962 (48.1%)	289 (44.7%)
New Brunswick	64 (3.2%)	28 (4.3%)
Newfoundland & Labrador	64 (3.2%)	21 (3.3%)
Nova Scotia	96 (4.8%)	33 (5.1%)
Prince Edward Island	12 (0.6%)	4 (0.6%)
Total	2,000 (100%)	646 (100%)

By province, response rates were slightly above or below the percentages mailed out (Table 5). Community pharmacy managers in

Saskatchewan made up 5.5 percent of the population sample, but 9.0 percent of respondents to the survey were from Saskatchewan. Of note is that Ontario – with the largest percentage of community pharmacies – had 48.1 percent of the sample population, but accounted for 44.7 percent of respondents.

4.1.2 Respondent Demographics

A majority of respondents (393, 60.8%) identified themselves as male. The average age of respondents was 44 years, with a range of 24 to 77 years (data not displayed). More than half of respondents (398, 61.6%) identified themselves as a pharmacy manager, with 33.3 percent (215) identifying themselves as the owner (data not displayed). Of the remaining respondents who stated their position, 1.1 percent identified themselves as pharmacist (3) or other (4) (e.g. dispensing physician).

A Bachelor of Pharmacy degree was the sole degree for the majority of respondents (499, 77.2%), while 22.0 percent (142) reported having multiple degrees (e.g. Bachelor of Pharmacy, in addition to a Master's of Business Administration, Master's of Science, Doctorate of Pharmacy, Non-pharmacy Bachelor's, etc.) (data not displayed). For respondents with multiple degrees, the most common combinations were a Bachelor of Pharmacy and a non-pharmacy Bachelor's (54, 8.4%), or Bachelor of Pharmacy and a Pharmacy Residency (18, 2.8%).

Table 6 displays the breakdown by province with regard to where respondents earned their pharmacy practice degree. Although 230 respondents (35.6%) were first licensed to practice in Ontario, only 177 (27.4%) earned their pharmacy degree in that province.

Respondents reported first being licensed to practice pharmacy between 1959 and 2007, with a mean of 1988 (data not displayed). On average, respondents were in their position for 9.3 years, with a range between one month and 41 years (data not displayed). Respondents were

with their current employer for an average of 11.9 years, with a range between one month and 45 years (data not displayed).

Table 6 – Province Respondents' Earned Initial Pharmacy Practice Degree & Province Where Respondents' First Licensed

Province	Province Degree Earned – N (%)	Province First Licensed to Practice – N (%)
British Columbia	63 (9.8%)	80 (12.4%)
Alberta	78 (12.1%)	86 (13.3%)
Saskatchewan	109 (16.9%)	78 (12.1%)
Manitoba	39 (6.0%)	46 (7.1%)
Ontario	177 (27.4%)	230 (35.6%)
Quebec	8 (1.2%)	6 (0.9%)
Newfoundland & Labrador	28 (4.3%)	23 (3.6%)
Nova Scotia	64 (9.9%)	38 (5.9%)
New Brunswick	NA*	30 (4.6%)
Prince Edward Island	NA*	4 (0.6%)
Other (non-Canadian)	59 (9.1%)	14 (2.2%)

* Do not have institutions granting pharmacy degrees

In terms of pharmacy type, *independent* was the single largest category respondents listed (33.6%), followed by *franchise* (18.4%) and *grocery store* (15.9%) (Table 7).

Table 7 – Respondents' Pharmacy Type

Pharmacy Type	Respondents N (%)
Independent	218 (33.6%)
Small Chain	15 (2.3%)
Banner	56 (8.7%)
Franchise	118 (18.4%)
Large Chain	61 (9.4%)
Grocery Store	103 (15.9%)
Department Store *	1 (0.2%)
Mass Merchandiser	64 (9.9%)
Mail Order ~	1 (0.2%)
Other (e.g. dispensing MD) ~	9 (1.4%)
Total	646 (100.0%)

* For comparative analysis, Department Store was included under Mass Merchandiser

~ Excluded from comparative analysis

For the purposes of analysis, pharmacy type was reduced to three categories: independent, franchise and corporate. Independent consisted of independent, small chain and banner (44.6%); franchise consisted of franchise (18.4%); and corporate consisted of large chain, grocery store, department store, and mass merchandiser (35.4%). As stated above, mail order and other were excluded from comparative analysis, as these practice environments did not reflect the focus of the study.

4.1.3 Professional Practice Standards

With regard to self-regulation and professional autonomy, managers were asked to respond to twelve items (Table 8). The majority of responses were weighted toward *agree/strongly agree* and reflected items pertaining to members of the profession influencing practice. The highest level of agreement was for the statement *I would depart from the employer's policies when I judge it professionally necessary* (89.6%).

Four items produced responses weighted toward *disagree/strongly disagree.* For the most part, the items referred to employers influencing practice standards; these included: *the employer should establish specific guidelines for making professional decisions in my work* (44.9%), *the opportunity to exercise professional judgement in my work should be determined by my employer* (81.1%), *the employer has the right to influence my professional decisions because the employers pay my salary* (75.4%), and *there is little professional autonomy as a pharmacist with this employer* (65.8%).

Table 8 – Establishing Practice Standards

	Strongly Disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly Agree N (%)	Total N (%)
My pharmacy colleagues and I should be the only ones who determine and set standards for our professional practice	10 (1.5%)	132 (20.4%)	71 (11.0%)	243 (37.6%)	183 (28.3%)	639 (98.9%)
The employer should establish specific guidelines for making professional decisions in my work	84 (13.0%)	206 (31.9%)	126 (19.5%)	186 (28.8%)	34 (5.3%)	636 (98.5%)
The only professional practice standards I will accept are those established by my profession	8 (1.2%)	131 (20.3%)	102 (15.8%)	248 (38.4%)	143 (22.1%)	632 (97.8%)
The opportunity to exercise professional judgement in my work should be determined by the employer	224 (34.7%)	300 (46.4%)	65 (10.1%)	40 (6.2%)	9 (1.4%)	638 (98.8%)
Only another pharmacist is qualified to judge the competence of my professional work	11 (1.7%)	123 (19.0%)	72 (11.1%)	268 (41.5%)	164 (25.4%)	638 (98.8%)
I would depart from the employer's policies when I judge it professionally necessary	3 (0.5%)	8 (1.2%)	49 (7.6%)	382 (59.1%)	197 (30.5%)	639 (98.9%)
The employer has the right to influence my professional decisions because the employer pays my salary	214 (33.1%)	273 (42.3%)	77 (11.9%)	72 (11.1%)	3 (0.5%)	639 (98.9%)
The public should be allowed input into the development of standards for professional competence which guide my practice	42 (6.5%)	139 (21.5%)	150 (23.2%)	282 (43.7%)	25 (3.9%)	638 (98.8%)
The employer has no right to place limitations on the decisions I make concerning professional matters	7 (1.1%)	154 (23.8%)	101 (15.6%)	236 (36.5%)	138 (21.4%)	636 (98.5%)
I would modify the professional practice standards which guide my practice only in response to recommendations made by my profession	4 (0.6%)	96 (14.9%)	93 (14.4%)	344 (53.3%)	97 (15.0%)	634 (98.1%)
A basic problem in community pharmacy practice is the intrusion of standards/policies other than those which are truly professional	8 (1.2%)	98 (15.2%)	169 (26.2%)	262 (40.6%)	93 (14.4%)	630 (97.5%)
There is little professional autonomy as a pharmacist with this employer	138 (21.4%)	287 (44.4%)	132 (20.4%)	45 (7.0%)	14 (2.2%)	616 (95.4%)

4.1.4 Manager Autonomy

This section consisted of six items focusing on manager autonomy (Table 9). Managers were asked to respond to statements regarding their role as pharmacy manager and professional autonomy.

Table 9 – Manager Autonomy

As pharmacy manager:	Never N (%)	Seldom N (%)	Half the Time N (%)	Usually N (%)	Always N (%)	Total N (%)
You have final approval on implementing a new professional service	40 (6.2%)	122 (18.9%)	72 (11.1%)	228 (35.3%)	175 (27.1%)	637 (98.6%)
If you feel it necessary, you are authorized to alter company policies to specifications on patient care to better suit the needs of your patients	33 (5.1%)	96 (14.9%)	64 (9.9%)	244 (37.8%)	195 (30.2%)	632 (97.8%)
You have access to all information used to arrive at decisions on policies regarding *clinical practice* in your pharmacy	24 (3.7%)	81 (12.5%)	54 (8.4%)	241 (37.3%)	233 (36.1%)	633 (98.0%)
You have access to all information used to arrive at decisions on policies regarding *business practices* in your pharmacy	41 (6.3%)	126 (19.5%)	88 (13.6%)	195 (30.2%)	183 (28.3%)	633 (98.0%)
You are free to initiate research projects or educational programs such as cardiovascular risk reduction	37 (5.7%)	77 (11.9%)	50 (7.7%)	207 (32.0%)	260 (40.2%)	631 (97.7%)
You are free to participate in research projects or educational programs related to your patient population	21 (3.3%)	63 (9.8%)	37 (5.7%)	223 (34.5%)	287 (44.4%)	631 (97.7%)

The majority of responses to all six items were weighted toward *usually/always*. However, respondents were more likely (usually/always) to have access to the information used to arrive at decisions on clinical practice (73.4%) than for business practices (58.5%). As well, respondents were able to participate in research projects or educational programs (78.9%) slightly more often than initiate such projects or programs (72.2%).

4.1.5 Decision Making

The four items in this section dealt with professionals in bureaucracies (Table 10). Items surrounded the respondents' ability to make decisions within their pharmacy. The majority of responses to the four items were strongly and consistently weighted toward *moderate/lots*.

Table 10 – Decision Making

	None N (%)	Little N (%)	Moderate N (%)	Lots N (%)	Total N (%)
How much freedom does your position allow you as to how you do your work?	7 (1.1%)	74 (11.5%)	242 (37.5%)	314 (48.6%)	637 (98.6%)
How much does your position allow you to make most decisions on your own?	1 (0.2%)	74 (11.5%)	219 (33.9%)	344 (53.3%)	638 (98.8%)
How much does your position allow you to take part in making decisions that affect you?	15 (2.3%)	98 (15.2%)	217 (33.6%)	307 (47.5%)	637 (98.6%)
How much is your position one where you have a lot of say over what happens in your pharmacy?	9 (1.4%)	95 (14.7%)	200 (31.0%)	332 (51.4%)	636 (98.5%)

4.1.6 Pharmacy Profession Characteristics

Focusing on various characteristics of the profession, this section contained six items regarding professional satisfaction (Table 11).

Table 11 – Pharmacy Profession Characteristics

	Very Dissatisfied N (%)	Dissatisfied N (%)	Neutral N (%)	Satisfied N (%)	Very Satisfied N (%)	Total N (%)
The performance of professional associations	33 (5.1%)	135 (20.9%)	131 (20.3%)	305 (47.2%)	35 (5.4%)	639 (98.9%)
Respect from other health professionals	16 (2.5%)	109 (16.9%)	140 (21.7%)	318 (49.2%)	46 (7.1%)	629 (97.4%)
Development of professional patient-pharmacist relationships	0 (0.0%)	31 (4.8%)	64 (9.9%)	394 (61.0%)	151 (23.4%)	640 (99.1%)
Practice that provides a vital service to society	1 (0.2%)	25 (3.9%)	49 (7.6%)	381 (59.0%)	183 (28.3%)	639 (98.9%)
Public opinion of pharmacists as professionals	6 (0.9%)	62 (9.6%)	80 (12.4%)	336 (52.0%)	156 (24.1%)	640 (99.1%)
Freedom from outside intervention in making professional judgements	18 (2.8%)	119 (18.4%)	142 (22.0%)	305 (47.2%)	54 (8.4%)	638 (98.8%)

While the majority of responses to the six items were weighted toward *satisfied/very satisfied*, weighting toward one side or the other was not as heavy as previous items in the questionnaire. Slightly more than half of respondents were *satisfied/very satisfied* with three characteristics: *the performance of professional associations* (52.6%), *respect from other health professionals* (56.3%), and *freedom from outside intervention in making professional judgements* (55.6%). Respondents were more than 80% *satisfied/very satisfied* with the remaining three items.

4.1.7 Amount of Control

Addressing the issue surrounding level of control, this section included five items (Table 12). Items dealt with the respondents' influence in controlling workplace processes within their pharmacy.

Table 12 – Amount of Control

	No Control N (%)	Little Control N (%)	Moderate Control N (%)	Lots of Control N (%)	Total Control N (%)	Total N (%)
The quality of care provided to patients	2 (0.3%)	20 (3.1%)	176 (27.2%)	299 (46.3%)	142 (22.0%)	639 (98.9%)
The development of workplace policies	33 (5.1%)	104 (16.1%)	145 (22.4%)	226 (35.0%)	130 (20.1%)	638 (98.8%)
The responsibilities delegated to staff	2 (0.3%)	21 (3.3%)	136 (21.1%)	297 (46.0%)	185 (28.6%)	641 (99.2%)
How workplace problems are solved	4 (0.6%)	23 (3.6%)	147 (22.8%)	318 (49.2%)	149 (23.1%)	641 (99.2%)
The time spent on various work activities	4 (0.6%)	62 (9.6%)	211 (32.7%)	238 (36.8%)	125 (19.3%)	640 (99.1%)

Once again, the majority of responses to the five items were weighted toward one side: *lots of control/total control*. However, just over half of the respondents reported having lots of control/total control for two items: *the development of workplace policies* (55.1%) and *the time spent on various work activities* (56.1%).

4.1.8 Orientation to Practice

Comprised of eleven items, this section dealt with role orientation and the importance of various aspects of practice for respondents (Table 13); items surrounded both professional and business aspects of practice. Responses were not as heavily weighted to one side, yet the majority were still weighted toward *important/very important*.

Table 13 – Orientation to Practice

	Very Unimportant N (%)	Unimportant N (%)	Neutral N (%)	Important N (%)	Very Important N (%)	Total N (%)
Attending professional meetings & conferences	7 (1.1%)	39 (6.0%)	141 (21.8%)	318 (49.2%)	137 (21.2%)	642 (99.4%)
Dispensing prescriptions	3 (0.5%)	13 (2.0%)	63 (9.8%)	284 (44.0%)	277 (42.9%)	640 (99.1%)
Being a good businessperson	5 (0.8%)	24 (3.7%)	94 (14.6%)	337 (52.2%)	180 (27.9%)	640 (99.1%)
Encouraging the proper use of medications	1 (0.2%)	1 (0.2%)	2 (0.3%)	148 (22.9%)	487 (75.4%)	639 (98.9%)
Arranging counter & shelf displays	84 (13.0%)	182 (28.2%)	208 (32.2%)	136 (21.1%)	30 (4.6%)	640 (99.1%)
Being part of the health care team	1 (0.2%)	1 (0.2%)	29 (4.5%)	288 (44.6%)	318 (49.2%)	637 (98.6%)
Offering a variety of sundry goods	88 (13.6%)	193 (29.9%)	206 (31.9%)	134 (20.7%)	12 (1.9%)	633 (98.0%)
Reading the professional literature	0 (0.0%)	4 (0.6%)	43 (6.7%)	387 (59.9%)	202 (31.3%)	636 (98.5%)
Maintaining a business establishment	10 (1.5%)	14 (2.2%)	101 (15.6%)	363 (56.2%)	149 (23.1%)	637 (98.6%)
Public service, such as presentations to community groups, etc.	5 (0.8%)	53 (8.2%)	179 (27.7%)	321 (49.7%)	80 (12.4%)	638 (98.8%)
Mentoring students & interns	1 (0.2%)	19 (2.9%)	125 (19.3%)	339 (52.5%)	157 (24.3%)	641 (99.2%)

Rated the highest as important/very important was: *dispensing prescriptions* (86.9%), *encouraging the proper use of medications* (98.3%), *being part of the health care team* (93.8%), and *reading the professional literature* (91.2%). Conversely, two questions had responses weighted more toward the left side – *unimportant/very unimportant* – than the right side:

offering a variety of sundry goods (43.5%) and *arranging counter and shelf displays* (41.2%).

4.1.9 Practice Affinity

Focusing on role orientation and the level of enjoyment of various aspects of practice, this section included eleven items (Table 14); items incorporated both professional and business aspects of practice.

Table 14 – Practice Affinity

	Dislike Very Much N (%)	Dislike Somewhat N (%)	Neutral N (%)	Like Somewhat N (%)	Like Very Much N (%)	Total N (%)
Dispensing prescriptions	2 (0.3%)	20 (3.1%)	57 (8.8%)	267 (41.3%)	288 (44.6%)	634 (98.1%)
Selling non-prescription medications	1 (0.2%)	15 (2.3%)	57 (8.8%)	319 (49.4%)	229 (35.4%)	621 (96.1%)
Selling non-medication related items (cosmetics, newspapers, etc.)	164 (25.4%)	190 (29.4%)	194 (30.0%)	72 (11.1%)	14 (2.2%)	634 (98.1%)
Management of personnel (including supervision & training of pharmacists & pharmacy technicians)	5 (0.8%)	46 (7.1%)	100 (15.5%)	330 (51.1%)	156 (24.1%)	637 (98.6%)
Management of personnel (including supervision & training of non-professional staff)	32 (5.0%)	112 (17.3%)	171 (26.5%)	234 (36.2%)	80 (12.4%)	629 (97.4%)
Management of cash (daily reports, deposits, change, etc.)	99 (15.3%)	196 (30.3%)	194 (30.0%)	118 (18.3%)	24 (3.7%)	631 (97.7%)
Management of “front store” stock (buying, inventories, storage, etc.)	95 (14.7%)	192 (29.7%)	184 (28.5%)	144 (22.3%)	14 (2.2%)	629 (97.4%)
Management of dispensary stock (ordering, inventories, storage, etc.)	16 (2.5%)	54 (8.4%)	153 (23.7%)	321 (49.7%)	93 (14.4%)	637 (98.6%)
Keeping abreast on health & drug-related matters	0 (0.0%)	6 (0.9%)	35 (5.4%)	282 (43.7%)	315 (48.8%)	638 (98.8%)
Providing information & advice to physicians and other health care professionals	1 (0.2%)	6 (0.9%)	36 (5.6%)	273 (42.3%)	323 (50.0%)	639 (98.9%)
Counselling patients regarding prescription & over-the-counter related matters	0 (0.0%)	3 (0.5%)	7 (1.1%)	165 (25.5%)	462 (71.5%)	637 (98.6%)

Much like the *Orientation to Practice* responses above, responses in this section were somewhat weighted toward *like somewhat/like very much*. Rated the highest were: *dispensing prescriptions* (85.9%), *selling non-prescription medications* (84.8%), *keeping abreast on health and drug-related matters* (92.5%), and *providing information and advice to physicians and other health care professionals* (92.3%). By contrast, three items had responses weighted more toward the left side – *dislike somewhat/dislike very much* – than the right side: *selling non-medication related items* (54.8%), *management of cash* (45.6%), and *management of front store stock* (44.4%).

4.1.10 Organizational Identity

The four items in this section centred on organizational commitment and the respondent's personal connection to the organization (place of employment) (Table 15). Three of the four items in this section had responses weighted toward *disagree/strongly disagree*. Conversely, the one item with responses more toward the *agree/strongly agree* dealt with the organization having a great deal of personal meaning for the respondent (61.3%).

Table 15 – Organizational Identity

	Strongly Disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly Agree N (%)	Total N (%)
I do not feel like "part of the family" at this organization	243 (37.6%)	200 (31.0%)	82 (12.7%)	66 (10.2%)	40 (6.2%)	631 (97.7%)
I do not feel "emotionally attached" to this organization	239 (37.0%)	190 (29.4%)	82 (12.7%)	81 (12.5%)	35 (5.4%)	627 (97.1%)
This organization has a great deal of personal meaning for me	33 (5.1%)	69 (10.7%)	135 (20.9%)	187 (28.9%)	209 (32.4%)	633 (98.0%)
I do not feel a strong sense of belonging to my organization	253 (39.2%)	202 (31.3%)	98 (15.2%)	54 (8.4%)	25 (3.9%)	632 (97.8%

4.1.11 Community Pharmacy Practice

Examining role perceptions, this section included five items (Table 16) that centred on the practice setting and responsibilities. Responses to the five items in this section varied.

Most respondents' *disagreed/strongly disagreed* that *a pharmacist's primary professional responsibility is to fill prescriptions exactly as ordered by the prescriber* (53.7%). On the other side, the large majority of respondents' *agreed/strongly agreed* that *pharmacists should be readily available and accessible to counsel patients about the use of their medications* (95.2%).

Table 16 – Community Pharmacy Practice

	Strongly Disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly Agree N (%)	Total N (%)
A goal of the pharmacy manager is to attain regular increases in both prescription sales and patient counts	16 (2.5%)	80 (12.4%)	116 (18.0%)	340 (52.6%)	84 (13.0%)	636 (98.5%)
The pharmacy manager is the best judge of a pharmacist's job performance	6 (0.9%)	83 (12.8%)	150 (23.2%)	319 (49.4%)	78 (12.1%)	636 (98.5%)
The employing organization should have the right to establish standards of professional competence for its employees	30 (4.6%)	106 (16.4%)	144 (22.3%)	318 (49.2%)	36 (5.6%)	634 (98.1%)
A pharmacist's primary professional responsibility is to fill prescriptions exactly as ordered by the prescriber	68 (10.5%)	279 (43.2%)	129 (20.0%)	128 (19.8%)	29 (4.5%)	633 (98.0%)
Pharmacists should be readily available and accessible to counsel patients about the use of their medications	1 (0.2%)	7 (1.1%)	11 (1.7%)	221 (34.2%)	394 (61.0%)	634 (98.1%)

4.1.12 Organizational Experiences

The six items in this section dealt with the practice environment and the personal experiences of respondents (Table 17). As with responses to the *Community Pharmacy Practice* section above, responses to the six items in this section varied.

Most respondents' reported *often/always* feeling certain about the amount of authority they had (77.3%). Conversely, responses to three items were weighted toward the *rarely/never side*: being required to do things in their job that are against their professional judgement (84.9%), receiving incompatible requests from two or more people (62.7%), and having to choose between the business and professional aspects of pharmacy (57.6%).

Table 17 – Organizational Experiences

	Never N (%)	Rarely N (%)	Sometimes N (%)	Often N (%)	Always N (%)	Total N (%)
I feel certain about the amount of authority I have	4 (0.6%)	18 (2.8%)	111 (17.2%)	244 (37.8%)	255 (39.5%)	632 (97.8%)
I am provided with clear, planned goals and objectives for my job	18 (2.8%)	50 (7.7%)	158 (24.5%)	219 (33.9%)	181 (28.0%)	626 (96.9%)
I am required to do things in my job that are against my professional judgment	293 (45.4%)	255 (39.5%)	72 (11.1%)	7 (1.1%)	3 (0.5%)	630 (97.5%)
I am willing to "buck" a company rule or policy in order to carry out my professional duties	43 (6.7%)	105 (16.3%)	255 (39.5%)	91 (14.1%)	112 (17.3%)	606 (93.8%)
I receive incompatible requests from two or more people	143 (22.1%)	262 (40.6%)	168 (26.0%)	33 (5.1%)	4 (0.6%)	610 (94.4%)
I often have to choose between the business and professional aspects of pharmacy	100 (15.5%)	272 (42.1%)	195 (30.2%)	66 (10.2%)	2 (0.3%)	635 (98.3%)

4.1.13 Organizational Characteristics

Dealing with innovation within the respondent's pharmacy, this section was comprised of eight items (Table 18). Responses to the eight items in this section were weighted more toward the centre – *disagree/neutral/agree* – than to one side or another.

Only one item had responses of more than 70% toward *agree/strongly agree*: *we try to shape our business environment to enhance our presence in the market* (73.3%), while only one item was weighted more toward *disagree/strongly disagree*: *we take above average risks in our business* (37.3%).

Table 18 – Organizational Characteristics

	Strongly Disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly Agree N (%)	Total N (%)
This pharmacy usually takes action in anticipation of future market conditions	9 (1.4%)	68 (10.5%)	176 (27.2%)	329 (50.9%)	50 (7.7%)	632 (97.8%)
This pharmacy is known as an innovator among pharmacies in our area	12 (1.9%)	122 (18.9%)	212 (32.8%)	205 (31.7%)	82 (12.7%)	633 (98.0%)
We try to shape our business environment to enhance our presence in the market	5 (0.8%)	41 (6.3%)	127 (19.7%)	380 (58.8%)	81 (12.5%)	634 (98.1%)
We promote innovative professional services in this pharmacy	6 (0.9%)	75 (11.6%)	154 (23.8%)	298 (46.1%)	97 (15.0%)	630 (97.5%)
We take above average risks in our business	30 (4.6%)	211 (32.7%)	231 (35.8%)	126 (19.5%)	31 (4.8%)	629 (97.4%)
We are responsive to the activities of our rivals	12 (1.9%)	72 (11.1%)	173 (26.8%)	323 (50.0%)	40 (6.2%)	620 (96.0%)
Identifying new business opportunities is the concern of all employees	13 (2.0%)	110 (17.0%)	182 (28.2%)	279 (43.2%)	48 (7.4%)	632 (97.8%)
Because market conditions are changing, we continually seek out new opportunities	5 (0.8%)	50 (7.7%)	140 (21.7%)	353 (54.6%)	81 (12.5%)	629 (97.4%)

4.1.14 Implementing Professional Services

This section included thirteen items on implementing professional services. The first seven items centred on situations in which a professional service/clinic was not implemented (Table 19). Responses to the first seven items in this section varied. Respondents reported two barriers to implementing a new professional service/clinic more than half of the time: *not enough staff* (53.6%) and *too much of a time commitment* (54.2%).

For the next item respondents' were asked where the idea came from when implementing a new professional service and asked to check all that applied to their pharmacy (Table 20). *Management outside of the pharmacy* was listed as the single most influential source when implementing a new professional service (15.9%).

Table 19 – Barriers to Implementation

	Yes N (%)	No N (%)	Not Applicable N (%)	Total N (%)
Inadequate funding	180 (27.9%)	226 (35.0%)	217 (33.6%)	623 (96.4%)
The process involved in having it approved was too long (too many levels of approval)	120 (18.6%)	243 (37.6%)	254 (39.3%)	617 (95.5%)
Could not obtain support from management outside your location	114 (17.6%)	252 (39.0%)	253 (39.2%)	619 (95.8%)
Unmotivated staff	175 (27.1%)	278 (43.0%)	162 (25.1%)	615 (95.2%)
Not enough staff	346 (53.6%)	155 (24.0%)	123 (19.0%)	624 (96.6%)
Too much of a time commitment	350 (54.2%)	154 (23.8%)	118 (18.3%)	622 (96.3%)
Professional staff did not have the requisite training (i.e., Certified Diabetes Educator)	240 (37.2%)	210 (32.5%)	172 (26.6%)	622 (96.3%)

Table 20 – Idea to Offer New Professional Service

Response Category	N (%)
Pharmacists in the Pharmacy	58 (9.0%)
Pharmacy Manager	81 (12.5%)
Management Outside the Pharmacy	103 (15.9%)
Other (MD, Rx Rep., Drug Plans, Techs, etc.)	20 (3.1%)
Pharmacists & Pharmacy Manager	83 (12.8%)
Pharmacists, Pharmacy Manager & Management Outside the Pharmacy	46 (7.1%)
Pharmacists, Pharmacy Manager, Management Outside the Pharmacy & Other	46 (7.1%)
Other Combinations	90 (14.0%)
Total	623 (96.4%)

The next item asked respondents': *as pharmacy manager, do you and pharmacists under your guidance have to follow policies and procedures developed by non-pharmacists?* There were a total of 643 (99.5%) responses with 257 (39.8%) responding *no*, while 112 (17.3%) responded *yes*, and 274 (42.4%) reporting *yes, but only in regard to business practices*.

The tenth item in this section asked respondents: *does your pharmacy serve as a preceptor site for pharmacy students/interns?* There were a total of 643 (99.5%) responses, with half (49.2%, 318) reporting serving as a preceptor site, 146 (22.6%) responding not serving as a preceptor site, and a further 179 (27.7%) indicating they served as a preceptor site in the past, but

not currently.

The last three items centred on important factors when implementing a new professional service (Table 21). Of the three items, the *potential benefit for your patients' health* was rated the highest as *important/very important* (94.0%), while *management outside your location suggests implementing the new professional service* was rated the lowest (37.5%).

Table 21 – Important Factors In Implementing A New Professional Service

	Very Important N (%)	Important N (%)	Neutral N (%)	Unimportant N (%)	Very Unimportant N (%)	Not Applicable N (%)	Total N (%)
The potential benefits to your patients' health	363 (56.2%)	244 (37.8%)	18 (2.8%)	6 (0.9%)	4 (0.6%)	5 (0.8%)	640 (99.1%)
The increase in revenues at your location	136 (21.1%)	389 (60.2%)	85 (13.2%)	17 (2.6%)	8 (1.2%)	5 (0.8%)	640 (99.1%)
Management outside your location suggests implementing the new professional service	60 (9.3%)	182 (28.2%)	198 (30.7)	59 (9.1%)	20 (3.1%)	114 (17.6%)	633 (98.0%)

4.1.15 The Pharmacy and Its Manager

This section was comprised of eleven items dealing with the pharmacy and its manager, as well as manager preferences and requests. The first five items centred on the experiences of the respondent (Table 22).

Almost all respondents (98.6%) reported currently practicing pharmacy. More respondents enjoyed their position as pharmacy manager (86.7%) than welcomed the opportunity to become pharmacy manager (81.9%). For 6.2 percent of respondents, the dispensary that they managed was a loss leader.

Table 22 – Pharmacy Manager Experience

	Yes N (%)	No N (%)	Not Applicable N (%)	Total N (%)
Your dispensary (pharmacy department) is a 'loss leader' (regularly does not earn a profit)	40 (6.2%)	566 (87.6%)	35 (5.4%)	641 (99.2%)
As pharmacy manager you currently practice pharmacy	637 (98.6%)	4 (0.6%)	2 (0.3%)	643 (99.5%)
You welcomed the opportunity to become pharmacy manager	529 (81.9%)	52 (8.0%)	40 (6.2%)	621 (96.1%)
As the pharmacy manager you are only responsible for managing the dispensary (not responsible for front store/non-medication related products & staff)	249 (38.5%)	370 (57.3%)	24 (3.7%)	643 (99.5%)
You currently enjoy your position as pharmacy manager	560 (86.7%)	69 (10.7%)	9 (1.4%)	638 (98.8%)

The next five items dealt with aspects of practice the respondents may request if – when looking back – they were offered the position as manager again (Table 23). Responses to the five items varied.

Table 23 – Pharmacy Manager Preferences

	Strongly Disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly Agree N (%)	Not Applicable N (%)	Total N (%)
More time to personally practice pharmacy /interact with patients	19 (2.9%)	116 (18.0%)	137 (21.2%)	183 (28.3%)	121 (18.7%)	63 (9.8%)	639 (98.9%)
Final approval of what cognitive services your location offers	8 (1.2%)	51 (7.9%)	149 (23.1%)	257 (39.8%)	92 (14.2%)	76 (11.8%)	633 (98.0%)
More non-professional staff so the pharmacists in your pharmacy could focus on providing professional services	12 (1.9%)	100 (15.5%)	109 (16.9%)	231 (35.8%)	129 (20.0%)	58 (9.0%)	639 (98.9%)
Fewer front shop responsibilities (non-pharmacy related)	12 (1.9%)	95 (14.7%)	151 (23.4%)	169 (26.2%)	107 (16.6%)	104 (16.1%)	638 (98.8%)
More money to implement new professional services	10 (1.5%)	57 (8.8%)	169 (26.2%)	214 (33.1%)	114 (17.6%)	75 (11.6%)	639 (98.9%)

Over half (54.0%) of respondents *agreed/strongly agreed* that if offered the position as pharmacy manager again they would request final approval of cognitive services offered at their pharmacy, as well as more non-professional staff so that pharmacists in their location could focus on providing professional services (55.8%). While only 20.9 percent *disagreed/strongly disagreed* they would request more time to personally practice pharmacy.

The last item asked respondents about their level of agreement with the following statement: *it is possible to be both a good professional and a successful businessperson in community pharmacy today.* A total of 630 (97.5%) responded to this item, with 272 (42.1%) of respondents strongly agreeing with the statement, 292 (45.2%) agreeing and 44 (6.8%) remaining neutral. On the other end 5 (0.8%) respondents strongly disagreed with the statement and 17 (2.6%) disagreed.

4.2 Independent Variable

4.2.1 Pharmacy Ownership Structure

The independent variable was developed to align with the primary focus of this study that centred on the impact of community pharmacy ownership. The original ten pharmacy type responses on the questionnaire were subdivided into three categories (Table 24): independent (independent, small chain, and banner), franchise, and corporate (large chain, grocery store, department store, and mass merchandiser). Please see section *Description of Pharmacy Type* for a description of the ten pharmacy types. Mail order pharmacy and other were excluded from the main independent variable due to lacking statistically significance, as well as not fitting into the three categories or focus of the study. As well, below are results of cross-tabular analysis of the *Pharmacy Ownership Structure* independent variable by the dependent variables *Gender* (Table 25), *Age* (Table 26), *Region* (Table 27) and *Years With Employer* (Table 28).

Table 24 – Pharmacy Ownership Structure Breakout

Pharmacy Type	Respondents N (%)	Ownership Structure	Respondents N (%)
Independent	218 (33.6%)		
Small Chain	15 (2.3%)	*Independent*	289 (44.7%)
Banner	56 (8.7%)		
Franchise	118 (18.4%)	*Franchise*	118 (18.3%)
Large Chain	61 (9.4%)		
Grocery Store	103 (15.9%)	*Corporate*	229 (35.5%)
*Department Store**	1 (0.2%)		
Mass Merchandiser	64 (9.9%)		
Total	636 (98.4%)		636 (98.5%)

* For comparative analysis, *Department Store* was included under *Mass Merchandiser*

Table 25 – Pharmacy Ownership Structure by Gender

	Ownership Structure			
Gender	**Independent N (%)**	**Franchise N (%)**	**Corporate N (%)**	**Total**
Female	99 (40.2%)	34 (13.8%)	113 (45.9%)	246
% of Total	15.6%	5.4%	17.8%	38.7%
Male	190 (48.8%)	84 (21.6%)	115 (29.6%)	389
% of Total	29.9%	13.2%	18.1%	61.3%

Table 26 – Pharmacy Ownership Structure by Age

	Ownership Structure			
Age	**Independent N (%)**	**Franchise N (%)**	**Corporate N (%)**	**Total**
24 – 39	56 (32.6%)	36 (20.9%)	80 (46.5%)	172
% of Total	11.2%	7.2%	16.0%	34.5%
40 – 49	74 (46.8%)	29 (18.4%)	55 (34.8%)	158
% of Total	14.8%	5.8%	11.0%	31.7%
50+	94 (55.6%)	27 (16.0%)	48 (28.4%)	169
% of Total	18.8%	5.4%	9.6%	33.9%

Table 27 – Pharmacy Ownership Structure by Region

	Ownership Structure			
Region	**Independent N (%)**	**Franchise N (%)**	**Corporate N (%)**	**Total**
British Columbia	44 (50.6%)	18 (20.7%)	25 (28.7%)	87
% of Total	6.9%	2.8%	3.9%	13.6%
Alberta	34 (36.2%)	20 (21.3%)	40 (42.6%)	94
% of Total	5.3%	3.1%	6.3%	14.7%
Saskatchewan & Manitoba	43 (51.2%)	13 (15.5%)	28 (33.3%)	84
% of Total	6.7%	2.0%	4.4%	13.1%
Ontario	138 (47.8%)	49 (17.0%)	102 (35.3%)	289
% of Total	21.6%	7.7%	15.9%	45.2%
Atlantic Canada	33 (38.4%)	18 (20.9%)	35 (40.7%)	86
% of Total	5.2%	2.8%	5.5%	13.4%

Table 28 – Pharmacy Ownership Structure by Years With Employer

	Ownership Structure			
Years With Employer	**Independent N (%)**	**Franchise N (%)**	**Corporate N (%)**	**Total**
Up to 2 Years	38 (44.2%)	11 (12.8%)	37 (43.0%)	86
% of Total	6.2%	1.8%	6.1%	14.1%
2.1 – 4.0 Years	26 (35.6%)	14 (19.2%)	33 (45.2%)	73
% of Total	4.3%	2.3%	5.4%	11.9%
4.1 – 6.0 Years	24 (30.0%)	15 (18.8%)	41 (51.3%)	80
% of Total	3.9%	2.5%	6.7%	13.1%
6.1 – 15.0 Years	79 (43.4%)	32 (17.6%)	71 (39.0%)	182
% of Total	12.9%	5.2%	11.6%	29.8%
15.1 Years +	107 (56.3%)	41 (21.6%)	42 (22.1%)	190
% of Total	17.5%	6.7%	6.9%	31.1%

4.3 Analysis of Constructs

4.3.1 Professional Authority

In conducting a factor analysis on the first twelve items of the questionnaire, with descriptive statistics displayed above in the *Practice Standards* section, two distinct groups emerged.

The first is the construct labelled *Professional Authority*. It is composed of four items (Table 29), with a Cronbach's alpha of 0.759. Responses to items in this construct were measured using a five-point Likert-scale, spanning from Strongly Disagree (1) to Strongly Agree (5); therefore, responses to this construct could range from 4-20, and the full range was present for this construct. The construct mean was 14.7, with a median of 15.0 and a standard deviation of 3.25. As displayed in Figure 1, responses were skewed toward agree/strongly agree.

Table 29 – Professional Authority Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Colleagues Standards of Practice	11.0113	6.140	.558	.335	.700
Only Profession Established Standards	11.1014	6.127	.607	.389	.671
Only Another Pharmacist Can Judge Work	11.0016	6.376	.538	.296	.710
Modify Professional Standards Only Due To Profession	11.0354	7.112	.525	.306	.719

With regard to the independent variable *Pharmacy Ownership Structure* there were no statistically significant differences among groups ($p > 0.564$).

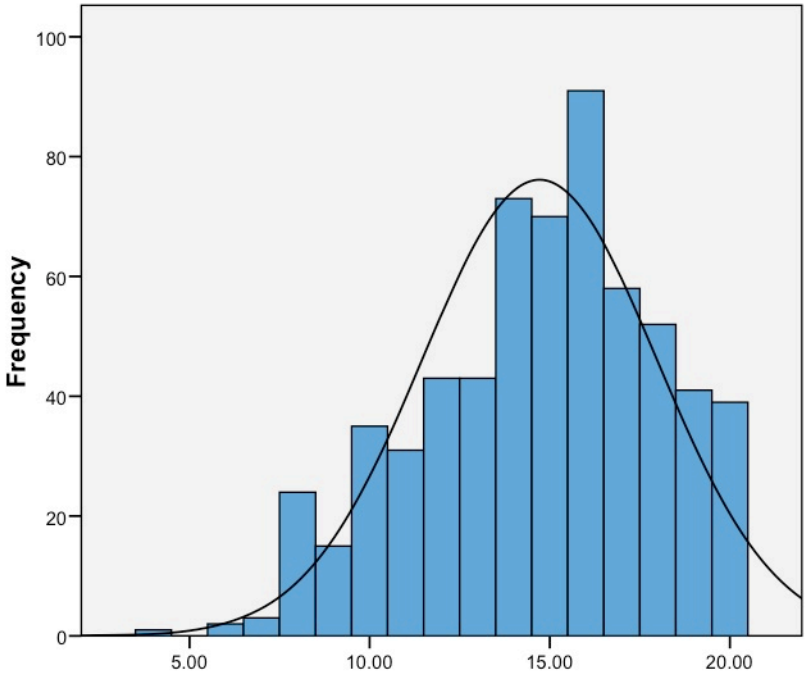

Figure 1 – Professional Authority Histogram

4.3.2 Employer Authority

The second construct emerging from the first twelve items of the questionnaire, with descriptive statistics displayed above in the *Practice Standards* section, is *Employer Authority*. It is composed of three items (Table 30), with a Cronbach's alpha of 0.651. While this Cronbach's alpha level is below the desired level of 0.700, it was kept as the inter-item correlation matrix displayed levels between 0.3 and 0.5 for all three items (data not displayed). Responses to items in this construct were measured using a five-point Likert-scale, spanning from Strongly Disagree (1) to Strongly Agree (5); therefore, responses to this construct could range from 3-15, with the range for this construct being between 3 and 14. The construct mean was 6.8, with a median of 7.0 and a standard deviation of 2.33. As displayed in Figure 2, responses were skewed toward disagree/strongly disagree.

Table 30 – Employer Authority Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Employer Set Professional Guidelines	3.9478	2.573	.410	.209	.615
Exercise Professional Judgment Employer	4.8354	2.848	.567	.322	.397
Employer Influence Professional Decision Since They Pay	4.7263	3.109	.394	.201	.612

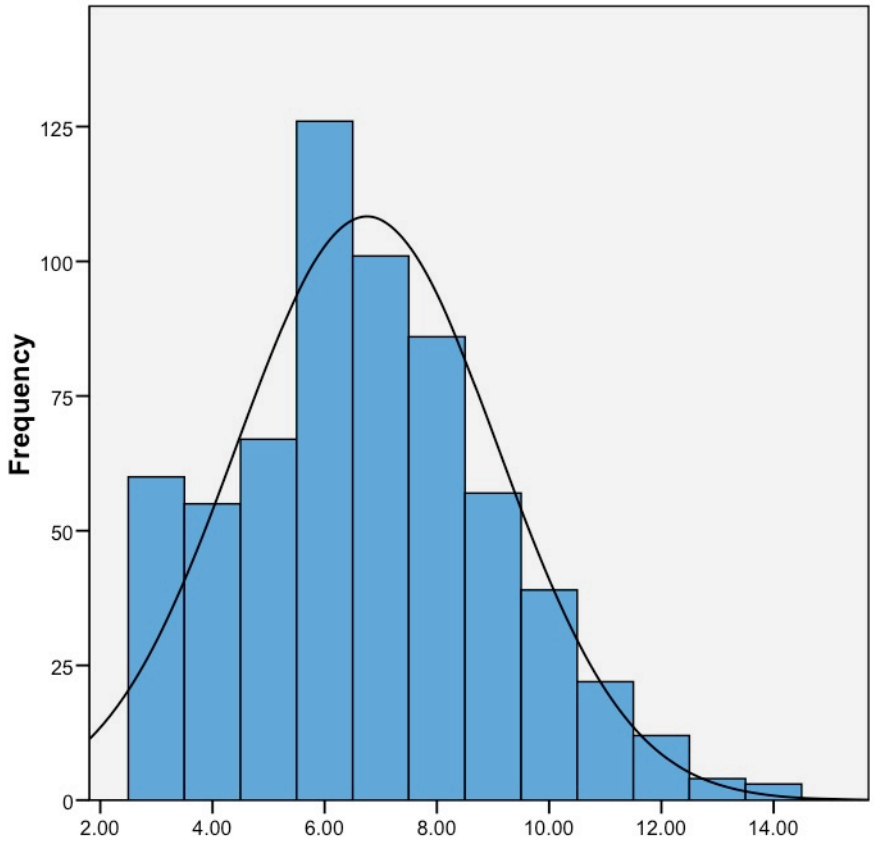

Figure 2 – Employer Authority Histogram

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) among corporate respondents and independent and franchise respondents (Table 31). Corporate respondents reported being less likely to agree/strongly agree than independent and franchise respondents.

Table 31 – Employer Authority by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure		Subset for alpha = .05	
	N	2	1
Corporate	224	6.2946	
Independent	284		6.9613
Franchise	118		7.1525
Sig.		1.000	.732

4.3.3 Manager Autonomy

The third construct to emerge is from the second section of the questionnaire, with descriptive statistics displayed above in the *Manager Autonomy* section, and labelled *Manager Autonomy*. It is composed of six items (Table 32), with a Cronbach's alpha of 0.875. Responses to items in this construct were measured using a five-point Likert-scale, spanning from Never (1) to Always (5); therefore, responses to this construct could range from 6-30, and the full range was present for this construct. The construct mean was 22.8, with a median of 24.0 and a standard deviation of 5.62. As displayed in Figure 3, responses to this construct broke into three distinct peaks.

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) among all three ownership types: corporate, franchise, and independent (Table 33). Corporate respondents reported the least amount of autonomy, followed by

franchise respondents, with independent respondents reporting the most autonomy.

Table 32 – Manager Autonomy Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Final Approval On Professional Services	19.2439	21.911	.697	.563	.850
Can Alter Policy To Suit Patients	19.0829	21.936	.735	.586	.843
Access To Info On Clinical Practice Policies	18.9268	22.918	.671	.518	.854
Access To Info On Business Policies	19.2813	21.779	.685	.542	.852
Free To Initiate Research Projects	18.9285	22.369	.669	.634	.855
Free To Participate In Research Projects	18.7561	23.784	.611	.595	.864

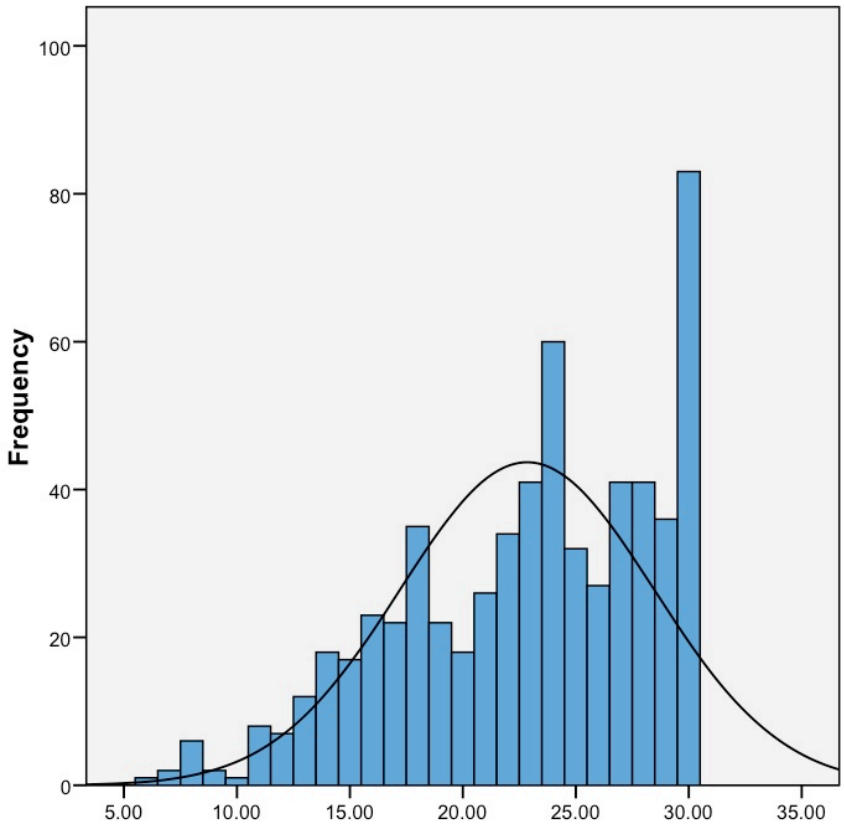

Figure 3 – Manager Autonomy Histogram

Table 33 – Manager Autonomy by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure	N	Subset for alpha = .05		
		2	3	1
Corporate	217	19.0323		
Franchise	117		22.2564	
Independent	275			26.0509
Sig.		1.000	1.000	1.000

4.3.4 Decision Making

The fourth construct to emerge is from the third section of the questionnaire, with descriptive statistics displayed above in the *Decision Making* section, and labelled *Decision Making*. It is composed of four items (Table 34), with a Cronbach's alpha of 0.894. Responses to items in this construct were measured using a four-point Likert-scale, spanning from None (1) to Lots (4); therefore, responses to this construct could range from 4-16, with the range for this construct being between 6 and 16. The construct mean was 13.4, with a median of 14.0 and a standard deviation of 2.62. As displayed in Figure 4, there were three distinct peaks in responses to items in the construct.

Table 34 – Decisions Making Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
How Much Freedom In Managers Work	10.0585	4.270	.691	.490	.888
Make Most Decisions Alone	9.9905	4.145	.791	.626	.854
Take Part In Decisions Affecting Manager	10.1311	3.750	.785	.639	.855
A Lot Of Say Over Decisions In Pharmacy	10.0711	3.807	.797	.653	.849

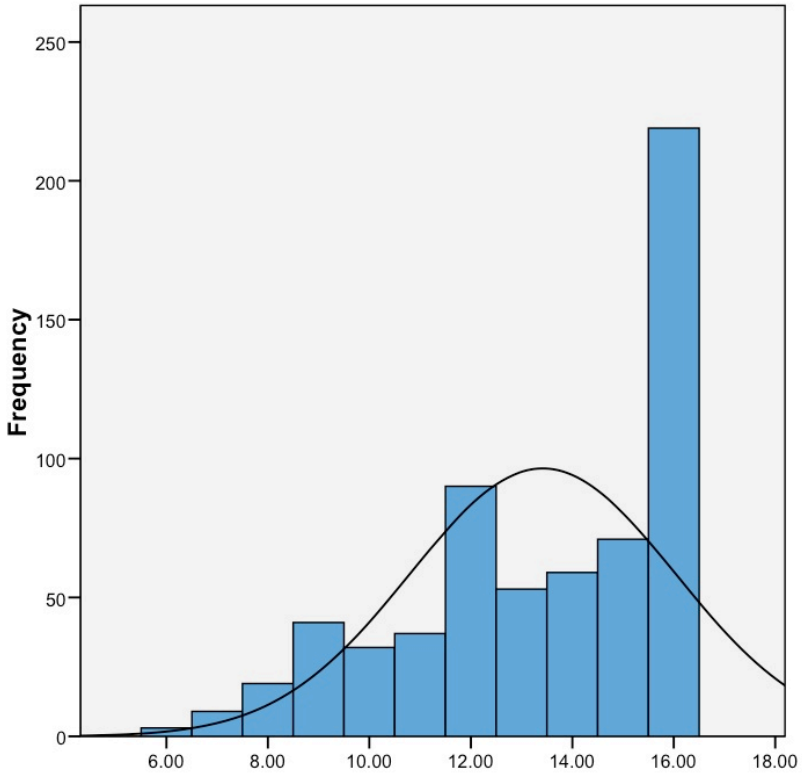

Figure 4 – Decision Making Histogram

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) among all three ownership types: corporate, franchise, and independent (Table 35). Independent respondents reported having the most decision making ability, followed by franchise respondents, with corporate respondents reporting the least amount of decision making ability.

Table 35 – Decision Making by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure	N	Subset for alpha = .05		
		2	3	1
Corporate	226	11.8142		
Franchise	116		12.9052	
Independent	285			14.8596
Sig.		1.000	1.000	1.000

4.3.5 Pharmacy Characteristics

The fifth construct to emerge is from the fourth section of the questionnaire, with descriptive statistics displayed above in the *Pharmacy Profession Characteristics* section, and labelled *Pharmacy Characteristics*. It is composed of five of the six items (Table 36) in this section and has a Cronbach's alpha of 0.743. Responses to items in this construct were measured using a five-point Likert-scale, spanning from Very Dissatisfied (1) to Very Satisfied (5); therefore, responses to this construct could range from 5-25, with the range for this construct being between 10 and 25. The construct mean was 18.9, with a median of 19.0 and a standard deviation of 3.00. As displayed in Figure 5, responses were skewed toward satisfied/very satisfied.

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) between corporate and independent respondents (Table 37). Respondents in corporate pharmacies reported being less satisfied than independent pharmacy respondents.

Table 36 – Pharmacy Characteristics Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Respect From Other HCP	15.4759	5.799	.513	.280	.680
Development of Patient-Pharmacist Relationships	14.8601	6.703	.482	.278	.695
Practice Vital Service To Society	14.7814	6.474	.546	.341	.674
Public Opinion Of Pharmacists	15.0177	5.702	.565	.337	.658
Freedom In Making Professional Decisions	15.5177	6.067	.409	.174	.727

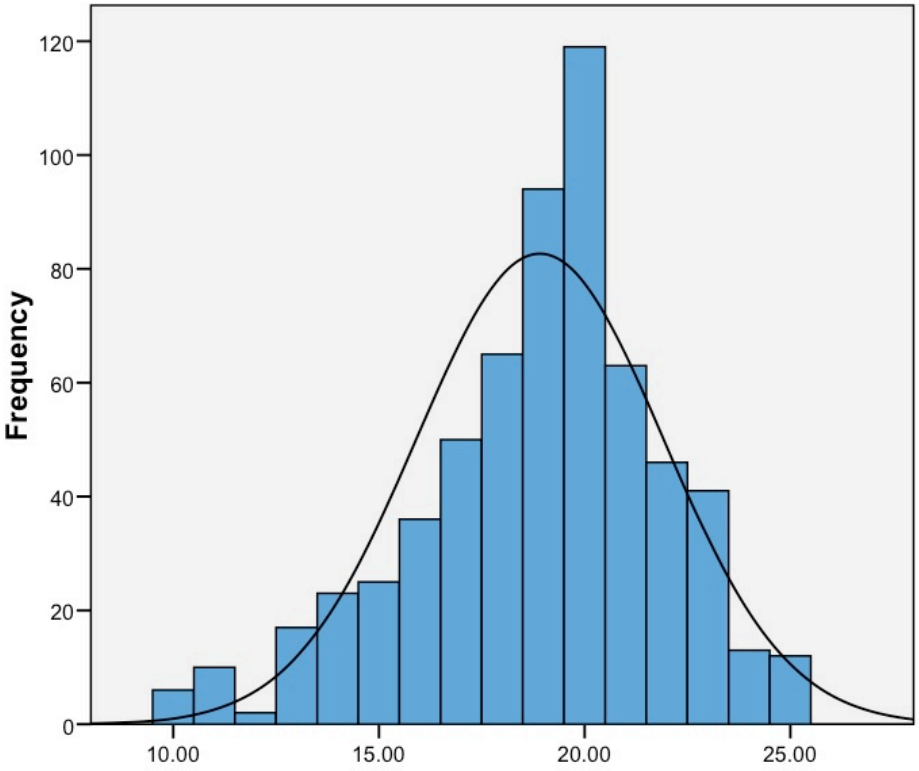

Figure 5 – Pharmacy Characteristics Histogram

Table 37 – Pharmacy Characteristics by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure	N	Subset for alpha = .05	
		2	1
Corporate	226	18.2566	
Franchise	114	18.9211	18.9211
Independent	276		19.4203
Sig.		.108	.285

4.3.6 Control Amount

The sixth construct to emerge is from the fifth section of the questionnaire, with descriptive statistics displayed above in the *Amount of Control* section, and labelled *Control Amount*. It is composed of five items (Table 38) in this section and has a Cronbach's alpha of 0.861. Responses to items in this construct were measured using a five-point Likert-scale, spanning

from No Control (1) to Total Control (5); therefore, responses to this construct could range from 5-25, with the range for this construct being between 6 and 25. The construct mean was 19.0, with a median of 19.0 and a standard deviation of 3.59. As displayed in Figure 6, responses in this construct were skewed toward lots of control/total control, with a spike at total control.

Table 38 – Control Amount Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Quality Of Care Provided	15.0882	9.525	.556	.320	.850
Development Of Workplace Policies	15.4677	7.432	.665	.451	.834
Responsibilities Delegated To Staff	14.9559	8.657	.745	.598	.806
Solving Workplace Problems	15.0472	8.654	.746	.607	.805
Time Spent On Work Activities	15.3087	8.387	.678	.469	.820

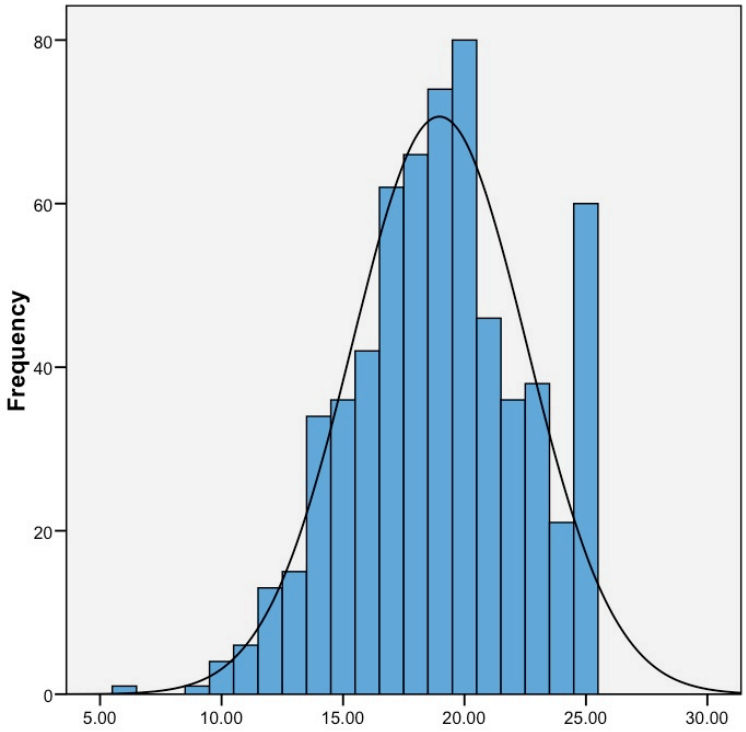

Figure 6 – Control Amount Histogram

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) among all three ownership types: corporate, franchise, and independent (Table 39). Respondents in corporate pharmacies reported the least amount of control, followed by franchise respondents, with respondents in independent pharmacies reporting the most control.

Table 39 – Control Amount by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure		Subset for alpha = .05		
	N	2	3	1
Corporate	226	17.1991		
Franchise	117		18.5299	
Independent	286			20.5175
Sig.		1.000	1.000	1.000

4.3.7 Professional Orientation

The seventh construct to emerge is from the sixth section of the questionnaire, with descriptive statistics displayed above in the *Orientation to Practice* section, and labelled *Professional Orientation*. It is composed of five items (Table 40) in this section and has a Cronbach's alpha of 0.738. Responses to items in this construct were measured using a five-point Likert-scale, spanning from Very Unimportant (1) to Very Important (5); therefore, responses to this construct could range from 5-25, with the range for this construct being between 12 and 25. The construct mean was 20.2, with a median of 20.0 and a standard deviation of 2.57. As displayed in Figure 7, responses to items in this construct were skewed toward important/very important.

With regard to the independent variable *Pharmacy Ownership Structure* there was no statistically significant differences among groups ($p > 0.438$).

Table 40 – Professional Orientation Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Attending Professional Meetings	16.3286	4.256	.448	.211	.711
Being Part of HC Team	15.7238	4.874	.508	.268	.687
Reading Professional Literature	15.9349	5.085	.430	.200	.711
Public Service	16.5127	3.910	.608	.389	.638
Mentoring Students & Interns	16.1794	4.392	.512	.318	.679

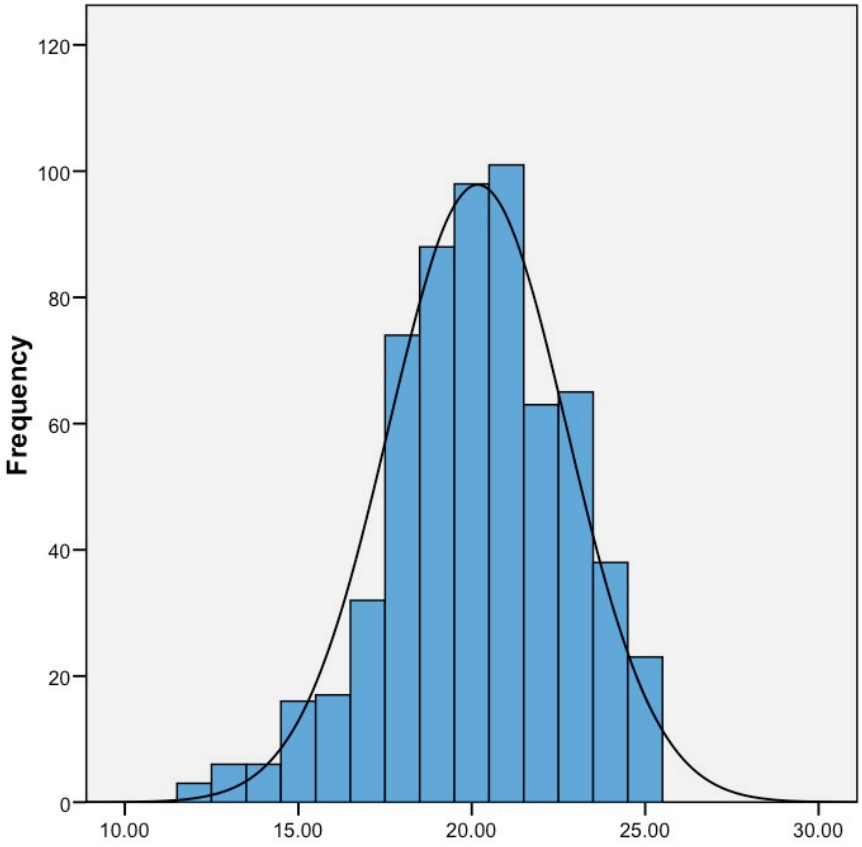

Figure 7 – Professional Orientation Histogram

4.3.8 Business Orientation

The eighth construct to emerge is from the sixth section of the questionnaire, with descriptive statistics displayed above in the *Orientation to Practice* section, and labelled *Business Orientation*. It is composed of four items (Table 41) in this section and has a Cronbach's alpha of 0.749. Responses to items in this construct were measured using a five-point Likert-scale, spanning from Very Unimportant (1) to Very Important (5); therefore, responses to this construct could range from 4-20, with the full range present for this construct. The construct mean was 13.4, with a median of 13.0 and a standard deviation of 2.78. Responses to items in this construct were skewed toward important (Figure 8).

Table 41 – Business Orientation Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Being A Good Businessperson	9.4108	5.097	.545	.485	.676
Offering Sundry Goods	10.7803	4.424	.536	.333	.678
Maintaining A Business Establishment	9.4618	5.126	.555	.489	.672
Arranging Displays	10.6799	4.295	.520	.325	.693

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) among corporate respondents, and franchise and independent respondents (Table 42). Respondents in corporate pharmacies reported attaching less importance to the business orientated aspects of practice than respondents in franchise and independent pharmacies.

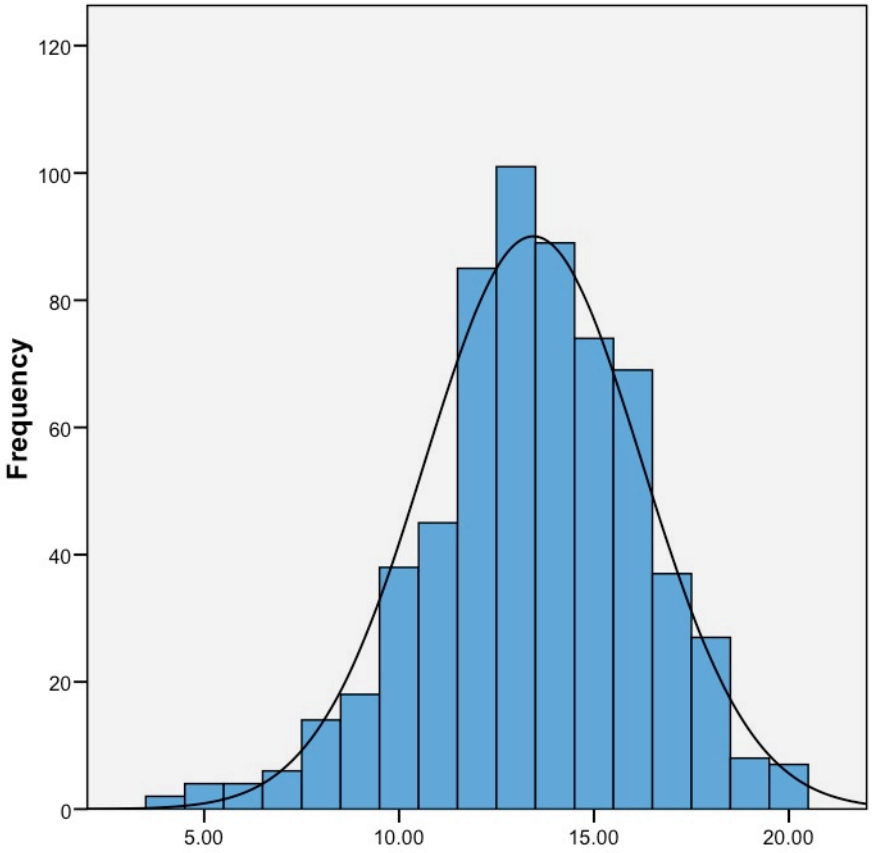

Figure 8 – Business Orientation Histogram

Table 42 – Business Orientation by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure	N	Subset for alpha = .05	
		2	1
Corporate	223	12.8789	
Franchise	115		13.6348
Independent	284		13.8556
Sig.		1.000	.748

4.3.9 Professional Affinity

The ninth construct to emerge is from the seventh section of the questionnaire, with descriptive statistics displayed above in the *Practice Affinity* section, and labelled *Professional Affinity*. It is composed of three

items (Table 43) in this section and has a Cronbach's alpha of 0.736. Responses to items in this construct were measured using a five-point Likert-scale, spanning from Dislike Very Much (1) to Like Very Much (5); therefore, responses to this construct could range from 3-15, with the range for this construct being between 8 and 15. The construct mean was 13.6, with a median of 14.0 and a standard deviation of 1.46. As displayed in Figure 9, responses to items in this construct were skewed toward like very much.

Table 43 – Professional Affinity Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Providing Advice To Other HCP	9.1274	.924	.608	.369	.556
Counselling Patients	8.8506	1.283	.508	.267	.687
Up-to-date On Health & Drug Matters	9.1321	1.022	.540	.299	.644

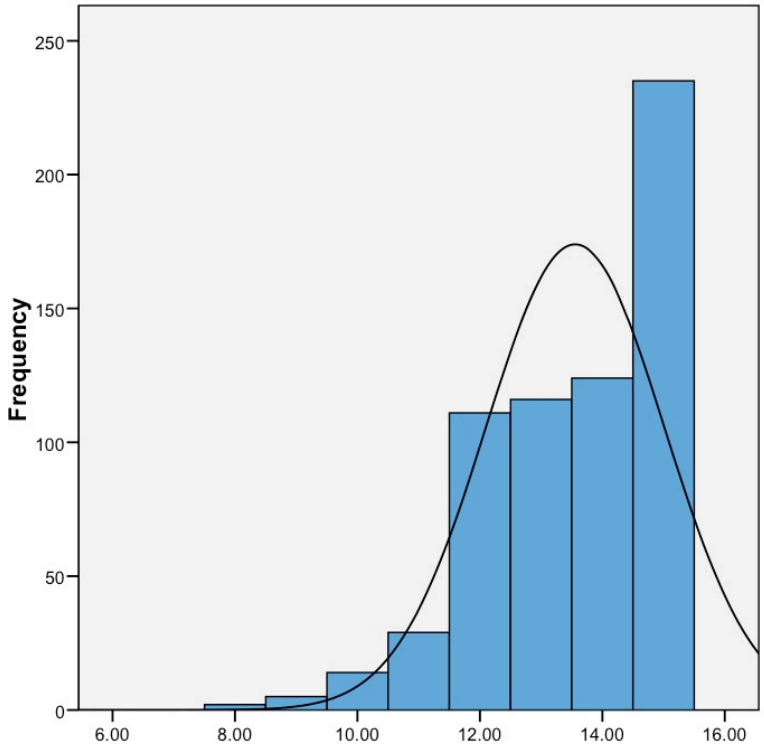

Figure 9 – Professional Affinity Histogram

With regard to the independent variable *Pharmacy Ownership Structure* there was no statistically significant differences among groups ($p > 0.238$).

4.3.10 Business Affinity

The tenth construct to emerge is from the seventh section of the questionnaire, with descriptive statistics displayed above in the *Practice Affinity* section, and labelled *Business*. It is composed of four items (Table 44) in this section and has a Cronbach's alpha of 0.735. Responses to items in this construct were measured using a five-point Likert-scale, spanning from Dislike Very Much (1) to Like Very Much (5); therefore, responses to this construct could range from 4-20, with the full range present for this construct. The construct mean was 11.3, with a median of 11.0 and a standard deviation of 3.08. Responses to items in this construct fell toward the middle (Figure 10).

Table 44 – Business Affinity Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Management of Front Store Stock	8.6394	5.107	.676	.468	.590
Selling Non-med Items	8.9728	5.937	.473	.262	.713
Management of Cash	8.6651	5.343	.597	.390	.639
Management of Dispensary Stock	7.6410	6.763	.391	.175	.750

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) among corporate respondents, and franchise and independent respondents (Table 45). Respondents in corporate pharmacies reported less of an affinity to business aspects of practice than respondents in franchise and independent pharmacies.

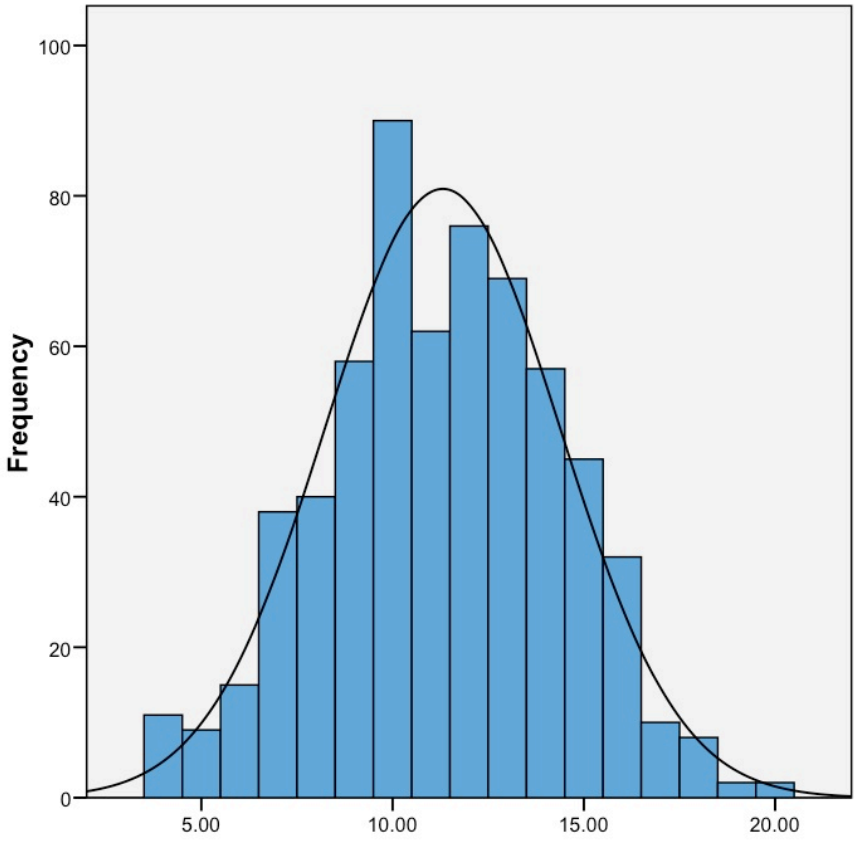

Figure 10 – Business Affinity Histogram

Table 45 – Business Affinity by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure		Subset for alpha = .05	
	N	2	1
Corporate	221	10.3258	
Independent	284		11.7958
Franchise	113		11.9823
Sig.		1.000	.843

4.3.11 Pharmacy Relationship

The eleventh construct to emerge is from the eighth section of the questionnaire, with descriptive statistics displayed above in the *Organizational Identity* section, and labelled *Pharmacy Relationship*. It is composed of three items (Table 46) and has a Cronbach's alpha of 0.887. Responses to items in

this construct were measured using a five-point Likert-scale, spanning from Strongly Disagree (1) to Strongly Agree (5); therefore, responses to this construct could range from 3-15, with the full range present for this construct. The construct mean was 6.4, with a median of 6.0 and a standard deviation of 3.22. Responses to items in this construct were skewed toward strongly disagree/disagree (Figure 11).

Table 46 – Pharmacy Relationship Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Don't Feel Like Part Of The Family	4.2125	4.750	.777	.616	.842
Don't Feel Emotionally Attached	4.1821	4.581	.818	.670	.804
Don't Feel Strong Sense Of Belonging	4.3147	5.278	.747	.565	.868

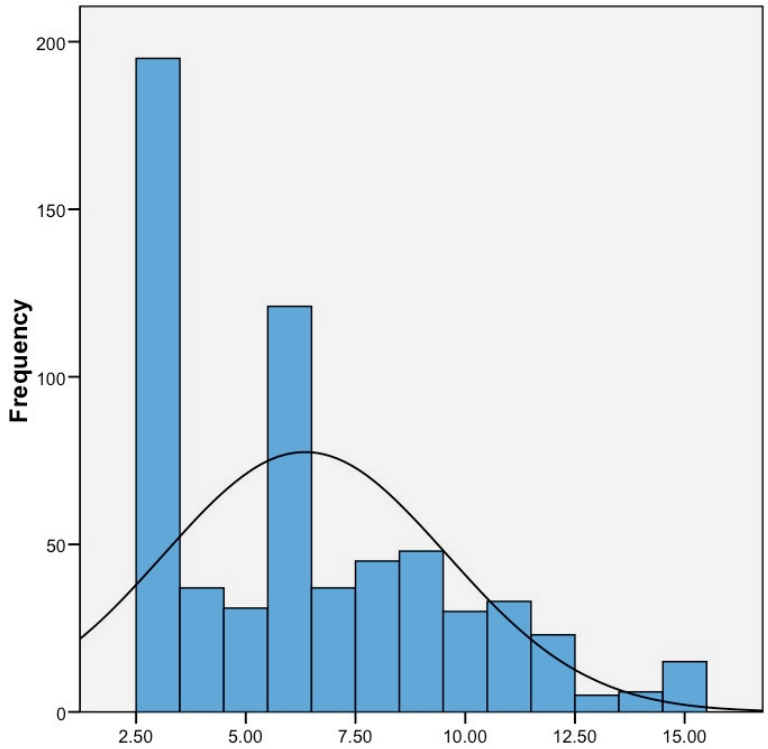

Figure 11 – Pharmacy Relationship Histogram

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) among all three ownership types: corporate, franchise, and independent (Table 47). Respondents in independent pharmacies reported the greatest connection to the organization, followed by franchise respondents, with respondents in corporate pharmacies reporting the lowest connection to the organization.

Table 47 – Pharmacy Relationship by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure		Subset for alpha = .05		
	N	2	3	1
Independent	281	5.0534		
Franchise	113		6.7168	
Corporate	227			7.7048
Sig.		1.000	1.000	1.000

4.3.12 Role Conflict

The twelfth construct to emerge is from the tenth section of the questionnaire, with descriptive statistics displayed above in the *Organizational Experiences* section, and labelled *Role Conflict*. It is composed of three items (Table 48) in this section and has a Cronbach's alpha of 0.691. While this Cronbach's alpha level is below the desired level of 0.700, it was kept as the inter-item correlation matrix displayed levels between 0.3 and 0.5 for all three items. Responses to items in this construct were measured using a five-point Likert-scale, spanning from Never (1) to Always (5); therefore, responses to this construct could range from 3-15, with a range between 3 and 13 for this construct. The construct mean was 6.2, with a median of 6.0 and a standard deviation of 1.97. Responses to items in the construct were skewed toward never/rarely (Figure 12).

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) between

corporate and independent respondents (Table 49). Corporate pharmacy respondents reported conflict more often than independent pharmacy respondents.

Table 48 – Role Conflict Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Required To Do Things Against Professional Judgment	4.5199	2.247	.477	.229	.634
Receive Incompatible Requests	4.0315	1.888	.508	.260	.593
Choose Between Professional And Business Aspects	3.8394	1.820	.536	.287	.554

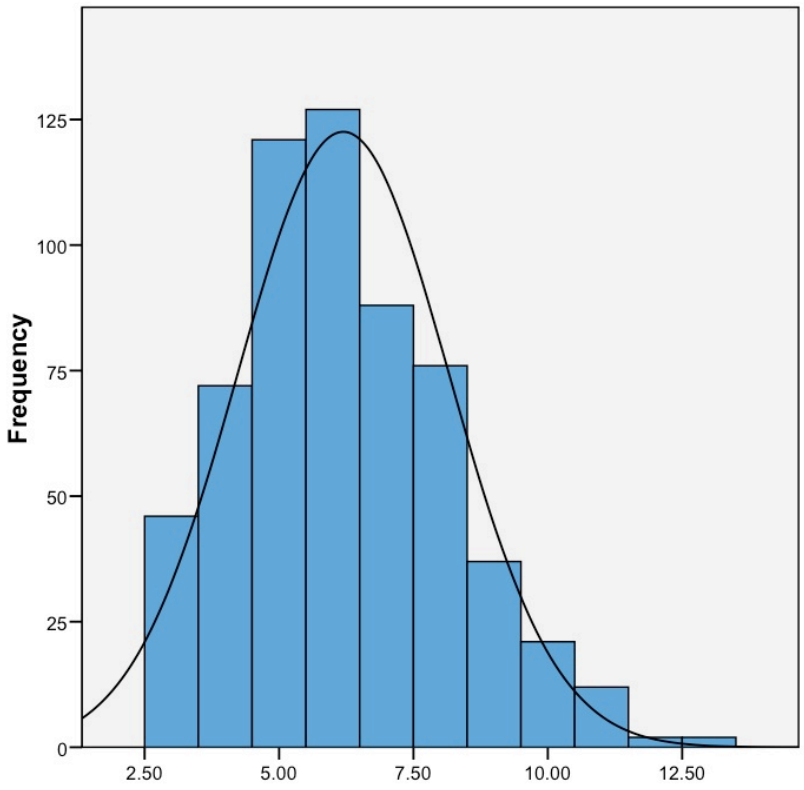

Figure 12 – Role Conflict Histogram

Table 49 – Role Conflict by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure		Subset for alpha = .05	
	N	2	1
Independent	267	5.8464	
Franchise	109	6.3119	6.3119
Corporate	222		6.5495
Sig.		.087	.528

4.3.13 Innovation

The thirteenth construct to emerge is from the eleventh section of the questionnaire, with descriptive statistics displayed above in the *Organizational Characteristics* section, and labelled *Innovation*. It is composed of seven items (Table 50) in this section and has a Cronbach's alpha of 0.849. Responses to items in this construct were measured using a five-point Likert-scale, spanning from Strongly Disagree (1) to Strongly Agree (5); therefore, responses to this construct could range from 7-35, with a range between 8 and 35 for this construct. The construct mean was 24.4, with a median of 25.0 and a standard deviation of 4.45. Responses to items in the construct were skewed toward agree/strongly agree (Figure 13).

Table 50 – Innovation Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Pharmacy Takes Action In Anticipation Of Future Market	20.8682	15.200	.598	.428	.827
Pharmacy Known As Innovator	21.0560	13.713	.693	.573	.811
Shape Business To Enhance Market Presence	20.6409	14.940	.713	.530	.812
Promote Innovative Professional Services	20.7611	14.723	.607	.474	.825
Take Above Average Risk	21.5453	15.103	.517	.288	.840
Respond To Activities Of Rivals	20.9209	15.641	.505	.351	.840
Continually Seek New Opportunities	20.6886	15.129	.624	.422	.823

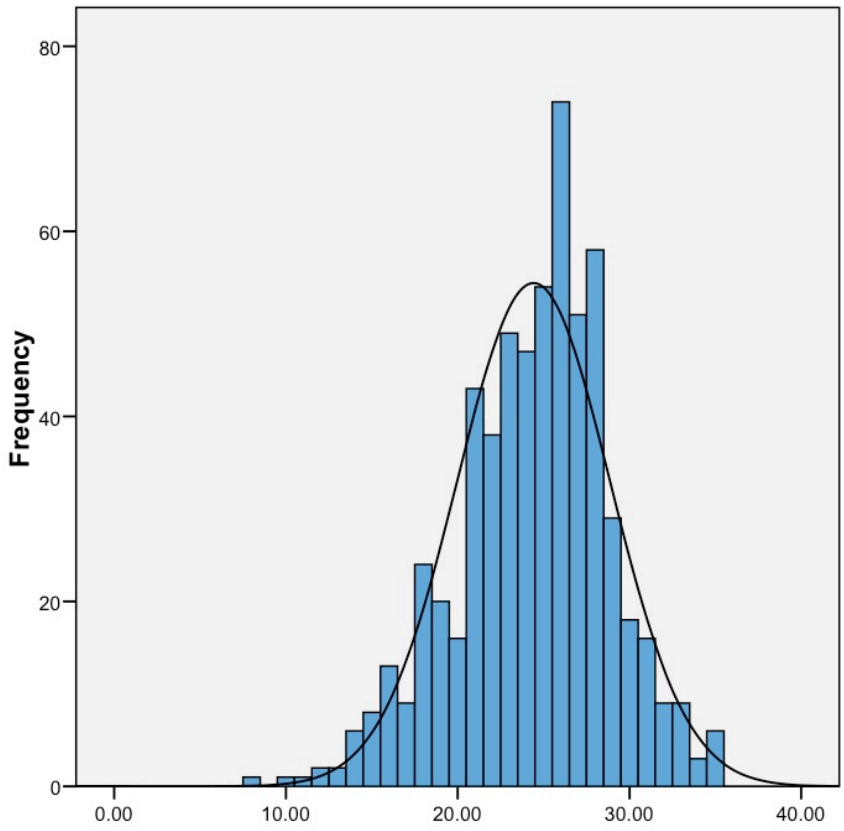

Figure 13 – Innovation Histogram

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) among corporate respondents, and independent and franchise respondents (Table 51). Corporate pharmacy respondents reported being less innovative than respondents in independent and franchise pharmacies.

Table 51 – Innovation by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure		Subset for alpha = .05	
	N	2	1
Corporate	214	23.3551	
Independent	274		24.7518
Franchise	113		25.7434
Sig.		1.000	.108

4.3.14 Red Tape

The fourteenth construct to emerge is from the twelfth section of the questionnaire, with descriptive statistics displayed above in the *Implementing Professional Services* section, and labelled *Red Tape*. It is composed of two items (Table 52) in this section and has a Cronbach's alpha of 0.752. Responses to items in this construct were measured using a three-point Likert-scale, spanning from Yes (1) to Not Applicable (3); therefore, responses to this construct could range from 2-6, with the range present for this construct. The construct mean was 4.4, with a median of 4.0 and a standard deviation of 1.33. Responses to the two items in the construct varied (Figure 14).

Table 52 – Red Tape Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Process Involved In Approval Too Long	2.2231	.542	.603	.363	.(a)
Couldn't Obtain Outside Management Support	2.2166	.558	.603	.363	.(a)

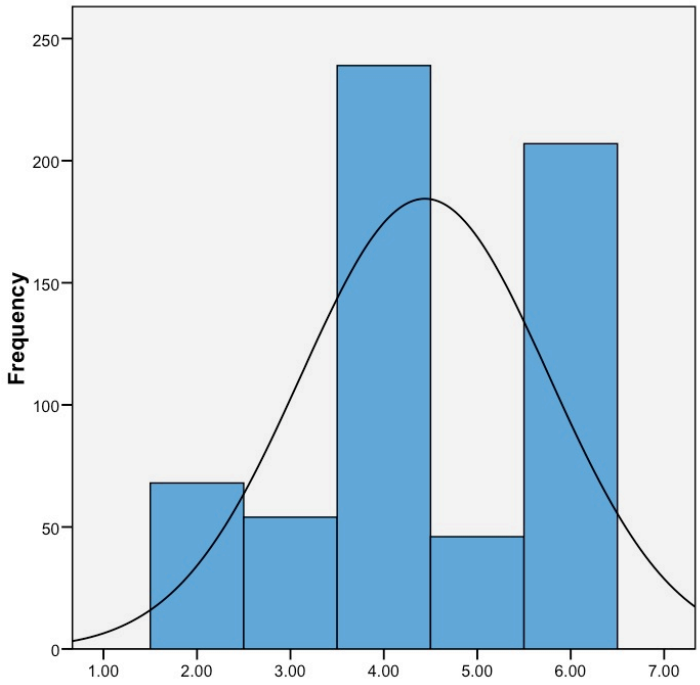

Figure 14 – Red Tape Histogram

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.001$) among all three ownership types: corporate, franchise, and independent (Table 53). Corporate pharmacy respondents reported the most red tape, followed by franchise respondents, with independent respondents reporting the least amount of red tape.

Table 53 – Red Tape by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure		Subset for alpha = .05		
	N	2	3	1
Corporate	220	3.9955		
Franchise	112		4.4018	
Independent	276			4.7826
Sig.		1.000	1.000	1.000

4.3.15 Manager Preferences

The fifteenth construct to emerge is from the eighteenth section of the questionnaire, with descriptive statistics displayed above in *The Pharmacy and Its Manager* section, and labelled *Manager Preferences*. It is composed of five items (Table 54) and has a Cronbach's alpha of 0.840. Responses to items in this construct were measured using a six-point Likert-scale, spanning from Strongly Disagree (1) to Not Applicable (6); therefore, responses to this construct could range from 5-30, with the range present for this construct. The construct mean was 19.3, with a median of 19.0 and a standard deviation of 4.85. As displayed in Figure 15, responses to items in this construct were skewed toward agree/strongly agree.

With regard to the independent variable *Pharmacy Ownership Structure*, there were statistically significant differences ($p < 0.040$) between corporate and franchise respondents (Table 55). Respondents in corporate

pharmacies reported being more likely to agree to further requests – if offered the position as manager again – than respondents in franchise pharmacies.

Table 54 – Manager Preferences Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
More Patient Interaction	15.6177	15.771	.579	.349	.822
Final Approval On Services	15.3839	16.224	.655	.455	.801
More Non-Professional Staff	15.4945	15.598	.658	.437	.799
Fewer Front Store Responsibilities	15.4360	15.044	.637	.436	.806
More Money To Implement Services	15.4076	15.723	.678	.486	.794

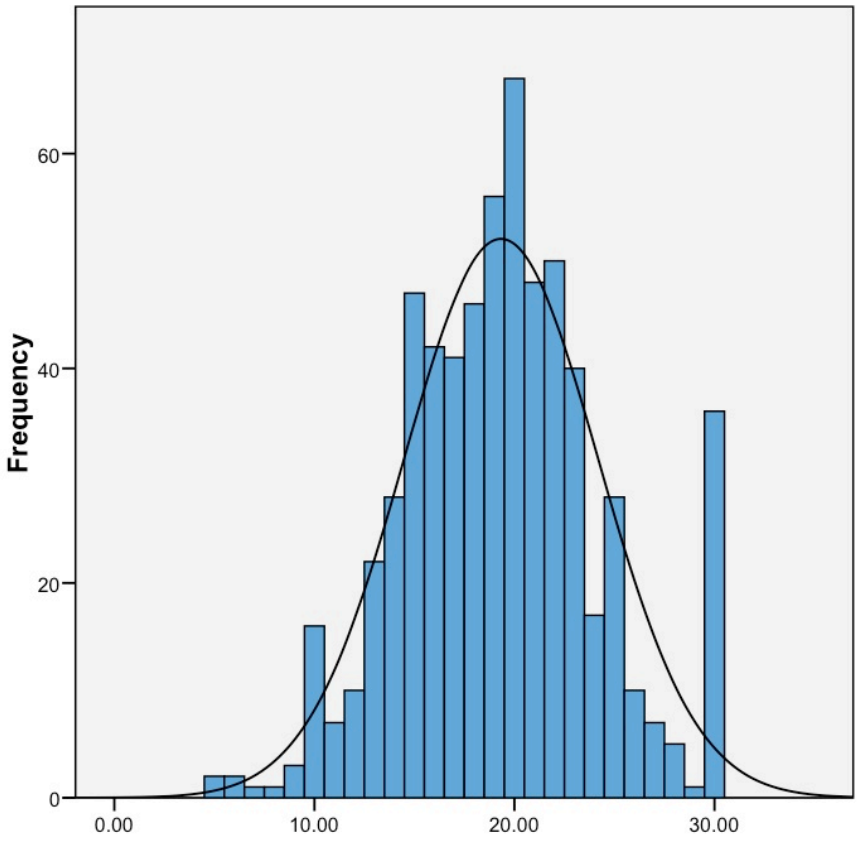

Figure 15 – Manager Preferences Histogram

Table 55 – Manager Preferences by Pharmacy Ownership Structure Variable Homogeneous Subsets

Pharmacy Ownership Structure	N	Subset for alpha = .05	
		2	1
Franchise	118	18.2797	
Independent	282	19.5142	19.5142
Corporate	227		19.5551
Sig.		.050	.997

4.4 Validating Results of Parametric Analyses

When assumptions of normal distribution are not met, non-parametric analysis should be conducted to increase the validity of the results of parametric analysis. The first test performed to increase the validity of the results of parametric analysis when examining *Pharmacy Ownership Structure* was the Kruskal-Wallis test. Significant differences ($p < 0.05$) were revealed for all constructs except *Professional Authority*, *Professional Orientation* and *Professional Affinity*. The Bonferroni was conducted following the Kruskal-Wallis test to reveal what groups differed. The exception is the *Manager Requests* construct that did not reveal any differences among the groups when conducting the Bonferroni test despite a statistically significant difference arising in the Kruskal-Wallis test.

Differences among all three groups were exposed for the *Manager Autonomy, Decision Making, Control Amount, Business Affinity, Pharmacy Relationship, Innovation* and *Red Tape* constructs. Differences arose among corporate, and independent and franchise respondents with regard to the *Employer Authority* construct, and between independent and corporate with regard to the *Pharmacy Characteristics, Business Orientation*, and *Role Conflict* constructs.

When conducting independent t-tests on the constructs and controlling for gender, there were significant differences for eight constructs. Males responded higher for the *Manager Autonomy, Decision Making, Control*

Amount, Business Orientation, Business Affinity, and *Innovation* constructs. Females responded higher for the *Professional Orientation* and *Professional Affinity* constructs.

When analyzing the constructs and controlling for age, four significant differences were revealed. The results of the Scheffe (ANOVA) analysis, displayed in homogeneous subset, for *Professional Authority* (Table 56)*, Manager Autonomy* (Table 57)*, Decision Making* (Table 58) and *Role Conflict* (Table 59) constructs are presented below.

Table 56 – Professional Authority by Age Variable Homogeneous Subsets

		Subset for alpha = .05	
Age	N	1	2
24-39	170	13.8824	
50+	163		15.0982
40-49	152		15.2961
Sig.		1.000	.858

Table 57 – Manager Autonomy by Age Variable Homogeneous Subsets

		Subset for alpha = .05	
Age	N	1	2
24-39	170	22.0000	
40-49	148	22.9865	22.9865
50+	158		23.7089
Sig.		.283	.507

Table 58 – Decision Making by Age Variable Homogeneous Subsets

		Subset for alpha = .05	
Age	N	1	2
24-39	173	13.0116	
40-49	155	13.4516	13.4516
50+	167		13.7605
Sig.		.309	.560

Table 59 – Role Conflict by Age Variable Homogeneous Subsets

		Subset for alpha = .05	
Age	N	1	2
50+	156	5.9872	
40-49	150	6.1067	6.1067
24-39	163		6.5460
Sig.		.853	.118

Analysis of the fifteen constructs, when controlling for region, resulted in three significant differences. The homogeneous subsets from the results of the Scheffe (ANOVA) analysis below are *Professional Authority* (Table 60), *Professional Orientation* (Table 61) and *Red Tape* (Table 62).

Table 60 – Professional Authority by Region Variable Homogeneous Subsets

		Subset for alpha = .05	
Region	N	1	2
ATLANTIC	82	14.2073	
SK & MB	86	14.3140	14.3140
AB	87	14.6437	14.6437
ON	280	14.7036	14.7036
BC	86		15.7209
Sig.		.884	.054

Table 61 – Professional Orientation by Region Variable Homogeneous Subsets

		Subset for alpha = .05	
Region	N	1	2
SK & MB	87	19.6322	
BC	88	19.6591	
AB	91	19.9670	19.9670
ON	281	20.3416	20.3416
ATLANTIC	83		20.9157
Sig.		.416	.136

Table 62 – Red Tape by Region Variable Homogeneous Subsets

Region	N	Subset for alpha = .05	
		1	2
AB	92	4.1196	
ATLANTIC	80	4.3625	4.3625
ON	272	4.4338	4.4338
SK & MB	84	4.4643	4.4643
BC	86		4.8488
Sig.		.496	.152

When analyzing the construct and controlling for the number of years respondents' were with their employer, four significant differences emerged. The results of the Scheffe (ANOVA) analysis, displayed in homogeneous subset, are *Manager Autonomy* (Table 63), *Decision Making* (Table 64), *Control Amount* (Table 65) and *Business Affinity* (Table 66).

Table 63 – Manager Autonomy by Years With Employer Variable Homogeneous Subsets

Years With Employer	N	Subset for alpha = .05	
		1	2
2.1 - 4.0 Years	68	20.7647	
4.1 - 6.0 Years	82	22.1951	22.1951
6.1 - 15 Years	175	22.6571	22.6571
Up to 2 Years	84	22.7976	22.7976
15.1 Years +	180		24.1944
Sig.		.156	.170

Table 64 – Decision Making by Years With Employer Variable Homogeneous Subsets

Years With Employer	N	Subset for alpha = .05	
		1	2
2.1 - 4.0 Years	73	12.6986	
Up to 2 Years	85	13.2000	13.2000
6.1 - 15 Years	183	13.3770	13.3770
4.1 - 6.0 Years	82	13.3780	13.3780
15.1 Years +	185		13.9135
Sig.		.477	.425

Table 65 – Control Amount by Years With Employer Variable Homogeneous Subsets

Years With Employer	N	Subset for alpha = .05	
		1	2
2.1 - 4.0 Years	73	18.0274	
4.1 - 6.0 Years	83	18.4940	18.4940
Up to 2 Years	86	18.6628	18.6628
6.1 - 15 Years	181	18.9669	18.9669
15.1 Years +	187		19.6738
Sig.		.459	.222

Table 66 – Business Affinity by Years With Employer Variable Homogeneous Subsets

Years With Employer	N	Subset for alpha = .05	
		1	2
2.1 - 4.0 Years	72	10.4444	
4.1 - 6.0 Years	80	10.8500	10.8500
Up to 2 Years	84	10.9762	10.9762
6.1 - 15 Years	175	11.3943	11.3943
15.1 Years +	186		11.9892
Sig.		.300	.136

When conducting a general linear model of the constructs controlling for *Ownership Structure, Gender*, *Age, Region* and *Years With Employer*, differences were revealed for twelve of the constructs. Only the *Professional Authority* construct displayed a difference in terms of *Age* (Table 67). There was a difference in terms of *Gender* for the *Professional Orientation* and *Professional Affinity* constructs (Table 67), as well as the *Red Tape* construct (Table 69). The *Pharmacy Characteristics* (Table 67), *Business Affinity* (Table 68), *Manager Autonomy, Decision Making, Control Amount, Pharmacy Relationship, Role Conflict, Innovation* and *Red Tape* (Table 69) constructs revealed differences with regard to *Ownership Structure*. With regard to *Region*, there were differences for the *Professional Authority* and *Professional Orientation* constructs (Table 67), as well as the *Red Tape* construct (Table

69). While differences emerged for the *Professional Orientation* (Table 67), *Business Affinity* (Table 68) and *Manager Autonomy* (Table 69) constructs with regard to *Years With Employer*.

Table 67: Multi-variate Analysis of Variance – General Linear Model of Professional Constructs by Ownership, Gender, Age, Region and Years With Employer

	Type III Sum of Squares	df	Mean Square	F	Sig.	R Squared (Adj. R Squared)
Professional Authority						
Ownership	26.269	2	13.134	1.328	.266	
Gender	1.170	1	1.170	0.118	.731	
Age	183.161	2	91.581	9.262	.001*	0.083 (0.057)
Region	154.382	4	38.595	3.903	.004*	
Years With Employer	45.827	4	11.457	1.159	.328	
Pharmacy Characteristics						
Ownership	58.341	2	29.171	3.263	.039*	
Gender	.468	1	.468	.052	.819	
Age	19.406	2	9.703	1.085	.339	0.055 (0.028)
Region	84.146	4	21.036	2.353	.053	
Years With Employer	22.660	4	5.665	.634	.639	
Professional Orientation						
Ownership	7.269	2	3.635	.559	.572	
Gender	35.146	1	35.146	5.405	.021*	
Age	12.446	2	6.223	.957	.385	0.078 (0.052)
Region	103.751	4	25.938	3.989	.003*	
Years With Employer	69.044	4	17.261	2.654	.033*	
Professional Affinity						
Ownership	8.670	2	4.335	2.092	.125	
Gender	31.633	1	31.633	15.266	.001*	
Age	4.570	2	2.285	1.103	.333	0.055 (0.028)
Region	3.221	4	.805	.389	.817	
Years With Employer	10.341	4	2.585	1.248	.290	

* Statistically significant ($p < 0.05$)

Table 68: Multi-variate Analysis of Variance – General Linear Model of Business Constructs by Ownership, Gender, Age, Region and Years With Employer

	Type III Sum of Squares	df	Mean Square	F	Sig.	R Squared (Adj. R Squared)
Business Orientation						
Ownership	39.413	2	19.707	2.691	.069	
Gender	6.710	1	6.710	.916	.339	
Age	19.887	2	9.944	1.358	.258	0.045 (0.018)
Region	48.008	4	12.002	1.639	.163	
Years With Employer	22.645	4	5.661	.773	.543	
Business Affinity						
Ownership	92.749	2	46.374	5.345	.005*	
Gender	.001	1	.001	.000	.994	
Age	26.188	2	13.094	1.509	.222	0.082 (0.056)
Region	33.269	4	8.317	.959	.430	
Years With Employer	152.926	4	38.232	4.407	.002*	

* Statistically significant ($p < 0.05$)

Table 69: Multi-variate Analysis of Variance – General Linear Model of Environmental Constructs by Ownership, Gender, Age, Region and Years With Employer

	Type III Sum of Squares	df	Mean Square	F	Sig.	R Squared (Adj. R Squared)
Control Amount						
Ownership	799.010	2	399.505	28.590	.001*	
Gender	13.773	1	13.773	1.330	.249	
Age	17.823	2	8.911	.861	.424	0.188 (0.165)
Region	28.565	4	7.141	.690	.599	
Years With Employer	86.538	4	21.635	2.090	.081	
Manager Autonomy						
Ownership	3730.832	2	1865.416	86.916	.001*	
Gender	4.231	1	4.321	.197	.657	
Age	5.945	2	2.973	.138	.871	0.329 (0.309)
Region	73.019	4	18.255	.851	.494	
Years With Employer	242.291	4	60.573	2.822	.025*	
Decision Making						
Ownership	830.787	2	415.394	85.911	.001*	
Gender	5.383	1	5.383	1.113	.292	
Age	2.823	2	1.412	.292	.747	0.309 (0.289)
Region	27.217	4	6.804	1.407	.230	
Years With Employer	42.219	4	10.555	2.183	.070	
Employer Authority						
Ownership	26.692	2	13.346	2.500	.083	
Gender	1.368	1	1.368	.256	.613	
Age	1.161	2	.581	.109	.897	0.042 (0.015)
Region	21.363	4	5.341	1.000	.407	
Years With Employer	29.035	4	7.259	1.360	.247	
Pharmacy Relationship						
Ownership	535.243	2	267.621	29.796	.001*	
Gender	4.411	1	4.411	.491	.484	
Age	21.101	2	10.550	1.175	.310	0.146 (0.122)
Region	31.137	4	7.784	.867	.484	
Years With Employer	63.646	4	15.911	1.771	.133	
Role Conflict						
Ownership	23.647	2	11.823	3.360	.036*	
Gender	10.730	1	10.730	3.049	.081	
Age	8.661	2	4.331	1.231	.293	0.054 (0.025)
Region	15.196	4	3.799	1.080	.366	
Years With Employer	13.444	4	3.361	.955	.432	
Innovation						
Ownership	218.824	2	109.412	5.819	.003*	
Gender	5.364	1	5.364	.285	.594	
Age	56.749	2	28.374	1.509	.222	0.052 (0.024)
Region	71.470	4	17.868	.950	.435	
Years With Employer	23.936	4	5.984	.318	.866	
Red Tape						
Ownership	54.577	2	27.289	16.778	.001*	
Gender	10.909	1	10.909	6.707	.010*	
Age	6.362	2	3.181	1.956	.143	0.199 (0.093)
Region	16.821	4	4.205	2.586	.036*	
Years With Employer	.680	4	.170	.104	.981	
Manager Requests						
Ownership	37.113	2	18.557	.807	.447	
Gender	1.130	1	1.130	.049	.825	
Age	32.140	2	16.070	.699	.498	0.018 (-0.010)
Region	39.380	4	9.845	.428	.788	
Years With Employer	56.085	4	14.021	.610	.656	

* Statistically significant ($p < 0.05$)

4.5 Analysis of Potential Non-response Bias

The fifteen study constructs, the independent variable *Pharmacy Ownership Structure*, and the dependent variables *Age, Gender, Region* and *Years With Employer* were analyzed to assess for potential non-response bias using *early* versus *late* responders to the survey. Independent t-tests performed on the fifteen constructs resulted in a statistically significant difference for two constructs: *Affinity Business* ($p < 0.039$) and *Pharmacy Relationship* ($p < 0.042$). Each of these differences represented less than one-eighth of a standard deviation.

No statistically significant differences were observed when conducting chi-square analysis on the independent variable *Pharmacy Ownership Structure.* Chi-square analysis of the *Gender* variable also did not result in any statistically significant differences between early and late responders. The final analysis of the *Age, Region* and *Years With Employer* variables via an independent t-test also did not result in any statistically significant differences.

4.6 Qualitative/One-on-one Interviews

4.6.1 Respondents

At the end of the questionnaire respondents were asked to provide their contact information if they were interested in discussing the subject matter of the questionnaire further via a one-on-one telephone interview. Of the 646 respondents to the survey, 172 indicated they were willing to be interviewed. Potential interviewees were contacted from the list of 172. When contacted, some did not want to participate, as they were unaware of the time commitment, while others wanted to discuss the subject, but could not due to time restrictions as the result of not having enough pharmacists on staff to allow for overlap so they could participate.

A total of 7 interviews were conducted between June 17th, 2007 and June 28th, 2007 (Table 70). While pharmacy managers from all regions of

Canada were sought, those agreeing to be interviewed when contacted were from Ontario (1), Saskatchewan (2), Alberta (3), and British Columbia (1).

Table 70 – Interviewees

Ownership Type	Position	Participant Pseudonym
Corporate	Manager	Karl
Independent	Owner/Manager	George
Corporate	Manager	Dorothy
Corporate	Manager	Janice
Corporate	Manager	Jackie
Independent	Manager	Norma
Franchise	Manager	Beth

4.6.2 Themes

While reviewing the interview transcripts and coding the interviews, themes were added as they presented themselves. Once all interviews were coded, a total of nine themes emerged, with a total of 406 references to all nine themes (Table 71): that is statements made by the interviewee that are coded into a theme. Also, some references were coded into more than one category if deemed appropriate.

Table 71 – Interview Themes

Theme	Source	References
Autonomy	4	17
Behaviour	7	78
Environment	7	81
Future	7	48
Human Resources	7	33
Image	7	30
Incentives	5	41
Professional Standards	4	22
Role as Manager	7	56
	Total:	406

The first theme of *autonomy* was in reference to respondents' ability to make decisions in their pharmacy. To reflect what participants spoke of in the

interviews regarding autonomy and the ability to implement a new professional service, one manager mentioned:

> *…there are probably some hoops, but it's something that this organization supports.*

Another respondent echoed conversations with managers in discussing autonomy and making decisions within the pharmacy without having to pass ideas to outside management first, by stating:

> *Certainly, yes, professionally [autonomy] and with running the dispensary and deciding on how we're going to do things. Absolutely. They don't interfere and my boss or the person to whom I report, the Pharmacy Director, doesn't want to micromanage. He doesn't want to be involved in day-to-day operations.*

The second theme, *behaviour,* centred on how respondents performed as pharmacists. When discussing behaviour with managers, many spoke of the policies and procedures their employer had, and was best expressed by the statement of one respondent:

> *The company has their standard operating procedures, and there's a binder that sort of like here's how you behave as the [large national chain] pharmacist.*

Discussions on behaviour also surrounded the personal interactions managers had with their patients, and these conversations are well exemplified by one manager's statement:

> *There's no one there watching over me so the only way the corporation would find out that maybe I was practicing outside of their guidelines, and by that I mean I was counselling for 15 minutes, you know, or if I was counselling for 30 seconds, they don't. The only reason they would know is if the individual left and said either thank you for counselling me for 15 minutes or I can't believe you counselled for 30 seconds, and e-mailed head office.*

The next theme was *environment* and related to the general practice environment in which respondents practiced. In discussing the practice environment for many, the environment was not restricted solely to the dispensary or store, but to the surrounding community. These conversations are represented well by the statement of one manager, who stated:

> *My pharmacist [name], just started here last week, will spend fifty percent of her time at the medical clinic up here on my nickel providing pharmacy services to the patients and to the physicians here because my belief is we are, number one, part of the primary care team, and number two, if my pharmacist is there, most of my problems are circumvented before they ever come across my dispensary counter.*

Conversations with mangers surrounding the practice environment also included the reality of the dual professional and business setting of community pharmacy, and was reflected well with the following statement by one manager, who stated:

> *I mean you have a little bit of both – you know it's about the business and stuff but it's about taking care of patients so I guess you're going to have to balance that. I'm not the owner so that sometimes makes a little bit of a difference but, yeah, for sure, I mean you know you want your numbers and you want you know that sort of stuff, but it's all about the patient.*

The fourth theme was *future*, and dealt with the outlook respondents had on the future of community pharmacy practice. Many of the managers were very passionate when discussing what they envision community pharmacy practice will be like in the future, and is well represented by one manager's statement:

> *I would like to say that in time pharmacy will be very different in that, yes, pharmacists will prescribe, yes, pharmacists will finally be compensated for counselling and medication reviews and all that stuff. But you know what, 15 years ago that was the prediction as well and it hasn't occurred and I think we are to blame. Pharmacists have traditionally not promoted themselves and they're all happy.*

There were a few who did not have much to say about the future of community pharmacy practice, and have a narrow focus on the future; this was accurately portrayed by one manager, who stated:

> *I don't think about it on a daily basis… like the future to me is kind of what's going to happen tomorrow.*

Human resources was the fifth theme and centred on issues around staffing, both professional and non-professional. Managers spoke of the difficulty in having adequate staffing levels, and were well represented with the statement of one manager, who said:

> *My hiring needs are determined by a budget that is not set by me… It's all based on script volumes and it's all very clearly laid out in a labour model… I have little input because there's always a bigger picture.*

There was also a sense of frustration with some managers in that they felt they were personally completing tasks that should be done by others; this aggravation was brought out well by one manager, who stated:

> *If you [District Manager] want to pay me $45 an hour to check your accountant's work, where you pay them $16 an hour, then you go right ahead but I think you're out of your mind.*

The sixth theme was *image*, and dealt with the perception others have of pharmacists and pharmacy. Several managers spoke of the conflicting image of pharmacy by patients, as well as other health care professionals. One manager best represented the image predicament described by many with the statement:

> *As commercial and I've hounded my colleagues for years over $0.99 Coke: you know you're working with the doctors during the day, he goes home at night and the nurses go home at night and in the paper, there you are, advertising Coke for $0.99. What is their impression of you as a professional?*

The dual professional and business roles also came out when discussing image with managers, and was reflected well with one manager's statement:

> *I mean we're in a real conflict of interest because we're supposed to be offering advice and care in a preventative medicine fashion, yet we make our money off selling the drugs so when you think of it we're supposed to promote good health and preventative care but then if that's what we're doing how are we supposed to be paid?*

The seventh theme was *incentives*, and centred on how managers are rewarded and how pharmacists are paid. Some managers were frustrated with the incentives provided by larger corporations and the ability to retain pharmacists, and was best echoed by the statement of one manager, who stated:

> *There doesn't have to be one [pharmacy] in every food store in this country. And if there weren't that many drug stores you wouldn't have such a terrible shortage [of pharmacists] that there is now in such a dog-eat-dog profession out there. People are going from place to place on incentives of starting bonuses and things like that and jumping around because Joe Blow needs a pharmacist and then oh, this other guy needs one worse.*

There was also discussion with many managers about incentives surrounding the expanded role of pharmacists and the remuneration that accompanies that expanded role; one manager highlighted these conversations well, when stating:

> *They've [employer] said to us, if the government pays you $50 per med-check, the company is paying your $25; the other $25, it goes toward the bottom line of your store. And then they said you know your labour charge, you're not supposed to do those med-checks on your labour charge. You know what that means? That means on my day off I go into the store and I do a med-check.*

In the eighth theme – *professional standards* – discussion centred on how respondents' conducted themselves professionally. Most managers

spoke of how the employer, unless a pharmacist themselves, should not be setting professional standards, and one manager's statement accurately reflected the sentiments by many managers:

> *Employers shouldn't be able to guide that [practice standards] and yet you see that's happening right now in the [national chain] where they're laying off pharmacists and hiring more techs.*

As well, many managers highlighted that there were set standards and expectations for some aspects of practice in their pharmacy, and other aspects were discretionary; this was accurately portrayed by one manager, who stated:

> *There are certain decisions that are mine and there are certain decisions that are not mine and those are clearly laid out.*

With some managers there was talk of how rewards programs should not be provided for prescriptions as it affected where and when a patient had their prescriptions filled; one manager echoed this sentiment well when stating:

> *It's one thing if I came for my prescription and paid for it and got my Air Miles® or [national chain points] or whatever, but I mean people who have the government paying or their drug plan is paying, I mean it just seems crazy. I mean how can we be doing that? People are going to those places [for the points/mile] instead of choosing a pharmacy based on what kind of care they should be getting.*

The last theme centred on the *role as manager* for respondents. Corporate managers interviewed alluded to the fact that they did not possess any real ownership over their pharmacy and this affected how they acted as the pharmacy manager; this was well represented by one manager, who stated:

> *I haven't been aggressive and maybe belt tightening that I might be doing if I was an owner.*

As well, most managers spoke of the difficulty in having the dual role as manager and pharmacist, and how other staff in the dispensary do not always understand and appreciate the challenges that come along with these roles. One manager's statement reflected this situation well when stating:

> *I would be the only pharmacist [on an evening shift], the only person in the dispensary so there's no one sort of that I feel accountable to and so if I want to spend time doing scheduling or whatever I feel like I can do that. During the day when we're very busy and there are other pharmacists and a tech there, I kind of get the feeling from them that they think I'm not pulling my load.*

4.6.3 Researcher's Reflection on Interview Data Collection

Much like the *Researcher's Story* piece presented above in *Methods*, this section will take on a first-person perspective, as it is reflective of the interviewing portion of data collection, as well as the analysis of the interview transcripts.

Taking an ethnographic perspective of the interviews was done because I am from outside of the community pharmacy culture, in that I am not a pharmacist. While interviews were conducted to provide me with a much better understanding of why the results of the survey may be, it was also to give me a stronger appreciation for what it is to be a community pharmacy manager; at the same time recognizing that I will only fully identify what it is to be a community pharmacy manager by completing an undergraduate degree in pharmacy and becoming a community pharmacy manager. Anything is possible, but at present this is not hypothesized!

The ethnographic perspective allows one who is external from a particular culture to study the culture as the outsider's perception may differ from those belonging to the cultural group. For this study, culture referred to the culture of community pharmacy. However, after conducting this study it became a lot clearer that within community pharmacy many cultures exist, from the regional variation in culture, to the organizational culture that exists

within the employing organization, and even the individual pharmacy within a larger organization, to the difference in culture between community pharmacy managers and community pharmacists. It is anticipated that future research I conduct will explore the differing cultures that exist within the broad umbrella of community pharmacy.

As I highlighted in the *Researcher's Story* section, I came into this study with a certain level of bias, in particular that corporate pharmacy ownership might negatively impact community pharmacy practice. While some of the interviewees I spoke with reinforced this view, others provided me with a different perspective as to why corporate pharmacy ownership for some is a positive. For instance, while theory may hypothesize that a reduction in autonomy and control in the practice environment is a negative to the professional, some welcomed this reduction. For some, the corporate control over budgets and scheduling, or reduction in the 'administrative' aspects of the position, for example, allowed the manager more time to focus on the professional aspects of practice. As well, some interviewees became managers because they had no choice, so any reduction in the duties outside of what a staff pharmacist would be expected to perform was welcomed.

Without the interviews, I would not have had the opportunity to recognize the value of the differing perspectives. Moreover, if I would have conducted the interviews before the survey – as this is what is 'usually' done – I do not feel I would have had the chance to further understand community pharmacy managers and the dynamic practice environment. I also believe that that the interviews provided me a personal growth opportunity, as a researcher and as a patient, and to recognize that what appears to be, may in fact not be at all!

Reflecting by after going over the notes I made during the interviews, the semi-structured nature of the interviews allowed me to work in the new appreciation for the practice environment interviewees provided me with. This

would not have been possible if I followed a structured, formulaic pattern when conducting the interviews.

With regard to culture, after speaking with the two interviewees from independent pharmacies, these two individuals shared the bias I had entering the interviewing phase of this study, highlighting that there are many cultures within community pharmacy practice. Both spoke of the negative consequences to the profession by increasing corporate-ownership and -operation of community pharmacies, and how corporations are heavily influencing practice change, such as increasing technician to pharmacist ratios.

They talked of difficulties attracting pharmacists to their pharmacy, as they could not offer the same wage that corporate pharmacies could, despite offering – in their personal opinion – the opportunity to practice in an environment where pharmacists have the chance to utilized more of their professional skills and expertise. However, one interviewee who minutes earlier was chastising corporate pharmacy, stated that he thought one national chain is promoting the professional nature of community pharmacists and due to the company's national presence had a real opportunity to positively affect practice change.

Another unforeseen result of the interviews was that some corporate managers had no idea of practice changes occurring within the province where they practiced, let alone across Canada. One spoke of the fact that she only concerned herself with what was happening in her pharmacy, and if it were important for her to know her district manager would make her aware of it. I suppose my disbelief with this may have come about because of my awareness of practice changes around the world, but also because I am not a practicing member of the community pharmacy culture, despite it being my area of concentration for this study, and therefore have a different perspective. In a sense, this was frustrating to me because I find myself – whether others share this view or not – as an advocate for the profession and if someone who

is a member of the profession is not concerned with changes in practice, then why should I be?

For decades there have been numerous calls for pharmacists to get involved in practice change, to help shape and control the future of the profession. However, despite the lack of buy-in by many as to the primacy of the need to be involved, wages have done up! So if not doing any thing results in an increase in wages, why try to change a good thing?

What I have tried to understand and disseminate is that if market forces prevail, and the more economical model is taken, with the goal of increasing profits, then some may eventually lobby governments that community pharmacists are simply over-educated and -compensated technicians, and their role is not needed as technicians and technology can fill the role. Depending on the stance one takes, this could be negative or positive to the profession: negative because community pharmacists as professionals would be stripped of their benefit to society, and positive because it may free community pharmacists from the technical role and allow them to focus on the clinical, professional role in a more clinical, primary health care environment.

– V –

DISCUSSION & IMPLICATIONS

In the following the results from the quantitative survey are discussed in combination with qualitative information collected from the semi-structured interviews. Statistical analysis revealed many significant differences with regard to the *Pharmacy Ownership Structure* independent variable (independent, franchise, and corporate) that were anticipated/hypothesized, as well as some results that were not. Additional analysis was conducted to confirm results of the parametric analysis via non-parametric analysis, as well as a general linear model that included *Ownership Type*, *Gender*, *Age, Region* and *Years With Employer*.

Analysis was performed, as described above, to assess potential non-response bias between responders and non-responders to the survey using the early versus late responder method[132, 205-207]. There were only two statistically significant differences from this analysis: the *Affinity Business* and *Pharmacy Relationship* constructs, and each difference was less than one-eight of a standard deviation. While there was a statistically significant difference for these two constructs, these results were not felt to be of practical significance to the study; differences were only observed for two of fifteen constructs, and there was no difference with regard to the independent variable, age, gender, region or years with employer. Unless stated otherwise, differences referred to below are statistically significant.

To align with the three hypotheses of this study, the main body of the discussion is separated into three parts: professional, business and

environmental. Throughout the discussion quotes from the interview portion of this study are provided when they add to and/or highlight the concept being discussed. While some of the quotes are provided in the *Results* section above, not all are; while unreported results are not typically included in discussions, they are for this study as not all coding from the interviews was provided.

5.1 Professional

Null Hypothesis: *Community pharmacy managers' alignment to professional aspects of practice is not related to ownership type.*

Analysis of the quantitative data revealed four professional constructs: 1) professional authority; 2) professional characteristics; 3) professional orientation; and 4) professional affinity. As well, results of the interviews from the themes of autonomy, behaviour, environment, future, image, professional standards and role as manager are utilized in the discussion below. The social transformation of community pharmacy, pharmacy education and practice change, corporatization and commercialism, commodification, proletarianization, professionals in organizations and professions are all areas of the literature review that aided in the development of items for the study, as well as in the following discussion.

In analyzing the *Professional Authority* construct, there were no significant differences among groups based on ownership type, suggesting respondents, regardless of ownership, shared a similar level of agreement on the need for the profession to establish practice standards, and the level of agreement was generally high. Managers remained committed to the profession; however, as will be witnessed in the *Environmental* section, the autonomy, control and other aspects required to make professional decisions may not exist in all three ownership types.

Differences were observed regarding age with those respondents between 24 and 39 years age less likely than those 40 years of age and older to agree to the primacy of the profession in establishing practice standards. This suggests that younger managers may have a somewhat different outlook with regard to establishing professional practice standards. A possible explanation is that employers are influencing pharmacy education in an attempt to shape the formal training of future pharmacists to better suit the realities of practice[228]. As a result, younger respondents may be more willing to accept those outside the profession influencing practice standards.

Another possibility is with changes to pharmacy curriculum, younger managers may take a broader view of pharmacy practice to include other health care professions as is witnessed by the increasing role of pharmacists on primary health care teams. However, older managers, who have more practice experience, may perceive those outside the profession as not able to understand the roles and duties of the profession and therefore ill-equipped and ineligible to influence practice standards.

Moreover, respondents in Atlantic Canada were less likely than those in British Columbia to agree to the primacy of the profession in establishing practice standards. There is no apparent reason for this difference, but it is likely that the role of professional associations in these regions differs and/or that respondents in British Columbia agree with the role and vision professional associations, such as the College of Pharmacists of British Columbia, are taking. However, no definitive conclusion can be made and further research is needed to explore this difference.

In the analysis of the *Professional Characteristics* construct, differences emerged between corporate and independent respondents. Corporate respondents were less satisfied than independent respondents with regard to professional characteristics.

In relation to the five items that made up the construct, this difference could be explained by more restricted freedom for corporate respondents. For

instance, *freedom from outside intervention in making professional judgements* was one item in the construct, and as observed above in the *Results* section, there was more than a one standard deviation difference between corporate and independent respondents with regard to the *Manager Autonomy* and *Decision-making* constructs; these two constructs will be discussed in more detail below in the *Environmental* section.

Moreover, as professionals become employees of larger organizations, control and freedom over their work can decrease[42, 66, 89, 117]. Therefore, as employees of a larger organization, corporate managers may face restrictions on professional aspects of practice not encountered in the small structure of an independent pharmacy.

Similar to the *Professional Authority* construct, no significant differences arose among groups regarding *Professional Orientation*. This suggests that where a manager practices does not significantly affect his/her professional orientation. However, this result was unexpected as prior studies have shown that bureaucratically-based professionals eventually become dedicated to the advancement of their bureaucracy in seeking to advance personally within the organization[117]. As well, controlling for the years respondents were with their employer did not result in any difference among respondents regarding their professional orientation.

This contradictory finding may indicate that corporate pharmacy managers identify more with professional objectives than with the business-oriented objectives of their employers[42]. As will be discussed below, maintaining a professional orientation may create conflict for corporate managers if the professional objectives and ideals of the profession differ from the principles of the employing organization[118, 123].

In this study, female respondents attached greater importance to a professional orientation than males. This gender difference is consistent with previous research; for example, studies suggest female pharmacy students tend to place more importance on the patient care, professional aspects of

pharmacy practice than male students who tend to rate management and other business-related aspects of practice as more important[26, 229], a trend that appears to continue into the practice setting.

While Atlantic Canadian respondents were less likely to agree to the primacy of the profession establishing practice standards, they also reported being more professionally orientated than respondents in British Columbia, and Saskatchewan and Manitoba. Like the difference reported above with regard to the *Professional Authority* construct, no explanation is apparent for this result and future research is needed into potential regional variations.

Like two of the three other professionally focused constructs already discussed – *Professional Authority* and *Professional Orientation* – the *Professional Affinity* construct did not display any significant differences among the three ownership types. As well, when controlling for the length of time respondents were with their employer, no differences arose among respondents regarding their affinity for professional aspects of practice. This is contrary to the literature that suggests employees in larger, bureaucratic organizations eventually start to identify more with the goals and objectives of the organization, as opposed to their profession[117]. Corporate managers may be resisting the situational pressure that can exist within organizations for employees to behave in a particular manner, and this resistance is more likely if the proposed action is not congruent with professional ethics[132, 133].

Female respondents reported more affinity with regard to professional aspects of practice than males. This is similar to findings seen with the *Professional Orientation* construct in that women may identify more with the professional aspects of practice, while men tend to identify more with the business aspects of practice[20, 26, 229].

Based on the results of this study, the null hypothesis *community pharmacy managers' alignment to professional aspects of practice is not related to ownership type* is accepted, and the alternative hypothesis is

rejected. *Pharmacy Ownership Structure* does not appear to influence the professional orientation or focus of pharmacy managers.

For corporate respondents issues surrounding satisfaction with some aspects of the profession may be attributed to the corporate environment. Yet, gender and age do appear to correlate with professional aspects of practice, a result that is supported by the literature[20, 26, 229]. There also appears to be a role of region and years with employer that requires further research.

An incident communicated by Jackie (corporate pharmacy manager) highlights the professional nature of pharmacists, regardless of ownership structure, and the unique opportunity community pharmacists have in patient health care:

> I had a woman who came in with a lump on her bottom lip and she wanted medication – she wanted a herpes salve and I said it's not herpes. And she told me, well yeah my friend told me it's a cold sore. I said I think you have been picking at it because it's scabby. And she said, well yes, I have. And I said I think you need to stop picking at it and I'm not going to sell you anything but you need to go to your doctor cause it could be a cyst – cause she said nothing came out of it and I said it looks really hard, like it could be a bit of a cyst and you need to have it lanced or excised you know. So she said oh I don't want to do that and I said well otherwise if it doesn't resolve itself in a week I would do that.
>
> It turns out she went to a medi-clinic that night, the doctor lanced it and couldn't get anything out of it so he referred her to a dermatologist. She came in two weeks later and she had a little scar under her lip. She said I wanted to come in and thank you – it was squamous cell carcinoma!
>
> And she said I want to thank you for not selling me that med and for sending me to the doctor. So I'm thinking who paid me for that? I made nothing financially from it – I made a friend or someone who thought I was great. But I mean the bottom line is we're trying to make a living at this profession so that may not make me a living, but it made me a reputation.

5.2 Business

Null Hypothesis: *Community pharmacy managers' alignment to business aspects of practice is not related to ownership type.*

Business orientation and business affinity are the two constructs that centre on business aspects of practice and form the basis of the discussion in this section. As well, results of the interviews from the themes of incentives, human resources, environment and role as manager are utilized in the discussion below. The social transformation of community pharmacy, pharmacy education and practice change, corporatization and commercialism, commodification, rationalization, rationalizing pharmacy practice and professionals in organizations are all areas of the literature review that aided in the development of items for the study, as well as in the following discussion.

In analysing the *Business Orientation* construct differences arose among corporate respondents, and franchise and independent respondents. One explanation for this result is franchise and independent managers have a more personal connection to the financial viability and long-term success of the pharmacy than corporate managers.

Along with being the owner or franchisee come the inherent risks and rewards of operating a business[1, 92, 126, 132, 164, 173, 230-233]. Corporate managers may choose to practice in a corporate environment to avoid the risks and responsibilities of being an owner or franchisee. Added to this is the choice of practicing in a corporate environment to avoid the business-orientated aspects of practice that are not desired by those choosing to practice in a corporate pharmacy. The reality is that not all pharmacists want to practice in an independent pharmacy, or desire to be an owner, just as not all pharmacists want to practice hospital pharmacy[6, 126, 164, 173, 220, 229, 230, 234-239].

The above difference also presented itself with regard to the *Employer Authority* construct to be discussed below, and may also relate to corporate managers being removed from ownership and the financial viability of the

pharmacy. This was alluded to in one of the interviews with Karl, the manager of a corporate pharmacy, who stated:

> I'm cynical right off the bat that my company's given me a target, a financial target and I'm going to get a bonus on that target. And in my opinion, I'm never going to hit that target.

It may also be inferred from this statement and the results presented above that the manager of the corporate pharmacy understands the realities of the practice environment and the feasibility of financial and budget targets more than those within the corporation who develop the targets.

When controlling for age, the difference seen regarding ownership type was removed, suggesting that age has more of a role than ownership type in regard to business orientation. However, those 24 to 39 years old are more likely than those 50 years and older to practice in a corporate pharmacy (46.5% vs. 28.4%) and may influence this change. Future research is needed to explore this concept further.

Male respondents reported a greater orientation to business aspects of practice than females, a finding that is consistent with the literature[26, 229]. There is also evidence that men tend to be managers and owners in community pharmacies disproportionately more than women[148], and women are more likely than men to practice in corporate pharmacies[20].

Janice, the manager of a corporate pharmacy, spoke of the management aspects of her position:

> We get fairly tied up in non-pharmacy tasks, tied up in stuff that is required as a corporation. Tied up in the sense that it takes up a lot of our time and that's time I wish I could spend doing something else.

It has been suggested that females and males have different professional orientations due to differing socialization and ethical development of the genders; males are more interested in the competitive aspects of professions, whereas women prefer helping others and working with the

public[240]. Moreover, men are more likely to strive to be an authoritative figure than women, and seek fewer restrictions on practice[241]. This environment is more indicative of the independent pharmacy, and to a certain extent the franchise pharmacy, than of the corporate pharmacy.

Owing to the decreasing number of independent pharmacies and increasing number of corporate pharmacies, the opportunity to own a pharmacy is decreasing. The loss of this entrepreneurial opportunity is thought to be a main reason that the profession has become feminized, with more women than men entering and practicing pharmacy, as men tend to be more attracted to owning and managing a pharmacy than women[242].

In this study, there were statistically significant differences between females and males with regard to the position of respondents and the type of pharmacy where respondents practiced. Female respondents were more likely to practice in a corporate pharmacy than male respondents (45.9% vs. 29.6%), while male respondents were more likely to practice in an independent or franchise pharmacy than female respondents (70.4% vs. 54.1%). Furthermore, female respondents were more likely than males to identify themselves as the pharmacy manager (78.3% vs. 54.7%), while male respondents were more likely to identify themselves as a pharmacy owner than female respondents (44.0% vs. 20.9%).

Similar to the *Business Orientation* construct, differences were observed among corporate respondents, and franchise and independent respondents for the *Business Affinity* construct. Again, the personal connection for franchise and independent respondents may explain this difference[1, 92, 126, 132, 164, 173, 230-233]. Franchise managers may be viewed as falling between independent and corporate managers, but on business aspects tended to align with independent respondents. This may be explained by the fact that while franchise respondents have less to personally gain or lose financially than independent respondents, it is generally more than those

in corporate pharmacies who risk little beyond their wage and potential bonuses.

Moreover, with regard to the number of years respondents were with their employer, those respondents who were with their employer between 2.1 and 4 years reported less affinity for the business aspects of practice than those who had been with their employer 15.1 years or more. Exploring this further, over half of the respondents who reported being with their employer 15.1 years or more (56.3%) reported practicing in an independent pharmacy, while the single largest practice environment for those respondents who were with their employer between 2.1 and 4 years was the corporate environment (45.2%). Therefore, this is consistent with previous results as there is a greater connection to the financial/business aspects of practice in an independent pharmacy when compared to the corporate pharmacy environment.

Males reported more affinity to business aspects of practice than females; as already discussed, this difference is not unexpected as males tend to identify more with the business aspect of practice than their female colleagues[26, 148, 229, 234, 240, 242].

There is also the issue of organizational structure in that independent pharmacies are simple structures, with ownership more directly involved in the day-to-day operations of the business. While franchise pharmacies do have the franchisee – or Associate in the case of Shoppers Drug Mart – who is financially invested in the business, he/she is required, at varying levels, to follow policies and procedures of the company to maintain a consistent image and brand.

In corporate pharmacies the pharmacy manager is an employee within a variety of levels of organizational management: from management within the larger retail environment, as is the case with mass merchandisers and grocery store, and some large chains, to the district/regional manager and the various levels of management at corporate headquarters, including vice presidents

and the chief executive officer. These larger, more complex business structures, and the resulting levels of bureaucracy, are magnified if the organization is part of a multi-national corporation: for instance, where the Canadian division is separate from its parent company in the United States.

Beth, the manager of a franchise pharmacy, in speaking of the dual role as a professional and businessperson, said:

> I mean you have a little bit of both: you know it's about the business and such, but it's about taking care of patients so I guess you're going to have to balance that. I'm not the owner so that sometimes makes a little bit of a difference, but I mean you want your numbers and you want that sort of stuff [hit budget/performance targets], but it's all about the patient.

Based on the results of this study, the null hypothesis *community pharmacy managers' alignment to business aspects of practice is not related to ownership type* is rejected, and the alternative hypothesis is accepted. With regard to *Pharmacy Ownership Structure*, there appears to be a divide among independent and franchise respondents compared to corporate respondents. As well, orientation and affinity to business aspects of practice appear to differ between female and male respondents, and is supported by previous research on gender differences in the profession[26, 148, 229, 234, 240, 242]. There also appears to be a role of region and years with employer that requires further research.

5.3 Environmental

Null Hypothesis: *Community pharmacy managers' authority over environmental (organizational) aspects of practice is not related to ownership type.*

Nine constructs centring on the environment (organization) in which the respondents practice form the foundation for the discussion in this section. The nine constructs are: 1) employer authority; 2) manager autonomy; 3)

decision making; 4) pharmacy manager control; 5) pharmacy relationship; 6) role conflict; 7) innovation; 8) red tape; and 9) manager preferences. As well, results of the interviews from the themes of autonomy, behaviour, environment, human resources and role as manager are utilized in the discussion below. The social transformation of community pharmacy, corporatization and commercialism, bureaucratization, proletarianization and professionals in organizations are all areas of the literature review that aided in the development of items for the study, as well as in the following discussion.

With regard to the *Employer Authority* construct, independent and franchise respondents were significantly more likely than corporate respondents to agree that the employer should aid in developing professional practice standards. This result may seem somewhat surprising at first until one considers why this divide might occur.

Corporate respondents are detached from the ownership of the pharmacy, and in this case the organization as a whole, whereas independent and to a lesser extent franchise respondents are either the owner/franchisee themselves, or have a personal connection by knowing the owner/franchisee within the ownership structure. As well, there is a good chance that the owner of an independent pharmacy and the franchisee, and certainly the Associate in the case of Shoppers Drug Mart, are themselves pharmacists. Based on this reasoning, the outcome is consistent with theory in that members of the profession can be expected to aid in developing professional practice standards.

When controlling for gender and age, the difference among ownership type was removed. However, female respondents (45.9%) and those between 24 and 39 years old (46.5%) were more likely to report practicing in a corporate pharmacy than male respondents (29.6%) and those 50 years old and greater (28.4%), suggesting that gender and age may influence this change. Future research is needed to explore this concept further.

The *Manager Autonomy* construct provides a clear picture of the divide with certain aspects of practice among the three groups. There was a significant difference among all three groups, with greater than one standard deviation difference between corporate and independent respondents. Respondents all agreed with the professional authority aspects of practice, but there was a marked difference between what one identifies with professionally, and one's autonomy. Corporate respondents report having less autonomy than independent respondents, a result supported by the literature[119, 121, 122, 163, 195].

Friedman argued that the social responsibility of business is to increase profits[149]. He distinguished between corporate-owned and -operated businesses and the individual proprietor. The individual proprietor, in this case the independent pharmacy owner, who chooses to reduce financial gains for his/her business to conduct business in an ethical, socially responsible manner does so with his/her own money[149]. The corporate manager, on the other hand, is an employee of the owners of the business, and is directly responsible to the employer[149].

This dichotomy between the owner of an independent pharmacy and the manager of a corporate pharmacy came forward in discussions with George, the owner of an independent pharmacy, when he stated:

> My primary concern is my patients; when that patient walks through the door, I am an advocate for that patient; I will do the best that I can including referring them to another physician if I feel the diagnosis of the treatment is inappropriate.
>
> When you're your own boss you can handle it the way you want and bear the consequences, but if I was working for [large national chain] and I said to a patient you know that doctor is not doing a very good job for you, I want you to go and see this doctor, and word got around and that doctor talked to your boss, you're going to be in trouble. If that doctor phones me when I own my own business, I am going to say you blew it.

Males reported more autonomy than females. As highlighted in the *Professional* and *Business* sections above, males and females differ as to their professional and business orientation and affinity, as well as where they tend to practice. Therefore, males may report greater autonomy as a result of being more likely to practice in independent pharmacies than females (65.7% of independent respondents were male), an environment that is also attributed to having more autonomy[40, 119, 121, 122, 163, 195].

With regard to the number of years respondents were with their employer, those respondents who were with their employer between 2.1 and 4 years reported less autonomy than those who had been with their employer 15.1 years or more. This result appears logical as the longer one is with an organization, and has shown their competency, the more autonomy they are likely to have.

Moreover, respondents between 24 and 39 years of age reported less autonomy than respondents 50 years of age and greater. Following further analysis, of the respondents reporting his/her age, 25.0 percent of respondents practicing in an independent pharmacy were between 24 and 39 years of age, whereas 42.0 percent were 50 years of age and greater. These figures were almost reversed in the case of corporate pharmacies, where 43.7 percent of respondents practicing in a corporate pharmacy were between 24 and 39 years of age, with 26.2 percent of respondents 50 years of age and greater.

Again, those practicing in an independent pharmacy reported more autonomy than those in corporate pharmacies, and with regard to the age of respondents, those 50 years old and greater are more likely to practice in an independent pharmacy than those 24 to 39 years old. Therefore, it may be reasoned that respondents 50 years old and greater report having more autonomy than respondents between 24 and 39 years old.

When discussing autonomy and the ability to make decisions in the pharmacy without having to pass the idea by outside management first, Jackie, a manager of a corporate pharmacy, stated:

> Certainly yes professionally [autonomy] and with running the dispensary and deciding on how we're going to do things absolutely. They don't interfere and my boss or the person to whom I report, the Pharmacy Director, doesn't want to micromanage. He doesn't want to be involved in day-to-day operations.

This statement aligns with the notion of decentralization proposed by Weber as one of the seven characteristics of bureaucracy[38, 114]. However, decentralization also recognizes that day-to-day, routine decisions may be decentralized to individual departments, or in this case stores, but the 'important', organization wide decisions are made by upper management[38, 114].

Society grants the professions the right to self-regulate. The professions maintain autonomy in exchange for placing the interest of society above personal and organizational interests. However, in this study respondents in independent pharmacies reported more autonomy than corporate respondents, and to lesser extent franchise respondents. One needs to consider the impact of a reduction in the autonomy that should accompany professional practitioners, regardless of the practice setting. Not only does the potential for conflict, role strain and ambiguity increase when autonomy is not established[16, 25, 30, 31, 163, 195], but questions are raised as to the amount of influence and control corporate agendas have over the professional work of pharmacists in corporate pharmacies.

Like the *Manager Autonomy* construct, the *Decision Making* construct was associated with differences among all three groups, with more than one standard deviation difference between corporate and independent respondents. Again, regarding professional aspects of practice all respondent groups agreed to the same degree; however, there was a noticeable

divergence among the decision-making abilities of respondents in relation to ownership type.

Males reported more decision-making capabilities than females. As well, respondents between 24 and 39 years of age reported less decision-making capabilities than respondents 50 years of age and greater. These differences are similar to the findings seen with regard to the *Manager Autonomy* construct. Generally, older, male respondents practicing in an independent pharmacy report more autonomy and decision-making capabilities than younger, female respondents in corporate pharmacies.

With regard to the number of years respondents were with their employer, those respondents who were with their employer between 2.1 and 4 years reported less decision-making ability than those who had been with their employer 15.1 years or more. This result appears logical as the longer one is with an organization, and has shown their competency, the more decision-making ability they are likely to have.

Dorothy, pharmacy manager of a corporate pharmacy, spoke of the decision-making and managerial role she occupies, stating:

> Because I work for a bigger company we have a lot of backstage staff that handle the marketing and promotion and that kind of stuff, so my managerial focus that I put in my job personally is helping our department work as a team. So I don't mean I can't assist in record keeping, I can deal with some of the paperwork, I can deal with some of the scheduling and that type of thing, but I don't have to worry if every decision of mine will affect the bottom line.

An employee in any large organization can expect to encounter some degree of bureaucracy as the levels required to arrive at a decision increase. However, decision-making of a professional nature should be free from outside, non-professional influence, including individuals within the employing organization who are not members of the profession. This is not to say that the decision-making capabilities are muted in corporate pharmacies, but one needs to explore further as to what aspects of decision-making are being

restricted in the corporate pharmacy. Are decision-making capabilities restricted to corporate, organization wide decisions, or do they impinge on the ability to practice professionally within the pharmacy?

Much like the *Manager Autonomy* and *Decision Making* constructs, the *Control Amount* construct broke into three distinct groups, with almost one standard deviation difference between corporate and independent respondents. While respondents in corporate pharmacies may be professionally focused and orientated, they reported less control than respondents in independent and, to a lesser extent, franchise pharmacies.

Males reported having more control than females. Again, similar to the *Manager Autonomy* and *Decision Making* constructs, males who practice in independent pharmacies generally report more autonomy, decision-making capabilities, and control than females who practice in corporate pharmacies.

Like the *Manager Autonomy* and *Decision Making* constructs, when analyzing the *Control Amount* construct and controlling for the number of years respondents were with their employer, respondents who were with their employer between 2.1 and 4 years reported less control than those who had been with their employer 15.1 years or more. Again, similar to the *Manager Autonomy* and *Decision Making* constructs, this result appears logical as the longer one is with an organization, and has shown their competency, the more control over the work environment they are likely to have.

Janice, the manager of a corporate pharmacy, spoke of the control she has, and aspects that are beyond her control:

> There are certain decisions that are mine and there are certain decisions that are not mine, and those are very clearly laid out. For me that focus makes good business sense… You're seen as a volume, like a particular kind of pharmacy [high volume, low volume]. As well, some things are out of their control, and some are in the middle.

When analysing the *Pharmacy Relationship* construct, differences arose among all three pharmacy ownership types, with independent

respondents reporting a greater connection to the pharmacy/organization than franchise and corporate respondents.

Independent respondents were either the pharmacy owner/manager or the pharmacy manager and knew the owner personally; therefore, more likely to identify with the mission of the pharmacy/organization to a greater extent than those who may be removed from ownership. As well, with regard to business aspects where similar responses were found, the number of managerial levels of the organization was negatively correlated with the connection respondents expressed toward the organization. In effect, the more removed from ownership, the less likely respondents identified with the organization.

In examining the *Role Conflict* construct, differences between independent and corporate respondents may be explained by the fact that a corporate pharmacy manager does not own the pharmacy. Therefore, this disconnect between professional and non-professional aspects of practice may create conflict. As with the business constructs and the *Pharmacy Relationship* construct, when the manager is removed from higher levels of management there is a separation of the professional and managerial roles. The manager in a corporate pharmacy must then balance the demands of upper management while also managing the day-to-day realities of practice, which may not align with the corporate mission/direction, creating conflict[16, 17, 27, 117, 118].

Some have suggested that formalization of professional work may in fact reduce role conflict[243, 244]. This is thought to result when the organization clearly lays out expectations for its employees, and therefore reduces conflict and ambiguity that may come about without formalized policies and procedures. However, these guidelines should be consistent with professional norms and not involve high degrees of formalization so that the professional has his/her professional freedom[243]. Given the differences present in this study, where conflict is more likely for corporate than independent

respondents, the congruence between professional and organizational objectives may be missing.

Corporate managers reported more conflict than independent managers; this is consistent with the management literature[11, 17, 31, 92, 127, 132, 133, 163, 195], but may be understood by considering the nature of the work itself. A number of those interviewed indicated that as managers in a corporate pharmacy they did not know what was expected, and many times reported having to be the 'manager' while also being the only pharmacist in the dispensary. Moreover, the formalization of work may not be consistent with the managers' view of the ideal concept of pharmacy practice in a corporate pharmacy, whereas independent pharmacies are more likely to be innovative and in line with the professional ideal of pharmacy practice[40, 113].

Based on the split between independent and corporate respondents, it appears reasonable to suggest that respondents 50 years of age and greater, whom are more likely to practice in an independent pharmacy, report experiencing less conflict than respondents between 24 and 39 years of age, whom are more likely to practice in a corporate pharmacy.

Karl, the manager of a corporate pharmacy, spoke of the disconnection between what his employer wants and what he identifies with:

> It would depend on how much I cared or how much I depended on the bonus because as far as I'm concerned I have a good base salary; I'm running a good business that everyone works at a busy pace at sometimes, a comfortable at others. The company would probably want me to worry about the fine line, and if I were that excited or passionate about a corporate store, or about my bonus, then I would be… It's just that they want me to make more [money/profit], and you know in my opinion, as one person in a corporate store, I'm not their marketing department, I'm not their buying group, I'm not the reason they're going to make targets – what am I supposed to do about it?

Differences were observed among corporate, and independent and franchise respondents with regard to the *Innovation* construct. The literature on innovation suggests the larger the organization, the less innovative the

organization tends to be[40, 113], and this appears to be supported with regard to the results of this study.

George, the owner of an independent pharmacy, alluded to this point and the challenges on practising and owning a pharmacy in a rural location by stating:

> Innovative practices will not generally occur in the city: they occur in small towns like this. Not being able to attract people to that just because it's a small town is very, very frustrating.

Males, more than females, tended to report that their pharmacies were innovative. Independent respondents, who were also more likely to be male, reported being more innovative than corporate respondents. This result supports the previous results of this study when differences surrounding gender were present.

There were differences among all three ownership types in relation to the *Red Tape* construct. Corporate respondents reported the most bureaucracy, with independent reporting the least. This is not unexpected as the smaller the organizational structure the fewer levels of approval one must navigate.

As well, respondents in Alberta reported more bureaucracy than respondents in British Columbia. In terms of single largest type of practice, over half of respondents in British Columbia practiced in an independent pharmacy (50.6%), while 42.6 percent of respondents in Alberta reported practicing in a corporate pharmacy. Therefore, one may surmise that this difference is expected to be present. However, like the other two differences observed with regard to the geographic region – *Professional Authority* and *Professional Orientation* – more research is needed to explore the reasons for these differences.

Analysis of the *Manager Preferences* construct revealed differences between corporate and franchise respondents, with corporate respondents

agreeing to more requests if they were to go back and accept the position than franchise respondents. Respondents in corporate pharmacies may not have appreciated all that is involved in being the pharmacy manager. As well, franchise respondents have more control and decision-making capabilities than corporate respondents, which may explain franchise respondents being more content than corporate respondents with practice in his/her pharmacy.

When controlling for age, the difference seen regarding ownership type was removed, suggesting that age has more of a role than ownership type in regard to manager preferences. Older respondents may have a greater appreciation for various aspects of practice and therefore would agree to further requests than younger respondents. However, future research is needed to explore this concept further.

When discussing aspects of being a manager, Jackie, the manager of a corporate pharmacy, alluded to the difference between being a manager and a pharmacist:

> I don't get shift differential for working evenings; I don't get shift differential for working Sundays; I don't get overtime if I work the stat holiday; I don't get overtime for working any overtime… whereas the pharmacists do. The pharmacists just got a raise; I don't get that raise.

Norma, the manager of an independent pharmacy, also spoke of some of the issues of managing a pharmacy:

> Ultimately the bottom line is that any manager would like the time to manage and that's a huge issue in pharmacy right now, there just isn't enough staff… you squeeze your management into 2 or 3 minutes here and there when you can during the day.

Based on the results of this study, the null hypothesis *community pharmacy managers' authority over environmental (organizational) aspects of practice is not related to ownership type* is rejected, and the alternative hypothesis is accepted. There were statistically significant differences between independent and corporate respondents for eight of the nine

constructs (seven when considering multi-variate analysis that removed the difference regarding the *Employer Authority* construct). However, *Pharmacy Ownership Structure* appears to impact the environmental aspects of practice. Gender and age appear to have a role in respondents' practice environment, consistent with the *Professional* and *Business* sections discussed above, and supported in the literaure[26, 148, 229, 234, 240, 242]. As well, there appears to be a role of region and years with employer that requires further research.

5.4 Implications

Some of the results of this study are apt to be viewed as encouraging by the profession, while other results are apt to be viewed as a cause for concern, a wake-up call, if you will. The encouraging results are that pharmacy managers appear to maintain their sense of professionalism regardless of where they practice. However, apprehension may be expressed about the fact that managers of corporate pharmacies are significantly less likely to have the autonomy, decision-making capability and control one should have not only as a professional, but also as a manager.

Moreover, based on professional aspects of practice, corporate respondents reported less satisfaction than independent respondents. Corporate managers reported a disconnection between characteristics of the profession and what they are experiencing, such as performance of professional associations and development of the patient-pharmacist relationship. Maintaining a professional ethic takes more effort than focusing on a business ethic[24, 93] and the impact of corporate managers experiencing this disconnect must be acknowledged.

Currently, there is friction in some jurisdictions, such as Ontario, where splinter organizations like the Independent Pharmacists' Association of Ontario formed to bring forward issues faced by independent owners and pharmacists. This arose in part from the perception that the concerns of independent practitioners were not being addressed by the Ontario Pharmacists'

Association[245]. While bringing in new laws lowering drug mark ups and eliminating generic rebates impacted all pharmacists in Ontario, chain pharmacies, who obtain most of their revenue from front shop sales, can make up losses in other provinces, whereas many independent pharmacies rely on dispensary sales, and the associated mark up and dispensing fee, to remain in business[245]. Furthermore, one must consider where some of the funding comes from for professional associations to operate and the influence these donations have on where the associations' advocacy is focused.

There should also be deliberation as to the implications of not only the decrease in independent pharmacies, but the concentration and resulting influence by a relatively few corporate pharmacy chains; for example, Shoppers Drug Mart highlights "expanding through the acquisition of independent and banner store operations"[246, 247] as part of the company's strategic direction in adding new stores. At the same time, the relaxation in regulations in all jurisdictions but Quebec has allowed ownership to extend to non-pharmacists. This creates difficulties in restricting ownership to members of the profession.

If ownership continues to transition exclusively to corporate ownership, the profession may have no choice but to accept the direction of these owners. While corporate, chain pharmacies provide a higher salary and increased job security in comparison to independent pharmacies[32], the potentially negative aspects for the profession must also be considered. When health care professionals practice in corporate organizations, there is the chance of an increase in conflict[11, 17, 31, 92, 127, 132, 133, 163, 195], role strain/ambiguity[26, 27, 31, 163, 195], and stress[30-33], while decreasing job satisfaction[30-33, 119], autonomy[119, 121, 155, 163, 195], innovation[40, 113] and control[42, 66, 89, 117]. As well, health care professionals practicing in a corporate environment can discover their professional and business ethics beginning to blur[11, 16, 92, 93, 132, 133] and professionalism compromised when seeking to align with the organizations' objectives[42, 117]. Furthermore, when relatively few organizations own and

direct the operations within an industry, the influence of those organizations in controlling the market and affecting human resources increase to satisfy the organizations' mission[20, 114].

There are those who argue that pharmacy is an incomplete, or quasi-profession[3, 5, 34-36, 148], and one can only assume that pharmacy's professional status will continue to be questioned if ownership transitions completely to corporations, away from the profession. Again, this is not to pronounce that all corporate pharmacy chains are inherently bad for the profession, or seek to reduce pharmacists' ability to practice professionally, but the chances of pharmacy's professional status being stripped increases as ownership and control of the practice environment slip from the hands of the profession.

Hindsight may be 20/20, but before ownership completely transitions to corporations, the potential impact, positive and negative, need to be understood and addressed. Action may be needed to protect the professional status of pharmacy, not only for the profession itself, but also for all stakeholders, and most importantly patients and society as a whole. However, there may be positive aspects to the profession resulting from corporate ownership of community pharmacies that warrants attention. Only by fully understanding the potential opportunities and threats can the appropriate action be determined and, if needed, implemented.

5.5 Limitations

Due to the nature of the study, limitations are to be expected and acknowledged. First, as with any self-report methodology, one must approach the results with a certain level of caution as it relies on respondents to accurately reflect their perceptions/feelings/experiences.

Contact information obtained from provincial regulatory agencies was up-to-date as of the day the information was sent. However, some difficulties occurred in getting the mailings to the sample. For example, there were 38 mailings that were returned as undeliverable: these 38 were excluded from the

sample as contact information was checked to be sure it was correct, with what was provided, and still came back undeliverable. This does not take into consideration the number of mailings that came back where the correct contact information was obtained. As well, there were mailings that came back as undeliverable, that once cross referenced, had the correct contact information and were re-sent and did not come back as undeliverable.

There is also the possibility that some of the sample did not respond to the survey due to company policy. This was witnessed when one pharmacy manager sent an electronic mail stating that he could not respond due to company policy. As well, some in the sample requested that the questionnaire be sent to their home address, as opposed to their pharmacy address, as they could not complete it at the pharmacy. Further to this, when presenting preliminary results at the Canadian Pharmacists Association annual conference in Ottawa, Ontario on June 3rd, 2007, representatives from one company made it clear to the author that pharmacy managers in their stores are not to respond to any survey without the Manager of Professional Services reviewing the instrument first.

Another possible limitation to this study is that the questionnaire and accompanying materials mailed to the sample were written only in English. While pharmacy managers in Quebec were not included in this study, in a bilingual country, French-speaking pharmacies exist outside Quebec, particularly in Ontario and New Brunswick. Therefore, it is possible that some of the sample were unilingual Francophone and did not complete the questionnaire due to it being written only in English.

As with any survey research one cannot be certain that respondents filled out the questionnaire truthfully. However, the length of the questionnaire and time to complete it would have taken approximately fifteen-minutes to complete, so it is felt those who responded did so truthfully. No completed questionnaire received would suggest that respondents just checked whatever answer as there were none received that had the same answer checked off in

each section (e.g. while there were approximately ten that came back where one section had all the same answer, such as all Strongly Agree, no questionnaire had just the right-hand answers checked throughout the questionnaire).

Pharmacy managers in Nova Scotia did not receive a personalized letter in the same manner as managers in the other provinces. The contact information received for managers in Nova Scotia had only the pharmacy address as no names were provided for managers. Therefore, letters were simply addressed to the pharmacy manager, as opposed to a specific person, which was the case with the other provinces. This may have had an effect on the response rate in Nova Scotia; however, in terms of percentages responses from Nova Scotia were larger than the sample size: 4.8 percent of the sample were managers from Nova Scotia, yet 5.1 percent of the total responses received were from Nova Scotia.

The subject matter of the study and questionnaire centred on pharmacy managers and not necessarily pharmacy managers who were also owners; as a result, some owners sent correspondence stating that they do not feel, given their position, that they should complete the questionnaire. Again, as stated above, the list of community pharmacies could not be separated into different ownership structures and therefore the response rate may not be as high as might be achieved if one were able to specifically target non-owners.

When asking for the position of the respondent, a blank was left for the respondent to fill in, as opposed to check boxes with various responses (e.g. owner, manager, owner/manager, etc.). Therefore, when a respondent answered that they were the manager of an independent pharmacy, they may in fact have been the owner as well.

As with any survey research, the results should be interpreted with some caution. Some of the subject matter of this study was complex, and while efforts to reduce ambiguity were made by such means as adapting items previously employed in other studies and pre-testing the instrument, one

cannot be certain that all items were interpreted by all respondents as intended. However, any research that relies on participant response, quantitative or qualitative, relies on the truthful responses of respondents, and a larger sample size can help eliminate some potential skewing. With regard to not understanding individual items, the language of the questionnaire was written below the education level of respondents. As well, the interpretation and discussion of the survey findings was primarily conducted at the construct level, and not for individual items.

Each list received from the respective provincial regulatory agencies, and as a result the final list of off community pharmacies, did not state the type of pharmacy (e.g. independent, mass merchandiser, etc.). Therefore, because of the random, stratified sample, as well as the responses received, one cannot say whether the sample is or is not representative of the population.

In attempting to understand whether respondents were representative of the Canadian community pharmacy population as a whole (excluding Quebec), the only reliable source is the membership numbers of the Canadian Association of Chain Drug Stores (CACDS): the lists received from the provincial regulatory agencies were not separated into, or identifiable by, pharmacy type. The CACDS *State of the Industry 2006* reported a total of 6,326 community pharmacies in Canada (not including Quebec), of which 4,588 community pharmacies are members of CACDS[248]. This is similar to the 6,342 received from the respective provincial regulatory agencies.

Therefore, assuming that CACDS members include all community pharmacies except for independent and small chain pharmacies, 72.5 percent of community pharmacies in Canada are franchise, banner, large chain, grocery store, department store and mass merchandiser. As seen above, 36.0 percent (233) of respondents in this study were managers/owners in either independent or small chain pharmacies. While this is not the same percentage as CACDS (27.5%), it is not thought to negatively influence the

results; if fewer independent and small chain pharmacies responded than the 27.5 percent of independent and small chain pharmacies inferred from the CACDS list one might have problems with power, but this was not the case.

With any survey research there is a potential non-response bias between responders and non-responders to the survey. In an attempt to reduce the potential for non-response bias analysis was conducted by assessing early and late responders, with late responders thought to respond how non-responders might respond[132, 205-207]. There were only two statistically significant differences from this analysis for the *Affinity Business* ($p < 0.039$) and *Pharmacy Relationship* ($p < 0.042$) constructs; each of these differences represented less than one-eight of a standard deviation. However, there remains the potential bias between responders and non-responders to the survey, as well as between responders and the study population, community pharmacy managers.

With regard to the interviews, the author was not an experienced interviewer and therefore some caution should be taken when interpreting the results of the interviews. However, the interviews were meant to bring a voice to the survey portion of the study, and not to form the basis of the survey portion.

A decreased level of autonomy, control, decision-making capabilities and such were thought to be viewed as negative for professionals, and in this case community pharmacy managers, but there is the chance that this is desired by some. This possibility became apparent during the interviews as some interviewees stated that they did not see the reduction in control and decision-making ability, for example, as a bad thing: it allowed them more time to practice pharmacy. Therefore, caution should be taken as some may actually desire this and as a result choose to practice in one practice environment over another.

Based on the findings of this study there were, by and large, two predominant types of pharmacy managers. The first was the younger female, who practiced in a corporate pharmacy and had a strong professional orientation and affinity for the professional aspects of practice. The second was the older male, who practiced in an independent pharmacy, had a great deal of autonomy, control and decision-making capability, and was business oriented with an affinity for the business aspects of practice.

While this study was not the first to examine pharmacists in community practice and the balance between professional and business aspects of the environment, it was the first to examine, in combination, the organizational behaviour, role orientation and autonomy of pharmacy managers. At the same time, with pharmacy managers being licensed pharmacists, it adds to the literature on community pharmacy practice research.

Even though this study was undertaken as the research component of the author's doctoral program and to develop an expertise in the area, it was ultimately carried out in anticipation that the results would inform and aid in the formation of community pharmacy practice policy. The initial recognition of the significance of the research and its potential importance and 'real world' application came when the provincial regulatory authorities embraced this project by providing the contact information for all of their respective community pharmacies and managers. Further to this, when the provincial

regulatory authorities were sent the descriptive results of the study, interest increased.

This is not to say that this study, on its own, has the capacity to significantly change policy and practice; but comments generated during initial presentations of the research to professional audiences and talking one-on-one with regulators and practitioners make clear that this study has already had a positive impact, and has the capacity to continue in the future. For example, a few comments have been: “this has been in the back of my head for awhile and finally someone is doing this”; “we want to use some of your data to put forward new regulations on the professional responsibilities of pharmacy managers”; and “we would like to use these results for helping draft our strategic plan.”

Regardless of ownership, pharmacy managers appear to remain professionally orientated and focused. However, there were a number of differences present among respondents in different ownership structures. In considering these differences, ownership structure appears to play a vital role in the level of autonomy, control and decision-making capabilities of pharmacy managers. The autonomy and control needed to carry out the professional role appear more limited among corporate respondents than for independent respondents. Corporate respondents in particular, and franchise respondents to a lesser extent, are aware of the restrictions placed on practice in their pharmacy; therefore, the apparent disconnect between what is desired and what is possible is of concern. There were also a number of differences that were present when controlling for age, gender, region and years with employer that should be investigated.

The limits placed on corporate respondents highlight the possibility of role strain and ambiguity, potentially causing increased levels of stress for these managers. As ownership of community pharmacy continues to transition from pharmacist-controlled to corporate-owned, the profession must acknowledge the professional implications that arise, especially with regard to

autonomy, decision-making abilities and the level of control; while at the same time recognizing that not all will view a reduction in autonomy, decision-making abilities and the level of control as negative. The differing cultures within community pharmacy practice warrant further attention.

What the profession wants and what respondents identify with professionally may not translate into practice. The profession must consider who the employer is, and where obligation lies for that employer and for the profession, and the influence of ownership structure on pharmacy practice. At the same time, some may choose to practice in an environment congruent with their view of community pharmacy practice, which may not necessarily be the ideal view of practice by others.

As with any industry, organizations with a larger market share tend to influence the market as a whole, and this may be occurring within community pharmacy practice in Canada. As a growing presence, corporate pharmacy has the potential to influence pharmacy practice beyond the corporate entities they represent. While not suggesting that corporate-owned pharmacies are inherently bad for the profession, the profit-oriented goals of business may come to overshadow the professional goals of pharmacy practice, both within corporate-owned pharmacies and beyond. Consideration should also focus on the impact of those managers, and pharmacists, who do not want to adhere to the corporate objectives of employers, being replaced by others who are willing.

There may be a need for a national organization – such at the National Association of Pharmacy Regulatory Authorities (NAPRA) – to implement national standards of community pharmacy practice, standards that regardless of ownership, or even individual preference, must be followed. While the days of restricting ownership to pharmacists is effectively gone, the obligation of pharmacy, as a profession, to society must not become secondary to the obligation of corporations to shareholders.

6.1 Future Research

Based on the results of this study, there are several areas that merit further research. First off, the dependent variables of age, gender, region and years with employer are areas that appear to impact responses. Therefore, future research could explore these concepts to examine whether these four areas have more to do with role orientation, autonomy and such than ownership type. It may be that pharmacists from different age groups or genders, for example, choose to practice in one environment over another due to personal preferences, and therefore a common vision, or culture, may draw pharmacists into the different ownership structures that suit the individual. Moreover, the distinct cultures that exist within the broad cultural group of community pharmacy is an area of inquiry that warrants further attention.

As stated above, the questionnaire did not include all desired areas of inquiry. For instance, job satisfaction, role strain and role ambiguity are areas of inquiry that deserve attention, particularly as they relate to the practice environment. These areas may in fact show that despite reduced autonomy, control and decision-making capabilities, those practicing in a corporate pharmacy are satisfied with their job.

While only touched on briefly in the literature, the question of professional and business ethics would be a worthy area of inquiry. This may be accomplished, for instance, by presenting pharmacists and/or pharmacy managers with various scenarios regarding practice and ask them to respond.

A lot of rich data was collected via the interviews that could be used to form the basis of a future study of pharmacists to explore concepts and results presented in this study. While pharmacy managers may have a more intimate connection to both the professional and business aspects of practice due to their position, pharmacists also experience this dichotomy daily. Therefore, qualitative data collection, through such method as focus groups, may bring about a better understanding of this dichotomy for pharmacists and serve as a platform to further inform pharmacy practice research.

1. Chappell N, Barnes G. Professional and Business Role Orientations Among Practicing Pharmacists. *Social Science and Medicine.* 1984;18(2):103-110.

2. Bissell P, Traulsen J, Haugbolle L. How Relevant is Marxist Sociology for Pharmacy Practice Research? *The International Journal of Pharmacy Practice.* 2002;10:127-140.

3. Harding G, Taylor K. Pharmacy as a Profession. In: Taylor K, Harding G, eds. *Pharmacy Practice*. New York, NY: Taylor & Francis; 2001:188-201.

4. Hepler C. Clinical Pharmacy, Pharmaceutical Care, and the Quality of Drug Therapy. *Pharmacotherapy.* 2004;24(11):1491-1498.

5. Taylor K, Nettleton S, Harding G. *Sociology for Pharmacists*. 2nd ed. New York, NY: Taylor & Francis; 2003.

6. Zellmer W. Unresolved Issues in Pharmacy. *American Journal of Health-System Pharmacy.* 2005;62:259-265.

7. Amsler M, Murray M, Tierney W, et al. Pharmaceutical Care in Chain Pharmacies: Beliefs and Attitudes of Pharmacists and Patients. *Journal of the American Pharmaceutical Association.* 2001;41(6):850-855.

8. Rogers. *Pharmacy Trends & Insights 2005.* Toronto, ON 2005.

9. Beales J, Austin Z. The Pursuit of Legitimacy and Professionalism: The Evolution of Pharmacy in Ontario. *Pharmaceutical Historian.* 2006;36(2):22-27.

10. Taylor K, Harding G. Corporate Pharmacy: Implications for the Pharmacy Profession, Researchers and Teachers. *Pharmacy Education.* 2003;3(3):141-147.

11. Resnik D, Ranelli P, Resnik S. The Conflict Between Ethics and Business in Community Pharmacy: What About Patient Counseling? *Journal of Business Ethics.* 2000;28:179-186.

12. Muzzin L, Brown G, Hornosty R. Professional Ideology in Canadian Pharmacy. *Health and Canadian Society.* 1993;1(2):319-345.

13. Sundaram A, Inkpen A. The Corporate Objective Revisited. *Organization Science.* 2004;15(3):350-363.

14. CPhA. *Pharmacists and Primary Health Care.* Ottawa, ON: Canadian Pharmacists Association; May 2004.

15. Clouse E. Marketing the Pharmacist as a Community Health Specialist. *Journal of Pharmaceutical Marketing and Management.* 1989;3(3):77-89.

16. Sleath B, Campbell W. American Pharmacy: A Profession in the Final Stage of Dividing? *Journal of Pharmaceutical Marketing and Management.* 2001;14(1):1-25.

17. Quinney E. Adjustment to Occupational Role Strain: The Case of Retail Pharmacy. *Southwestern Social Science Quarterly.* 1964;44(3):367-376.

18. Taylor K, Harding G. Does Corporate Pharmacy Threaten Evidence-based Practice and Policy? *The Pharmaceutical Journal.* 2003;270:222.

19. Bain D. Rationalisation Provides More Time for Professional Services. *New Zealand Pharmacy.* 1998;18(8):38.

20. Muzzin L, Brown G, Hornosty R. Consequences of Feminization of a Profession: The Case of Canadian Pharmacy. *Women & Health.* 1994;21(2/3):39-56.

21. Cooksey J, Knapp K, Walton S, Cultice J. Challenges to the Pharmacist Profession From Escalating Pharmaceutical Demand. *Health Affairs.* 2002;21(5):182-188.

22. Doucette W, Kreling D, Schommer J, Gaither C, Mott D, Pedersen C. Evaluation of Community Pharmacy Service Mix: Evidence from the 2004 National Pharmacist Workforce Study. *Journal of the American Pharmacists Association.* 2006;46(3):348-355.

23. Harding G, Taylor K. The McDonaldisation of Pharmacy. *The Pharmaceutical Journal.* 2000;265:602.

24. Pellegrino E. The Commodification of Medical and Health Care: The Moral Consequences of a Paradigm Shift from a Professional to a Market Ethic. *Journal of Medicine and Philosophy.* 1999;24(3):243-266.

25. Harding G, Taylor K. Responding to Change: The Case of Community Pharmacy in Great Britain. *Sociology of Health and Illness.* 1997;19(5):547-560.

26. Hornosty R, Coulas G. The Feminization of Pharmacy: Is the Analysis Right? *Canadian Pharmaceutical Journal.* 1988;128:93-98.

27. Guirguis L, Chewning B. Role Theory: Literature Review and Implications for Patient-Pharmacist Interactions. *Research in Social and Administrative Pharmacy.* 2005;1:483-507.

28. Zellmer W. Searching for the Soul of Pharmacy. *American Journal of Health-System Pharmacy.* 1996;53:1911-1916.

29. Gubbins T, Rascati K. Satisfaction with Management and Overall Job Satisfaction of Texas Chain Store Pharmacists. *Journal of Pharmaceutical Marketing and Management.* 1992;6(3):59-74.

30. Lahoz M, Mason H. Burnout Among Pharmacists. *American Pharmacy.* 1990;NS30(8):28-32.

31. Grasha AF. Pharmacy Workload: The Causes and Confusion Behind Dispensing Errors. *Canadian Pharmaceutical Journal.* 2001;134 (3):26-35.

32. Mott D. Pharmacist Job Turnover, Length of Service, and Reasons for Leaving, 1983-1997. *American Journal of Health-System Pharmacy.* 2000;57:975-984.

33. MacKeigan L, McGhan W. Person-Role Conflict in Pharmacists: Its Relationship to Job Scope, Need for Achievement, and Propensity to Leave an Organization. *Journal of Pharmaceutical Marketing and Management.* 1988;2(4):3-22.

34. Denzin N, Mettlin C. Incomplete Professionalization: The Case of Pharmacy. *Social Forces.* 1968;46(3):375-381.

35. Young T, Prichard K. Sociological Analysis of Pharmacy as a Quasi-profession. *Free Inquiry in Creative Sociology.* 1985;13(1):63-66.

36. McCormack T. The Druggists' Dilemma: Problems of a Marginal Occupation. *American Journal of Sociology.* 1956;61:308-315.

37. Gajduschek G. Bureaucracy: Is it Efficient? Is it Not? Is that the Question? - Uncertainty Reduction: An Ignored Element of Bureaucratic Rationality. *Administration & Society.* 2003;34(6):700-723.

38. Weber M. *Economy and Society: An Outline of Interpretive Sociology*. New York, NY: Bedminster Press; 1968 (1921).

39. Rushing W. Profit and Nonprofit Orientations and the Differentiations-Coordination Hypothesis for Organizations: A Study of Small General Hospitals. *American Sociological Review.* 1976;41:676-691.

40. Mintzberg H. Organization Design: Fashion or Fit? *Harvard Business Review.* 1981;59(1):103-116.

41. Fried B, Deber R, Leatt P. Corporatization and Deprivatization of Health Services in Canada. In: Salmon J, ed. *The Corporate Transformation of Health Care Part I - Issues & Directions* Amityville, NY: Baywood Publishing Company, Inc.; 1990:167-186.

42. McKinlay J, Stoeckle J. Corporatization and the Social Transformation of Doctoring. In: Salmon J, ed. *The Corporate Transformation of Health*

Care Part I - Issues & Directions. Amityville, NY: Baywood Publishing Company, Inc.; 1990:133-149.

43. Kalberg S. Max Weber's Types of Rationality: Cornerstones for the Analysis of Rationalization Processes in History. *American Journal of Sociology.* 1980;85(5):1145-1179.

44. Martin A. *The History of Pharmacy in Canada.* Vancouver, BC: University of British Columbia; 1954.

45. Arbeit S. *The Occupational Identity of the Retail Pharmacist: An Inquiry into its Nature, Correlates, and Consequences* [Dissertation]. Buffalo, NY: Pharmacy, State University of New York at Buffalo; 1971.

46. Garr M. *The Rhetoric of Professionalism: The Professional Identity of Pharmacists*. Bloomington, IN: Sociology, Indiana University; 1984.

47. Association CP. *A Brief History of Pharmacy in Canada*. Ottawa, ON: Canadian Pharmaceutical Association; 1967.

48. Sonnedecker G. *Kremers and Urdang's History of Pharmacy*. 4 ed. Toronto, ON: J.B. Lippincott Company; 1976.

49. Schommer J, Pedersen C, Worley M, et al. Provision of Risk Management and Risk Assessment Information: The Role of the Pharmacist. *Research in Social and Administrative Pharmacy.* 2006;2:458-478.

50. Nichols-English G. Marketing and Branding the Pharmacy Profession. Augusta, GA; 2005.

51. Nichols-English G. Lay People and Health Professionals' Awareness of and Value for Pharmaceutical Care. *Journal of Pharmaceutical Marketing and Management.* 2002;15(1):31-51.

52. Traulsen J, Almarsdottir A. Pharmaceutical Policy and the Pharmacy Profession. *Pharmacy World Science.* 2005;27:359-363.

53. Hepler C, Strand L. Opportunities and Responsibilities in Pharmaceutical Care. *American Journal of Hospital Pharmacy.* 1990;47:533-543.

54. Hepler C. The Third Wave in Pharmaceutical Education: The Clinical Movement. *American Journal of Pharmaceutical Education.* 1987;51:369-385.

55. Holland R, Nimmo C. Transitions, Part 1: Beyond Pharmaceutical Care. *American Journal of Health-System Pharmacy.* 1999;56:1758-1764.

56. Holland R, Nimmo C. Transitions in Pharmacy Practice, Part 3: Effecting Change - The Three-Ring Circus. *American Journal of Health-System Pharmacy.* 1999;56:2235-2241.

57. Nimmo C, Holland R. Transitions in Pharmacy Practice, Part 2: Who Does What and Why. *American Journal of Health-System Pharmacy*. 1999;56:1981-1987.

58. Nimmo C, Holland R. Transitions in Pharmacy Practice, Part 4: Can a Leopard Change Its Spots? *American Journal of Health-System Pharmacy.* 1999;56:2458-2462.

59. Nimmo C, Holland R. Transitions in Pharmacy Practice, Part 5: Walking the Tightrope of Change. *American Journal of Health-System Pharmacy.* 2000;57:64-72.

60. Matthews A. History of Pharmacy: The Initial Impact. *Canadian Pharmaceutical Journal.* 1984;117:578-583.

61. Muzzin L, Hornosty R. Formal and Informal Training in Pharmacy, Ontario, Canada, 1917-1927. *Pharmacy in History.* 1994;36(2):71-84.

62. Bond C. Pharmacists and the Multi-disciplinary Health Care Team. In: Taylor K, Harding G, eds. *Pharmacy Practice*. New York, NY: Taylor & Francis 2001:250-269.

63. Romanow R. *Building on Values: The Future of Health Care in Canada - Final Report.* Ottawa, ON: National Library of Canada; 2002.

64. (CACDS) CAoCDS. *The Integration of Community Pharmacy into Primary Health Care in Canada.* Toronto, ON 2005.

65. Thrall J. Prevalence and Costs of Chronic Disease in a Health Care System Structured for Treatment of Acute Illness. *Radiology.* 2005;235:9-12.

66. Coburn D. Canadian Medicine: Dominance or Proletarianization? *The Milbank Quarterly.* 1988;66(2):92-116.

67. Emerson L. Innovative Professional Pharmacy Services: Experiences from Down-under. Paper presented at: Global Innovations in Pharmacy; September 20, 2006; Toronto, ON.

68. Roberts A. *Practice Change in Community Pharmacy: The Implementation of Cognitive Services*. Sydney, AU: Faculty of Pharmacy, University of Sydney; 2005.

69. Roberts A, Benrimoj S, Chen T, Williams K, Aslani P. *Quantification of Facilitators to Accelerate Uptake of Cognitive Pharmaceutical Services (CPS) in Community Pharmacy* Sydney, AU: University of Sydney; 2004.

70. Roberts A, Benrimoj S, Chen T, et al. *An Investigation into Business and Professional Facilitators for Change for the Pharamcy Profession in Light of the Third Guild/Government Agreement.* Sydney, AU: University of Sydney; 2003.

71. Roberts A, Hopp T, Sorensen E, et al. Understanding Practice Change in Community Pharmacy: A Qualitative Research Instrument Based on Organisational Theory. *Pharmacy World Science.* 2003;25(5):227-234.

72. Tsuyuki R, Schindel T. *Leading Change in Pharmacy Practice: Fully Engaging Pharmacists in Patient-Oriented Healthcare.* Edmonton, AB: University of Alberta; December 2004.

73. Bertin R. Emerging Roles. In: Smith M, Wertheimer A, Fincham J, eds. *Pharmacy and the U.S. Health Care System*. Binghamton, NY: The Haworth Press, Inc.; 2005:133-146.

74. Snella K, Sachdev G. A Primer for Developing Pharmacist-Managed Clinics in the Outpatient Setting. *Pharmacotherapy.* 2003;23(9):1153-1166.

75. Pai A. Integration of a Clinical Community Pharmacist Position: Emphasis on Workflow Design. *Journal of the American Pharmacists Association.* 2005;45(3):400-403.

76. Reilly V, Cavanagh M. The Clinical and Economic Impact of a Secondary Heart Disease Prevention Clinic Jointly Implemented by a Practice Nurse and Pharmacist. *Pharmacy World Science.* 2003;25(6):294-298.

77. Singhal P, Raisch D, Gupchup G. The Impact of Pharmaceutical Services in Community and Ambulatory Care Settings: Evidence and Recommendations for Future Research. *The Annals of Pharmacotherapy.* 1999;33:1336-1355.

78. Watman G, Jepson M. Patient Screening by a Community Pharmacist Located in a GP Practice. *Journal of Social and Administrative Pharmacy.* 2002;19(3):105-114.

79. Borenstein J, Graber G, Saltiel E, et al. Physician-Pharmacist Comanagement of Hypertension: A Randomized, Comparative Trial. *Pharmacotherapy.* 2003;23(2):209-216.

80. Bogden P, Abbott R, Williamson P, Onopa J, Koontz L. Comparing Standard Care with a Physician and Pharmacist Team Approach for Uncontrolled Hypertension. *Journal of General Internal Medicine.* 1998;13:740-745.

81. Bogden P, Koontz L, Williamson P, Abbott R. The Physician and Pharmacist Team: An Effective Approach to Cholesterol Reduction. *Journal of General Internal Medicine.* 1997;12:158-164.

82. Irons B, Lenz R, Anderson S, Wharton B, Habeger B, Anderson H. A Retrospective Cohort Analysis of the Clinical Effectiveness of a

Physician-Pharmacist Collaborative Drug Therapy Management Diabetes Clinic. *Pharmacotherapy.* 2002;22(10):1294-1300.

83. Gattis W, Hasselblad V, Whellan D, O'Connor C. Reduction in Heart Failure Events by the Addition of a Clinical Pharmacist to the Heart Failure Management Team: Results of the Pharmacist in Heart Failure Assessment Recommendation and Monitoring (PHARM) Study. *Archives of Internal Medicine.* 1999;159(16):1939-1945.

84. Tsuyuki R, Johnson J, Teo K, et al. A Randomized Trial of the Effect of Community Pharmacist Intervention on Cholesterol Risk Management - The Study of Cardiovascular Risk Intervention by Pharmacists (SCRIP). *Archives of Internal Medicine.* 2002;162:1149-1155.

85. Tsuyuki R, Olson K, Dubyk A, Schindel T, Johnson J. Effect of Community Pharmacist Intervention on Cholesterol Levels in Patients at High Risk of Cardiovascular Events: The Second Study of Cardiovascular Risk Intervention by Pharmacists (SCRIP-plus). *The American Journal of Medicine.* 2004;116:130-133.

86. Jorgenson D. The Future of the Profession in Primary Care. *Representative Board of Saskatchewan Pharmacists Annual General Meeting*. Prince Albert, SK; 2006.

87. Canada H. Canada Health Act Website. www.hc-sc.gc.ca/medicare/home.htm Accessed June 15, 2005.

88. Salmon J. A Perspective on the Corporate Transformation of Health Care. *International Journal of Health Services.* 1995;25(1):11-42.

89. Salmon J. The Professional and Corporate Context: Trends in the United States. In: Davis P, ed. *Contested Ground: Public Purpose and Private Interest in the Regulation of Prescription Drugs*. New York, NY: Oxford University Press; 1996:141-158.

90. Dube G. *Competing for the Retail Drug Market.* Ottawa, ON: Statistics Canada; September 2006. 11-621-MIE - No. 048.

91. *Self-regulated Professions - Balancing Competition and Regulation.* Gatineau, PQ: Competition Bureau of Canada; 2007.

92. Hibbert D, Bissell P, Ward P. Consumerism and Professional Work in the Community Pharmacy. *Sociology of Health and Illness.* 2002;24(1):46-65.

93. McArthur J, Moore F. The Two Cultures and the Health Care Revolution: Commerce and Professionalism in Medical Care. *Journal of the American Medical Association.* 1997;277(12):958-989.

94. Stoeckle J. From Service to Commodity: Corporatization, Competition, Commodification, and Customer Culture Transforms Health Care. *Croatian Medical Journal.* 2000;41(2):141-143.

95. Pellegrino E, Thomasma D. *For the Patient's Good: The Restoration of Beneficence in Health Care*. New York, NY: Oxford University Press; 1988.

96. Ray M. Health Care and Human Caring in Nursing: Why the Moral Conflict Must be Resolved. *Family and Community Health.* 1987;10:35-43.

97. Have H. Re-evaluating Professional Autonomy in Health Care. *Theoretical Medicine.* 2000;21:503-513.

98. Ritzer G. Professionalization, Bureaucratization and Rationalization: The Views of Max Weber. *Social Forces.* 1975;53(4):627-634.

99. Ritzer G, Walczak D. Rationalization and the Deprofessionalization of Physicians. *Social Forces.* 1988;67(1):1-22.

100. McDonald C. Institutional Transformation: The Impact of Performance Measurement on Professional Practice in Social Work. *Social Work & Society.* 2006;4(1):25-37.

101. Ritzer G. *The McDonaldization of Society: Revised New Century Edition*. Thousand Oaks, CA Pine Forge Press; 2004.

102. Birenbaum A. Reprofessionalization in Pharmacy. *Social Science and Medicine.* 1982;16:871-878.

103. Harding G, Taylor K. Power, Status and Pharmacy. *The Pharmaceutical Journal.* 2002;269:440-442.

104. Karreman D, Sveningsson S, Alvesson M. The Return of the Machine Bureaucracy? *International Studies of Management and Organization.* 2002;32(2):70-92.

105. Parasuraman A, Zeithaml V. Understanding and Improving Service Quality: A Literature Review and Research Agenda. In: Weitz B, Wensley R, eds. *Handbook of Marketing*. Thousand Oaks, CA: Sage Publications Inc.; 2002:339-367.

106. Parasuraman A, Zeithaml V, Berry L. A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing* 1985;49(Fall):41-50.

107. Parasuraman A, Zeithaml V, Berry L. SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing.* 1988;64(1):12-40.

108. Levitt T. Production-line Approach to Service. *Harvard Business Review.* 1972;50(5):41-52.

109. Levitt T. The Industrialization of Service. *Harvard Business Review.* 1976;54:63-74.

110. Mintzberg H. Covert Leadership: Notes on Managing Professionals. *Harvard Business Review.* 1998;76(6):140-147.

111. Morris T, Empson L. Organisation and Expertise: An Exploration of Knowledge Bases and the Management of Accounting and Consulting Firms. *Accounting, Organizations and Society.* 1998;23(5/6):609-624.

112. Kanter R. *The Future of Bureaucracy and Hierarchy in Organizational Theory: A Report from the Field.* Boston, MA: Harvard Business School; November 1989. 90-035.

113. Mintzberg H. *The Structuring of Organizations: A Synthesis of the Research*. Englewood Cliffs, NJ: Prentice-Hall, Inc.; 1979.

114. Aldrich H. *Organizations and Environments*. Englewood Cliffs, NJ: Prentice-Hall, Inc.; 1979.

115. Gerth H, Mills C. *Essays in Sociology: Max Weber*. New York, NY: Oxford University Press; 1958.

116. Hall R. The Concept of Bureaucracy: An Empirical Assessment. *American Journal of Sociology.* 1963;69(1):32-40.

117. McKinlay J, Arches J. Towards the Proletarianization of Physicians. *International Journal of Health Services.* 1985;15(2):161-195.

118. Scott W. Professionals in Bureaucracies - Areas of Conflict. In: Vollmer H, Mills D, eds. *Professionalization*. Englewood Cliffs, NJ: Prentice-Hall, Inc.; 1966:265-275.

119. Carroll N, Jowdy A. Professionals in Bureaucracies: A Study of the Effect of Employment in Chain Organizations on Pharmacists' Job Satisfaction. *Journal of Pharmaceutical Marketing and Management.* 1986;1(1):27-39.

120. Hall R. *Organizations: Structure and Process*. Englewood Cliffs, NJ: Prentice-Hall; 1972.

121. Engel G. The Effect of Bureaucracy on the Professional Autonomy of the Physician. *Journal of Health and Social Behavior.* 1969;10(1):30-41.

122. Engel G. Professional Autonomy and Bureaucratic Organization. *Administrative Science Quarterly.* 1970;15(1):12-21.

123. Sorensen J, Sorensen T. The Conflict of Professionals in Bureaucratic Organizations. *Administrative Science Quarterly.* 1974;19(1):98-106.

124. Marx K. *Capital: A Critique of Political Economy*. New York: International Press; 1967.

125. Larson M. Proletarianization and Educated Labor. *Theory & Society.* 1980;9(1):131-175.

126. Clark B, Grussing P, Mrtek R. Pharmacist Role Perceptions in Large Chain Pharmacy Organizations. *Journal of Pharmaceutical Marketing and Management.* 1994;8(2):59-71.

127. Sitkin S, Sutcliffe K. Dispensing Legitimacy: The Influence of Professional, Organizational, and Legal Controls on Pharmacist Behavior. *Research in the Sociology of Organizations.* 1991;8:269-295.

128. Scott W. Reactions to Supervision in a Heteronomous Professional Organization. *Administrative Science Quarterly.* 1965;10:65-81.

129. Blau P, Scott W. *Formal Organizations: A Comparative Approach*. San Francisco, CA: Chandler Publishing Company; 1962.

130. Rizzo J, House R, Lirtzman S. Role Conflict and Ambiguity in Complex Organizations. *Administrative Science Quarterly.* 1970;15(2):150-163.

131. Wallace J. Organizational and Professional Commitment in Professional and Nonprofessional Organizations. *Administrative Science Quarterly.* 1995;40:228-255.

132. Latif D. Ethical Cognition and Selection-Socialization in Retail Pharmacy. *Journal of Business Ethics.* 2000;25:343-357.

133. Latif D. The Relationship Between Pharmacists' Tenure in the Community Setting and Moral Reasoning. *Journal of Business Ethics.* 2001;31:131-141.

134. Davis-Blake A, Pfeffer J. Just a Mirage: The Search for Dispositional Effects in Organizational Research. *Academy of Management Review.* 1989;14(3):385-400.

135. Jansen E, Von Glinow M. Ethical Ambivalence and Organizational Reward Systems. *Academy of Management Review.* 1985;10(4):814-822.

136. Sitkin S, Sutcliffe K. *Dispensing Legitimacy: The Influence of Professional, Organizational, and Legal Controls on Pharmacist Behavior.* Austin, TX: University of Texas at Austin; August 1989. 89/90-4-6.

137. Latif D. Assessing the Moral Reasoning of American Pharmacy Students. *Pharmacy Education.* 2002;2(4):177-183.

138. Vitell S, Rawwas M, Festervand T. The Business Ethics of Pharmacists: Conflicts, Practices and Beliefs. *Journal of Business Ethics.* 1991;10:295-301.

139. Perkin H. *The Rise of Professional Society: England Since 1880*. New York, NY: Routledge; 2002.

140. Freidson E. The Theory of Professions: State of the Art. In: Dingwall R, Lewis P, eds. *The Sociology of the Professions*. Hong Kong: The MacMillan Press Ltd; 1983:19-37.

141. Torrance G. Socio-Historical Overview: The Development of the Canadian Health System. In: Coburn D, D'Arcy C, Torrance G, eds. *Health and Canadian Society: Sociological Perspectives*. 3rd ed. Toronto, ON: University of Toronto Press; 1998:3-22.

142. Jamous H, Peloille B. Changes in the French University Hospital System. In: Jackson JA, ed. *Professions and Professionalisation*. Cambridge, UK: Cambridge University Press; 1970.

143. Unknown. Is Medicine Still a Profession? *Canadian Medical Association Journal.* 2006;174(6):743.

144. Gould S, Considine J. When Two Professions Clash: The Marketing and Consumer Behavior Implications of the Physician/Pharmacist Dispensing Debate. *Health Marketing Quarterly.* 1988;5(1/2):161-169.

145. Avery A, Pringle M. Extended Prescribing by UK Nurses and Pharmacists. *British Medical Journal.* 2005;331:1154-1155.

146. Eggertson L, Sibbald B. Privacy Issues Raised Over Plan B: Women Asked for Name, Addresses, Sexual History. *Canadian Medical Association Journal.* 2005;173(12):1435-1436.

147. Cowan P. SMA Give Pharmacists' Proposal Cool Reception - Expanded Powers 'A Recipe for Disaster'. *Regina Leader-Post.* November 6, 2006.

148. Tanner J, Cockerill R. Gender, Social Change, and the Professions: The Case of Pharmacy. *Sociological Forum.* 1996;11(4):643-660.

149. Friedman M. The Social Responsibility of Business is to Increase Its Profits. *The New York Times Magazine.* Vol 13; 1970:32.

150. Zeithaml V, Berry L, Parasuraman A. The Behavioral Consequences of Service Quality. *Journal of Marketing.* 1996;60(April):31-46.

151. Turner B. *Medical Power and Social Knowledge*. Thousand Oaks, CA: Sage Publications Inc; 1995.

152. Kotler P, Hayes T, Bloom P. *Marketing Professional Services: Forward-thinking Strategies for Boosting Your Business, Your Image, and Your Profits*. 2 ed. Paramus, NJ: Prentice Hall; 2002.

153. Bergthold L. Business and the Pushcart Vendors in an Age of Supermarkets. In: Salmon J, ed. *The Corporate Transformation of Health Care Part I - Issues & Directions* Amityville, NY: Baywood Publishing Company, Inc.; 1990:37-54.

154. Havighurst C. Starr on the Corporatization and Commodification of Health Care: The Sequel. *Journal of Health Politics, Policy and Law.* 2004;29(4-5):947-967.

155. Zoloth-Dorfman L, Rubin S. The Patient as Commodity: Managed Care and the Question of Ethics. *The Journal of Clinical Ethics.* 1995;6(4):339-357.

156. Andrews M. Wal-Mart Rolls Out $4 Prescriptions. *U.S. News & World Report.* Vol 141; 2006:75.

157. Stuart T. $4 Scrips Take Off in US. *Pharmacy Post.* Vol 14; 2006:1.

158. Evans J, Evans E, Jacobs T. Impact of Four Dollar Prescription Programs on Prescribing Habits of Family Medicine Providers. *American Pharmacists Association Conference*. San Diego, CA; 2008.

159. Pereboom B. *A Situational Analysis of Human Resource Issues in the Pharmacy Profession in Canada.* Ottawa, ON: Peartree Solutions Inc.; 2001.

160. Reed R, Evans D. The Deprofessionalization of Medicine: Causes, Effects, and Responses. *Journal of the American Medical Association.* 1987;258(22):3279-3282.

161. Kermode-Scott B. Alberta Finalizes Steps for Additional Prescribing Authorization. www.pharmacygateway.ca/news/article.jsp?content=20080227_150033_7248. Accessed February 28, 2008.

162. Sinnema J. Pharmacists Get Power of Prescriptions. www.canada.com/components/print.aspx?id=6f9e1073-f053-a2b0-148c2d1d6a97. Accessed March 7, 2008.

163. Kronus C. Occupational Versus Organizational Influences on Reference Group Identification: The Case of Pharmacy. *Sociology of Work and Occupations.* 1976;3(3):303-331.

164. Ralph D, Langenbach M. Oklahoma Pharmacists' Explanations of Professional Satisfaction and Dissatisfaction. *Journal of Pharmaceutical Marketing and Management.* 1987;1(3):81-95.

165. Dillman DA. *Mail and Internet Surveys: The Tailored Design Method*. Second ed. New York City, New York: John Wiley & Sons, Inc.; 2000.

166. CACDS. *State of the Industry Report 2005.* Toronto, ON: Canadian Association of Chain Drug Stores; 2006.

167. Raosoft. Sample Size Calculator. http://www.raosoft.com/samplesize.html. Accessed March 14, 2007.

168. Schommer J, Pedersen C, Gaither C, Doucette W, Kreling D, Mott D. Pharmacists' Desired and Actual Times in Work Activities: Evidence of Gaps from the 2004 National Pharmacist Workforce Study. *Journal of the American Pharmacists Association.* 2006;46(3):340-347.

169. Kreling D, Doucette W, Mott D, Gaither C, Pedersen C, Schommer J. Community Pharmacists' Work Environments: Evidence from the 2004 National Pharmacist Workforce Study. *Journal of the American Pharmacists Association.* 2006;46(3):331-339.

170. Schack D, Hepler C. Modification of Hall's Professionalism Scale for Use with Pharmacists. *American Journal of Pharmaceutical Education.* 1979;43(2):98-104.

171. Nunnally J, Bernstein I. *Psychometric Theory*. Third ed. Toronto, ON: McGraw-Hill, Inc.; 1994.

172. Peter J. Reliability: A Review of Psychometric Basics and Recent Marketing Practices. *Journal of Marketing Research.* 1979;16(February):6-17.

173. Blenkinsopp A, Tann J, Platts A. A Method for Distinguishing Leading Edge Practitioners - A Case Study in Community Pharmacy. *Journal of Social and Administrative Pharmacy.* 1999;16(3/4):186-198.

174. Wilson B, Laschinger H. Staff Nurse Perception of Job Empowerment and Organizational Commitment. *Journal of Nursing Administration.* 1994;24(4S):39-47.

175. Senatra P. Role Conflict, Role Ambiguity, and Organizational Climate in a Public Accounting Firm. *The Accounting Review.* 1980;55(4):594-603.

176. Scott T, Mannion R, Davies H, Marshall M. The Quantitative Measurement of Organizational Culture in Health Care: A Review of the Available Instruments. *Health Services Research.* 2003;38(3):923-945.

177. Miller M, Ortmeier B. Factors Influencing the Delivery of Pharmacy Services. *American Pharmacy.* 1995;NS35(1):39-45.

178. CPhA. *Blueprint for Action for the Pharmacy Profession in Canada - Background Paper.* Ottawa, ON: Canadian Pharmacists Association; June 2006.

179. Germov J. Managerialism in the Australian Public Health Sector: Towards the Hyper-rationalisation of Professional Bureaucracies. *Sociology of Health and Illness.* 2005;27(6):738-758.

180. Creswell J. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, CA: Sage Publications, Inc.; 2003.

181. Mott D, Doucette W, Gaither C, Pedersen C, Schommer J. Pharmacists' Attitudes Towards Worklife: Results From a National Survey of Pharmacists. *Journal of the American Pharmacists Association.* 2004;44(3):326-336.

182. Blau G. The Measurement and Prediction of Career Commitment. *Journal of Occupational Psychology.* 1985;58:277-288.

183. Blau G. On Assessing the Construct Validity of Two Multidimensional Constructs - Occupational Commitment and Occupational Entrenchment. *Human Resource Management Review.* 2001;11:279-298.

184. Mills P, Hall J, Leidecker J, Margulies N. Flexiform: A Model for Professional Service Organizations. *Academy of Management Review.* 1983;8(1):118-131.

185. Aranya N, Ferris K. A Reexamination of Accountants' Organizational-Professional Conflict. *The Accounting Review.* 1984;59(1):1-15.

186. Grimes A, Berger P. Cosmopolitan-Local: Evaluation of the Construct. *Administrative Science Quarterly.* 1970;15(4):407-416.

187. Hall R. Professionalization and Bureaucratization. *American Sociological Review.* 1968;33(1):92-104.

188. Fagermoen M. Professional Identity: Values Embedded in Meaningful Nursing Practice. *Journal of Advanced Nursing.* 1997;25:434-441.

189. Snizek W. Hall's Professionalism Scale: An Empirical Reassessment. *American Sociological Review.* 1972;37:109-114.

190. Quinn RP, Shephard LJ. *The 1972-1973 Quality of Employment Survey.* Ann Arbor, MI: Institute of Social Research: University of Michigan; 1974.

191. Hornosty R. Subjective Role Orientation, Conflict and Satisfaction Among Pharmacy Students. *Journal of Social and Administrative Pharmacy.* 1990;7(1):14-25.

192. Ralph D. Pharmacist Satisfaction Study. Weatherford, OK; 2006:Questionnaire sent from Pharmacist Satisfaction Study.

193. Mott D, Pederson C, Doucette W, Gaither C, Schommer J. A National Survey of U.S. Pharmacists in 2000: Assessing Nonresponse Bias of a Survey Methodology. *American Association of Pharmaceutical Scientists Journal.* 2001;3(4 (article 33)).

194. Doucette W. Workforce Survey Instruments. Iowa City, IA; 2006:Provided questionnaires used in 2004 National Pharmacist Workforce Survey.

195. Kronus C. Occupational Values, Role Orientations, and Work Settings: The Case of Pharmacy. *The Sociological Quarterly.* 1975;16(2):171-183.

196. Murphy K, Davidshofer C. *Psychological Testing: Principles and Applications*. 6 ed. Upper Saddle River, NJ: Pearson Prentice Hall; 2005.

197. Fabrigar L, Wegener D, MacCallum R, Strahan E. Evaluating the Use of Exploratory Factor Analysis in Psychological Research. *Psychological Methods.* 1999;4:272-299.

198. Tabachnick B, Fidell L. *Using Multivariate Statistics*. 5 ed. Toronto, ON: Pearson Education, Inc.; 2007.

199. Dawis R. Scale Construction. *Journal of Counseling Psychology.* 1987;34(4):481-489.

200. Churchill G. A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research.* 1979;16(February):64-73.

201. Santos J. Cronbach's Alpha: A Tool for Assessing the Reliability of Scales. *Journal of Extension.* 1999;37(2).

202. Cronbach L. Coefficient Alpha and the Internal Structure of Tests. *Psychometrika.* 1951;16(3):297-334.

203. Norman G, Streiner D. *Biostatistics: The Bare Essentials*. 2 ed. New York, NY: Lewiston; 2000.

204. Mann P. *Introductory Statistics*. 5 ed. Hoboken, NJ: John Wiley & Sons, Inc.; 2004.

205. Churchill G, Iacobucci D. *Marketing Research: Methodological Foundations*. 8 ed. Fort Worth, TX: Harcourt College Publishers; 2002.

206. Churchill G, Peter J. Research Design Effects on the Reliability of Rating Scales: A Meta-Analysis. *Journal of Marketing Research.* 1984;21(November):360-375.

207. Oppenheim A. *Questionnaire Design, Interviewing, and Attitude Measurement*. New York, NY: Pinter Publishers; 1992.

208. Bisanz C. State of the Retail Chain Industry: Canadian Association of Chain Drug Stores; 2005.

209. Brown C, Lloyd K. Qualitative Methods in Psychiatric Research. *Advances in Psychiatric Treatment.* 2001;7:350-356.

210. Morse JM, Richards, L. *Readme First for a User's Guide to Qualitative Methods*. Thousand Oaks, CA: Sage Publications, Inc.; 2002.

211. Savage J. Ethnography and Health Care. *BMJ.* 2000;321:1400-1402.

212. Pope C, Mays N. Reaching the Parts Other Methods Cannot Reach: An Introduction to Qualitative Methods in Health Services Research. *BMJ.* 1995;311:42-45.

213. Creswell J. *Qualitative Inquiry and Research Design*. Thousand Oaks, CA: Sage Publications; 1998.

214. Maxwell J. *Qualitative Research Design: An Interactive Approach*. Thousand Oaks, CA: Sage Publications; 1996.

215. Safman R, Sobal J. Qualitative Sample Extensiveness in Health Education Research. *Health Education & Behavior.* 2004;31(1):9-21.

216. Britten N. Qualitative Research: Qualitative Interviews in Medical Research. *BMJ.* 1995;311:251-253.

217. Morse J, Field P. *Qualitative Research Methods for Health Professionals*. 2 ed. Thousand Oaks, CA: Sage Publications; 1995.

218. Smith F. Qualitative Interviews. *International Journal of Pharmacy Practice.* 1998;6:97-108.

219. Smith F. Triangulation. *The International Journal of Pharmacy Practice.* 1999;7:60-68.

220. Zelnio R, Nelson A, Beno C. Clinical Pharmaceutical Services in Retail Practice I: Pharmacists Willingness and Abilities to Provide Services. *Drug Intelligence and Clinical Pharmacy.* 1984;18:917-922.

221. Nelson A, Zelnio R, Beno C. Clinical Pharmaceutical Services in Retail Practice II: Pharmacists Willingness and Abilities to Provide Services. *Drug Intelligence and Clinical Pharmacy.* 1984;18:992-996.

222. Kvale S. *InterViews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks, CA: SAGE Publications Inc.; 1996.

223. Taylor S, Bogdan R. *Introduction to Qualitative Methods: The Search for Meanings*. 2 ed. Toronto, ON: John Wiley & Sons; 1984.

224. Silverman D. *Doing Qualitative Research*. 2 ed. Thousand Oaks, CA: SAGE Publications Inc.; 2005.

225. Bogdan R, Biklen S. *Qualitative Research for Education: An Introduction to Theory and Methods*. 4 ed. Boston, MA: Allyn & Bacon; 2003.

226. Case D. *The Community's Toolbox" The Idea, Methods and Tools for Participatory Assessment, Monitoring and Evaluation in Community Forestry.* Rome: Food and Agriculture Organization of the United Nations; 1990.

227. Kidd P, Parshall M. Getting the Focus and the Group: Enhancing Analytical Rigor in Focus Group Research. *Qualitative Health Research.* 2000;10(3):293-308.

228. Cohen J, Kabat H, Knapp D, Koda-Kimble M, Rutledge C. Pharmaceutical Education and the Pharmacy Workforce. Should We Exapnd our Programs? Report of the AACP Argus Commission 1999-2000. *American Journal of Pharmaceutical Education.* 2000;64:4S-7S.

229. Woodward J, Merryman J, Kirk K. Management Aspiration and Gender Differences in Pharmacy Students. *Journal of Pharmaceutical Marketing and Management.* 1993;7(3):3-24.

230. Brown C, Cantu R, Corbell Z, Roberts K. Attitudes and Interests of Pharmacists Regarding Independent Pharmacy Ownership. *Journal of the American Pharmacists Association.* 2007;47(2):174-180.

231. Curtiss F, Hammel R, Johnson C. Psychological Strain and Job Dissatisfaction in Pharmacy Practice: Institutional versus Community Practitioners. *American Journal of Hospital Pharmacy.* 1978;35:1516-1520.

232. Rickert D. Professionalization and the Design of Work: A Study of Pharmacists. *Health Care Supervisor.* 1988;6(4):29-34.

233. Schulz R, Baldwin H. Chain Pharmacist Turnover. *Journal of Social and Administrative Pharmacy.* 1990;7(1):26-33.

234. Brown C, Cantu R, Corbell Z, Roberts K. *Examining the Attitudes and Interests of Pharmacists Regarding Pharmacy Ownership.* Austin, TX: University of Texas, Pharmacy Administration Division, College of Pharmacy; May 2005. 78712-1074.

235. Iyer S, Doucette W. The Influence of Environmental Attributes on the Relationship Between Entrepreneurial Orientation and Performance in Independent Community Pharmacies. *Journal of Pharmaceutical Marketing and Management.* 2003;15(2):25-46.

236. Jambulingam T, Kathuria R, Doucette W. Entrepreneurial Orientation as a Basis for Classification Within a Service Industry: The Case of Retail Pharmacy Industry. *Journal of Operations Management.* 2005;23:23-42.

237. Ortiz M, Walker W, Thomas R. Community Pharmacists' Professional Role Orientation: Comparison of Self-derived Norms with Perceived Group Norms. *Journal of Social and Administrative Pharmacy.* 1992;9(3):97-103.

238. Rickert D. The Relationship Between Pharmacy Practice Setting and Job Design. *Journal of Pharmaceutical Marketing and Management.* 1988;2(3):149-163.

239. Wolfgang A. Job Stress and Dissatisfaction Among Employee Pharmacists: The Role of Coworker Social Support and Powerlessness. *Journal of Pharmaceutical Marketing and Management.* 1994;9(1):19-32.

240. Gilligan C. *In a Different Voice: Psychological Theory and Women's Development*. Cambridge, MA: Harvard University Press; 1982.

241. Austin Z, Gregory P, Martin J. Negotiation of Interprofessional Culture Shock: The Experiences of Pharmacists who Become Physicians. *Journal of Interprofessional Care.* 2007;21(1):83-93.

242. Phipps P. Industrial and Occupational Change in Pharmacy: Prescription for Feminization. In: Reskin B, Roos P, eds. *Job Queues, Gender Queues: Explaining Women's Inroads into Male Occupations*. Philadelphia, PA: Temple University Press; 1990:111-127.

243. Organ D, Greene C. The Effects of Formalization on Professional Involvement: A Compensatory Process Approach. *Administrative Science Quarterly.* 1981;26(2):237-252.

244. Podsakoff P, Williams L, Todor W. Effects of Organizational Formalization on Alienation Among Professionals and Nonprofessionals. *Academy of Management Journal.* 1986;29(4):820-831.

245. Felix S. Frustrated Independents Organize in Ontario. *Pharmacy Post.* Vol 16; 2008:1 & 11.

246. SDM. *Shoppers Drug Mart Annual Report.* Toronto, ON: Shoppers Drug Mart; 2007.

247. SDM. *Shoppers Drug Mart Corporation Annual Information Form for the Fiscal Year Ended December 30, 2006.* Toronto, ON: Shoppers Drug Mart; March 20 2007.

248. CACDS. *State of the Industry Report 2006.* Toronto, ON: Canadian Association of Chain Drug Stores; 2007.

249. Byles I. $25 Million Commitment to U of A Included Largest Even One-time Gift to a Canadian Pharmacy School. *Express News* [http://www.expressnews.ualberta.ca/article.cfm?id=7927. Accessed February 14, 2008.


APPENDICIES

APPENDIX I – QUESTIONNAIRE

UNIVERSITY OF SASKATCHEWAN

Managing a Community Pharmacy in Canada: The Practice Experiences of Community Pharmacy Managers

Jason Perepelkin, 2007 ©
College of Pharmacy and Nutrition
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Your Experiences as a Pharmacy Manager

The following questions pertain to professional practice standards and you as a pharmacist. Please check your level of agreement with each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My pharmacy colleagues and I should be the only ones who determine and set standards for our professional practice	☐	☐	☐	☐	☐
The employer should establish specific guidelines for making professional decisions in my work	☐	☐	☐	☐	☐
The only professional practice standards I will accept are those established by my profession	☐	☐	☐	☐	☐
The opportunity to exercise professional judgement in my work should be determined by the employer	☐	☐	☐	☐	☐
Only another pharmacist is qualified to judge the competence of my professional work	☐	☐	☐	☐	☐
I would depart from the employer's policies when I judge it professionally necessary	☐	☐	☐	☐	☐
The employer has the right to influence my professional decisions because the employer pays my salary	☐	☐	☐	☐	☐
The public should be allowed input into the development of standards for professional competence which guide my practice	☐	☐	☐	☐	☐
The employer has no right to place limitations on the decisions I make concerning professional matters	☐	☐	☐	☐	☐
I would modify the professional practice standards which guide my practice only in response to recommendations made by my profession	☐	☐	☐	☐	☐
A basic problem in community pharmacy practice is the intrusion of standards/policies other than those which are truly professional	☐	☐	☐	☐	☐
There is little professional autonomy as a pharmacist with this employer	☐	☐	☐	☐	☐

Below are statements centred on your role as pharmacy manager. Please check your answer to the corresponding statements below.

As pharmacy manager:	Never	Seldom	Half the Time	Usually	Always
You have final approval on implementing a new professional service	☐	☐	☐	☐	☐
If you feel it necessary, you are authorized to alter company policies to specifications on patient care to better suit the needs of your patients	☐	☐	☐	☐	☐
You have access to all information used to arrive at decisions on policies regarding *clinical practice* in your pharmacy	☐	☐	☐	☐	☐
You have access to all information used to arrive at decisions on policies regarding *business practices* in your pharmacy	☐	☐	☐	☐	☐
You are free to initiate research projects or educational programs such as cardiovascular risk reduction	☐	☐	☐	☐	☐
You are free to participate in research projects or educational programs related to your patient population	☐	☐	☐	☐	☐

Below are questions in regard to your position as pharmacy manager. Please check the answer that best corresponds with your experience.

	None	Little	Moderate	Lots
How much freedom does your position allow you as to how you do your work?	☐	☐	☐	☐
How much does your position allow you to make most decisions on your own?	☐	☐	☐	☐
How much does your position allow you to take part in making decisions that affect you?	☐	☐	☐	☐
How much is your position one where you have a lot of say over what happens in your pharmacy?	☐	☐	☐	☐

Below is a composite list of elements that characterise pharmacy as a profession. As a member of the pharmacy profession, check the phrase that best describes the degree of your satisfaction/dissatisfaction with each element as it applies to *your* pharmacy career. Please use your own personal feelings about pharmacy and not your perception of how other pharmacists may feel.

	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
The performance of professional associations	☐	☐	☐	☐	☐
Respect from other health professionals	☐	☐	☐	☐	☐
Development of professional patient-pharmacist relationships	☐	☐	☐	☐	☐
Practice that provides a vital service to society	☐	☐	☐	☐	☐
Public opinion of pharmacists as professionals	☐	☐	☐	☐	☐
Freedom from outside intervention in making professional judgements	☐	☐	☐	☐	☐

Please check the corresponding answer in regard to the amount of control you have over the following.

	No Control	Little Control	Moderate Control	Lots of Control	Total Control
The quality of care provided to patients	☐	☐	☐	☐	☐
The development of workplace policies	☐	☐	☐	☐	☐
The responsibilities delegated to staff	☐	☐	☐	☐	☐
How workplace problems are solved	☐	☐	☐	☐	☐
The time spent on various work activities	☐	☐	☐	☐	☐

In terms of your pharmacy career, how important are each of the following?

	Very Unimportant	Unimportant	Neutral	Important	Very Important
Attending professional meetings & conferences	☐	☐	☐	☐	☐
Dispensing prescriptions	☐	☐	☐	☐	☐
Being a good businessperson	☐	☐	☐	☐	☐
Encouraging the proper use of medications	☐	☐	☐	☐	☐
Arranging counter & shelf displays	☐	☐	☐	☐	☐
Being part of the health care team	☐	☐	☐	☐	☐
Offering a variety of sundry goods	☐	☐	☐	☐	☐
Reading the professional literature	☐	☐	☐	☐	☐
Maintaining a business establishment	☐	☐	☐	☐	☐
Public service, such as presentations to community groups, etc.	☐	☐	☐	☐	☐
Mentoring students & interns	☐	☐	☐	☐	☐

Most pharmacists are involved with a variety of daily tasks, many of which are listed below. Please indicate how much you like or dislike each of the following:

	Dislike Very Much	Dislike Somewhat	Neutral	Like Somewhat	Like Very Much
Dispensing prescriptions	☐	☐	☐	☐	☐
Selling non-prescription medications	☐	☐	☐	☐	☐
Selling non-medication related items (cosmetics, newspapers, etc.)	☐	☐	☐	☐	☐
Management of personnel (including supervision & training of pharmacists & pharmacy technicians)	☐	☐	☐	☐	☐
Management of personnel (including supervision & training of non-professional staff)	☐	☐	☐	☐	☐
Management of cash (daily reports, deposits, change, etc.)	☐	☐	☐	☐	☐
Management of "front store" stock (buying, inventories, storage, etc.)	☐	☐	☐	☐	☐
Management of dispensary stock (ordering, inventories, storage, etc.)	☐	☐	☐	☐	☐
Keeping abreast on health & drug-related matters	☐	☐	☐	☐	☐
Providing information & advice to physicians and other health care professionals	☐	☐	☐	☐	☐
Counselling patients regarding prescription & over-the-counter related matters	☐	☐	☐	☐	☐

When considering the organization as the place of employment, please indicate your level of agreement with the following statements:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I do not feel like "part of the family" at this organization	☐	☐	☐	☐	☐
I do not feel "emotionally attached" to this organization	☐	☐	☐	☐	☐
This organization has a great deal of personal meaning for me	☐	☐	☐	☐	☐
I do not feel a strong sense of belonging to my organization	☐	☐	☐	☐	☐

Below are statements regarding community pharmacy practice. Please check your level of agreement with each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
A goal of the pharmacy manager is to attain regular increases in both prescription sales and patient counts	☐	☐	☐	☐	☐
The pharmacy manager is the best judge of a pharmacist's job performance	☐	☐	☐	☐	☐
The employing organization should have the right to establish standards of professional competence for its employees	☐	☐	☐	☐	☐
A pharmacist's primary professional responsibility is to fill prescriptions exactly as ordered by the prescriber	☐	☐	☐	☐	☐
Pharmacists should be readily available and accessible to counsel patients about the use of their medications	☐	☐	☐	☐	☐

Below are a few statements in regard to your place of employment. Please check the response that best represents your perspective.

	Never	Rarely	Sometimes	Often	Always
I feel certain about the amount of authority I have	☐	☐	☐	☐	☐
I am provided with clear, planned goals and objectives for my job	☐	☐	☐	☐	☐
I am required to do things in my job that are against my professional judgment	☐	☐	☐	☐	☐
I am willing to "buck" a company rule or policy in order to carry out my professional duties	☐	☐	☐	☐	☐
I receive incompatible requests from two or more people	☐	☐	☐	☐	☐
I often have to choose between the business and professional aspects of pharmacy	☐	☐	☐	☐	☐

Please give your opinion about these characteristics of your practice site. Check your response by using the following scale to indicate your level of agreement with each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This pharmacy usually takes action in anticipation of future market conditions	☐	☐	☐	☐	☐
This pharmacy is known as an innovator among pharmacies in our area	☐	☐	☐	☐	☐
We try to shape our business environment to enhance our presence in the market	☐	☐	☐	☐	☐
We promote innovative professional services in this pharmacy	☐	☐	☐	☐	☐
We take above average risks in our business	☐	☐	☐	☐	☐
We are responsive to the activities of our rivals	☐	☐	☐	☐	☐
Identifying new business opportunities is the concern of all employees	☐	☐	☐	☐	☐
Because market conditions are changing, we continually seek out new opportunities	☐	☐	☐	☐	☐

Please check your answer to the corresponding questions below. In the past, your pharmacy did *not* implement a new professional service/clinic because of:

	Yes	No	Not Applicable
Inadequate funding	☐	☐	☐
The process involved in having it approved was too long (too many levels of approval)	☐	☐	☐
Could not obtain support from management outside your location	☐	☐	☐
Unmotivated staff	☐	☐	☐
Not enough staff	☐	☐	☐
Too much of a time commitment	☐	☐	☐
Professional staff did not have the requisite training (i.e., Certified Diabetes Educator)	☐	☐	☐

The idea to offer a new professional service comes from (check all that apply):

☐ Pharmacists in the Pharmacy ☐ Pharmacy Manager ☐ Management Outside the Pharmacy ☐ Other (please specify): _____

As pharmacy manager, do you and pharmacists under your guidance have to follow policies and procedures developed by non-pharmacists?

☐ No ☐ Yes ☐ Yes, but only in regard to business practices

Does your pharmacy serve as a preceptor site for pharmacy students/interns?

☐ Yes ☐ No ☐ In the past, but not currently

As a pharmacist, please rate the importance of the following when deciding on whether your pharmacy location will implement a new professional service:

	Very Important	Important	Neutral	Unimportant	Very Unimportant	Not Applicable
The potential benefits to your patients' health	☐	☐	☐	☐	☐	☐
The increase in revenues at your location	☐	☐	☐	☐	☐	☐
Management outside your location suggests implementing the new professional service	☐	☐	☐	☐	☐	☐

Below are a few statements in regard to your pharmacy and you as pharmacy manager. Please check the most appropriate answer to the following statements.

	Yes	No	Not Applicable
Your dispensary (pharmacy department) is a 'loss leader' (regularly does not earn a profit)	☐	☐	☐
As pharmacy manager you currently practice pharmacy	☐	☐	☐
You welcomed the opportunity to become pharmacy manager	☐	☐	☐
As the pharmacy manager you are only responsible for managing the dispensary (not responsible for front store/non-medication related products & staff)	☐	☐	☐
You currently enjoy your position as pharmacy manager	☐	☐	☐

Please check the corresponding answer to the following statements. Looking back, if offered the position as pharmacy manager again, you would request:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
More time to personally practice pharmacy/interact with patients	☐	☐	☐	☐	☐	☐
Final approval of what cognitive services your location offers	☐	☐	☐	☐	☐	☐
More non-professional staff so the pharmacists in your pharmacy could focus on providing professional services	☐	☐	☐	☐	☐	☐
Fewer front shop responsibilities (non-pharmacy related)	☐	☐	☐	☐	☐	☐
More money to implement new professional services	☐	☐	☐	☐	☐	☐

It is possible to be both a good professional and a successful businessperson in community pharmacy today.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
☐	☐	☐	☐	☐

Your Pharmacy Location (please select the one that best describes your pharmacy)

Type

- ☐ Independent (fewer than 4 pharmacies under the same ownership)
- ☐ Small Chain (4-10 pharmacies under the same ownership)
- ☐ Large Chain (more than 10 pharmacies under the same ownership)
- ☐ Franchise
- ☐ Banner
- ☐ Grocery Store
- ☐ Department Store
- ☐ Mass Merchandiser
- ☐ Mail Order Pharmacy
- ☐ Other (please describe): ______________________

If *not* an independent pharmacy, what organization/company is your pharmacy a part of?

____

The Pharmacist Completing the Questionnaire

Gender: ☐ Female ☐ Male Age (years): ____________

Education and Degrees earned (check all that apply):

- ☐ Bachelor of Pharmacy
- ☐ Pharmacy Residency
- ☐ PhD
- ☐ PharmD
- ☐ MSc
- ☐ Other (please describe): ______________________
- ☐ BS/BA (not pharm)
- ☐ MBA

In what province did you earn your initial pharmacy practice degree? ____________

When and in which province were you first licensed as a Pharmacist? Year - ____________ Province - ____________

Current position/job title: ____________

How many years in your current position? ____________

How many years with your current employer? ____________

The portion below will be separated from the above questionnaire before any responses are put into a database so that your responses are not identifiable by any information provided below.

✂ -

As a follow-up to this survey we are interested in discussing in more detail the subject matter of this questionnaire with those who are interested. The follow-up would consist of a one-on-one telephone conversation with a member of the research team that would last approximately one hour. If you are interested in participating in the second phase of this project, please provide your name, city/town, telephone number (including the area code) where you can be reached, and the best local time to contact you below.

Name: ______________________

City/town & province: ______________________

Telephone number: **(   )   -** ______________________

Best time to contact you: ______________________

Once the responses from this survey have been compiled and analyzed, would you like to receive a summary of the findings?

☐ Yes via e-mail (please provide e-mail address) ______________________

☐ Yes via postal mail (please provide postal address) ______________________

____

Thank you for participating in this study – your time and willingness to share your perspective and opinion are greatly appreciated!

APPENDIX II – SURVEY PRE-NOTICE LETTER

<Date>

<UsualName> <Pharmacy_Manager_Last_Name>
<Pharmacy_Name>
<Street>
<City>, <Province> <PostalCode>

Dear <Title> <Pharmacy_Manager_Last_Name>:

Within the next week you will receive in the mail a request to complete a brief questionnaire for an important research project being conducted at the College of Pharmacy & Nutrition at the University of Saskatchewan. For this research project your contact information was obtained from the <Provincial_Regulatory_Agency>.

In pharmacy practice research, the unique issues and concerns of community pharmacy managers are seldom addressed. The questionnaire we are asking you to complete seeks to enhance our appreciation for the pharmacy manager's role within this challenging practice environment. This comprehensive, cross-Canada study seeks to gain a better understanding of both your clinical and managerial roles, as well as your level of autonomy as a pharmacy manager.

Your participation is important. However, it is completely voluntary and you do not have to complete the questionnaire if you do not wish to; you may also refuse to answer individual questions. You may withdraw from the study at any time.

Should you have any concerns about this research do not hesitate to contact the principal investigator (Roy Dobson) by e-mail (roy.dobson@usask.ca), facsimile (306-966-6377) or phone (306-966-6363).

Thank you for your time and consideration. It's only through people like you who are willing to help in our research that we are able to gain a greater appreciation for the rewards and challenges of the pharmacy practice environment and the factors affecting pharmacy managers and pharmacists.

Sincerely,

Jason Perepelkin, MSc
PhD Student, Division of Pharmacy
College of Pharmacy & Nutrition

Roy Dobson, BScPharm, MBA, PhD
Associate Professor of Pharmacy
College of Pharmacy & Nutrition

APPENDIX III – SURVEY INITIAL MAILING COVER LETTER

<Date> <ID_Code>

<UsualName> <Pharmacy_Manager_Last_Name>
<Pharmacy_Name>
<Street>
<City>, <Province> <PostalCode>

Re: Community Pharmacy Managers' Role Orientation

Dear <Title> <Pharmacy_Manager_Last_Name>:

In pharmacy practice research, the unique issues and concerns of community pharmacy managers are seldom addressed. The questionnaire we are asking you to complete seeks to enhance our appreciation for the pharmacy manager's role within this challenging practice environment. This comprehensive, cross-Canada study seeks to gain a better understanding of both your clinical and managerial roles, as well as your level of autonomy as a pharmacy manager. The questionnaire should take less than 15 minutes to complete.

Your participation is important. However, it is completely voluntary and you do not have to complete the questionnaire if you do not wish to; you may also refuse to answer individual questions. You may withdraw from the study at any time. The code number on the questionnaire is designed to give the investigators the ability to track questionnaires while keeping your identity strictly confidential. Once the data collection is complete, the list that links code numbers to names will be destroyed. Only the principal investigator (Roy Dobson) and co-investigator (Jason Perepelkin) will have access to the data arising from this study. All information will be stored in secure, locked facilities in the office of the principal investigator (Roy Dobson) at the University of Saskatchewan. Results will be aggregated to ensure that the identities of individual respondents are safeguarded. Results will be reported in the student-researcher's Thesis, refereed periodicals and at conferences and meetings associated with pharmacists and health care organizations.

Should you have any concerns about this research do not hesitate to contact the principal investigator (Roy Dobson) by e-mail (roy.dobson@usask.ca), facsimile (306.966.6377) or phone (306.966.6363). You completing and returning this questionnaire constitutes consent for the researchers to use the data for the purposes of conducting the study as approved by the University of Saskatchewan Behavioural Research Ethics Board on March 6th, 2007 (BEH 07-26). Should you have any questions regarding your rights as a participant in this study you may call the Ethics Office at the University of Saskatchewan (306.966.2084). Out of town participants may call collect.

Sincerely,

Jason Perepelkin, MSc
PhD Student, Division of Pharmacy
College of Pharmacy & Nutrition

Roy Dobson, BScPharm, MBA, PhD
Associate Professor of Pharmacy
College of Pharmacy & Nutrition

APPENDIX IV – SURVEY REMINDER POSTCARD

Re: Community Pharmacy Managers' Role Orientation

You recently received a request to complete a questionnaire on your professional and managerial experiences. If you have already completed and returned the questionnaire, thank you. If you have not yet completed the questionnaire, we would ask that you complete it as soon as possible and to return it in the pre-stamped envelope provided. Your participation is important and we look forward to receiving a completed questionnaire from you.

As you know, the purpose of this study is to gain a better understanding of pharmacy managers' experiences in their position as pharmacists, but also as managers. In addition to informing members of the pharmacy profession about pharmacy managers' experiences, the information obtained from you and other participants in the study will help to better understand your position and provide a more intimate understanding of the dual roles as professionals and managers. The aggregate results of the study will then be disseminated to stakeholders to relay your experiences.

Your participation is important. However, it is completely voluntary and you do not have to complete the questionnaire if you do not wish to; you may also refuse to answer individual questions. You may withdraw from the study at any time.

Should you have any concerns about this research do not hesitate to contact the principal investigator (Roy Dobson) by e-mail (roy.dobson@usask.ca), facsimile (306.966.6377) or phone (306.966.6363).

Sincerely,

Jason Perepelkin, MSc
PhD Student, Division of Pharmacy
College of Pharmacy & Nutrition

Roy Dobson, BScPharm, MBA, PhD
Associate Professor of Pharmacy
College of Pharmacy & Nutrition

APPENDIX V – SURVEY SECOND MAILING COVER LETTER

<Date> <ID_Code>

<UsualName> <Pharmacy_Manager_Last_Name>
<Pharmacy_Name>
<Street>
<City>, <Province> <PostalCode>

Re: Community Pharmacy Managers' Role Orientation

Dear <Title> <Pharmacy_Manager_Last_Name>:

You recently received a request to complete a questionnaire on your professional and managerial experiences. If you have already completed and returned the questionnaire, thank you. If you have not yet completed the questionnaire and intend to do so, we would ask that you complete it as soon as possible and to return it in the pre-stamped envelope provided. Your participation is important and we look forward to receiving a completed questionnaire from you.

As you know, the purpose of this study is to gain a better understanding of pharmacy managers' experiences in their position as pharmacists, but also as managers. In addition to informing members of the pharmacy profession about pharmacy managers' experiences, the information obtained from you and other participants in the study will help to better understand your position and provide a more intimate understanding of the dual roles as professionals and managers. The aggregate results of the study will then be disseminated to stakeholders to relay your experiences.

Your participation is important. However, it is completely voluntary and you do not have to complete the questionnaire if you do not wish to; you may also refuse to answer individual questions. You may withdraw from the study at any time.

Should you have any concerns about this research do not hesitate to contact the principal investigator (Roy Dobson) by e-mail (roy.dobson@usask.ca), facsimile (306.966.6377) or phone (306.966.6363). You completing and returning this questionnaire constitutes consent for the researchers to use the data for the purposes of conducting the study as approved by the University of Saskatchewan Behavioural Research Ethics Board on March 6th, 2007 (BEH 07-26). Should you have any questions regarding your rights as a participant in this study you may call the Ethics Office at the University of Saskatchewan (306.966.2084). Out of town participants may call collect.

Sincerely,

Jason Perepelkin, MSc
PhD Student, Division of Pharmacy
College of Pharmacy & Nutrition

Roy Dobson, BScPharm, MBA, PhD
Associate Professor of Pharmacy
College of Pharmacy & Nutrition

APPENDIX VI – INTERVIEW PROTOCOL

Introduction to Session

The purpose of this interview/conversation is to discuss the role of community pharmacy managers. The intent is to provide the researchers with a greater perspective on issues facing this unique aspect of the profession. I will begin by giving you a brief overview of how the session will work, followed by an opening statement to set the stage for the remainder of the session.

In this session you are asked to be as candid as you feel comfortable in discussing the topic at hand. What is said within this session will only be identifiable by yourself and I; when I transcribe the tapes, no names will be used, only your participant pseudonym.

Throughout the session I may pose questions and/or provide statements that develop on what has been said. I also encourage you to pose questions and/or statements that you feel may add to the depth to our discussion. My role is to have a conversation with you in regard to your role as community pharmacy manager. I am not looking for specific answers, just personal opinions on your role and profession, as well as what you have – or have not – experienced as a pharmacy manager.

Please feel free to ask me for clarification on what was said/asked. You may also ask to have your previous comment(s) taken off of the record and not be included in the transcript; as well, you can clarify what was previously said if I misunderstood what you said.

Statement

The community pharmacist negotiates on a daily basis professional and commercial obligations: providing a skilled service in the preparation and dispensing of medications, while selling commodities for profit in distributing that medication. As a result, corporate objectives are more pronounced for community pharmacists than for other Canadian health care professionals, such as physicians and nurses. And as pharmacists seek to manage and re-define their professional role within health care, the business structure in which the profession is practiced is also changing from small-scale entrepreneurships to corporate ownership.

In pharmacy practice research, the unique issues and concerns of community pharmacy managers are seldom addressed. The survey and interview phases of the study seek to enhance our appreciation for the pharmacy manager's role within this challenging practice environment. This comprehensive cross-Canada study seeks to gain a better understanding of both your clinical and managerial roles, as well as your level of autonomy as a pharmacy manager.

Interview Questions

Introductory Questions

- Are there any aspects of the questionnaire used in the survey portion of the study that you'd like to comment on and/or ask questions about?
- Now that you've had a chance to look at the responses from the survey portion of this study, are there any results that surprise you?
    - If so, which questions, and why?
- Tell me what it is like to be both a pharmacist and a manager/businessperson.
    - Do/can you separate these two roles?
- Why did you become a manager?
    - When starting your career as a pharmacist, was one of your goals to become a pharmacy manager?

Transition Questions

- Are there aspects of your position as manager would you like to change?
    - If so, what aspect(s)?
- Tell me about your relationship with pharmacists/pharmacy technicians/front store staff that you manage.
- How would you describe your relationship with superiors?
- In what way does your employer allow you the professional autonomy you feel necessary to practice – personally and/or pharmacists under your supervision?
    - Can you recall any instances when you felt you were given/not given (professional) autonomy?
- Does it bother you to any extent that you must both fill prescriptions and sell various non-medication related products in the pharmacy?
- Several authorities have noted that the pharmacist is faced with the dilemma of being both a professional and a businessperson. To what extent does this situation bother you?
    - Do you find the public expects the pharmacist to be both a businessperson and a professional?

Ending Questions

- How do you envision the future of the profession of pharmacy?
    - Will community pharmacies look the same in 10 years as they do now?
    - Will you be doing more or less clinical work?
    - Do you see a day when getting paid for clinical services will be a reality?
        - Similar to how physicians are paid
    - Will you be working closer with physicians?

    - Are you positive/negative about the future of the profession?
- What questions and/or comments do you have?
    - With regard to the study?
    - With regard to the profession?

APPENDIX VII – INTERVIEW CONSENT FORM

You are invited to participate in the second phase of a study entitled **Managing a Community Pharmacy in Canada: The Practice Experiences of Community Pharmacy Managers.** Please read this form carefully, and feel free to ask questions you might have.

Researchers

Jason Perepelkin, MSc, PhD (student) and Roy T Dobson, MBA, PhD
College of Pharmacy & Nutrition, Division of Pharmacy
University of Saskatchewan
110 Science Place
Saskatoon, SK S7N 5C9

Phone: 306.966.6346
Fax: 306.966.6377
E-mail: jason.perepelkin@usask.ca

Purpose and Procedure

The purpose of this study is to gain a greater appreciation for the experiences of community pharmacy managers in Canada. The first stage of this study was a cross-Canada, self-administered postal survey. As a respondent, you identified yourself as someone interested in further discussing your role as a community pharmacy manager – a responsibility that requires you to balance professional and business roles. In order to discuss the responses to the survey portion of the study, one-on-one telephone interviews are being conducted.

The interviews are scheduled to last approximately one hour. The conversation between you and the interviewer (Jason Perepelkin) will be recorded in order for the tapes to be transcribed at a later date. During the interview you may ask to have the tape recorder turned off at any time. All recorded conversation will de-identify all participants using a participant pseudonym.

During the hour the interview is expected to last, the interviewer will give a short overview of how the interview will proceed, give you the chance to pose any questions with regard to the process and/or study, give a brief summary of the results of the survey portion of the study and then start asking questions. It is anticipated that the conversation will naturally lead itself, but if need be the interviewer will pose new questions. This study is not looking to obtain specific

answers to questions, but is instead seeking your input and perspective as a community pharmacy manager.

Potential Risks

The potential risks of this study are minimal. Since you will make up or be provided with a pseudonym, and personal names will not be used, there is no chance in identifying participants. Only the researchers (Jason Perepelkin & Roy Dobson) will have access to the consent form and participant pseudonym. After transcribing the interview tapes, each participant will receive a copy and have a chance to review it before the researchers proceed with using the transcripts.

Potential Benefits

The results of all interviews will be used to inform the first phase of the study (survey). The study as a whole will gain a greater appreciation for community pharmacy managers across Canada. As a unique group amongst pharmacists, the role of a pharmacy manager is commonly not addressed. More than any other member of the profession, pharmacy managers must negotiate on a daily basis between the professional and business aspects of community pharmacy.

The results of this study will be disseminated in various formats to develop a dialogue on the image of pharmacy. These formats include peer reviewed articles, conference presentations, and other methods as they arise. Not only will this information be disseminated to those within the profession, but also a broader audience of stakeholders including employers, other health care professionals, policy makers, government, and the lay public. However, it is possible that you may not gain personally from this study.

Storage of Data

Transcripts of the interview will be de-identified. Tape recordings, transcripts and consent forms will be stored in a secure, locked facility of the Research Supervisor (Dr. Roy Dobson), at the University of Saskatchewan, for no less than five years. After this time, if the tapes are deemed no longer needed, they will be erased; also, the transcripts and consent forms will be shredded if no longer required.

Confidentiality

As stated under *Purpose and Procedure*, only the researchers will have access to the list identifying each participant. For any direct quotations from a participant when disseminating the results of the interviews, the participant pseudonym will be given, with no connection to the participant's name. If a participant mentions their employer during the interview, the interviewer will not identify the name of that employer in the transcripts. Instead, the interviewer will simply state the type of pharmacy of the employer (such as independent, franchise, chain, etc.). This will

also be the case if a participant mentions another employer, person and/or organization.

Right to Withdraw

Your participation is voluntary, and you may withdraw from the study for any reason, at any time, without penalty of any sort. You may also refuse to respond to any statement and/or answer any of the questions asked in the interview. If you withdraw from the study at any time, any data that you have contributed will be destroyed at your request.

Questions

Should you have any questions concerning the study, please feel free to ask/contact the researcher at any point. You may contact the researcher (Jason Perepelkin) by e-mail (jason.perepelkin@usask.ca), phone (306.966.6346) or facsimile (306.966.6377). This study has been approved on ethical grounds by the University of Saskatchewan Ethics Office on May 28th, 2007. Should you have any questions regarding your rights as a participant in this study you may call the Ethics Office at the University of Saskatchewan (306.966.2084). Out of town participants may call collect.

Consent to Participate

I have read and understood the description provided above; I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I consent to participate in the study described above, understanding that I may withdraw this consent at any time. A copy of this consent form has been given to me for my records. Please return a signed copy of this consent form via facsimile to 306.966.6377 to the attention of Jason Perepelkin.

Name of Participant	Date
Signature of Participant	Signature of Researcher

APPENDIX VIII – INTERVIEW PARTICIPANT COPY OF QUESTIONNAIRE WITH SURVEY RESPONSES IN PERCENT

UNIVERSITY OF SASKATCHEWAN

Managing a Community Pharmacy in Canada:
The Practice Experiences of Community Pharmacy Managers

Final Survey Responses

Jason Perepelkin, 2007 ©
College of Pharmacy and Nutrition
University of Saskatchewan
Saskatoon, SK

Your Experiences as a Pharmacy Manager

The following questions pertain to professional practice standards and you as a pharmacist. Please check your level of agreement with each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My pharmacy colleagues and I should be the only ones who determine and set standards for our professional practice	1.6%	20.5%	11.1%	38.2%	28.6%
The employer should establish specific guidelines for making professional decisions in my work	13.2%	32.4%	19.8%	29.1%	5.5%
The only professional practice standards I will accept are those established by my profession	1.3%	20.6%	16.1%	39.4%	22.6%
The opportunity to exercise professional judgement in my work should be determined by the employer	35.3%	47.0%	10.0%	6.3%	1.4%
Only another pharmacist is qualified to judge the competence of my professional work	1.7%	19.1%	11.3%	42.2%	25.7%
I would depart from the employer's policies when I judge it professionally necessary	0.5%	1.3%	7.7%	59.6%	31.0%
The employer has the right to influence my professional decisions because the employer pays my salary	33.6%	42.7%	12.1%	11.1%	0.5%
The public should be allowed input into the development of standards for professional competence which guide my practice	6.6%	21.8%	23.5%	44.2%	3.9%
The employer has no right to place limitations on the decisions I make concerning professional matters	1.1%	24.2%	15.7%	37.1%	21.9%
I would modify the professional practice standards which guide my practice only in response to recommendations made by my profession	0.6%	15.0%	14.7%	54.4%	15.3%
A basic problem in community pharmacy practice is the intrusion of standards/policies other than those which are truly professional	1.3%	15.4%	27.0%	41.6%	14.8%
There is little professional autonomy as a pharmacist with this employer	22.3%	46.7%	21.5%	7.3%	2.3%

Below are statements centred on your role as pharmacy manager. Please check your answer to the corresponding statements below.

As pharmacy manager:	Never	Seldom	Half the Time	Usually	Always
You have final approval on implementing a new professional service	6.3%	19.2%	11.3%	35.6%	27.6%
If you feel it necessary, you are authorized to alter company policies to specifications on patient care to better suit the needs of your patients	5.2%	15.2%	10.1%	38.4%	31.0%
You have access to all information used to arrive at decisions on policies regarding *clinical practice* in your pharmacy	3.8%	12.8%	8.5%	38.1%	36.8%
You have access to all information used to arrive at decisions on policies regarding *business practices* in your pharmacy	6.5%	19.9%	13.9%	30.6%	29.1%
You are free to initiate research projects or educational programs such as cardiovascular risk reduction	5.9%	12.2%	7.9%	32.8%	41.2%
You are free to participate in research projects or educational programs related to your patient population	3.3%	10.0%	5.9%	35.3%	45.5%

Below are questions in regard to your position as pharmacy manager. Please check the answer that best corresponds with your experience.

	None	Little	Moderate	Lots
How much freedom does your position allow you as to how you do your work?	1.1%	11.6%	38.0%	49.3%
How much does your position allow you to make most decisions on your own?	0.2%	11.6%	34.3%	53.9%
How much does your position allow you to take part in making decisions that affect you?	2.4%	15.4%	34.1%	48.2%
How much is your position one where you have a lot of say over what happens in your pharmacy?	1.4%	14.9%	31.4%	52.2%

Below is a composite list of elements that characterise pharmacy as a profession. As a member of the pharmacy profession, check the phrase that best describes the degree of your satisfaction/dissatisfaction with each element as it applies to *your* pharmacy career. Please use your own personal feelings about pharmacy and not your perception of how other pharmacists may feel.

	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
The performance of professional associations	5.2%	21.1%	20.3%	47.7%	5.6%
Respect from other health professionals	2.5%	17.3%	22.3%	50.4%	7.5%
Development of professional patient-pharmacist relationships	0.0%	4.8%	10.0%	61.6%	23.6%
Practice that provides a vital service to society	0.2%	3.9%	7.7%	59.5%	28.8%
Public opinion of pharmacists as professionals	0.9%	9.7%	12.5%	52.5%	24.4%
Freedom from outside intervention in making professional judgements	2.8%	18.7%	22.3%	47.8%	8.5%

Please check the corresponding answer in regard to the amount of control you have over the following.

	No Control	Little Control	Moderate Control	Lots of Control	Total Control
The quality of care provided to patients	0.3%	3.1%	27.5%	46.9%	22.1%
The development of workplace policies	5.2%	16.3%	22.7%	35.3%	20.5%
The responsibilities delegated to staff	0.3%	3.3%	21.2%	46.2%	29.0%
How workplace problems are solved	0.6%	3.6%	22.9%	49.6%	23.2%
The time spent on various work activities	0.6%	9.7%	33.1%	37.0%	19.5%

In terms of your pharmacy career, how important are each of the following?

	Very Unimportant	Unimportant	Neutral	Important	Very Important
Attending professional meetings & conferences	1.1%	6.1%	22.0%	49.5%	21.3%
Dispensing prescriptions	0.5%	2.0%	9.8%	44.4%	43.3%
Being a good businessperson	0.8%	3.8%	14.7%	52.7%	28.1%
Encouraging the proper use of medications	0.2%	0.2%	0.3%	23.2%	76.2%
Arranging counter & shelf displays	13.1%	28.4%	32.3%	21.4%	4.7%
Being part of the health care team	0.2%	0.2%	4.6%	45.1%	50.1%
Offering a variety of sundry goods	12.9%	30.5%	32.5%	21.2%	1.9%
Reading the professional literature	0.0%	0.6%	6.8%	61.0%	31.6%
Maintaining a business establishment	1.6%	2.2%	15.9%	57.0%	23.4%
Public service, such as presentations to community groups, etc.	0.8%	8.3%	28.1%	50.3%	12.5%
Mentoring students & interns	0.2%	3.0%	19.5%	52.9%	24.5%

Most pharmacists are involved with a variety of daily tasks, many of which are listed below. Please indicate how much you like or dislike each of the following:

	Dislike Very Much	Dislike Somewhat	Neutral	Like Somewhat	Like Very Much
Dispensing prescriptions	0.3%	3.2%	9.0%	42.1%	45.4%
Selling non-prescription medications	0.2%	2.4%	9.2%	51.4%	36.9%
Selling non-medication related items (cosmetics, newspapers, etc.)	25.9%	30.0%	30.6%	11.4%	2.2%
Management of personnel (including supervision & training of pharmacists & pharmacy technicians)	0.8%	7.2%	15.7%	52.0%	24.3%
Management of personnel (including supervision & training of non-professional staff)	5.1%	17.8%	27.2%	37.4%	12.6%
Management of cash (daily reports, deposits, change, etc.)	15.7%	31.1%	30.7%	18.7%	3.8%
Management of "front store" stock (buying, inventories, storage, etc.)	15.1%	30.5%	29.4%	22.7%	2.2%
Management of dispensary stock (ordering, inventories, storage, etc.)	2.5%	8.5%	24.0%	50.4%	14.6%
Keeping abreast on health & drug-related matters	0.0%	0.9%	5.5%	44.2%	49.4%
Providing information & advice to physicians and other health care professionals	0.2%	0.9%	5.6%	42.6%	50.7%
Counselling patients regarding prescription & over-the-counter related matters	0.0%	0.5%	1.1%	25.9%	72.5%

When considering the organization as the place of employment, please indicate your level of agreement with the following statements:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I do not feel like "part of the family" at this organization	38.4%	31.9%	13.0%	10.5%	6.3%
I do not feel "emotionally attached" to this organization	38.0%	30.5%	13.1%	12.9%	5.6%
This organization has a great deal of personal meaning for me	5.1%	10.9%	21.3%	29.5%	33.2%
I do not feel a strong sense of belonging to my organization	39.9%	32.1%	15.5%	8.5%	4.0%

Below are statements regarding community pharmacy practice. Please check your level of agreement with each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
A goal of the pharmacy manager is to attain regular increases in both prescription sales and patient counts	2.5%	12.6%	18.4%	53.3%	13.2%
The pharmacy manager is the best judge of a pharmacist's job performance	0.9%	13.1%	23.6%	50.2%	12.3%
The employing organization should have the right to establish standards of professional competence for its employees	4.9%	16.7%	22.7%	50.0%	5.7%
A pharmacist's primary professional responsibility is to fill prescriptions exactly as ordered by the prescriber	10.9%	44.1%	20.2%	20.2%	4.6%
Pharmacists should be readily available and accessible to counsel patients about the use of their medications	0.2%	1.1%	1.7%	34.9%	62.1%

Below are a few statements in regard to your place of employment. Please check the response that best represents your perspective.

	Never	Rarely	Sometimes	Often	Always
I feel certain about the amount of authority I have	0.6%	2.8%	17.6%	38.6%	40.3%
I am provided with clear, planned goals and objectives for my job	2.9%	8.0%	25.2%	35.0%	28.9%
I am required to do things in my job that are against my professional judgment	46.5%	40.5%	11.4%	1.1%	0.5%
I am willing to "buck" a company rule or policy in order to carry out my professional duties	7.1%	17.3%	42.2%	14.9%	18.5%
I receive incompatible requests from two or more people	23.4%	43.0%	27.5%	5.4%	0.7%
I often have to choose between the business and professional aspects of pharmacy	15.7%	42.8%	30.7%	10.4%	0.3%

Please give your opinion about these characteristics of your practice site. Check your response by using the following scale to indicate your level of agreement with each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This pharmacy usually takes action in anticipation of future market conditions	1.4%	10.8%	27.8%	51.9%	8.1%
This pharmacy is known as an innovator among pharmacies in our area	1.9%	19.3%	33.3%	32.5%	13.0%
We try to shape our business environment to enhance our presence in the market	0.8%	6.5%	20.0%	59.9%	12.8%
We promote innovative professional services in this pharmacy	1.0%	11.9%	24.4%	47.3%	15.4%
We take above average risks in our business	4.8%	33.5%	36.6%	20.2%	4.9%
We are responsive to the activities of our rivals	1.9%	11.6%	28.1%	51.9%	6.5%
Identifying new business opportunities is the concern of all employees	2.1%	17.4%	28.8%	44.1%	7.6%
Because market conditions are changing, we continually seek out new opportunities	0.8%	7.9%	22.3%	56.1%	12.9%

Please check your answer to the corresponding questions below. In the past, your pharmacy did *not* implement a new professional service/clinic because of:

	Yes	No	Not Applicable
Inadequate funding	29.1%	36.1%	34.8%
The process involved in having it approved was too long (too many levels of approval)	19.4%	39.2%	41.3%
Could not obtain support from management outside your location	18.4%	40.5%	41.0%
Unmotivated staff	28.5%	45.0%	41.0%
Not enough staff	55.4%	24.8%	19.7%
Too much of a time commitment	56.1%	24.8%	19.1%
Professional staff did not have the requisite training (i.e., Certified Diabetes Educator)	38.7%	33.8%	27.5%

The idea to offer a new professional service comes from (check all that apply):

9.5%	Pharmacists in the Pharmacy	**13.0%**	Pharmacy Manager	**16.5%**	Management Outside the Pharmacy	**3.2%**	Other (please specify): MD, Drug Rep., Patients, Drug Plans, Techs
13.3%	Pharmacists & Manager	**22.8%**	Pharmacist, Manager & Outside Mgmt	**7.2%**	Pharmacist, Manager, Outside Mgmt & Other	**14.5%**	Other combinations

As pharmacy manager, do you and pharmacists under your guidance have to follow policies and procedures developed by non-pharmacists?

40.0%	No	**17.4%**	Yes	**42.6%**	Yes, but only in regard to business practices

Does your pharmacy serve as a preceptor site for pharmacy students/interns?

49.5%	Yes	**22.7%**	No	**27.8%**	In the past, but not currently

As a pharmacist, please rate the importance of the following when deciding on whether your pharmacy location will implement a new professional service:

	Very Important	Important	Neutral	Unimportant	Very Unimportant	Not Applicable
The potential benefits to your patients' health	**56.7%**	**38.1%**	**2.8%**	**0.9%**	**0.6%**	**0.8%**
The increase in revenues at your location	**21.3%**	**60.8%**	**13.3%**	**2.7%**	**1.3%**	**0.8%**
Management outside your location suggests implementing the new professional service	**9.5%**	**28.8%**	**31.4%**	**9.2%**	**3.2%**	**18.0%**

Below are a few statements in regard to your pharmacy and you as pharmacy manager. Please check the most appropriate answer to the following statements.

	Yes	No	Not Applicable
Your dispensary (pharmacy department) is a 'loss leader' (regularly does not earn a profit)	**6.2%**	**88.3%**	**5.5%**
As pharmacy manager you currently practice pharmacy	**99.1%**	**0.6%**	**0.3%**
You welcomed the opportunity to become pharmacy manager	**85.2%**	**8.4%**	**6.4%**
As the pharmacy manager you are only responsible for managing the dispensary (not responsible for front store/non-medication related products & staff)	**38.7%**	**57.5%**	**3.7%**
You currently enjoy your position as pharmacy manager	**87.8%**	**10.8%**	**1.4%**

Please check the corresponding answer to the following statements. Looking back, if offered the position as pharmacy manager again, you would request:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
More time to personally practice pharmacy/interact with patients	3.0%	18.0%	21.4%	28.6%	18.9%	10.0%
Final approval of what cognitive services your location offers	1.3%	7.9%	23.5%	40.6%	14.5%	12.2%
More non-professional staff so the pharmacists in your pharmacy could focus on providing professional services	1.9%	15.5%	17.1%	36.2%	20.3%	9.1%
Fewer front shop responsibilities (non-pharmacy related)	1.9%	14.7%	23.7%	26.6%	16.8%	16.3%
More money to implement new professional services	1.6%	8.8%	26.4%	33.5%	18.0%	11.7%

It is possible to be both a good professional and a successful businessperson in community pharmacy today.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
43.2%	46.3%	7.0%	2.7%	0.8%

Your Pharmacy Location (please select the one that best describes your pharmacy)

Type	**33.6%**	Independent (fewer than 4 pharmacies under the same ownership)	**18.4%**	Franchise	
			8.7%	Banner	
			15.9%	Grocery Store	
	2.3%	Small Chain (4-10 pharmacies under the same ownership)	**0.2%**	Department Store	
			9.9%	Mass Merchandiser	
	9.4%	Large Chain (more than 10 pharmacies under the same ownership)	**0.2%**	Mail Order Pharmacy	
			1.4%	Other (please describe):	Dispensing MD, etc.

The Pharmacist Completing the Questionnaire

Gender: **38.7%** Female **61.3%** Male

Age (years): Mean: 44 yo
Range: 24-77 yo

Education and Degrees earned (check all that apply):

78.0%	Bachelor of Pharmacy	**0.8%**	PharmD	**8.4%**	Bachelor of Pharmacy & BS/BA (not pharm)
2.8%	Bachelor of Pharmacy & Pharmacy Residency	**0.5%**	MSc	**1.1%**	Bachelor of Pharmacy & MBA
0.2%	Bachelor of Pharmacy & PhD	**2.3%**	Other (please describe):		MD, pharmacy degree outside of Canada
1.1%	Bachelor of Pharmacy & MSc	**0.3%**	Bachelor of Pharmacy & PharmD	**2.8%**	Bachelor of Pharmacy & Other
0.2%	Bachelor of Pharmacy, PhD & MSc	**0.5%**	Bachelor of Pharmacy , MSc & Other	**0.3%**	Bachelor of Pharmacy, Pharmacy Residency, PharmD & MBA
0.2%	Bachelor of Pharmacy, MSc & MBA	**0.2%**	Bachelor of Pharmacy, MBA & Other	0.2%	Bachelor of Pharmacy, Pharmacy Residency & BS/BA
0.3%	Bachelor of Pharmacy, Pharmacy Residency & Other				

In what province did you earn your initial pharmacy practice degree?

BC	10.1%	**AB**	12.5%	**SK**	17.3%	**MB**	6.2%
ON	28.3%	**PQ**	1.3%	**NL**	4.5%	**NS**	9.4%
N/A	9.7%						

When and in which province were you first licensed as a Pharmacist? Year
Mean: 1988
Range: 1959 – 2007
Province -

BC	12.6%	**AB**	13.5%	**SK**	12.1%	**MB**	7.2%
ON	36.2%	**PQ**	0.9%	**NL**	3.6%	**NS**	6.0%
NB	4.7%	**PEI**	0.6%	**Other**	2.4%		

Current position/job title: Pharmacy Manager: 62.4%

	Owner: 35.5% Pharmacist: 0.8% Other: 1.3%
How many years in your current position?	Mean: 9.3 years Range: 0.1 – 41 years
How many years with your current employer?	Mean: 11.9 years Range: 0.1 – 45 years

Respondents

646/2,000 = 32.3%

38 → undeliverable & 1 → long-term care home

= 646/1,961 = 32.9%

By province:

Province	Respondents (%)	# mailed out	% mailed out	# of pharmacies
BC	89 (13.8%)	304	15.2%	962
AB	94 (14.6%)	288	14.4%	911
SK	58 (9.0%)	110	5.5%	350
MB	30 (4.6%)	100	5.0%	317
ON	289 (44.7%)	962	48.1%	3,056
NB	28 (4.3%)	64	3.2%	200
NFLD	21 (3.3%)	64	3.2%	201
NS	33 (5.1%)	96	4.8%	305
PEI	4 (0.6%)	12	0.6%	40

APPENDIX IX – ETHICS APPROVAL FOR STUDY

UNIVERSITY OF SASKATCHEWAN

Behavioural Research Ethics Board (Beh-REB)

Certificate of Approval

PRINCIPAL INVESTIGATOR	DEPARTMENT	Beh #
Roy Dobson	Pharmacy	07-26

INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT
University of Saskatchewan
Saskatoon SK

STUDENT RESEARCHER(S)
Jason Perepelkin

SPONSORING AGENCIES
UNIVERSITY OF SASKATCHEWAN - COLLEGE OF PHARMACY AND NUTRITION

TITLE
Community Pharmacy Managers' Role Orientation

APPROVAL DATE	EXPIRY DATE
28-Feb-2007	27-Feb-2008

APPROVAL OF
Will now interview participants who have agreed to be interviewed. Have included an updated consent form and interview guide.

APPROVED ON
28-May-2007

CERTIFICATION
The University of Saskatchewan Behavioural Research Ethics Board has reviewed the proposed revisions to your study. The revisions were found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS
In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for further instructions: http://www.usask.ca/research/ethics_review/

John Rigby, Chair
University of Saskatchewan
Behavioural Research Ethics Board

May 30/07
Signature Date

Please send all correspondence to:

Ethics Office
University of Saskatchewan
Room 306 Kirk Hall, 117 Science Place
Saskatoon SK S7N 5C8
Telephone: (306) 966-2084 Fax: (306) 966-2069

APPENDIX X – AUDITOR'S APPROVAL OF INTERVIEW CODING AND THEMES

March 26th, 2008

To Whom It May Concern:

Please accept this letter as confirmation that I (Maya Wagner) have conducted an audit of the transcripts and thematic coding of Jason Perepelkin's research project centring on the *Role Orientation and Professional Autonomy of Community Pharmacy Managers in Canada*.

The reason for this audit is to review the interview materials to see if one would arrive at similar conclusions as the researcher. An overview of the study, interview protocol, five to eight consecutive pages of each transcript randomly selected, as well as the coding and themes of the researcher were received in order to conduct the audit.

I reviewed and coded five to eight pages of each of the seven interview transcripts to check for accuracy and consistency in Jason's coding. I also reviewed the themes Jason coded the transcripts into. After completing the above analysis, I attest to the accuracy and consistency of the coding and themes.

Please contact me with any questions.

Sincerely,

Maya Wagner, BSP, MSc
Saskatoon, SK
Phone: 306.244.4226
E-mail: mayawagner@shaw.ca