

**THE UNIVERSITY OF ZAMBIA  
SCHOOL OF MEDICINE  
DEPARTMENT OF COMMUNITY MEDICINE**

**A CROSS SECTIONAL QUESTIONNAIRE-BASED  
STUDY ON CLIENT SATISFACTION WITH  
COMMUNITY PHARMACY CARE IN LUSAKA  
DISTRICT**

**BY**

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This dissertation is the original work of Victor Mulubwa. It has been prepared in accordance with the guidelines for MPH dissertations of the University of Zambia. It has not been submitted elsewhere for a degree at this or another university.

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## **CERTIFICATE OF APPROVAL**

This dissertation of Mr. Victor Mulubwa is approved as part of the fulfilment of the

Requirements of the award of the degree of Master of Public Health by the University of  
Zambia.

Examiners' signatures

Date

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## **ABBREVIATIONS**

POMs	Prescription only Medicines
OTCDs	Over the counter Drugs
UTH	University Teaching Hospital
PRA	Pharmaceutical Regulatory Authority
UK	United Kingdom
WHO	World Health Organisation
FIP	International Pharmaceutical Federation
NCQA	National Committee on Quality assurance
CMS	Centre for Medicare and services
SD	Standard Deviation
ED	Essential Drug
PSI	Patient Satisfaction Index

## **ABSTRACT**

The main objectives of this study are to estimate the levels of patron satisfaction with community pharmacy care, to describe those with low satisfaction scores and to determine the reasons for purchase of drugs.

This was a cross sectional questionnaire based study that was conducted in Lusaka involving six community pharmacies representing zones used by the pharmaceutical society for monitoring. The study was conducted in eight geographical units which are Chawama,Chilenje,City Centre , Matero , Manda hill , UTH , Chelstone and Kanyama. Patrons were asked to fill in a standard questionnaire. Patrons were asked about demographic data, referral, reason for purchase of drugs, pattern of drug use, men's and women's problems, duration of drug use, satisfaction domains and tangibles. These clients were between 18 and 49 years old. Patrons had to fill in a questionnaire and consent had to be obtained before filling in.

The key concluding remarks are as follows:-

1. Only 36% of patrons were satisfied.
2. Assurance had the highest score 52.6% and reliability had the lowest score 21.2% on the satisfaction domains.
3. On reason for purchase of drugs sugar disease had the highest score 42.9% and diarrhoea had the lowest scores 27.3%.

Despite the above findings, much work remained to be done. There is need to do similar research in other parts of the country so that the picture obtained elsewhere can be compared to the findings. This could help to:-

- Identify pharmacy care that needs improvement
- Identify potential area of pharmacy care that needs performance assessment
- Inform managers and policy makers.
- Guide the training of pharmacists from University of Zambia.



## **CHAPTER ONE- INTRODUCTION**

### **1.0 Background**

One feature of public health care in Zambia is the liberalization of health care. The government has allowed the opening of community pharmacies to meet the needs of people who may not have access to drugs in public health institutions so that they could access drugs from community pharmacies which are as close to the family as possible. One facet of this is that Zambians unlike their counterparts in the West practice free movement and as such can purchase drugs anywhere in Zambia as long as they have a prescription (Prescription Only Medicines-POMs) and they can purchase other drugs without a prescription (Over The Counter Drugs-OTCDs) . OTCDs are often perceived as safe by customers (Clark et al., 2001). In Zambia, while patrons want to buy their drugs, they do not need to belong to particular catchment area.

Although community pharmacies are now increasing with every suburb in Zambia having one or two (unlike in the rural areas) the pattern of community residents and mobile patrons accessing drugs and tagging the service with a label of satisfaction have been rarely studied and they have not been on the health policy agenda in Zambia. There have been reports of varying complaints of poor satisfaction about the service in community pharmacies with no empirical evidence to support them.

The large increase of prescriptions from public hospitals and clinics and self medicating patrons desiring medicine is very evident in community pharmacies. Though there is this increase and liberalization of the practice of community pharmacy, the community pharmacy sector has not taken stock of itself to determine whether or not its patrons are satisfied with the service they offer. Research elsewhere and experience have documented that a community pharmacy is often the first contact in the health seeking process, although its specific role varies between different countries and cultures (Hassell et al., 1997; Nogaard et al., 2001; Iversen et al., 2001; Olson et al., 2000; Bislew and T.D. Sorensen (2002). In Zambia just like elsewhere, the pharmacists' role

has ranged from businessman to an individual adviser who takes responsibility for meeting the customers' needs for optimal medical treatments and advice (Hassell et al., 1997; Cassado et al., 2004). In developed countries, pharmacies are used for care of minor ailments and as a stepping-stone to the general practitioner (Hassell et al., 1997). Previous studies have suggested that community pharmacists can manage most of their patrons' minor ailments and pharmacists prescribing for these minor ailments would both benefit patrons and reduce costs (Bojke et al., 2004). Though the evolution of pharmaceutical care services in Zambia is in its infancy, some community pharmacists have started to have a more clinical role. This changing scenario of the community pharmacist has rendered some valuable assistance to some patrons in managing their diseases with medicines. However, the public is not always clear about the breadth of a pharmacists' role: people mainly perceive pharmacists as a source of drug advice rather than health advice. Using pharmacists for general health advice is often infrequent although the feedback when they do is often positive. This role has been misunderstood and may be responsible for the unsubstantiated dissatisfaction.

Concern over the quality of health care services in Zambia has led to loss of faith in public hospitals, low utilization of public health facilities, and increasing outflow of patients to private hospitals and community pharmacists. Community pharmacies have become a hope for many people even though they are tightly regulated. At the moment, we are not certain whether or not the service they provide makes patrons satisfied or not. Satisfaction with a health service by consumers is an important facet of quality of care that is receiving increasing attention. Many aspects of the health service experience have been measured from the patient's perspective including the quality of care provided by a specific service (Franklin and McLemore, 1967), the cost and convenience of various health insurance plans (Davies and Ware, 1991), general attitudes towards primary care physicians (Baker, 1996; Winefield et al., 1995; Zyzanski et al., 1974) and attitudes about a particular physician-patient visit (Frederikson, 1995; Linder-Pelz and Struening, 1985; Smith et al., 1984; Wiggers et al., 1990; Wolf et al., 1978).

Health care units in the developed world recognize the importance of delivering patient satisfaction as a strategic variable and a crucial determinant of long-term viability and success (Davies and Ware 1988; Makoul et al. 1995). Donabedian (1988) suggests that patient satisfaction may be considered to be one of the desired outcomes of care and have argued that information about patient satisfaction should be as indispensable to assessments of quality as to the design and management of health care systems. The World Health Organization (WHO) for instance has created a performance system based on five composite measures in which health system 'responsiveness' (patient satisfaction) and its distribution in the population (of varying economic status) are key components. However, the measures are based on surveying public health experts (and not patients) on the assumption that the performance of a health system is too complex for the general public to understand.

While there are a plethora of approaches to studying patron satisfaction represents intense interest in giving voice to the patrons in the developed world, in developing countries such as Zambia, patrons have very little voice. Few unpublished studies have sought their views and there is little effort to involve them in measuring satisfaction or defining health service standards. This has implications for how community pharmacies are ultimately perceived and the extent to which they are used. We believe that a person who endures the physical, psychological, social and economic experiences during the overall illness experience and health service delivery process would be able to make an appropriate evaluative judgment of how the service was provided, how they were treated, as reflected in their overall satisfaction or dissatisfaction measures.

The ability to satisfy customers is vital for a number of reasons. For one, today's buyers of health care services ought to be better informed, a condition that is being driven by greater levels of information available to them. These buyers are therefore more discerning, knowing exactly what they need. Customer satisfaction is also a valuable competitive tool; community pharmacies that are customer focused have been able to increase capacity utilization and market share (Gregory, 1986; Boscarino, 1992). Recent research has shown that service satisfaction can significantly enhance patients'

quality of life (Dagger and Sweeney 2006) and enable service providers to determine specific problems of customers, on which corrective action can then be taken (Oja et al. 2006). Patrons' voice ought to derive similar changes in the developing countries. It has also been shown that dissatisfied customers tend to complain to the establishment or seek redress from it more often to relieve cognitive dissonance and failed consumption experiences (Nyer, 1999). In fact, dissatisfaction can have serious ramifications: patients are unlikely to follow treatment regimen, may fail to show up for follow-up care and, in extreme cases, may resort to negative word-of-mouth that can dissuade others from seeking health care services from the system or persuade them to seek it elsewhere, often abroad. Satisfaction is defined here in Oliver's terms: that it is the person's fulfilment response (Oliver, 1997). It is a judgment that a health care gives service gives a pleasurable level of consumption-related fulfilment. In other words, it is the overall level of contentment with a service/product experience. Under these circumstances, assessment by the consumer of satisfaction with the community pharmacy from the perspective of the consumer and particularly the quality of health care service is imperative- the consumer's voice must begin to play a greater role.

### **1.1 Statement of the problem**

Knowledge of consumer satisfaction is extremely important in determining the success of service provision. The need to examine the process which an individual goes through during the pre-experience and post-experience stages of an encounter with a community pharmacist is paramount. Since satisfaction was introduced as a field of study, a considerable number of studies have focused on this concept. This is because it is conceived as the key to business success in today's competitive landscape (Morgan et al., 1996). Past research has analyzed both the nature of this judgment (Giese and Cote 2000) and its antecedents and consequences (Oliver 1980; Mano and Oliver 1993). This research however has not covered Zambia.

In recent years there has been an increasing trend in self medication with non-prescription drugs (sometimes referred to as over-the-counter (OTC) medicines) available in pharmacies and in retail outlets. There has been in addition an increase in the procurement of Prescription Only Medication from community pharmacies on account of poor stocking of drugs in public institutions. In parallel, a few products have been deregulated for purchase without a prescription. The deregulation process can only be championed by the medical profession and not the pharmaceutical industry. There has been no support from the pharmacy profession and government health policy makers to provide room for patrons wishes to have a greater role in their treatment choices.

While this is so, there are complaints. One would hear clients complain about community pharmacies not providing the expected care. Along with the prescription drugs and Over-the-counter drugs (OTCDs), patrons have ended up receiving what they have wanted or not wanted. These have been one of the many sources of dissatisfaction. There have been instances when patrons have had a strong sense of their ability to self-manage their conditions and often making unwarranted requests and these have created a challenging situation for pharmacists to satisfy them. In Zambia, lay people see the pharmacy as a substitute to other health care services, especially the availability of OTCs and even prescription medicines without a prescription. These have been directing patrons towards pharmacies. On the other hand, the lack of health services and sometimes financial problems, lack of transportation, long waiting hours and social distance inhibit using other health care services than pharmacies and might force people to self-medicate. This is not only a problem in Zambia, several thousands of people lack health insurance and do experience financial barriers to accessing health services and prescription medicines they need to treat their medical conditions. To them an encounter with a community pharmacist means that their problem has been resolved. So far little is known about the satisfaction levels and the domains of excellent satisfaction or dissatisfaction. There are many questions one may ask in this scenario. Can the added-perceived value of pharmacist intervention be demonstrated to meet the

needs of a patron? What is provided by the community pharmacist in patron care? Within these questions, this study is seeking answers to the following specific questions.

## **1.2 Research Question**

### **1. ARE PATRONS TO COMMUNITY PHARMACISTS SATISFIED WITH THE CARE THEY RECEIVE?**

## **1.3 General Objective**

This study aims at identifying the determinants of patron satisfaction with community pharmacy services.

### **1.3.1 Specific Objective**

1. To estimate the levels of patron satisfaction with community pharmacy service.
2. To describe the service characteristics that have the lowest satisfaction index scores.
3. To determine the reasons for purchase of drugs.

## **1.4 Hypothesis to be tested**

The hypothesis to be tested will be driven by the conceptual explanations drawn from the SERVQUAL framework and the Cognitive and Emotional Views. In essence the hypothesis will test the third research question. The main hypothesis to be tested will be:

**MH<sub>A</sub>: Clients are not satisfied with care from community pharmacies.**

## **1.5 Justification of This Study**

The study of satisfaction of service delivery among community pharmacists is a critical issue not only for academics and managers, but also for individuals themselves (and their societies). According to previous studies, life satisfaction is related to the individual's satisfaction with health, work, family, or leisure (Ferna'ndez- Ballesteros et

al., 2001). Satisfaction with community pharmacy experiences contributes significantly to life satisfaction (Neal et al., 1999), which is one of the central concepts of individual well-being (Oishi 2006).

This study is justified for the following reasons. Noting that consumer satisfaction is considered a personal evaluation or appraisal of a service or product received, it is envisaged that the data to be obtained from this satisfaction survey could be used for different purposes, such as (i) the identification of potential areas for pharmacy care services improvement (ii) the comparison of the quality of different community pharmacies and care programs and systems that are in place and (iii) to plan for the detection of patrons that are likely to discredit the pharmacy. Therefore, data on consumer satisfaction can serve as an indicator of service quality and as a predictor of health seeking-related behaviour.

## CHAPTER TWO- RESEARCH DESIGN AND METHODOLOGY

### 3.0 Research Dimension

A cross sectional survey research design of patrons traversing six community pharmacies in the city of Lusaka was conducted.

### 3.1 Study Site and Sampling Procedure

The study was done in the city of Lusaka. The site has community pharmacies in nearly all suburbs and in total there are 26 registered outlets. The study was conducted in eight geographic units which are: Chawama, Chilenje, City Centre, Matero, Manda Hill, UTH, Chelstone and Kanyama. This type of convenient sampling of units provides a social economic status variation of patrons and possible variations of relationships. In order to yield an adequate sample from an unknown population, the researcher relied on the daily use rate of a renowned community pharmacy in each of the geographic units to determine the sample size.

Using disproportionate sampling, the formula below was used to determine the final sample size.

$$n = \frac{N}{1 + N(e^2)}$$

Where:  $n$  is the desired sample size

$N$  is the known population size and

$e$  is the precision set at .05



Step 1;  $0.05 \times 0.05 = 0.0025$

Step 2;  $0.0025 \times 408 = 1.02$

Step 3;  $1 + 1.02 = 2.02$

Step 4;  $408 \div 2.02$

Therefore  $n = 201$

**Table 3.1 Community Pharmacy Use rate**

Zone	Operating hours	Daily Use rate	Disproportionate Sample
Chawama	08hrs to 19.00hrs	50	24
Chilenje	08hrs to 19.30hrs	40	20
City centre	09.0hrs to 18.00hrs	55	27
Matero	09.0hrs to 19.00hrs	55	27
Manda Hill	09.0hrs to 18.00hrs	60	25
UTH	09.0hrs to 17.30hrs	55	27
Chelston	09.0hrs to 19.00hrs	48	24
Kanyama	09.0hrs to 19.30hrs	55	27
<b>Total</b>		<b>408</b>	<b>201</b>

### **3.1.1 Recruitment of Patrons**

Patrons with pharmacy usage more than two times were eligible for recruitment in the study. Only end users of drugs participated in the study. Only patrons above 18 were eligible to enrol in the study. Patrons visiting more than one outlet more than twice were also included. This resolved the selection bias among clients whether the outlet had a good reputation or better accessibility.

### 3.2.1 The Contents of the Questionnaire

The questionnaire was administered to clients and focus group discussions were held with the pharmacist. Proxy users and first time clients less than 18 years old were not allowed to participate in the study.

Each questionnaire had a code number (including pharmacy location, and patron number). A preliminary questionnaire had been designed before the pilot test with the following dimensions being proposed (see appendix I): General demographics, (3items), reason for purchase of drug(s) 12 items, duration of drug use in the past 15 items, duration of drug use in the future 7 items, pattern of drug use 4 items and satisfaction domains (Ability to communicate) 14 items, Tangibles 6 items, service quality 8 items, service quality that fails to meet expectations 4 items.

### 3.2 Design of the Questionnaire

Instrument development commenced with an inductive literature search covering the service areas, demographic characteristics and scoring indices only in peer reviewed studies. A sample survey questionnaire was then developed and a panel consisting of five pharmacists with community pharmacy practice experience representing different practice settings reviewed existing information in the instrument and the ability of the instrument to provide a realistic representation of the happenings in the community pharmacy. After revisions, this group provided written comments agreeing that the instrument's content was consistent with relevant literature and the study objectives. On the basis of previous studies and in order for the questionnaire to meet content and face validity it was agreed that it should have the following key characteristics:

1. **Multiple dimensions:** To comprehensively assess patron satisfaction with pharmaceutical care.
2. **Multiple items per dimension:** To improve reliability, however, it also lengthens the questionnaire and thus increases the burden for the patron completing it.
3. **Response scale:** A ten choice assessment scale.
4. **Simple questions and clear instructions:** In order to be self-administered.

5. **The translation.** Items from questionnaires in English were translated using the back translation technique into Nyanja and Bemba. This will be done with the participation of bilingual experts from the school of education at the University of Zambia.
6. **Inter Coder Agreement.** A panel of judges composed of pharmaceutical care lecturers at the University of Zambia and Evelyn Hone College , a statistician and two community pharmacists and two patrons—that have received pharmaceutical care—are to assess face and content validity.
7. **Pilot testing.** The questionnaire to be first applied in a pilot test, in 2 pharmacies that provide pharmaceutical care.
8. **Revision of the survey tool.** The results are to be used to revise the instrument, rephrase or delete items, reduce its length or modify the response scale.

### **3.2.1 The Contents of the Questionnaire**

Each questionnaire had a code number (including pharmacy location, and patron number). A preliminary questionnaire was designed before the pilot test with the following dimensions being proposed (see appendix I): General demographics, (3items), reason for purchase of drug(s) 12 items, duration of drug use in the past 15 items, duration of drug use in the future 7 items, pattern of drug use 4 items and satisfaction domains (Ability to communicate) 14 items, Tangibles 6 items, service quality 8 items, service quality that fails to meet expectations 4 items.

### **3.3 Pilot testing and General Administration of the Survey Questionnaire**

The instrument was pre-tested using a convenience sample of 4 geographically dispersed pharmacies that are not in a central location where patrons do not have numerous choices for pharmacy services. Using a city pharmacy map to locate pharmacies four were selected for convenience.

The questionnaire was given to the patron in an envelope with the same code number (pharmacy number). The eligible patrons were asked by the pharmacist to answer the self-administered questionnaire, explaining to them that it is voluntary and confidential. If they agreed, they answered it in a private room within the pharmacy. Pharmacists had a standard form to record the number of approaches (Appendix II), the number of questionnaires distributed, the number of questionnaires returned and the time needed to answer the questionnaire. During the pilot test stage, patrons were required to fill a form to assess the questionnaire from the respondent's perspective. After completing it, the patron had to close the envelope and give it back to the pharmacist.

For the purposes of the survey, 'patrons' were operationalised as "people (18+) having used the service at least twice in the past 12 months.

'Satisfaction' was operationalised as "the patron's assessment of a service in terms of the extent to which that product or service had met his/her needs or expectations". Patron satisfaction was measured on a numeric score of 1 to 10 on specific questions that appear in three categories to obtain a statistically processed ('calculated satisfaction'). Average levels of satisfaction: for each sector, people were asked to evaluate, on a scale from 1 (not satisfied at all) to 10 (fully satisfied), the extent to which they are satisfied with their community pharmacist. On the basis of individual scores, average scores are calculated for each sector.

### **Levels of satisfaction and dissatisfaction**

The researcher expects that the community widely admits that the average satisfaction score (as described above) is necessary but requires a complementary approach that helps distinguish between *satisfied, neutral and dissatisfied consumers*. As stated in most satisfaction surveys in Europe, the average value of satisfaction on a 10 point-scale is not the arithmetical average of 5 but is closer to 7. There is therefore an inherent bias in the use of 1-10 scales in satisfaction surveys. In order to correct this standard bias the research community generally uses the 'Top 3 – Bottom 4 model' that says:

*'Consumers rating 1, 2, 3 or 4 are considered as dissatisfied'*

*'Consumers rating 5, 6 or 7 are considered as neutral'*

*'Consumers rating 8, 9 or 10 are considered as satisfied'*

Based on this grouping rule, we can more easily measure the percentage of satisfied and dissatisfied consumers for each sector and each criterion. The model to be developed during the pilot study will allow the researcher to gain an understanding of the factors that need moderation or eliminating. Satisfaction level will be as follows: 0-40 % dissatisfied, 41-70% neutral, 71-100% satisfied.

### **3.5 Ethical Matters**

Consent was obtained from the proprietors of community pharmacies and the Biomedical Research Ethics of the University of Zambia before the study took off. A research proposal and a research protocol were submitted for approval on condition that all identifying information related to the patrons shall be treated with utmost confidentiality. Once approval was obtained the study commenced. The researcher explained in detail to the respondents and proprietors what was required of them, as well as assuring them that they had the rights to decide not to be part of the study either before or during the study. Confidentiality and anonymity was assured to all parties concerned. Clients had to sign a consent form and information sheet before the study took off. Clients were compensated for their time.

## **CHAPTER THREE- LITERATURE REVIEW**

### **2.0 Introduction**

A pharmacy (commonly known as a chemist in Australia, New Zealand and the UK; or drugstore in North America; retail pharmacy in industry terminology; or Apothecary, historically) is the place where most pharmacists practice the profession of pharmacy. It is the community pharmacy where the dichotomy of the profession exists—health professionals who are also retailers.

Community pharmacies usually consist of a retail storefront with a dispensary where medications are stored and dispensed. The dispensary is subject to pharmacy legislation; with requirements such as for storage conditions, compulsory texts, and equipment specified in legislation. Where it was once the case that pharmacists stayed within the dispensary compounding/dispensing medications; there has been an increasing trend towards the use of trained pharmacy technicians while the pharmacist spends more time communicating with patients. In Zambia, all pharmacies are required to have a pharmacist on-duty at all times when open. It appears more feasible to have a pharmacist in order to provide POMDs than OTCDs.

OTCDs can be used for self medication without advice of a pharmacist or a doctor or Clinical Officer. Freely available, their use is often perceived as safe by customers. The lack of professional supervision may increase the risk of adverse drug effects including those caused by drug interactions. This makes pharmacists unwilling to dispense some drugs and it is a potential area for low satisfaction scores. Availability and use of OTCDs vary among different countries (WHO. 1996: 1988: Sihvo et al. 2000; Sinclair et al., 2001; Osborne and Luzac, 2005). In Switzerland for instance, OTCDs are classified as 'pharmacist only' (e.g. Levonorgestrel), 'pharmacy only' (e.g. Ranitidine), 'drug store only' (e.g. paracetamol) or freely available (e.g. low dose vitamins and minerals) (Sinclair, 2001).

## **2.1 Community Pharmacies**

The World Health Organization (WHO) has long believed that pharmacists could make a greater contribution to the provision of health care (WHO 1988; WHO 1996). This is particularly the case in developing countries, where health needs are greater and public sector health care provision is limited. The profession of pharmacy is concerned with promoting the safe and appropriate use of drugs. Community pharmacists are viewed as being well placed to advise on the management of common symptoms and long-term conditions, and to participate in health education and promotion. In many parts of the world, community pharmacies are increasingly recognized as a source of professional advice. Their potential to contribute more extensively to health care continues to be addressed on both national and international levels.

With the particular needs of developing countries in mind, the International Pharmaceutical Federation (FIP) set up a working party, which produced recommendations for stepwise implementation of Good Pharmacy Practice in these countries (FIP 1998). These recommendations focused on four aspects of services: access to pharmaceutical personnel, with the ultimate aim that all people should have access to a qualified pharmacist; the training needs of pharmacy personnel, ranging from the provision of basic training for community health workers to continuing professional development for qualified pharmacists; the promotion of high standards regarding premises, dispensing, labeling, advice-giving, pharmaceutical care and record keeping; and the establishment of legislation for national drugs policies (WHO consultative group, 1997).

In addressing the education and professional development of pharmacists, a WHO consultative group identified seven roles around which 'preparing the future pharmacist' should aspire (WHO consultative group, 1997). The framework describes the activities of a 'seven-star pharmacist' as care-giver, decision-maker, communicator, leader, manager, life-long learner and teacher. The concept of pharmaceutical care has also become prominent in pharmacy policy and service development in many countries.

Pharmaceutical care refers to an extended professional role in which pharmacists assume responsibility for pharmaceutical and health outcomes (that impact on a patient's quality of life, e.g. identifying and resolving potential drug-related problems) (Hepler and Strand 1990), rather than a more limited drug supply role. For example, in Britain, pharmacist prescribing, medication review and responsibility for repeat prescriptions, with associated monitoring and records, are being introduced.

Following the Nuffield Report in 1986 the role of the community pharmacist has undergone a period of intense review. The Department of Health, doctors and pharmacists alike have advocated broadening the role of the pharmacist from the traditional dispensing role to include, for example, giving advice on minor ailments and involvement in health promotion. Whilst research has shown that patients seeking advice from a General Practitioner over minor illness could be transferred successfully to community pharmacist management for specific symptoms,( Sihvo et al., 2000) the role of the pharmacist can only be expanded optimally if patients independently choose to utilize pharmacists for minor health problems as an alternative to their General Practitioner. People already use the pharmacist as a 'first port of call' for advice on minor illness (Hong et al., 2005).

## **2.2 Patron or Patient Satisfaction**

The concept of patient satisfaction was introduced into the literature in the 1960s by Donabedian (1968, 1969) as an important indicator of the quality of care in hospitals. He noted that the level of patient satisfaction tells providers how well they have achieved the values deemed important by patients. Later on Ross et al., (1987) proposed that satisfaction is the patient or patron's affective response to a health care consumption experience. Thus, satisfaction can be determined by measuring the degree to which patient or patrons' expectations, shaped by prior experiences, are confirmed.

During the past decades increased attention has been paid to monitoring and improving the quality of health care services. In this respect, there is a growing consensus that



patient or patron satisfaction is an important outcome parameter (Zastowny et al., 1995). Patient or patron satisfaction is an indicator of quality care and its assessment provides feed-back to clinicians and to services. Thus it may stimulate improvement initiatives. It is also considered as an 'outcome' measure, allowing one to assess the superiority of one treatment, program of care, health care organisation or system, over another. Across countries, one may foresee satisfaction ratings to be important for establishing the adequacy and the quality of health care practices (Calnan et al., 1994; Grol et al., 1999).

Research on patient satisfaction with pharmacy services began more than 30 years ago and a significant volume of literature has been generated (Matheson et al., 1999). Pharmaceutical care is a professional practice, the patient being the main beneficiary. This practice involves the responsible provision of pharmacotherapy not only by pharmacists alone but by retail staff too (Hall and Metheson, 1998).

Retail pharmacy staffs in many developing countries are an important source of advice on pharmaceuticals. Among the reasons clients give for their use of retail pharmacies are ease of access (Van Der Geest, 1982; Mills and Walker ; 1983; Anderson et al., 2003) availability of medicines (MHS, 1983) speed and convenience of service, cheaper products, availability of credit and the option to buy drugs in small amounts (Logan, 1983; Kloos et al., 1983). However, retail pharmacy staffs often prescribe inappropriately. Prescribing by retail pharmacy staff is rarely acknowledged officially in developing countries and thus, these prescribers are largely ignored in efforts for promoting rational prescribing.

Several studies carried out in other countries addressing patient satisfaction with pharmaceutical care in community pharmacies showed that the provision of pharmaceutical care contributes to patient satisfaction. Higher differences between traditional pharmacy practices and the pharmaceutical care services were observed in the dimensions specifically related with this practice. With the worldwide adoption of pharmaceutical care practice, the need for patient-oriented assessment questionnaires

emerged. There are three questionnaires—in English—to assess patient satisfaction with pharmaceutical care services that have proved to be valid and reliable to assess pharmaceutical care (DoH, 1989; Mattick Cameron et al., 2006). Although in English-speaking countries patient satisfaction research has been constantly evolving, in others the lack of suitable instruments is a problem. Researchers need to develop a new questionnaire in their own language or adapt the existent ones—in English—that requires a rigorous adaptation process to guarantee the questionnaire's linguistic and cultural appropriateness.

### **2.3 The Role of Patient Satisfaction**

Hospitals in the developed world recognize the importance of delivering patient satisfaction as a strategic variable and a crucial determinant of long-term viability and success (Davies and Ware 1988; Makoul et al. 1995; Royal Pharmaceutical Society 1997). Donabedian (1988) suggests that 'patient satisfaction may be considered to be one of the desired outcomes of care . . . information about patient satisfaction should be as indispensable to assessments of quality as to the design and management of health care systems'.

Other organizations such as the National Committee on Quality Assurance (NCQA), The Center for Medicare and Medicaid Services (CMS), and The National CAHPS Benchmarking Database (NCBD) are also deeply involved with assessing the patient's perspective.

The World Health Organization (WHO) has similarly created a performance system based on five composite measures in which health system 'responsiveness' (patient satisfaction) and its distribution in the population (of varying economic status) are key components. However, the measures are based on surveying public health experts (and not patients) on the assumption that the performance of a health system is too complex for the general public to understand. In this regard, Blendon et al. (2001) show that the

WHO ratings differ substantially for 17 industrialized countries when compared with the perceptions of their citizens.

While the plethora of approaches to studying satisfaction represents intense interest in giving voice to consumers in the developed world, in developing countries such as Zambia, patients have very little voice. No studies have sought their views and there is little effort to involve them in measuring satisfaction or defining health service standards. This has implications for how health care services are ultimately perceived and the extent to which they are used. We believe that in Zambia, a patient who endures the physical, psychological, social and economic experiences during the overall health service delivery process would be able to make an appropriate evaluative judgment of how they were treated, as reflected in their overall satisfaction or dissatisfaction measures.

The ability to satisfy customers is vital for a number of reasons. For one, today's buyers of health care services in developing countries need to be better informed, a condition that is being driven by little levels of information available to them. These buyers are therefore less discerning, knowing exactly what they need. Customer satisfaction is also a valuable competitive tool; community pharmacies that are customer focused have been able to increase capacity utilization and market share (Gregory, 1986; Boscarino 1992).

## **2.4 Service Characteristics**

Several studies other than on pharmacy care have attempted to identify the characteristics of medical care that lead to satisfaction or dissatisfaction. Grunfeld et al. (1999) found that continuity of care and service deliveries were key differences between the primary care and hospital outpatient group. Patient concerns included not seeing the same doctor at each visit, waiting too long to see the doctor, and not being provided with enough time to discuss problems with the doctor. Other studies have identified specific characteristics of the interaction between the patient and physician or other

medical staff that impact satisfaction. For example, satisfaction has been shown to be lower when patients felt they were not 'cared for as a person' (Boudreaux et al., 2000), and when communication between patient and providers was poor (Wiggers et al., 1990).

A study of 96 cancer patients found that patient satisfaction was most clearly predicted by the affective quality of the consultation with the oncologist (Ong et al., 2000), including the affective quality of verbalizations made by both patient and physician. In Hall's study, consultations characterized by interest, engagement, friendliness, and warmth were associated with higher satisfaction with the medical visit. Physician social behavior such as laughter, personal remarks, showing approval, or complimenting the patient also predicted higher satisfaction. In addition, several studies have examined interventions aimed at improving patient satisfaction. These interventions included providing information to clinic staff before a patient's appointment (Taenzer et al., 2000), or by preparing patients before their appointment through a clinic orientation (McQuellon et al., 1998). Studies have also attempted to identify patient characteristics associated with satisfaction with medical care. Although patient characteristics represent an unlikely target for intervention, knowing which patients tend to be less satisfied with their care may help to focus attention where it is needed.

Previous research has found that older patients are often more satisfied with their care (Jackson et al., 2001; Young et al., 2000). Other research has found that the satisfaction of men and women may depend on different aspects of care. For example, Weisman and colleagues (Weisman et al., 2000) found that women's satisfaction was more dependent on the informational content provided during a medical visit, whereas men's satisfaction was more dependent on the personal attention received.

## **2.5 Patron Characteristics**

Taking medicines is a part of everyday life for many Zambians nowadays. A significant number of adult respondents reported using medicine in the previous two weeks

globally (Wade, 2002), and more stated that they use prescription medicines than over-the-counter (OTC) medicines (Sinclair et al., 2001). In the UK for instance, most people obtain both their prescription and OTC medicines from community pharmacies. Such businesses are widely used by the general public; more than 85% reported using a pharmacy in 1 year (Sihvo et al., 2001). Obtaining prescription medicines are the main reported reason for using a community pharmacy, followed by the purchase of OTC medicines. By contrast, only a few people reported that their reason for using the pharmacy was to seek advice and less than one-third of the population reported that they had received advice in a community pharmacy recently (Covington, 2002).

### **2.5.1 Demographics**

Literature shows that there are more females than males who access community pharmacies. In the UK, in one study, of the 1000 members of the public interviewed, 417 were male (41.7%) and 583 were female (58.3%). The gender of the sample was shown to mirror closely that of the general population of Northern Ireland (48.7% males and 51.2% females). Almost half of all participants took regular prescription medicines (48.4%). More than half of the interviewees (55.4%) were exempt from prescription charges. The postcode districts were normally distributed throughout the sample.

The mean age of respondents was 38.35 years (range 22–69 years, SD 11.39); 39.9% of respondents were male and 59.7% were female. Rural-based pharmacies accounted for 18.1% urban, 50.6% and city centre 27.6%. Single outlet pharmacies accounted for 15.2%, small multiples (two to nine pharmacies) 23.4%, large multiple, 49.4% and Health Centre pharmacies 1% ( $n = 8$ ) (10.9% missing values). Most of these respondents were less educated and had low to medium incomes. However, researchers disagree about whether demographic variables may influence satisfaction responses. Lewis (1994) reported that older, less educated patients tended to rate their care more favorably, findings corroborated by others (Heffring, et al., 1986; McNeill et al., 2001; Oermann & Templin, 2000). On the contrary, Miller-Bader (1988) reported that in her sample age and education level, as well as gender, was not related to patient satisfaction. With respect to gender, Hildman and Ferguson (1990) and Singh (1990)

challenged Miller-Bader's finding. They reported that males rated nursing services significantly lower than females in their studies.

### **2.5.2 Patient Contact with Pharmacies**

In a study in Europe by Glintborg (2004), almost three-quarters of participants (74.6%) reported visiting the community pharmacy at least once per month. Females and those above 60 years visited community pharmacies on a more regular basis than males or other age groups. Almost 68.5% reported always or often using the same pharmacy, with the main reason being to obtain a prescription medicine (54.4%). Only 11.3% of interviewees visited a pharmacy primarily to purchase non-prescription medicines. There was no difference in terms of gender with regard to non-prescription medicines' that were purchased. Just over 60% (61.1%) reported that they would seek advice from a pharmacist rather than from a General Practitioner when the condition was not serious enough to visit the doctor. Just over one in every ten participants (11.3%) indicated that they would seek a pharmacist's advice if they had no time to wait for a General Practitioner appointment.

## **2.6 Satisfaction Types and Measurement**

Patient satisfaction can be defined as an evaluation of the quality of health care received from the viewpoint of the recipient. According to Pascoe (1983), the evaluation process includes a cognitively based evaluation and an affectively based response. Donabedian (1980) asserts that patient satisfaction is a significant indicator of the quality of care because it reveals the provider's success at meeting values and expectations for which the patient is the ultimate authority.

The literature offers many definitions of patient satisfaction. Hostutler et al. (1999) described satisfaction as occurring when services are rendered in terms of customer expectations, needs, and perceptions. Thompson and Yarnold, (1996) stated that satisfaction occurred in the setting of confirmation of patient expectation(s), and

dissatisfaction occurred in the setting of disconfirmation of the same expectation(s). Rhee and Bird (1996) stated that patient satisfaction was characterized by the patient's beliefs regarding future use or recommendation of the institution for future care. Other authors describe patient satisfaction as the degree of congruence between patients' expectations of care and their perceptions of the care actually received (Anderson et al., 1998). We recommend using the common definition of overall patient satisfaction as being *when the patient's own expectations for treatment and care are met (or exceeded)*. Using this definition, it is critical that any survey instrument frame a general satisfaction question by *defining* the chosen satisfaction measure. For example, "in terms of meeting your expectations for treatment and care, rate your satisfaction with your overall care." Important behavioral correlates of this state of being satisfied are the likelihood that the patient will return to the same Essential Drug (ED) in the future and the likelihood that she or he will recommend the ED for others needing care (Hostutler et al., 1999; Rydman et al., 1999).

To achieve these objectives, patient satisfaction measurements have to deal with methodological difficulties commonly reported in this field. These include sampling strategies, response rate and discrimination between levels of satisfaction (Wensing et al., 1994). Most importantly, the assessment instruments have to demonstrate quality in terms of reliability and validity (Sitzia, 1999), and for international application, cross-cultural validity. Researchers who design satisfaction instruments in nursing have proposed that score variation is related to the measurable distance between patient expectations and the reality experienced. At the time of this study, four instruments had been established in nursing: the Patient Satisfaction Scale (Risser, 1975), the Patient Satisfaction Index (Hinshaw & Atwood, 1982), and the LaMonica–Oberst Patient Satisfaction Scale (LOPSS; LaMonica et al., 1986). A further refinement of LOPSS was published by Munro et al., (1994). All four studies defined patient satisfaction as the discrepancy between the patients' ideal and their perceived experience with nursing care.

The first instrument testing patient satisfaction with nursing care was designed for primary care outpatients (Risser, 1975). Risser's original theory, that patient satisfaction was comprised of three dimensions (technical–professional, education, and trust), was unsupported by her results. Later, Hinshaw and Atwood (1982) adapted Risser's Patient Satisfaction Scale (PSS) to the hospital setting. Of the original 25 items on Risser's scale, only one item was deemed inappropriate for hospitalized patients, and that item was revised. Both scales contain 25 items and use a 5-point Likert-type response scale. Hinshaw and Atwood renamed the PSS the Patient Satisfaction Index (PSI). Hinshaw and Atwood (1982) tested the PSI using 506 hospitalized patients. Scores on the PSI were positively correlated with the use of care comfort measures and patients' perceptions of direct care quality and were inversely correlated with anxiety, providing evidence for both convergent and divergent validity. Although Hinshaw and Atwood's factor analysis produced three subscales, all three were highly inter correlated. Hinshaw and Atwood concluded that these subscales might actually measure a single dimension.

In 1986 LaMonica and colleagues (1986) identified the following weaknesses in the existing scales: (a) the existence of three subscales was not supported by the data; (b) favorably skewed scores across several studies indicated insensitivity of the instruments; and (c) the items in the PSI, primarily developed for outpatients, might not adequately reflect the construct of patient satisfaction for inpatients. These researchers therefore tested a new item pool derived from patient focus groups, which were based on Risser's (1975) conceptualization of the three dimensions. The focus groups were composed of English-speaking oncology patients. Like their predecessors, LaMonica and associates (1986) defined patient satisfaction as "the degree of congruence between patients' expectations of nursing care and their perceptions of care actually received" (LaMonica et al., 1986). In an attempt to increase the variation in responses and thereby enhance sensitivity, the authors increased the response options from five to seven. A 41-item, 7-option Likert-type scale resulted. This scale is scored by summing item responses, with higher scores indicating greater satisfaction. The 41 items explained 93.7% of the variance and factored into three subscales. LaMonica et al.



(1986) renamed the subscales interpersonal support, good impression, and dissatisfaction.

Subscale internal consistencies ranged from .89 to .92. Skewness was unaffected by more response options; therefore, the authors concluded that the seven-response version failed to increase the instrument's sensitivity. Subscale intercorrelations ( $r$ ) ranged from .84 to .90. To test the psychometrics of the LOPSS in a different patient population, Munro et al. (1994) combined three samples of women obtained from separate studies. Based on the sturdy internal consistency estimate of the total scale (less than .98), they proposed that the number of items could be reduced. Those items whose correlation with the total score was less than .60 or had a standard deviation of less than 0.70 were removed. Because LaMonica et al. (1986) had not been able to demonstrate improved variability with 7 instead of 5 response options, Munro, et al., (1995) reverted to a 5-point Likert-type scale. In an attempt to decrease acquiescence, they also reversed the numerical values assigned to the response options, so that lower scores indicated greater satisfaction. The 15 remaining items were factored into two subscales (items for interpersonal support and good impression were loaded onto a single factor). These two subscales, renamed satisfaction and dissatisfaction, accounted for 65.3% of score variation in the principal components analysis (.90 and .95 respectively). Therefore, the measurement of satisfaction is relevant to research, administration, and planning.

Despite a plethora of patient satisfaction studies, reviewers have concluded that the concept is ill-defined and measurement instruments lack well-established reliability and validity (Lin, 1996). Most studies of patient satisfaction have been conducted in acute care settings (Hinshaw & Atwood, 1982; La Monica, 1975). One of the most extensive studies was the Picker/Commonwealth Program for Patient-Centered. A national survey of over 6,000 patients was carried out using a patient interview that was developed as a result of focus groups and telephone interviews of patients. Data from the patients led to the identification of seven dimensions, with specific questions under each dimension: respect for patients' values, preferences, and expressed needs; coordination,

integration, and information flow; information and education; physical comfort; emotional support and alleviation of fear and anxiety; involvement of family/ friends; and transition and continuity.

Despite some parallels in measuring satisfaction in acute and long-term care, it has been found that many of the items in satisfaction instruments used in acute care are not appropriate for use in non acute situations like the community pharmacy setting. From the presentations above, it is interesting to note that the survey instruments used by different authors to measure patient satisfaction vary widely. Investigators have sought associations of clinical service delivery factors with various surrogate measures for satisfaction. In Table 1 we list the various measures reported by authors of the selected patient satisfaction studies. Often authors have reported they measured “overall satisfaction,” but did not report how the term was framed within the survey instrument. Scaled (Likert) measures also differed in terms of the number of options available and whether the options were skewed or symmetric about some neutral value.

Table 2.1 Patient Satisfaction Measures Used in Selected Studies

Author	Measure
Baker et al. (1998)	Developed using the mean score from 5 specific measures: “friendliness, respectfulness, concern for the patient as a person, spending enough time, and making the patient feel comfortable.” (skewed; 5-point scales)
Björvell and Stieg (1991)	“When you now leave the ED, how do you feel?” and “If you urgently have to go somewhere because you feel sick or have been injured, what would you then think of this ED?” (both with VAS scale; 100-point)
Bursch et al. (1993)	“Overall, how satisfied are you with the care you received in the ED?” (unspecified scale)
Hall (1996)	“Likelihood of recommending our ED to others” (skewed; 5-point scale)
Krishel and Baraff (1993)	“Overall satisfaction” and service subcategories (skewed; 5-point scale)
Mack et al. (1995)	Overall satisfaction constructed out of measurement of satisfaction with medical care, quality of interactions with staff, and state of hospital facility (each measure used skewed, 10- point scale)
Maitra and Chikhani (1992)	Overall satisfaction determined through self-categorization of “satisfied” or “not satisfied” (dichotomous query)
McMillan et al. (1986)	“32 service categories/attributes” related to ED care (symmetric; 5-point scale)
Thompson and Yarnold (1995)	“Describe your experience in the ED” (skewed; 4-point scale)
Thompson et al. (1996)	“After your visit, how would you describe your experience with the ED?” and “How likely would you be to recommend this ED to a friend or relative?” (skewed; 4-point and 3-point scales, respectively)

Yarnold et al. (1998)	“Overall satisfaction” (symmetric; 5-point scale, and skewed; 4-point scale)
Hansagi et al. (1992)	“How satisfied were you with the medical treatment at the ED?” and “How satisfied were you with the general service/care?” (skewed; 4-point scale)
Carrasquillo et al. (1999)	“Satisfaction with overall care” and “Would you return to the same ED if you had another problem that required emergency care?” (skewed; 5-point scale [only two upper categories = satisfied] and [presumed] dichotomous query, respectively)
Lewis and Woodside (1992)	“Overall satisfaction with ED visit” (skewed; 3-point scale)
Rhee and Bird (1996)	“How would you rate the overall quality of the service?” and “Would you recommend the ED to friends or relatives?” (skewed; 5-point scale and dichotomous yes/no)

## **2.7 Reasons and Theories guiding satisfaction Surveys**

Studies in the developing world have shown a clear link between patient satisfaction and a variety of explanatory factors, among which service quality has been prominent (Rao et al. 2006; Zineldin 2006). We believe this link is important also in community pharmacy practice in Zambia. Below we show models that tend to explain patron or patient satisfaction.

### **2.7.1 SERVQUAL framework**

Earlier studies suggest that service quality can be adequately measured using the SERVQUAL framework (Parasuraman et al. 1991, 1993). The framework, further embellished on the basis of focus group discussions, is as follows.

#### **2.7.1.1 Service factors**

##### **Reliability**

One of the most studied service factors is reliability. Reliability refers to providers' ability to perform the promised service dependably and accurately. In a study in Bangladesh, reliability of the provider was often perceived as low for various reasons, such as the accusation that doctors recommended unnecessary medical tests, there was an irregular supply of drugs at the hospital premises, supervision of patients by care providers was irregular, and specialists were unavailable. Perceptions of reliability were also attenuated when doctors did not provide correct treatment the first time. In view of these reliability drivers, we are of the opinion that that the more reliable the health care providers, the greater the patron's' satisfaction.

## **Responsiveness**

Patients expect staff to respond promptly when needed. They also expect the required equipment to be available, functional and able to provide quick diagnoses of diseases. In addition, patients also expect prescribed drugs to be available and properly administered, as other indicators of responsiveness. Thus in this study, we posit that the greater the responsiveness of health care providers, the greater the satisfaction of patients.

## **Assurance**

Knowledge, skill and courtesy of the doctors and nurses can provide a sense of assurance that they have the patient's best interest in mind and that they will deliver services with integrity, fairness and beneficence. For a service that is largely credence based (Zeithaml and Bitner 2000), where customers are unable to evaluate the quality of the services after purchase and consumption, the sense of assurance that is engendered can greatly influence patient satisfaction. In the health care system, assurance is embodied in service providers who correctly interpret laboratory reports, diagnose the disease competently, provide appropriate explanations to queries, and generate a sense of safety. Nurses also play an important part in providing additional support to patients' feelings of assurance by being well-trained and by addressing their needs competently. Thus, the greater the perceived assurance from the health care providers, the greater will be the satisfaction of patients.

## **Tangibles**

Physical evidence that the health institution will provide satisfactory services is very important to patient satisfaction judgments. Generally, good appearance (tangibility) of the physical facilities, equipment, personnel and written materials create positive impressions. A clean and organized appearance of a pharmacy, its staff, its premises, restrooms, equipment, wards and beds can influence patients' impressions about the

hospital. It would be prudent in this study to assess these variables. We posit that the better the physical appearance (tangibility) of the health care service facility and the service providers, the greater will be the patients' satisfaction.

## **Communication**

Communication is also vital for patient satisfaction. If a patient feels alienated, uninformed or uncertain about her health status and outcomes, it may affect the healing process. When questions of concern can be readily discussed and when patients are consulted regarding the type of care they will be receiving, it can alleviate their feelings of uncertainty. Also, when the nature of the treatment is clearly explained, patients' awareness is heightened and they are better sensitized to expected outcomes. Appropriate communication and good rapport can, thus, help convey important information to influence patient satisfaction. In particular, patients expect health workers to communicate clearly and in a friendly manner regarding laboratory and other test results, diagnoses, prescriptions, health regimens, for example, similarly, pharmacists are expected to understand patient problems and to communicate them properly. It is proposed that the better the quality of communication perceived by the patient, the greater will be their level of satisfaction.

## **Empathy**

Health care providers' empathy and understanding of patients' problems and needs can greatly influence patient satisfaction. Patients desire health workers to be attentive and understanding towards them and to provide personal care and mental support to them. This reflects service providers' empathy. We posit that the more empathy received from the service provider, the greater the satisfaction of the patients.

## **Process features**

Process features refer to an orderly management of the overall health care service process. This constitutes patients' expectation that pharmacists will maintain for example proper opening or service times. Updated patient records and standard care also facilitate patient satisfaction. We posit that the better the process features at the pharmacy, the higher will be the level of satisfaction of the patient.

### **2.7.1.2 Additional factors**

#### **Costs**

In addition to service factors, perceived treatment cost is another factor that patients may perceive as excessive. In the more affluent Western world, Schlossberg (1990) and Wong (1990) suggest that health care consumers have become much more sensitive to costs, despite health insurance coverage. Wong also predicts that consumers will shop for the best value. In the developing world, especially Zambia, cost is a perennial concern among those seeking health care service, given their low earnings. Such costs include, travel and drugs. While basic health care service is supposed to be free in public hospitals, patients end up bearing the costs of medicine in community pharmacies, as well as some additional unseen costs. We posit that the lower the perceived overall cost of health care services, the higher will be the level of patient satisfaction.

### **2.7.2 The Cognitive and Emotional Views**

The cognitive and emotional views are two of the most important approaches to explaining decision making and behavior processes (Decrop 1999). Traditionally, the individual is considered a rational being, i.e. a cognitive information processor (Heider 1958). Here, the key elements are the mental representations of objects such as knowledge or beliefs, i.e. cognitions. Individuals would process external information of



the pharmacy experience in order to form their own beliefs and judgments. The emotional approach on the contrary is based on the assumption that feelings are an important component of the experience since destinations are considered to include, for example, sensory pleasures, daydreams and enjoyment (Decrop 1999).

Satisfaction is also studied in line with the above paradigms. In particular, there are significant differences in the conceptualization of this variable (Giese and Cote 2000). Most previous studies have used a cognitive approach, defining consumer satisfaction as a post consumption evaluation that a chosen alternative at least meets or exceeds expectations (Engel et al., 1993). However, other studies consider it an emotional response derived from a consumption experience (Spreng et al., 1996). Recently, the cognitive affective nature has been recognized in literature (Bowen and Clarke 2002; Jun et al 2001; Van Dolen et al 2004; Wirtz and Bateson 1999). According to this most recent view, satisfaction is defined in this research as an individual's cognitive-affective state derived from a pharmacy experience.

In addition, research explores both antecedents and consequences of this concept. According to a cognitive approach, satisfaction is the consumer's response to the congruence between performance and comparison standard (Oliver 1980). In this view, the expectancy disconfirmation model is the most applied (Wirtz et al 2000). In this model, two cognitive judgments play an important role in satisfaction formation, predictive expectations and disconfirmation. Disconfirmation is the major determinant of this concept, whereas expectations are the comparison standard in the consumer's evaluation (Oliver 1997). A cognitive-affective view has been recently proposed, where satisfaction is influenced by the individual's cognitive judgments and emotions derived from the consumption experience (Bigne´ et al., 2005; Jun et al 2001; Mano and Oliver 1993; Oliver 1994; Phillips and Baumgartner 2002). Finally, loyalty or commitment with respect to a brand is conceived as the main consequence of satisfaction (Brady and Robertson 2001; Selnes 1993; Yu and Dean 2001).

Based on the most recent studies of psychology and behavior, a cognitive-affective model was developed to examine the interrelationships among the psychological variables that take place in health care satisfaction process. This model has been inspired by the combined cognitive and affective model developed by Oliver (1993). According to the model by Oliver, satisfaction is influenced by cognitive evaluations such as expectations and disconfirmation. In addition, positive and negative emotions would independently contribute to satisfaction. Similarly, Oliver (1989) establishes that emotions deriving from evaluations will determine the individual's overall response in the consumption process. This cognitive-affective approach is of great value for application in this proposed study since emotional responses are essential components of the destination experiences (Bigne' et al 2005; Ryan 1995). The importance of emotions in the consumer behavior models has increased significantly during the last few years (Loken 2006). In particular, it should be emphasized that the cognitive system and emotional states play an important role in satisfaction formation. The higher mental processes of understanding and evaluation would be performed by the cognitive system, whereas emotions would be related to the individual's feelings towards the service (Van Dolen et al 2004).

### **Conceptualizing the Consumer Satisfaction Process**

This process is formed by the state of satisfaction, the antecedents that contribute to its formation and the outcomes/consequences of this psychological state. Thus, this hypotheses section is divided into three parts. First a review of the cognitive and affective drivers of patron satisfaction is made. In particular the relationships between cognitions and emotions are explored. Second loyalty towards the destination is examined as the main consequence of satisfaction. Third the influence of preconceived image of the place during the different stages of the mentioned process is also analyzed (pre, during and post-destination experience).

First a review of the variables that play a significant role in satisfaction formation is carried out. Expectations are defined as the individual's beliefs about how a product is

likely to perform in the future (Oliver 1987). The role of these beliefs is not only analyzed as a comparison standard in consumer evaluations, suggested in the disconfirmation paradigm, but also as a direct antecedent of satisfaction (Szymanski and Henard 2001). The direct effect of expectations on this variable can be explained by the Assimilation Theory (Sherif and Hovland 1961). Individuals suffer a psychological conflict when they perceive discrepancies between performance and prior beliefs. Subsequently, consumers tend to adjust perception to their expectations in order to minimize or remove that tension (Oliver 1997). Thus, the assimilation effect can be described as a tendency to process new consumption experiences in terms of existing beliefs. Under these circumstances, satisfaction will be led by expectations (Churchill and Surprenant 1982; Oliver and Burke 1999; Pieters et al., 1995). This theory has been extensively studied in tourism and satisfaction research and we may get insights for this study (Rodríguez del Bosque et al., 2006).

### **The Role of Image in the Satisfaction Process**

Image is defined as an individual's mental representation of knowledge, feelings, and global impressions about a destination (Baloglu and McCleary 1999). Three basic components of image are identified: cognitive, affective and holistic. Perceptions of the attributes of the tourist site are included in the first two components. Traditionally, destination image is based on the beliefs and knowledge of the properties of the place, i.e. the cognitive component (Baloglu 1999). Recently, it has been proposed that image is also formed based on the affective evaluations or feelings (Kim and Richardson 2003; Pike and Ryan 2004). Finally, in addition to these aspects, image should be made up of more holistic impressions of the destination (Echtner and Ritchie 1993).

The importance of the above concept is acknowledged since it affects health behavior (Bigné et al 2001). It is established that the more positive the mental representation of a place, the higher the likelihood of choosing it (Telisman-Kosuta 1994). Unfortunately, little research has been done on the influence that preconceived image of a destination has on the tourist satisfaction process. The role of this variable in the formation of

expectations, satisfaction and loyalty is explored in this proposed research. First, image is defined as a real expectations communicator (Groenroos 1990). In this way, a positive relationship between image and consumer beliefs is found in several service industries (Clow et al., 1997). In tourism, for instance, a mental representation of the destination helps individuals to anticipate their experiences (Jenkins 1999). In other words, image moulds the expectations that people have before the visit (Bigné et al 2001). Rodríguez del Bosque et al (2006) prove that image is an expectations-generating factor of a future encounter with the tourist service.

Second, the evaluation of services is complex, basically due to its intangibility. In these cases, satisfaction with the service encounter would be significantly affected by the prior image the user has of the pharmacy (Andreassen and Lindestad, 1998; Kristensen et al., 1999). This influence is higher in high-risk situations as perceived by the consumer (Guñhan-Canli and Batra 2004). Intangibility and risk are two features associated with patron experience (Bowen and Clarke 2002). The difficulty for individuals to evaluate their experiences, as well as the confidence in their images of the place (Joppe et al 2001), could justify the view that image is a driver of satisfaction. This is supported by Bigné et al (2001). In addition to the effect of prior beliefs on pharmacy service satisfaction. It is interesting to analyze the influence of image on satisfaction. Significant differences between image and expectations would justify this position. In contrast to expectations, image is a long-run overall evaluation, a more stable psychological concept and tends to have more stability over time (Crompton and Lamb 1986).

Third, the relationship between image and consumer loyalty is explored. The positive relationship between both variables is acknowledged in the European Customer Satisfaction Index (ECSI Technical Committee 1998). However, empirical evidence is contradictory. Several studies recognize this relationship (Andreassen and Lindestad 1998; Kristensen et al., 1999), while others do not support it (Bloemer et al., 1998). In pharmacy research, where a patron can go for repeat refills, a positive relationship between image and intentions to return in the future is supported (Bigné et al 2001;

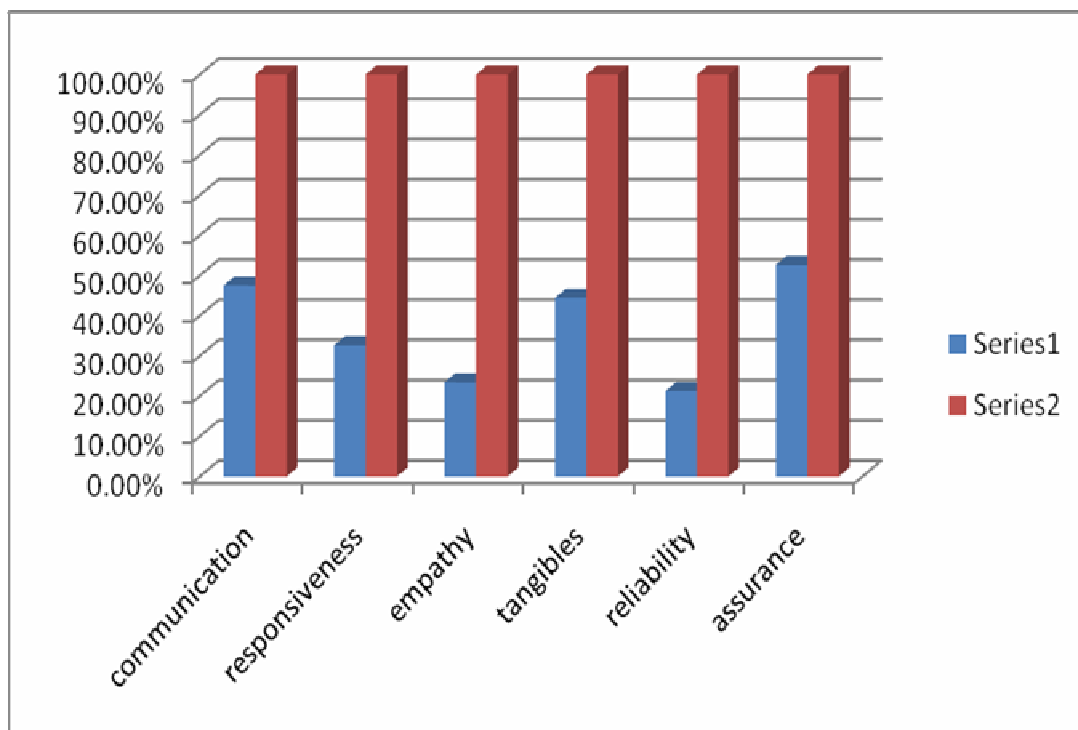
Court and Lupton 1997). In the present study, loyalty is judged not only on a satisfaction state (encounter- specific), but also on a preconceived image (primarily long-term).

Individuals with a positive image of the destination might continue their interactions in the future (and their recommendations to other people) regardless of the level of satisfaction during a specific experience, and vice versa. Under these circumstances, image should be considered a powerful instrument for generating loyalty.

## CHAPTER FOUR – RESULTS

### 5.0 Introduction

With the use of structured interviews (questionnaire) 254 respondents were interviewed. After going through the questionnaires, 26 (15 from those who were satisfied and 11 from those who were not satisfied) questionnaires were rejected, leaving us with 228. The reasons for the rejection of these questionnaires were that some were incomplete and others had some pages missing while others had respondents withdrawing from the interview voluntarily. The mean age for the respondents at the time they were enrolling for the study was 35.2 years (standard deviation of 7.8). Out of the 228 respondents, 96 (42%) were males. The average age for males at the time of enrolment was 35.9 years (standard deviation 7.9) years and for females it was 33.9 years (standard deviation of 7.9). Our findings were that those satisfied were 36%(82/228) and assurance had the highest score(52.6%) and reliability had the lowest score(21.2%).

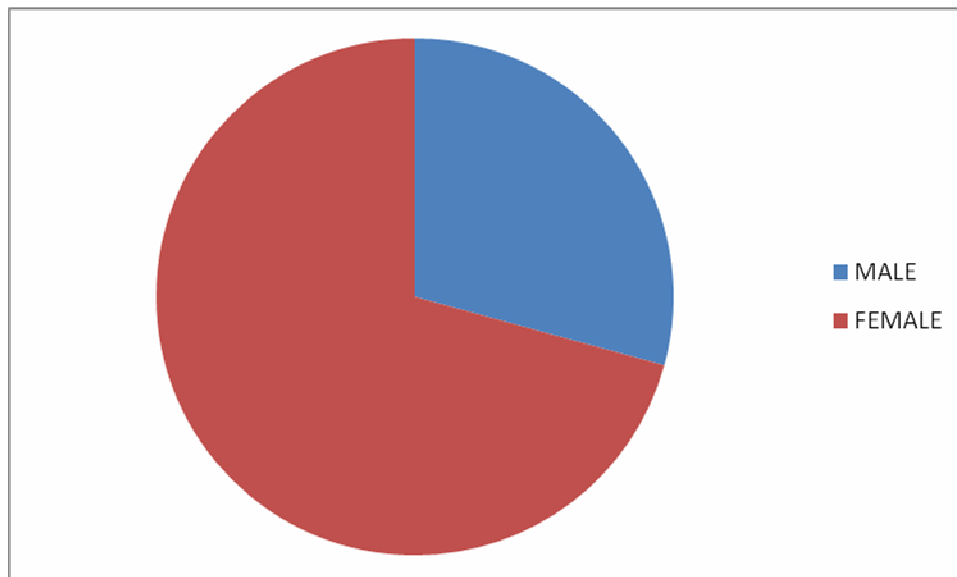


### Satisfaction domains

**Table 6: Satisfaction domains and satisfaction**

Satisfaction Domains	SATISFIED?		TOTAL
	YES	NO	
communication	28 (47.5%)	31 (52.5%)	(100%) 59
Responsiveness	14 (32.6%)	29 (67.4%)	(100%) 43
Empathy	11 (23.4%)	36(76.6%)	(100%) 47
Tangibles	12 (44.4%)	15 (55.6%)	(100%) 27
Reliability	(21.2%) 7	26 (78.8%)	(100%) 33
Assurance	10 (52.6%)	9 (47.4%)	(100%) 19
<b>TOTAL</b>	<b>82</b>	<b>146</b>	<b>228</b>

Assurance had the highest score 52.6% and reliability had the lowest score 21.2%. A test of significant ( $X^2$  13.07; p value 0.023) indicated that the observed proportion of respondents with different satisfaction domains is statistically significant as shown in table.



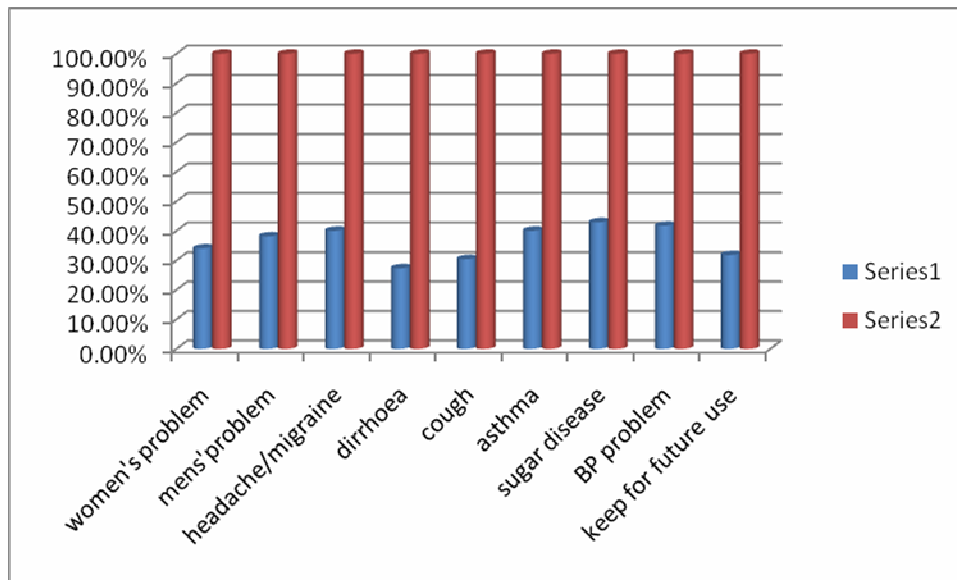
**MALE TO FEMALE SEX RATIOS OF PATRONS IN TERMS OF PARTICIPATION**

**Table 5: Reasons for purchase of drug(s) during the visit and satisfaction**

Reason for drug purchase	Satisfied?		TOTAL
	YES	NO	
Women's problems	18 (34%)	35 (66%)	(100%) 53
Men's problems	8 (38.1%)	13 (61.9%)	(100%) 21
Headache/migraine	6 (40%)	9 (60%)	(100%) 15
Diarrhoea	6 (27.3%)	16 (72.7%)	(100%) 22
cough	7 (30.4%)	16 (69.6%)	(100%) 23
Asthma	8 (40%)	12 (60%)	(100%) 20
Sugar disease	12 (42.9%)	16 (57.1%)	(100%) 28
BP problem	10 (41.7%)	14 (58.3%)	(100%) 24
Keep for future use	7 (31.8%)	15 (68.2%)	(100%) 22
<b>TOTAL</b>	<b>82</b>	<b>146</b>	<b>228</b>

On reasons for purchase of drugs sugar disease had the highest score 42.9% and diarrhoea had the lowest score 27.3%.





**On reason for purchase of drugs and satisfaction sugar disease had the highest score 42.9 % and diarrhoea had the lowest score 27.3%**

## **CHAPTER FIVE - DISCUSSION OF RESULTS**

### **5.0 INTRODUCTION**

In this study, the determinants of satisfaction with community pharmacy were examined.

### **5.1 DISCUSSION ON SATISFACTION DOMAINS**

Literature indicates that older patrons are often more satisfied with their care than younger patrons (Jackson *et al* 2000, Young *et al*, 2000). Other research has found that the satisfaction of men and women may depend on different aspects of care. For example, Weisman and Colleagues (Weisman *et al*, 2000) found that women satisfaction was more dependent on the information content provided during a medical visit, whereas men`s satisfaction was more dependent on personal attention received.

Lewis (1994) reported that older, less educated persons tended to rate their care more favourably ( Hefting. *et al*, 1986; macwell *et al*, 2001; Ocmann and Templin 2000). In this study those satisfied were 36% and were above 35 years as compared to those below 34 years old. Assurance had the highest score 52.6% and reliability had the lowest score 21.2%.

The difference in satisfaction could be due to demographic differences and differences in education status and systems. Overall, it shows that older persons are satisfied as compared to younger persons. This agrees with other research that has been done.

### **SATISFACTION DOMAINS**

#### **(a) communication**

On communication between the patrons and pharmacists, only 47.5 %( 28/59) were satisfied. Study done by Pascoe (1983) 60% were satisfied on communication and the other study done by Donabedian (1980) 61% were satisfied. This low satisfaction could be due to differences in training of pharmacists, policy, educational systems, culture and political will e.g. in Europe they have performance systems of assessments on pharmacy which is not the case in Zambia.

### **(b) Responsiveness**

A study that was done by Rhee and Bird (1996) 52% of the patrons were satisfied with responsiveness while in our study, only 32.6% were satisfied. The reasons for the difference could be due to lack of drugs, poor quantity of drugs, long queues; congestion might have led to dissatisfaction.

### **(c) Empathy**

Pharmaceutical Health care provider's empathy can greatly influence patient satisfaction according to the study done by (Parasuraman *et al*, 1991). Patients desire health workers to be attentive and understanding towards them and mentor support. (Handsaw and Atwood 1982 La Monica 1975) 61% satisfied. In our study 23.4% (11/47) were satisfied. Some of the reasons for this could due to poor training, low motivation, lack of supervision of pharmacies and poor monitoring according to Parasuraman *et al*, 1991.

### **(d) reliability**

Those patrons who visited pharmacies, 21.2% were satisfied with reliability. In a study done by Parasuraman(1990), 63% of patrons were satisfied. In that study Parasuraman explained that Irregular supply of drugs, poor stocks and poor quality were some of the reasons for low satisfaction levels.

### **(e)Assurance**

In our study, 52.6% of the patrons were satisfied with assurance. In a similar study done by Zeithanol and Bitner 2000, 75% were satisfied. This needs improvement.

## **5.2 REASONS FOR PURCHASE OF DRUGS AND SATISFACTION**

- (a) Those who came for women's problems 34%were satisfied.. A study conducted by Glint Borg 2004 in UK of the women's problems 60% were satisfied as compared to 40% not satisfied. This calls for further research as factors like educational status, culture, social Class could contribute. Another study by

Weismann (1990) found that women's satisfaction is dependant on information content provided during the visit.

- (b) **Men's problems** – those who came for men's problems 38.1% were satisfied. Study done by (Glint Borg 2004), shows men's satisfaction dependant on personnel attention received during the visit. This needs improvement..

- (c) **Headache / migraine**

For those who came for headaches/ migraines only 40% were satisfied with the service. This needs improvement.

- (d) **Diarrhoea**

Those who came for diarrhoea problems, only 27.3% were satisfied. This requires improvement.

- (e) **Cough**

Those who came with cough problems only 30.4% were satisfied. This score was low and requires improvement.

- (f) **Asthma**

Patrons who visited pharmacies due to asthma problems only 40% were satisfied. This low score needs improvements.

- (g) **Sugar disease**

Among patrons who came for sugar disease problems, only 42.9% were satisfied and this was a low score and needs improvement.

- (h) **B.P Problems**

Only 41.7% was satisfied. This is a low score and needs to improve.

- (i) **Keep for future use**

Those who wanted to keep the drugs for future use only 31.8% were satisfied.

## **CONCLUSION ON DISCUSSIONS OF RESULTS**

This is the first research of its kind in Zambia and we do not know the National existence or the levels of satisfaction. This research will help to estimate the levels of satisfactions, to describe those with the lowest scores and help to determine the reasons for purchase of drugs.

**Limitations in the study**

1. Patrons withdrew from interviews.
2. Could not pick a large sample due to lack of funds.
3. Reliability was more on self report. It is difficult to rely on such reports as people underreport to get more attention from pharmaceutical care providers.
4. Although some results are consistent with theories of association with age, sex, education, reason for purchase and Tangibles. Cross sectional studies can not provide conclusive evidence of association in the study. There is need for in-depth interviews and longitudinal studies to confirm some of the associated factors.

## CHAPTER SIX - CONCLUSION

The key concluding remarks are as follows:-

1. Only 36% of patrons were satisfied.
2. Assurance had the highest score 52.6% and reliability had the lowest score 21.2% on the satisfaction domains.
3. On reason for purchase of drugs sugar disease had the highest score 42.9% and diarrhoea had the lowest scores 27.3%.

Despite the above findings, much work remained to be done. There is need to do similar research in other parts of the country so that the picture that can be obtained elsewhere can be compared to the findings. This could help to:-

- Identify pharmacy care that needs improvement
- Identify potential areas of pharmacy care that needs performance assessment
- Inform managers and policy makers.
- Guide the training of pharmacists from the University of Zambia. This study is first of its kind and raises more questions than answers. It is hereby suggested that further studies are needed in this area.

## **CHAPTER SEVEN – RECOMMENDATIONS**

1. Performance assessment of pharmacies and pharmacists to be conducted every year and deserving pharmacists to be rewarded.
2. Policy makers and managers to do performance assessments annually to help with planning and procurement of drugs and medical supplies.
3. Results of performance appraisal to help with the training of pharmacists.
4. Medical health care is a commodity and thus performance assessment to be done to ensure that patrons are satisfied
5. Satisfaction surveys to help pharmacists to check inadequacies in care programmes and systems

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## Appendix 1: COMMUNITY SATISFACTION SURVEY INVENTORY

1. Age

Age Range	Tick Only One
a. 18–27	
b. 28–37	
c. 38–47	
d. 48 -57	
e. 58years and older	

Occupation	Tick Only One
a. Employed	
b. Student	
c. Housewife	
d. Unemployed	
e. Retired	

2. How far have you gone in school?

Level of Education	Never	Primary	Lower Secondary	Upper secondary	College /University
Tick					

3. Do you come to this pharmacy regularly? Yes-----No-----

If you do come regularly to this pharmacy, Whom did you consult to get the medication you wanted in the last six months?	Tick What applies to you (May be one or more than one)			
	A doctor referred me	A Clinical Officer referred me	A Pharmacist	I referred my self

4. Regarding the visit now, who recommended you to come and purchase the drugs?

	Tick Only One
a. Self	
b. Relative or friend	
c. Pharmacist or staff	
d. Doctor	
e. Not specified	

5. Reason for purchase of drug(s) during this visit(May be one or more than one)	Tick What applies to you
a. Women's problems	
b. Men's problems	
c. Headache/migraine	
d. Injury	
e. Diarrhoea	
f. Back pain	
g. Cold or flu	
h. Cough	
i. Joint pain/s	
j. Toothache	
k. Keep for future use	
l. Asthma	
m. Sugar disease	
n. High BP	
o. Mental Illness	

6. For how long have you used this medicine in the past? (May be one or more than one)	Tick What applies to you			
	Continuously	Regularly	Occasionally	Just this time
a. Women's problems				
b. Men's problems				
c. Headache/migraine				
d. Injury				
e. Diarrhoea				
f. Back pain				
g. Cold or flu				
h. Cough				
i. Joint pain/s				
j. Toothache				
k. Keep for future use				
l. Asthma				
m. Sugar disease				
n. High BP				
o. Mental Illness				

7. For how long are you going to use this medicine? (May be one or more than one)	Tick What applies to you						
	1 week	1-4 weeks	5-8 weeks	9-13 weeks	14-20 weeks	>20 weeks	Not specified
a. Women's problems							
b. Men's problems							
c. Headache/migraine							
d. Injury							
e. Diarrhoea							
f. Back pain							
g. Cold or flu							
h. Cough							
i. Joint pain/s							
j. Toothache							
k. Keep for future use							
l. Asthma							
m. Sugar disease							
n. High BP							
o. Mental Illness							

8. Noting the pattern of use of the drugs what applies to you	Tick What applies to you (May be one or more than one)			
	Continuously	Regularly	Occasionally	Just this time
a. Women's problems				
b. Men's problems				
c. Headache/migraine				
d. Injury				
e. Diarrhea				
f. Back pain				
g. Cold or flu				

## Satisfaction Domains

Please state the degree with which you are satisfied with this pharmacy by assigning marks from 1 to 10 as follows: "10 very satisfied "1 not satisfied at all. ----- to each statement below

### 9. Ability to communicate

	1	2	3	4	5	6	7	8	9	10
a. Greetings as a matter of welcome										
b. The courtesy and respect shown you by the pharmacist and staff										
c. Doctor's effort in exploring my health problem?										
d. The readiness of the pharmacist to answer my questions										
e. The privacy of our conversations with the pharmacist										
f. The pharmacist listened to me attentively.										
g. The advice I got from the pharmacist about problems that might occur with my medication										
h. The pharmacist explained the purpose of the drug (s)										
i. The privacy of our conversations with the pharmacist										
j. The pharmacist's instructions about how to take your medication										
k. The written information the pharmacist provides you about drug therapy and/or diseases										
l. The amount of time the pharmacist spends with you										
m. The information the pharmacist gives you about the proper storage of your medication										
n. I felt safe in the hands of the pharmacist										



## Tangibles

	1	2	3	4	5	6	7	8	9	10
a. Hospital was visually appealing										
b. Pharmacist was neat in appearance.										
c. Pharmacy staff was neat in appearance.										
d. The way your pharmacist works together with you to plan what should be done to get good results from your medications										
e. The help you get from the pharmacist to avoid unnecessary costs related to your prescriptions										
f. The way the pharmacist helps you to manage your medications										
g. The amount of time it takes to get a prescription filled at your pharmacy										
h. Drug cost was high.										

## Appendix II Work Plan

	September	October	November	December	January	February	March	April
proposal writing	XXX	XXX						
proposal submission and Ethical clearance			XXX					
data collection				XXX	XXX	XXX		
data analysis								
report writing							XXX	
discussion								XXX
project report submission								XXX

### **Appendix III: BUDGET**

An estimated budget of all the requirements for the study

<b>ITEM</b>	<b>QUANTITY</b>	<b>AMOUNT (In Kwacha)</b>
Allowances Data collectors	10	4 000 000
<b>Stationary</b>	40	8 00 000
<b>Compensation</b>	228	912 000
<b>Printing</b>	50	750 000
<b>Typing</b>	50	750 000
<b>Photocopying</b>	50	1 000 000
<b>TOTAL</b>		8 212 000

## **Appendix IV: INFORMED CONSENT FORM**

### **CONSENT TO PARTICIPATE IN A RESEARCH STUDY**

#### **Title of the Research study**

Client satisfaction with community pharmacy care in Lusaka: a cross sectional study.

#### **Investigator**

Victor Mulubwa Pharmacist, Ministry of Health, Lusaka, Cell No. 0977842435.

#### **Purpose and Background**

This is a study of client satisfaction with community pharmacy care. In most studies that have been done there has been or no association between satisfaction and domains like communication, empathy, reliability, responsiveness, tangibles and cost. The main purpose of this study is to test whether there is an association or not.

#### **Procedures:**

If you agree to participate, the following things will happen:

1. You will be asked to answer a questionnaire on demography i.e. social class, occupation, sex and age. This will take about 15 minutes.
2. You will then be asked questions on referral, men's and women's problems, patterns of drug use and satisfaction domains.
3. Your name will NOT be written on the questionnaire only the study number will be assigned to questionnaires.

#### **Benefits**

There may be no direct benefit to you from participating in the study. However, this can help managers, planners and policy makers in an effort to bring healthcare as close to the family as possible.

#### **Risks**

There are no risks. You may however, feel some discomfort with some questions which are unusual.

**Reimbursement**

You will be paid transport money to and from home (bus fare) and launch .Such costs will be paid by the researcher. For further information about this, you can contact the chairperson of Research Biomedical Ethical committee of the University of Zambia, School of Medicine on telephone number 256067 or P.O BOX 50110, Ridgeway campus, Lusaka.

**Confidentiality**

The results of all the study will be discussed with you, and kept confidential unless you wish otherwise). Except for this disclosure, all information obtained in this study will be considered confidential and used only for research purposes. You identity will be kept confidential as far as the law allows.

**Injury clause**

In the event that you become injured during the course of the research study, immediately notify the principal investigator or the chairperson of the Research Biomedical Ethical committee of the University of Zambia, School of Medicine on telephone number 256067 or P.O BOX 50110, Ridgeway campus, Lusaka. If you believe that your injury directly resulted from the search procedures of this study, you can file a complaint with the principal investigator. For a description of this process, contact the Chairperson of Research Biomedical Ethics Committee at University of Zambia, School of Medicine on telephone 256067.

**Right to Refuse or Withdraw**

Your participation in the study is entirely voluntary, and you are free to refuse to take part or withdraw at anytime without affecting or jeopardizing your future medical care.

**Questions**

....., the researcher has discussed this information with you and offered to answer your questions. If you have further questions, you can contact him on 0977 842435or the Chairperson of Research Biomedical Ethics Committee at University of Zambia, School of Medicine on telephone 256067.

**Consent**

I agree to participate in this study. I have been given a copy of this form and had a chance to read it.

Participant's Signature..... Thumb Print: .....

Date.....

Witness (Name and Signature): .....

Date.....