FACTORS AFFECTING CONSUMER BEHAVIOUR: A CASE STUDY OF HERBAL MEDICINE IN NAIROBI

BY

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STUDENT’S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Nairobi for academic credit.

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ABSTRACT

The gradual shift of scientific medicine consumers to herbal medicine usage during the last decade has posed a great challenge to scientific medicine. The shift has also created opportunities for herbalists.

The purpose of the study was to determine the factors that influence consumer choice and purchase of herbal medicine in Nairobi. The Study helped to determine the marketing mix variables that contribute to the purchase of herbal medicine such as product, price, promotion, place, people, processes and physical evidence. It also helped to determine the factors that affect consumer choice of herbal medicine such as perception, attitude, learning and culture. It also explains why herbal medicine consumers prefer herbal medicine to scientific medicine. Some of the reasons are because herbal medicine is natural, has no side effects, more effective and affordable as compared to scientific medicine.

The aim of this research is to provide a clear understanding of the gradual shift to herbal medicine usage by consumers.

This study was descriptive in nature and the population of interest was herbal medicine consumers in Nairobi. The respondents in this study were chosen using random sampling. Data was collected through structured questionnaires which were dispatched to respondents by the researcher and two research assistants. The responses received were compiled for data analysis by the use of Microsoft excel. The data was presented by the use of tables and pie charts.

All herbal medicine consumers use scientific medicine as well. Seventy percent (70%) of the herbalists support the use of scientific medicine. Scientific doctors on the other hand do not support herbal medicine. Fifty percent (50%) of the scientific doctors indicated that herbal medicine usage is fair and the remaining 50% rated herbal medicine usage as poor.

The main reason for herbal medicine choice is low price. The price of herbal medicine is lower than that of scientific medicine. According to 85% of the herbal medicine consumers, the price of herbal medicine is lower than that of scientific medicine. A hundred percent (100%) of the herbalists indicated that the price of herbal medicine is lower than that of
scientific medicine and 80% of the scientific doctors indicated that the price of herbal medicine is lower than that of scientific medicine.

Herbal medicine consumers prefer herbal medicine to scientific medicine because herbal medicine has a natural healing and is free from side effects. All herbal medicine consumers (100%) reported that herbal medicine has greater curative capability than scientific medicine.

This research explains why herbal medicine consumers prefer herbal medicine to scientific medicine and some of the reasons are affordability, minimal side effects and curative capability.

In order to retain customers and attract new ones, herbalists need to educate present and potential consumers on distinctive benefits of herbal medicine and its attributes. They should also undertake continuous research on herbal medicine preparation, storage and delivery in order to favourably change consumers’ perception and attitude.
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DEDICATION

This project is dedicated my husband Vincent Kioko and my parents for their support and encouragement throughout the MBA graduate program.
# TABLE OF CONTENTS

1. Declaration ................................................................. i
2. Abstract .................................................................... ii
3. Acknowledgment ........................................................ .v
4. Dedication .................................................................. v
5. List of tables ............................................................... x
6. List of figures .............................................................. xi

1. CHAPTER ONE: INTRODUCTION ...................................... 1
   1.1 Background of the Study ........................................... 1
   1.2 Statement of the Problem ......................................... 4
   1.3 Purpose of the Study ............................................... 5
   1.4 Research Questions ............................................... 5
   1.5 Importance of the Study ......................................... 5
   1.6 Scope of the Study ................................................ 6
   1.7 Definition of Terms ............................................... 6
   1.8 Chapter Summary ................................................ 7

2. CHAPTER TWO: LITERATURE REVIEW .......................... 8
   2.1 Introduction ........................................................ 8
   2.2 Marketing Mix Variables ........................................ 8
   2.3 Consumer Behaviour ............................................ 12
     2.3.1 Perception ................................................... 12
     2.3.2 Attitudes ..................................................... 13
     2.3.3 Learning ...................................................... 13
     2.3.4 Culture ....................................................... 14
   2.4 Chapter Summary ................................................ 16
3. CHAPTER THREE: RESEARCH METHODOLOGY .............................................. 17
   3.1 Introduction .................................................................................. 17
   3.2 Research Design .......................................................................... 17
   3.3 Population and Sampling Design .................................................. 17
   3.4 Data Collection Methods ............................................................... 18
   3.5 Research Procedures ................................................................... 18
   3.6 Data Analysis Methods ................................................................. 18
   3.7 Chapter Summary .......................................................................... 19

4. CHAPTER FOUR: RESULTS AND FINDINGS ........................................... 20
   4.1 Introduction .................................................................................. 20
   4.2 Herbal Medicine Consumers’ responses ....................................... 20
   4.3 Herbal Clinics responses to herbal medicine ............................... 26
   4.4 Scientific doctors’ responses on herbal medicine ....................... 31
   4.5 Chapter Summary .......................................................................... 36

5.0 CHAPTER 5: DISCUSSIONS, CONCLUSIONS AND
RECOMMENDATIONS ................................................................. 37
   5.1 Introduction .................................................................................. 37
   5.2 Summary ...................................................................................... 37
   5.3 Discussion ..................................................................................... 37
   5.4 Conclusions ................................................................................ 39
   5.5 Recommendations ...................................................................... 40

REFERENCES ...................................................................................... 41
Appendix 1 Questionnaire Covering letter ......................................... 44
Appendix 2 Consumer questionnaire ................................................ 45
Appendix 3 Herbal doctors questionnaire ........................................... 49
Appendix 4 Scientific doctors questionnaire..........................................................54
### LIST OF TABLES

**Herbal Medicine Consumers**

1. Table 1: Duration of herbal medicine usage by consumers .......................................................... 20
2. Table 2: Frequency of herbal medicine usage by consumers ......................................................... 20
3. Table 3: Herbal medicine versus scientific medicine ........................................................................ 21
4. Table 4: Curative capability of herbal medicine .............................................................................. 22
5. Table 5: Reasons for switching from scientific medicine to herbal medicine ............................... 22
6. Table 6: The price of herbal medicine compared to scientific medicine ..................................... 23
7. Table 7: Availability of herbal clinics in Nairobi and its suburb ..................................................... 24
8. Table 8: Weaknesses of herbal medicine ....................................................................................... 25
9. Table 9: Solutions to herbal medicine weaknesses ......................................................................... 25
10. Table 10: Other comments by consumers ................................................................................... 26

**Herbal Clinics**

11. Table 11: Opinion on herbal medicine usage ............................................................................. 26
12. Table 12: Opinion on scientific medicine usage ........................................................................... 27
13. Table 13: Curative capability of herbal medicine ......................................................................... 27
14. Table 14: Price of herbal medicine compared to scientific medicine ......................................... 28
15. Table 15: Availability of herbal medicine clinics in Nairobi and its suburbs ............................. 28

**Scientific Doctors**

16. Table 16: Opinion on herbal medicine usage ............................................................................. 31
17. Table 17: Opinion on scientific medicine usage ........................................................................... 31
18. Table 18: Comparison of herbal medicine to scientific medicine ............................................... 32
19. Table 19: Reasons for herbal medicine usage by consumers ...................................................... 33
20. Table 20: The price of herbal medicine as compared to scientific medicine .............................. 33
21. Table 21: Availability of herbal medicine in Nairobi and its suburbs ......................................... 34
22. Table 22: Weaknesses of herbal medicine ................................................................................. 35
23. Table 23: Addressing herbal medicine weaknesses of herbal medicine .................................... 35
24. Table 24: Strength of herbal medicine ....................................................................................... 35
25. Table 25: Comments ................................................................................................................... 36
LIST OF FIGURES

Herbal Medicine Consumers

Fig 1: Frequency of herbal medicine usage ......................................................... 21
Fig 2: Location of herbal medicine clinics in Nairobi ......................................... 23

Herbal Clinics

Fig 3: Location of herbal medicine clinics in Nairobi ......................................... 29

Scientific Doctors

Fig 4: Curative capability of herbal medicine ..................................................... 32
Fig 5: Location of herbal medicine clinics in Nairobi ......................................... 34
CHAPTER 1: INTRODUCTION

1.1 Background of the Study

Medicine is the science of diagnosing, treating or preventing disease and other damages to the body or mind. The world is mainly dominated with scientific medicine. There are two main types of medicines namely scientific medicine and alternative medicine (Eldin and Dunford, 1999).

Scientific medicine often contains toxic chemicals which work by destroying problem causing pathogens or by artificially taking over systems in the body instead of helping the body regain balance and work on its own again. In both cases, they can induce side effects by poisoning the body because they are chemically based. Pharmaceutical drugs are typically based on single chemicals with "active" properties. Some of these drugs are still derived directly from plants, while others are now synthesized. Chemicals in some plants are also extracted providing the building blocks for drugs (Cook, 2002).

Herbal medicine is the most common alternative medicine and it is the use of plant remedies in the treatment of disease. Herbal medicine and their extracts, known as phytomedicinals, are plant-derived products that are promoted for medicinal properties. Herbal medicine is the oldest form of medicine known. Herbal medicine is almost as old as human civilization itself. Ancient peoples quickly realized that some plants were edible, some poisonous and some beneficial to health- mostly by a simple but dangerous process of trial and error. They found the most effective local plants to heal their illnesses. They knew in some distinct way that nature did indeed offer up cures to what ails us (Sanderoff, 2000).

With the advancement of science enabling us to identify the chemical constituents within these plants, we can better understand their healing powers.

Medical herbalists are trained in the same diagnostic skills as orthodox doctors but take a more holistic approach to illness. The underlying cause of the problem is sought and once identified, it is this which is treated, rather than the symptoms alone. The reason for this is the treatment of suppression of symptoms will not rid the body of the disease itself.
Herbalists use their remedies to restore the balance of the body thus enabling it to mobilize its own healing powers. Consumers thus find herbal medicine a more natural way of healing their ailments (Strasen, 1999).

People have always relied on plants for food to nourish and sustain the body. Herbal medicine can be seen in the same way. Plants with a particular affinity for certain organs or systems of the body are used to "feed" and restore to health those parts, which have become weakened. As the body is strengthened, so its ability and power to fight disease is increased and when balance and harmony are restored, health will be regained. Because of their diverse range of uses, plants have a wide impact on the different functions of the body. Therefore, it can be noted that consumers are now seeking herbal medicines because they believe that they have natural healing powers therefore they feel safer using herbs. In addition herbs are generally perceived by consumers to be healthier than their synthetic counterparts (Mills, 1989).

Earlier related studies on herbal medicine include the Business Source premier on the 19th of June 2002, where the president of Bangladesh stressed the research in herbal medicine. President Badruddoza Chowdhury stressed the need for continuous research in traditional medicine as herbal medicine could play an important role in the health care sector.

"Due to its advantages such as curative capability, free from side effects and competitive price, the traditional medicine had already become popular in the developed countries like the United States and the European Union and is gaining ground everyday" the president said while inaugurating a national seminar on traditional medicine. He said that continuous research can raise the quality of herbal medicine and can make it competitive in terms of price (Business Source Premier, 2002).

World Health Organization (WHO), encourages and supports member states in integrating traditional medicine into the national health care system and in the proper use of traditional medicine by not only supporting national programs of research and training, but also providing technical guidelines and international standards as well as facilitating information exchange to assist member states. In order to assist member state in the proper use of herbal medicines, a series of technical documents and guidelines related to herbal medicines have been issued by WHO. Two aspects have been covered by the documents: Scientific
research and legal information based on requests from member states. The purpose of the scientific research documents is to provide scientific information on safety, efficacy and quality control of widely used medicinal plants for facilitating the proper use of herbal medicines in the Member states. Documents concerning regulation and assessment of herbal medicines on the other hand define the criteria of evaluating safety, quality and efficacy of herbal medicines and thereby assist national regulatory authorities, scientific organizations and manufactures to undertake an assessment of the documentation/submissions in respect to such products (Reported by WHO Western Pacific Regional Office, 1997).

Trends related to the factors affecting consumer choice of herbal medicine:
As we know, herbal medicines, made a great contribution to human health care and development before modern medicine appeared. At present herbal medicine is still playing an important role in the primary health care of a number of developing countries. In some countries particularly in the majority of Asian countries where modern medicine is available, herbal medicine also maintains its popularity because of its historic and cultural impacts (Eisenberg, Davis and Ettnner, 1997).

Factors contributing to the growing consumer interest in herbal medicine include: an increase in the number of diseases viewed as unresponsive to allopathic medicine, the increasing cost and impersonality of modern health care, decreasing consumer confidence in allopathic medicine, and a general interest in “natural” healing.

Many people in the world rely on herbal medicine also known as natural medicine either through self- treatment or treatment by herbal practitioners. Natural medicines have been found to be effective in the treatment of some of the opportunistic infections associated with HIV. Scientific medicine, especially antiretroviral are beyond the reach of the world’s poor (Lierbert, 1998).

Despite the existence of traditional medicine over many centuries and its expansive use during the last decade, in most countries, traditional medicine including herbal medicines have not yet been officially recognized, and in most countries the regulation and registration of herbal medicines have not been well established. Furthermore, research and training activities of herbal medicines have not received due support and attention. As a
result the quantity and quality of safety and efficacy data are far from sufficient to meet the demands for the use of herbal medicines in the world. As the characteristics and application of herbal medicines are quite different from chemical drugs, how to evaluate herbal medicines and what kind of academic research approaches and methods could be used to evaluate the safety and efficacy of herbal medicine are new challenges which have emerged in their recent years (WHO report, 1998).

Herbal medicine can be found in the form of tinctures, extracts, infusions, decoctions, juices, capsules and tablets, medicinal herbal teas, ointments, lotions, salves and sprays.

1.2 Statement of the Problem

Herbal medicine was once considered strange and ineffective but modern science has validated that our ancestors knew all along that plants contain natural healing components that can be used effectively to prevent and cure illnesses. According to World Health Organization the number of consumers in the world who use herbal medicine has grown rapidly overtime (WHO report, 1998).

Githae (1991) states that during the last decade many patients/consumers in Kenya have switched from scientific medicine to herbal medicine. The gradual shift to herbal medicine usage poses a great threat to scientific medicine, as there is the general interest in natural healing.

Renewed interest in herbal medicine in the world greatly supports the contention that scientific medicine has not been successful in the control and treatment of diseases as had probably been expected. While scientific medicine has been successful in suppressing killer diseases as tuberculosis and small pox, they have left residual toxic materials that are a burden to our bodies. No chemical drug is free from side effects (Githae, 1991) Herbs then are a real alternative to scientific medicine because of its strong chemical bias. It has been scientifically proven that wholesome original herbs containing all the known curative properties are more effective than scientific medicine. There has been an increase in the number of diseases viewed as unresponsive to scientific medicine and this has made herbal medicine more popular (Were, Waruinge and Githure, 1992).
It is against this background that this research is undertaken to establish the factors that affect consumer choice of herbal medicine in Nairobi.

1.3 Purpose of the Study
The purpose of the study was to determine the factors that influence consumer choice of herbal medicine in Nairobi.

1.4 Research Questions
The study helped to answer the following questions:

1. What marketing mix variables contribute to the purchase of herbal medicine in Nairobi?
2. What factors affect consumer choice of herbal medicine in Nairobi?
3. Why do herbal medicine consumers prefer herbal medicine to scientific medicine?

1.5 Importance of the Study
The consumers will be well informed of the benefits of herbal medicine. The information will also be useful to consumers because they will learn that herbal medicine is a form of alternative medicine, is affordable, has minimal side effects and has curative capability. Herbalists are likely to increase in number due to the high demand of herbal medicine resulting into greater competition, wider range of herbalists and herbal medicines to choose from and improved quality of herbal drugs.

Herbal medicine practitioners will develop higher quality herbal medicine in more hygienic conditions to ensure safety. By so doing herbalists will better accommodate consumer needs because of the high quality standards they will maintain. This information will also be of use to upcoming herbalists so that they can know which factors influence consumer choice of herbal medicine in Nairobi. They will use this information to tailor customer needs.

Scientific medicine practitioners will understand why consumers have resulted into herbal medicine to cure their illnesses. They will also get to know how consumers compare scientific medicine to herbal medicine.
This study will also be a source of information to people who may carry out a similar research in the future.

1.6 Scope of the Study
This study will focus on Nairobi dwellers so as to get more accurate information as to why consumers prefer herbal medicine in Nairobi.

1.7 Definition of Terms
1.7.1 Suburb
District outside the central of a town or city (Cowie, 1994)

1.7.2 Tinctures
Liquid herbal preparations in which alcohol is used to extract the herb’s medical constituents (Lierbert, 1998)

1.7.3 Extracts
Obtained from a substance by chemical or mechanical action as by pressure distillation or evaporation (Lierbert, 1998)

1.7.4 Capsules and tablets
Contain ground up or powdered raw herb (Sanderoff, 2000)

1.7.5 Ointments, lotions, salves and sprays
Applied topically to help heal broken skin, wounds, fight skin infections and rashes and heal minor burns (Walton, 1986)

1.7.6 Infusions
To extract flavours for a drink or medicine (Sanderoff, 2000)

1.7.7 Phytomedicinals
Extracts of herbal medicine which are plant-derived products that are of medicinal value (Sanderoff, 2000)
1.7.8 Herbal Medicine
Herbal medicine is the most common alternative medicine and it is the use of plant remedies in the treatment of disease (Sanderoff, 2000).

1.7.9 Consumer behaviour
Consumer behaviour is the mental and physical decision process individuals engage in when evaluating, acquiring, using, or disposing of goods and services (Evans, Moutinho and Raaij, 1996).

1.8 Chapter Summary
This chapter explains the purpose of the study, which is to determine consumer choice of herbal medicine in Nairobi. This is because consumer interest in herbal medicine is growing rapidly worldwide. People, are seeking herbal medicine because they believe they have "natural" healing powers therefore they perceive them as safer and healthier as compared to their synthetic counter parts.
CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION
This chapter examines the marketing mix elements and factors that influence product choice, consumer buying behaviour, perception and attitudes toward herbal medicine in Nairobi and its suburbs.

2.2 MARKETING MIX VARIABLES
The theory of consumer choice advocates that the functions of place, price, distribution, promotion, quality and income play different roles in influencing demand of different products. Customer satisfaction involves marketing decisions regarding product, price, place and promotion, people, processes and physical evidence (Moutinho, Goode and Davis (1988).

2.2.1. Product
A product is anything that is capable of satisfying customer needs that is both goods and services. Products and product attributes are major stimuli that affect consumer cognitions, attitudes and behaviours. These attributes may be physical and concrete or psychological and subjective. Products are evaluated by customers in terms of their values, beliefs and past experiences (Evans, Moutinho and Raaij, 1997).

It is the product or service that provides the benefits that satisfy customer’s needs and wants after the price has long been forgotten. A product becomes an “augmented product” through branding, packaging, image formation and services. The quality of products and services is an important means to keep customers satisfied and loyal. The product must be appealing to the customer and the quality must be up to set standard. Products need to be available in correct quantities. A product is considered to be of high quality only if it conforms to the requirements of the customer. The consumer determines quality of a product after his/her experience with the product (Evans et al. 1997).

Consumers seek herbal medicine because they perceive they are natural, safer and healthier than their synthetic counter parts (Mills, 1989).
2.2.2 Price

Consumer exchanges for goods and services are more than simply money. They also exchange their time, cognitive activity and behavioural effort. Time is required for shopping and purchasing. The methods used to determine price are cost of production, product benefits, product augmentation/extras, market and competition (Moutinho et al. 1988).

The high prices of scientific medicine have compelled many consumers/patients over the years to switch to herbal medicines because they are cheaper. These natural medicines have been found effective in the treatment of some opportunistic infections associated with HIV. Scientific medicine, especially antiretrovirals are beyond the reach of most of the world’s poor (Lierbert, 1998).

2.2.3 Distribution

Distribution channels have a very important impact on consumer cognitions, attitudes and behaviour. The location of shopping centers and stores together with their stimuli within these environments strongly influence consumer’s attitude and perception. The place needs to be strategic, accessible and convenient to customers. The key elements of distribution are channel objectives, intensity, integration and policies (Evans et al. 1997).

According to Willis Wanjala, managing director of the Makini Herbal Clinic in Nairobi, many people from the rural areas are not able to visit the Nairobi clinic. In order to improve service accessibility, Makini conducts forty (40) mobile clinics annually and the response to date is overwhelming. The Abha Light Foundation, a member of Kenya Institute of Alternative medicine, promotes low-cost herbal medicine in health centers at Kariobangi, Mathare and other slums in Nairobi (East African Standard 16th August 2004).

2.2.4 Promotion

Marketers disseminate information about their products or services and they try to persuade customers to buy these through advertising, personal selling, sales promotion, public relations, publicity and direct marketing. Promotion creates a sustainable differential advantage over their competitors. Companies are able to inform consumers about their product, prices and places (Shimp, 2000).
Advertising is dissemination of information through television, radio and press; Personal selling involves sales presentations by sales force while Sales promotion includes point-of-purchase displays, premiums, discounts and demonstrations. Direct marketing is conducted through catalogues, telephone, fax, kiosks and internet (Kotler and Armstrong, 2001).

According to Strasen (1991) Consumers will need to rely on other methods in order to select reputable and qualified herbal medicine practitioners. This is because standards, regulations and research documentation are non-existent. One the effective method is word-of-mouth referrals by satisfied customers.

Makini Herbal Clinic occasionally advertises their services through The Sunday Nation newspaper. The objectives are to create awareness and inform consumers of their products. This is done through referrals by existing consumers and distribution of leaflets. The clinic also attempts to create awareness and inform consumers about the ailments they are able to cure. The main ailments are diabetes, asthma, arthritis, epilepsy, impotence and infertility, insomnia, osteoporosis, tuberculosis, heart ailments, skin ailments, and fibroids (Sunday Nation 29th February 2004).

2.2.5 People

Since most services are provided by people, the selection, training and motivation of employees can make a huge difference in customer satisfaction (Kotler, 2003)

Due to ineffective regulation of complementary medicine discipline there are few standards in the herbal medicine industry. As a result, practitioners have radically different levels of formal training (if any) in a particular discipline. There has been much criticism regarding the lack of standardization and regulation in herbal therapies. This issue is valid and significant but not isolated given the variance in the practice patterns, educational preparation, and clinical outcomes of many traditional health care providers. Furthermore, Research and training activities for herbal medicines have not received due support and attention. Consequently, the quantity and quality of safety and efficacy data are far from sufficient to meet the demands for the use of herbal medicine in the world (Strasen, 1999).
2.2.6 Processes

Processes used to make and deliver a product. Processes are particularly important for services where the product is produces and consumed at the same time. Service companies can choose among different processes to deliver their service (Kotler, 2003).

Consumers have fewer choices about who and where to go for services and they get complicated authorizations, validations and verifications before they can be seen by a scientific doctor. They need to fill out forms and wait for long to get an appointment. When they finally get an appointment, they wait for longer periods of time and they see practitioners for shorter periods of time, they spend more time with untrained support staff and hey get little attention or no personal attention. Education about the consumers’ illness is a thing of the past as is “emotional support caring”. While invasive procedures are on the increase, feeling better after receiving attention for a scientific doctor is on the decrease. The exclusive focus on scientific medicine has stimulated a view of healing as purely physical experience and process and minimized the perspective of individuals as physical, emotional and spiritual beings. Medical herbalists are trained in the same diagnostic skills as orthodox doctors but take a more holistic approach to illness. The underlying cause of the problem is sought and once identified, is treated, rather than the symptoms alone. The reason for this is the treatment of suppression of symptoms will not rid the body of disease itself. Herbalists use their remedies to restore the balance of the body thus enabling it to mobilize its own healing powers (Strasen, 1999).

2.2.7 Physical Evidence

Companies try to demonstrate their service quality through physical evidence and presentation. A hospital will develop a look and style of dealing with customer value proposition, whether it is cleanliness, speed or some other benefit (Kotler, 2003).

When Makini Herbal Clinic opened its doors in 1996, it was run by traditional herbalists. Around 1998, a new management system was established to revolutionize herbal practice in the country by allowing imported herbal medicines. Since 1998 the clinic has improved on packaging and dissemination of information (East African Standard 16th August, 2004).
2.3 Consumer Behaviour

Consumer behaviour is the mental and physical decision process individuals engage in when evaluating, acquiring, using, or disposing of goods and services. Much of our time is spent directly in the market place, shopping or engaging in related activities. A large amount of additional time is spent thinking about products and services, talking to friends about them, seeing or hearing advertisements about them. In addition the goods we purchase and the manner in which we use them significantly influences how we live (Evans et al. 1996).

Marketing communicators direct their effort towards influencing consumers’ brand-related beliefs, attitudes and choices. The ultimate objective is to encourage consumers to purchase the marketer’s brand rather than the competitor’s. Consumer buyer behaviour and the resulting purchase decision are strongly influenced by needs, perception, attitudes, learning and culture. An understanding of the influence of these factors is essential for marketers in order to develop an effective marketing strategy (Shimp, 2000).

2.3.1 Perception

Perception is the process by which we attribute meaning to incoming stimuli through our five common senses. Marketers must understand how all their marketing activities are perceived because perceptions greatly influence buyer behaviour. A consumer self image is believed to affect his choice of products. There are many situations in which a consumer might favour brands perceived as best representing his self-image. Perceived risk reflects the amount of uncertainty a consumer feels is inherent in the purchase decision. A consumer’s perceived risk in a purchase decision is three fold. This includes need satisfaction, value for money and psychosocial. Consumers try to reduce risks by obtaining additional information from mass media, advertising, sales representatives and friends. They also tend to remain loyal to a brand they have already used (Gregor, 1995).

The view we have of our self increases an image of the products and services we may consider appropriate to buy. The way a product is perceived by consumers is a much more important influence on their behaviour than any objective characteristic it may have (Statt, 1997)
Plant remedies meet needs left unprovided for in modern healthcare. Herbal medicine is now seen as accessible and safer alternative to scientific drugs. In skilled hands, it can provide a coherent and effective alternative to professional medical practices as well. With the appropriate approaches it is possible to transform herbal medicine into very powerful curative agents (Mills, 1989).

2.3.2 Attitudes

An attitude is a learned tendency to respond to a product, brand or company in a way that is consistently favourable or unfavourable. The more favourable the consumer’s attitude towards a product, the higher the usage rates and vice versa. Marketers are interested in finding out what the prevailing attitudes towards their products are. They use marketing research to establish the prevailing attitudes and modify the marketing strategy appropriately. Attitudes are learned, relatively enduring and influence behaviour. A marketing communication strategy can effectively change attitudes (Shimp, 2000).

Traditional healing, including herbal practice has often been associated with witchcraft and primitive spiritual divination. This attitude has been further entrenched by our educational system, which on account of its colonial legacy and western orientation, has tended to strongly support scientific medical practice. Kenya Medical Research Institute (KEMRI) and National Museums of Kenya analyze herbal medicine drugs. The National museums of Kenya have also advised herbalists where the more difficult-to-find herbs may be readily available besides advising the government on the need to protect the more endangered species (Were, Mutugi and Githure, 1992).

2.3.3 Learning

Learning is any change in an individual’s response resulting from practice, experience or mental association. Consumer learning comprises purchase, experience, adjusting taste, preference and practice as new products and services are introduced and retail outlets evolve. (Kibera and Waruinge, 1998)

Over 350,000 species of medicinal plants in the world are known to have been useful in the treatment, suppression and cure of various illnesses. The bible praises the use of herbs. It encourages people to take them without fear, as they are God’s provision. “The Lord
created medicines out of earth and a sensible person will not hesitate to use them” (Genesis 1:29). Renewed interest in herbal medicine supports the contention that scientific medicine has not been successful in the control and treatment of diseases as has probably been expected. While they have been successful in suppressing such killer diseases as tuberculosis and smallpox, they have left residual toxic materials that are a burden to our bodies. No chemical drug is free from side effects (Githae, 1991)

The application of herbal medicines was handed down orally from generation to generation. Standards for dosage and usage are not easily achieved (Zhang 1999).

2.3.4 Culture
Culture includes knowledge, belief, art, morals, law, customs and any other capabilities and habits acquired by man as a member of society. Culture is socially learned and shared by members of a society. Much of our learning occurs through observation and imitation of others, a process referred to by psychologists as “modeling” (Kibera et al.1998).

Culture is the most basic cause of a human wants and behaviour. Every group has a culture and cultural influences on buying behaviour may vary greatly from country to country. Failure to adjust to these differences can result in ineffective marketing strategies (Kotler et al. 2001).

Herbal medicine has made a great contribution to human health care and development before modern medicine emerged. Herbal medicine still plays an important role in the primary health care of a number of developing countries. In most Asian countries where modern medicine exists, herbal medicine maintains its popularity because of its historic and cultural impacts (Zhang, 1999).

Ethnic groups, social classes, reference groups and family members can significantly influence consumer behaviour. Studies carried out among the Kamba, Kikuyu, Gusii, Tharaka, Duruma, Digo, Luyia, Luo, Tugen and Pokot, in both rural and urban Kenya, show that regardless of place of residence, education and religion, most people hold concepts of health and illness. Herbal medicines are administered orally, as ointments or through incisions of the skin (Nyamwaya, 1992).
A social class refers to a group of people who have approximately equal positions in society. A social class is not indicated by a single variable but is measured as a weighted function of an individual’s occupation, place of residence, wealth, education and values (Moutinho et al. 1998).

In a world that has for long dedicated itself to the pursuit of technological and scientific precision, it is astonishing to realize that the most ancient form of medicine has come back. Herbal medicine is a form of treatment so ancient that its misty origins pre-date humanity and is returning to challenge the assumptions of the most sophisticated system of medicine in world history (Mills, 1989).

Reference groups serve as a model for an individual’s behaviour and as a “frame of reference” for decision-making. A marketer can make good use of reference group influence by creating advertising messages that either focus on people who can benefit from his product or by presenting the product through some well known person in society (Kibera et al. 1998).

The days are gone when herbalists were viewed with suspicion and labeled primitive. Anyone using this approach now would be failing to keep pace with what is happening. In China and Japan herbal medicine is very popular. There are many agents in Kenya who are marketing herbal medicine from China and Japan (Nyamwaya, 1992).

The family is the most important influence of the consumption behaviour. The influence of each member based on his/her role in the family influences purchase decisions. It is often difficult to isolate objectively which family members perceives the need for a product, makes the final purchase decision, makes the purchase and uses the product. A marketer should therefore determine the members who are most influential (Kibera et al.1998).

In Africa, individuals and communities respond to diseases and illnesses in various ways. Attempts are made to treat illness through administering herbs appropriately. The herbalist then advises the patients on how to cope with the illnesses that need special attention. If the illness persists, patients are advised to consult herbalists (Nyamwaya, 1992).
David Nyamwaya, author of "African Indigenous Medicine" obtained information from ethnographic studies and surveys carried out in Kenya between 1983 and 1990. He also interviewed traditional healers from diverse cultures in Kenya who voluntarily narrated information on herbal medicine to him.

Simon Mills, author of "The complete guide to modern medicine" based his research on the practical experience and wisdom of those who had spent their lives providing the benefits of the use of herbs. He also wrote with an understanding of modern biomedicine while retaining links to the ancient herbal traditions.

2.4 Chapter Summary
The aim of this research is to provide an understanding of the gradual shift from scientific medicine to herbal medicine by consumers. The literature for this research was obtained from marketing textbooks, herbal medicine textbooks, journals, magazines, newspaper articles and the internet. These sources of information were used to determine the marketing mix variables that influence purchase of herbal medicine. The study also identifies consumer choice of herbal medicine and the reasons why consumers prefer herbal medicine to scientific medicine. Consumers seek herbal medicine because they are safer, cheaper and more effective. The study also explains how consumer behaviour and the resulting purchasing decisions are influenced by needs, perception, attitudes, learning and culture. An understanding of the influence of these factors is important in the development of an effective marketing strategy.
CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction
This chapter describes the methods and procedures which were used to carry out the study. It comprises the research design, population and sample, data collection methods, research procedures, data analysis methods and chapter summary.

3.2 Research design
The study is descriptive in nature because it is used to explain the characteristics of consumers. It helps to determine the factors that affect consumer choice of herbal medicine in Nairobi as well as how consumers perceive the product elements of herbal medicine.

3.3 Population and Sampling Design

3.3.1 Population
The population of interest in this study consists of herbal doctors, scientific doctors and herbal medicine consumers in Nairobi.

3.3.2 Sampling Design and Sample size
The sample consisted of 60 respondents who were carefully decided on because it enabled the researcher to get detailed information from each respondent allowing in-depth information to be obtained. The respondents comprised of 10 herbal doctors, 10 scientific doctors and 40 herbal medicine consumers in Nairobi and its suburbs. Simple random sampling was used because each member of the population had an equal chance of being selected.

The herbal medicine practitioners/clinics used in this study were International Center of Insect Physiology and Ecology (ICIPE), Kenya Medical Research Institute (KEMRI), Kenyatta University, Makini Herbal Clinic and Kamirihutu Herbs. Two (2) respondents were randomly selected from each clinic. The scientific doctors were selected from Kenyatta National Hospital, Nairobi Hospital, Mater Hospital, Avenue Nursing Home and Kenya Medical Research Institute (KEMRI). Two (2) doctors were used from each hospital.

Herbal medicine consumers were identified from Runda, Langata, South B, Satellite, Zimmerman, Eastleigh, Umoja and Buruburu. Five (5) consumers were chosen from each
estate using stratified sampling method. The 8 estates were chosen using random sampling technique to represent herbal medicine consumers in Nairobi and its suburbs.

3.4 Data Collection Methods
Both secondary and primary data were used for this research. Secondary data was collected mainly from marketing and herbal medicine text books, journals, magazines, newspaper articles and internet. Some examples of newspaper articles used are The East African Standard January 21st and 28th 2002. The Internet sites used were http://allafrica.com/stories/200309260075.html http://search.epnet.com/direct.asp/an. Journal of alternative and complementary medicine vol 4, 1998, Mary Ann Lierbert, Inc. and The Official Journal of Society of Integrative Medicine, 1998 Stamford C.T., Appelton and Lange were used as well.

Primary data was collected through structured questionnaires which contained both close-ended and open-ended questions. The questionnaires were dispatched to respondents by the researcher and two research assistants. This enabled the researchers to gather both detailed and in-depth information. It also ensured clarifications to the respondents were easily made if the need arose as well as quick retrieval of the questionnaires.

3.5 Research Procedures
The project involved, design and pre-testing of questionnaires. The questionnaires were dispatched to the respondents by the researcher and two research assistants. In addition, 10% of each of the 3 groups of interviewees was selected and face-to-face interviews were conducted in an attempt to ascertain the validity of the data. Only those interviewees who had shown a lot of interest when completing the questionnaires were used for face-to-face interviews. Data collected was then analyzed and interpreted. The findings were presented using table and pie charts. Finally conclusions and recommendations were drawn.

3.6 Data Analysis Methods
The responses received were compiled for data analysis by the use of Microsoft excel. The data was presented by the use of tables and pie charts in order to explain and understand the information generated. These methods were used because they were easy to understand and interpret.
Chapter Summary

This chapter shows the methods and procedure that were used to carry out the study. The research is descriptive in nature and the population of interest in this study consists of herbal doctors, scientific doctors and herbal medicine consumers in Nairobi. The respondents were chosen using random sampling technique. Structured questionnaires were used to collect both secondary and primary data.
CHAPTER 4: RESULTS AND FINDINGS

4.1 Introduction
This chapter presents the findings of the study using tables and pie charts. The findings will be analyzed on the basis of the research questions. Data was collected from herbal medicine consumers, herbal medicine practitioners and scientific doctors. This data was collected through self-administered questionnaires.

4.2 HERBAL MEDICINE CONSUMER’S RESPONSES

4.2.1 Duration of herbal medicine usage
The respondents were asked to indicate the number of years they had used herbal medicine

<table>
<thead>
<tr>
<th>Duration</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>2-3 years</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td>4-5 years</td>
<td>16</td>
<td>40</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

N= 40

From table 1 above, 75% of the respondents have used herbal medicine for 2-5 years.

4.2.2 Frequency of herbal medicine usage
The respondents were asked to indicate how often they used herbal medicine.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Distribution</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Occasionally</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td>Frequently</td>
<td>20</td>
<td>50</td>
</tr>
</tbody>
</table>

N=40

According to table 2 above, 50% of the herbal medicine consumers use herbal medicine frequently and 35% use herbal medicine occasionally.
4.2.3 Herbal medicine versus scientific medicine

The consumers were asked if they used both herbal medicine and scientific medicine.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

All the herbal medicine consumers (100%) as seen in table 3 indicated that they used both herbal medicine and scientific medicine.

4.2.4 Curative capability of herbal medicine as compared to scientific medicine

The respondents were asked if they believed that herbal medicine could cure certain diseases that scientific medicine could not.
Table 4: Curative capability of herbal medicine over scientific medicine

<table>
<thead>
<tr>
<th>Curative capability</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

N=40

As seen in table 4 above, 100% of the respondents indicated that herbal medicine cures certain diseases that scientific medicine does not cure. The diseases that were listed are diabetes, cancer, asthma, arthritis, epilepsy, impotence and infertility, insomnia, osteoporosis, tuberculosis, heart ailments, skin ailments, fibroids, high blood pressure, ulcers, malaria, stomach ulcers, kidney problems, hepatitis, prostate, sinus, typhoid, HIV/AIDS, leukemia and intestinal worms.

4.2.5 Reasons for switching from scientific medicine to herbal medicine

The respondents were asked to indicate their reasons for switching from scientific medicine to herbal medicine.

Table 5: Reasons for switching from herbal medicine to scientific medicine

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>More effective</td>
<td>7</td>
<td>17.5</td>
</tr>
<tr>
<td>Affordable</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Natural</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>Safe</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Affordable/safe/natural</td>
<td>7</td>
<td>17.5</td>
</tr>
<tr>
<td>More effective/natural/safe</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>More effective/affordable</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Natural/safe</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

N=40

According to table 5 the main reasons for brand switching are effectiveness (17.5%) and affordability (17.5%).

4.2.6 Price of herbal medicine as compared to scientific medicine

The respondents were asked to compare the price of herbal medicine to that of scientific medicine and their results were as follows.
Table 6: Price of herbal medicine compared to scientific medicine

<table>
<thead>
<tr>
<th>Price</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>34</td>
<td>85</td>
</tr>
<tr>
<td>Same</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Higher</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

N=40

As recorded in table 6 above, 85% of the consumers indicated that the price of herbal medicine is lower than that of scientific medicine. Fifteen percent (15%) of the consumers indicated that the price of herbal medicine was higher than that of scientific medicine and none of the respondents indicated that the price of herbal medicine is the same as the price of scientific medicine.

Studies show that the price is the greatest determinant of product choice because its effect is felt quicker that the effect of other factors (Moutinho, Goode and Davis, 1998).

4.2.6 Location of most herbal clinics in Nairobi

The respondents were asked where most herbal clinics were located in Nairobi.

![Pie chart showing location of herbal medicine clinics in Nairobi]

**Fig 2: Location of herbal medicine clinics in Nairobi**

Figure 2 indicates that 80% of the herbal clinics are located in the estates, 10% in the suburbs and the remaining 10% in the city.
4.2.8 Availability of herbal clinics in Nairobi and its suburbs

The respondents were asked about the availability of herbal clinics in Nairobi and their responses were as follows.

Table 7: Availability of herbal clinics in Nairobi and its suburbs

<table>
<thead>
<tr>
<th>Availability</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easily available</td>
<td>28</td>
<td>70</td>
</tr>
<tr>
<td>Many</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>A few</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Scarce</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

N=40

As seen in table 7, 70% of the consumers said that herbal clinics are easily available in Nairobi and its suburbs. Twenty five percent of the consumers said that herbal clinics were many and 5% of the consumers indicated that herbal clinics were scarce. None of the consumers indicated that herbal clinics were few.

The location of stores and their stimuli in the marketing environment strongly influence consumer’s attitude and perception. The place should be strategic and convenient to customers (Evans, Moutinho and Raaij, 1997).

4.2.9 Weaknesses of herbal medicine

The respondents were asked to indicate the weaknesses of herbal medicine.
Table 8: Weaknesses of herbal medicine

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad taste</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>You must take on daily basis</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Not well researched</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>Some herbalists are greedy for money</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Some are unhygienic</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Not easily available</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Associated with witchcraft</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Some herbalists are not genuine</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Some herbalists are thieves</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Some herbalists are con-men</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Some herbalists do not give appropriate dosages</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Not all herbalists are registered</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>There is lack of adequate information on herbal medicine</td>
<td>24</td>
<td>60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

N=40

According to table 8 above, 60% of the sample there is lack of adequate information on herbal medicine.

4.2.10 Solutions to herbal medicine weaknesses

The respondents were asked what could be done in order to reduce herbal medicine weaknesses. The following were their responses

Table 9: Solutions to herbal medicine weaknesses

<table>
<thead>
<tr>
<th>Solutions</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase herbalists</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Prepare medicine under more hygienic conditions</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Herbalists should be more educated</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Get rid of con-men herbalists</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Educate the public on advantages of herbal medicine</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Not Applicable (N/A)</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>No response</td>
<td>7</td>
<td>17.5</td>
</tr>
<tr>
<td>More research on herbal medicine needed</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>Allow herbalists to practice more freely</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Register all herbalists</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Herbal medicine should have documented ingredients</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Proper dosages of herbal medicine should be administered</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>Have herbal centers where people can learn more about herbs</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Herbalists should work closely with researchers</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>
4.2.11 Other Comments

The responses were as follows:

Table 10: Other comments

<table>
<thead>
<tr>
<th>Comments</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I recommend the use of herbal medicine</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>The results of herbal medicine are eternal</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>I recommend the use of herbal medicine without reservations</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Herbalists should be increased</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Educate people on herbal medicine</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Herbal medicine is very effective</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>No side effects</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>Natural</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Healthier way of life</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Not Applicable (N/A)</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>No response</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>More research is needed</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td>The government should support herbalists more</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

N=40

Table 10 shows that 35% commented that more research on herbal medicine needed to be carried out. Twelve percent of the respondents said that herbal medicine has no side effects and 10% of the respondents recommended the use of herbal medicine.

4.3 HERBAL CLINICS RESPONSES ON HERBAL MEDICINE

4.3.1 Opinion of herbal medicine usage

The respondents were asked their opinion on herbal medicine

Table 11: Opinion of herbal medicine usage

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Good</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fair</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10
From table 11 it is evident that all the herbal doctors (100%) have a very good opinion of herbal medicine usage.

4.3.2 Opinion of scientific medicine usage
The respondents were asked their opinion on scientific medicine

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Good</td>
<td>7</td>
<td>70</td>
</tr>
<tr>
<td>Fair</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10

Seventy percent (70%) of the herbalists find scientific medicine usage good and 30% indicated very good. From tables 11 and 12 herbal doctors support the use of herbal medicine more than scientific medicine.

4.3.3 Curative capability of herbal medicine as compared to scientific medicine
The respondents were asked if they believed that herbal medicine could cure certain diseases that scientific medicine could not.

<table>
<thead>
<tr>
<th>Curative capability</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10

The respondents were asked if herbal medicine could cure certain diseases that scientific medicine cannot. As seen in table 13 above, 100% of the sample indicated YES and listed diabetes, cancer, asthma, arthritis, epilepsy, impotence and infertility, insomnia, osteoporosis, tuberculosis, heart ailments, skin ailments, fibroids, high blood pressure, ulcers, malaria, stomach ulcers, kidney problems, hepatitis, prostate, sinus, typhoid, HIV/AIDS, leukemia and intestinal worms.
4.3.4 Reasons for herbal medicine usage by consumers
The respondents were asked why some consumers had resulted into herbal medicine usage and 100% of the respondents said that it is because herbal medicine is more effective, more affordable and safer.

4.3.5 Price of herbal medicine compared to scientific medicine
The respondents were asked to comment on the price of herbal medicine as compared to scientific medicine.

Table 14: Price of herbal medicine compared to scientific medicine

<table>
<thead>
<tr>
<th>Price</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Same</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lower</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10

According to table 14 above, all the respondents (100%) agreed that the price of herbal medicine is lower than that of scientific medicine.

4.3.6 Availability of herbal medicine clinics in Nairobi and its Suburbs
The respondents said that the availability of herbal medicine clinics was as follows.

Table 15: Availability of herbal medicine clinics in Nairobi and its suburbs

<table>
<thead>
<tr>
<th>Availability</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easily available</td>
<td>8</td>
<td>80</td>
</tr>
<tr>
<td>Many</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>A few</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Scarce</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10

From table 15 above, majority of the respondents (100%) agreed that herbal clinics are easily available and many.

4.3.7 Location of most herbal clinics in Nairobi
The respondents were asked where most of the herbal clinics were located in Nairobi.
From figure 3 above, 80% of the respondents said that herbal medicine clinics were located in estates. The others are in the estates and suburbs.

4.3.8 Competitiveness of the herbal medicine business as compared to scientific medicine

The respondents were asked how competitive their herbal medicine businesses were compared to scientific medicine. Herbal medicine is competitive because it is easily available, natural and has no side effects. In addition, the medicine is affordable and can cure diseases that scientific medicine cannot.

4.3.9 Competitive Strategy

The respondents were asked what they were doing in order to be more competitive. ICIPE said that they were trying to come up with more medicines so that they can be able to cure more ailments. Others are trying to establish more clinics e.g. Kamirihu Herbs clinic has established branches in Nairobi, Kisumu, Nyeri, Mombasa, Thika, Meru, Isiolo, Narumoru, Kericho and Eldoret. Makini Herbal Clinic is trying to be more competitive by advertising its products through newspapers, magazines and radio. Kenya Medical Research Institute (KEMRI) is trying to use science in herbal medicine in an attempt to add value.
4.3.10. Weaknesses of Herbal medicine
The respondents were asked what the weaknesses of herbal medicine were and their responses were as follows: 9 of the 10 respondents indicated that herbal medicine has no weaknesses whereas 1 respondent said that some plants are toxic.

4.3.11. Addressing herbal medicine weaknesses
The respondents were asked what could be done to improve on herbal medicine weaknesses. They said that appropriate dosages must be administered (1 respondent) and more research should be carried out (1 respondent). Eight (8) respondents indicated Not Applicable.

4.3.12. Strengths of herbal medicine over scientific medicine
The respondents were asked what strengths herbal medicine has over scientific medicine. Some people are resistant to some chemicals used in scientific medicine and unlike herbal medicine, which is natural and has no side effects (3 respondents). Herbal medicine can cure certain diseases that scientific medicine cannot cure (5 respondents). Herbal medicine is more effective (1 respondent) and herbal medicine is cheaper (1 respondent).

4.3.13. Customer complaints on herbal medicine and solutions
The respondents were asked if there were any customer complaints regarding the use of herbal medicine. They were also asked what could be done in order to reduce the complaints. Nine (9) of the herbal clinics said that customers had not complained. However, one clinic said that some customers complained about having only few herbalists in Nairobi.
4.4 SCIENTIFIC DOCTORS RESPONSES ON HERBAL MEDICINE

4.4.1 Opinion on herbal medicine usage
The respondents were asked their opinion on herbal medicine.

Table 16: Opinion on herbal medicine usage

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Good</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fair</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Poor</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10

According to table 16 above, 50% of the respondents indicated that it is fair and 50% said that it was poor. Apparently the scientific doctors do not support the use of herbal medicine.

4.4.2 Opinion on scientific medicine usage
The respondents were asked their opinion on scientific medicine.

Table 17: Opinion on scientific medicine usage

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>9</td>
<td>90</td>
</tr>
<tr>
<td>Good</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Fair</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10

As seen in table 17 above, majority of the respondents indicated that the use of scientific medicine was very good and 10% said that it was fair. Evidently majority of the scientific doctors support the use of scientific drugs.

4.4.3 Comparison of herbal medicine to scientific medicine
The respondents were asked how they compared herbal medicine to scientific medicine.
Table 18: Comparison of herbal medicine to scientific medicine

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>More effective</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Less effective</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Unreliable</td>
<td>7</td>
<td>70</td>
</tr>
<tr>
<td>Not effective</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10

From table 18 above 10% of the sample indicated that herbal medicine is less effective as compared to scientific medicine. Seventy percent (70%) of the respondents said that herbal medicine is unreliable and 20% said that herbal medicine is not effective.

4.4.5. Curative capability of herbal medicine

The scientific doctors were asked if herbal medicine could cure certain disease that scientific medicine could not and the responses were as follows:

![Curative capability of herbal medicine](image)

Fig 4: Curative capability of herbal medicine

According to figure 4 above, 80% of the respondents said that they did not believe that herbal medicine can cure diseases that scientific medicine can while 20% of the respondents believe that herbal medicine can cure certain diseases that scientific medicine cannot.
4.4.5 Reasons for herbal medicine usage by consumers

The respondents were asked the reason why some consumers had resulted into herbal medicine.

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>More effective</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Affordable</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Safer</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Desperation</td>
<td>8</td>
<td>80</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10

From table 19 above, 80% of the scientific doctors said that consumers resulted into herbal medicine due to desperation. According to 20% of the sample, consumers shifted to herbal medicine because it is affordable. It is evident that scientific doctors do not support herbal medicine usage.

4.4.6 The price of herbal medicine as compared to scientific medicine

The respondents were asked how they compared the price of herbal medicine to scientific medicine.

<table>
<thead>
<tr>
<th>Price</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Same</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lower</td>
<td>8</td>
<td>80</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10

From table 20 above, 20% of the respondents think that the price of herbal medicine as compared to that of scientific medicine is higher and 80% of the respondents think that the price of herbal medicine is lower than that of scientific medicine. Apparently the price of herbal medicine is lower than that of scientific medicine.

4.4.6 Availability of herbal medicine clinics in Nairobi and its suburbs

The views of the sample regarding the availability of herbal clinics were sought.
Table 21: Availability of herbal medicine in Nairobi and its suburbs

<table>
<thead>
<tr>
<th>Availability</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easily available</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>Many</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>A few</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Scarce</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

N=10

As recorded in table 21 above, 60% of the respondents said that herbal clinics were easily available. Twenty percent (20%) of the respondents think that they are many while 20% think that they are few.

4.4.8 Location of most herbal clinics in Nairobi

The respondents were asked where most of the herbal clinics were located in Nairobi.

![Fig 5: Location of herbal clinics](image)

From figure 5 above, 70% of the respondents indicated that herbal medicine clinics were located in estates while 10% indicated that they were located in the city and the remaining 20% in the Suburbs.

4.4.9 Weaknesses of Herbal medicine

The respondents were asked to indicate the weaknesses of herbal medicine and their responses were as follows.
Table 22: Weaknesses of herbal medicine

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not well researched</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Inappropriate dosages and not standardized</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Some herbalists are inexperienced and uneducated</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Some herbalists are not truthful</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Some medicines are marked as curing all ailments</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>No documented side effects and also not tested</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>No documented evidence for specific therapy</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

N=10

Forty percent (40%) of the respondents as seen in table 22 said that herbal medicine was not well researched.

4.4.10 Addressing herbal medicine weaknesses

The respondents were asked how they would reduce herbal medicine weaknesses

Table 23: Addressing herbal medicine weaknesses

<table>
<thead>
<tr>
<th>Solutions</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate research</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>More education to herbalists on herbs</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Herbal medications should be Evaluated for safety</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Prepare medicine in more hygienic way/get rid of con-men</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>A regulatory board should oversee the activities of herbalists</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

N=10

As seen in table 23 above, 60% of the respondents indicated that the major solution would be undertaking adequate research.

4.4.11 Strength of herbal medicine over scientific medicine

The respondents asked to highlight strengths of herbal medicine over scientific medicine.

Table 24: Strength of herbal medicine over scientific medicine

<table>
<thead>
<tr>
<th>Strength</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herbal medicine has no strength over scientific medicine</td>
<td>7</td>
<td>70</td>
</tr>
<tr>
<td>Herbal medicine can be used for psychological problems</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Herbal medicine only satisfies the patients psychological status</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

N=10

35
4.4.12. Comments

At the end of the questionnaire, the respondents were asked to give any other comments.

Table 25: Comments

<table>
<thead>
<tr>
<th>Comments</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herbal medicine's role should be defined by evidence</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>based information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A regulatory board should monitor herbalists and</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>their drugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herbal medicine should be well researched</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Herbal medicine should be standardized and proper</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>formulations made</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumers should visit recognized herbalists</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Not applicable</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

N=10

4.5 Chapter Summary

This chapter presents the results and findings of the study using tables and pie charts. Consumers use both herbal medicine and scientific medicine. According to herbal doctors and consumers, many patients have shifted from scientific medicine to herbal medicine because the latter is more effective, affordable, natural and safe. According to scientific doctors however, consumers have switched to herbal medicine because they are desperate and have limited information. The price of herbal medicine is lower than that of scientific medicine as supported by consumers, herbal doctors and scientific. It was also established that scientific doctors do not support the use of herbal medicine.
CHAPTER 5: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This is the final chapter of the research project and summarizes the major findings. Conclusions will be drawn from the research findings and finally recommendations for improvement made.

5.2 Summary

The purpose of the study for this research project is to determine the factors that affect consumer choice of herbal medicine in Nairobi. The study is descriptive in nature and highlights the characteristics of consumers. Both primary and secondary data were used. The primary data was collected through three different questionnaires to herbal medicine consumers, scientific doctors and herbal medicine practitioners.

It was established that herbal medicine has no side effects, is natural and more effective than scientific medicine. The price of herbal medicine is lower than that of scientific medicine. All the herbal medicine consumers and herbalists reported that herbal medicine can cure certain diseases that scientific medicine cannot. Several clinics e.g. Makini Herbal advertise mainly through newspapers, magazines and radio.

5.3 Discussion

This section will provide interpretation of the results by comparing them to the findings of the theoretical background presented in the literature review.

Seventeen point five percent (17.5%) of the herbal medicine consumers reported that herbal medicine is more effective than scientific medicine. Fifteen percent (15%) of the herbal medicine consumers reported that herbal medicine was safer than scientific medicine. Ten percent (10%) of the herbal medicine consumers said that herbal medicine was more affordable as compared to scientific medicine (see table 5). Herbal medicine consumers perceive herbal medicine as healthier than scientific medicine.
All the consumers and herbalists reported that herbal medicine can cure certain diseases that scientific medicine cannot as indicated in tables 4 and 13 respectively. Scientific doctors do not support use of herbal medicine as reported in table 18 where 70% indicated that herbal medicine is unreliable. Twenty percent (20%) of the scientists said that herbal medicine is ineffective and the remaining 10% said that herbal medicine is less effective than scientific medicine.

Ninety percent (90%) of the scientific doctors support scientific medicine as indicated in table 17. They do not support herbal medicine because 50% of them said that herbal medicine usage is fair and the remaining 50% said that herbal medicine usage is poor (see table 16). According to 60% of the scientific doctors, there is need for herbal medicine to be well researched as seen in table 23. Eighty percent (80%) of the scientific doctors reported that consumers have resulted into herbal medicine usage because of desperation. (See table 19).

The price of herbal medicine is lower than that of scientific medicine as indicated by 85% of the herbal medicine consumers in table 6. All the herbalists said that the price of herbal medicine is lower than that of scientific medicine as indicated in table 14 while 80% of the scientific doctors said that the price of herbal medicine was lower than that of scientific medicine (table 20). Studies have shown that price is the greatest determinant because its effect is felt quicker than the effect of other factors (Moutinho, Goode and Davis, 1988).

Natural medicines have been found effective in the treatment of some opportunistic infections associated with HIV. Scientific drugs especially antiretrovirals are beyond the reach of most of the world’s poor. The price of herbal medicine is therefore more attractive (Lierbert, 1998).

Herbal medicine is readily available in Nairobi. Most herbal clinics are located in the estates, which are strategic and thus accessible to consumers. Other herbal clinics are located in Nairobi city and its suburbs. Eighty percent (80%) of the herbalists said that herbal clinics are located in estates while 10% said that they were located in the city and the remaining 10% indicated the suburbs (see fig 2). According to 70% of the scientific doctors
herbal clinics are located in the estates, 20% in the suburbs and the remaining 10% in the city as reported in fig 5.
Several herbal clinics promote their businesses through newspapers, radio and magazines. The aim is to create awareness and inform consumers about their products and services.

5.4 Conclusions

5.4.1 Herbal medicine versus scientific medicine
All herbal medicine consumers use both herbal medicine and scientific medicine. Majority of the herbalists have a good opinion of scientific medicine. Scientific doctors on the other hand do not support the use of herbal medicine. They believe that herbal medicine is unreliable.

5.4.2 Reasons for choice of herbal medicine
The main reason for herbal medicine choice is low price. This is supported by the majority of herbal medicine consumers. The herbalists agreed that the price of herbal medicine is lower than that of scientific medicine. Majority of the scientific doctors said that the price of herbal medicine is lower than that of scientific medicine. According to scientific doctors consumers chose herbal medicine because of desperation.

5.4.3 Location of Branches
Most of the clinics are located in the estates as supported by herbal medicine consumers, herbal doctors and scientific doctors. The rest are in the city and the suburbs.

5.4.4 Effectiveness of herbal medicine
Herbal medicine consumers and herbalists prefer herbal medicine to scientific medicine because they have a natural healing and are free from side effects. All the herbal medicine consumers reported that herbal medicine has greater curative capability than scientific medicine.
5.5 Recommendations

5.5.1 Pricing strategy
Herbalists need to aggressively promote the low price of herbal medicine as compared to that of scientific medicine. Low price of herbal medicine was quoted as the major reason for choice by the majority of the herbal medicine consumers.

5.5.2 Location of branches
In future, herbal clinics should open branches in densely populated areas to enhance convenience and easy access to consumers. Majority of the respondents indicated that herbal clinics were located in estates.

5.5.3 Education to consumers
In order to retain consumers and attract new ones, herbal clinics should educate consumers on distinctive benefits and attributes of their products. Herbal medicine consumers pointed out that there was lack of adequate information on herbal medicine.

5.5.4 Marketing research
Herbalists need to undertake continuous research on herbal medicine preparation, storage and delivery in order to favourably change consumers’ perception and attitude towards herbal medicine. Thirty five percent of the herbal medicine consumers indicated that more research on herbal medicine needed to be carried out.

5.6 Further research
The following issues are recommended for further research.

i) Rationale for simultaneous use of herbal medicine and scientific medicine.
ii) Real effect of herbal medicine on consumers as compared to scientific medicine.
REFERENCES

Business Source Premier (2002). *Bangladeshi President Stresses Research on Herbal Medicine*


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Tseko W.M (1991). Safety and efficacy inspections of traditional medicine. Traditional medicine and drugs research center (KEMRI)


APPENDIX 1

Dear Respondent,

I am a graduate student at United States International University - Nairobi, currently undertaking a study on factors affecting consumer choice of herbal medicine in Nairobi.

Please indicate your honest responses in the attached questionnaire. All information will be treated in confidence and used for academic purposes only.

Thank you for your understanding and co-operation.

Yours faithfully,

CATHERINE NGATIARI
APPENDIX 2
CONSUMER QUESTIONNAIRE

Please tick (✓) in the appropriate box and complete the blank spaces

1. NAME (optional) .................................................................

2. OCCUPATION (optional) .........................................................

3. How would you compare herbal medicine to scientific medicine
   More effective □
   Less effective □
   Unreliable □
   Not effective □
   Other (Please specify) ..........................................................

4. What is your comment on the price of herbal medicine as compared to scientific medicine in Nairobi and its immediate environment?
   Higher □
   Same □
   Lower □
5. Herbal clinics in Nairobi and its immediate environment are

Easily available □
Many □
A few □
Scarce □

6. How did you learn about herbal medicine?

Word of mouth □
Newspaper □
Radio □
Magazines □

Other (please specify) ————————————————————————————————————

7. For how long have you used herbal medicine?

1 year □
2-3 years □
4-5 years □
More than 5 years □
8. How often do you use herbal medicine?

Frequently
Occasionally
Rarely

9. Do you believe that herbal medicine can cure certain diseases that scientific medicine cannot cure?

Yes
No

10. If yes, please list such diseases...

11. Do you use both herbal medicine and scientific medicine?

12. Why did you decide to switch from scientific medicine to herbal medicine?

More effective
Affordable
Natural
Safe

Other (please specify)

13. What in your opinion is particularly good about herbal medicine?

14. What are the weaknesses of herbal medicine?

15. Make suggestions on what can be done in order to reduce herbal medicine weaknesses?

16. Please indicate any major problems you have faced while using herbal medicine?

17. Other comments

Thank you
HERBAL DOCTOR'S QUESTIONNAIRE

Please tick (✓) in the appropriate box and complete the blank spaces

1. NAME (optional)

2. What is your opinion of Herbal medicine usage?
   - Very good □
   - Good □
   - Fair □
   - Poor □

3. What is your opinion on scientific medicine usage?
   - Very good □
   - Good □
   - Fair □
   - Poor □

4. What is your comment on the price of herbal medicine as compared to scientific medicine in Nairobi and its suburbs
   - Higher □
Same  
Lower

5. Herbal clinics in Nairobi and its suburbs are

Easily available  
Many  
A few  
Scarce

6. How do you promote herbal medicine?

Newspapers  
Magazines  
Radio

Other (Please specify)

7. Where are most of the herbal clinics located in Nairobi?

City  
Estates
8. How would you compare herbal medicine to scientific medicine

- More effective
- Less effective
- Unreliable
- Not effective

Other (Please specify)

9. Do you believe that herbal medicine can cure certain diseases that scientific medicine cannot cure?

- Yes
- No

10. If yes, please list such diseases

[Blank lines for listing diseases]
11. In your opinion, why have some consumers resulted into herbal medicine usage?

More effective ☐

Affordable ☐

Safer ☐

Desperation ☐

Other (please specify) ___________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

12. How competitive is your herbal medicine business as compared to scientific business? ___________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

13. What are you doing in order to be more competitive? ___________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

14. Please indicate the weaknesses of herbal medicine. ___________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

52
15. What can be done in order to reduce herbal medicine weaknesses?

16. Indicate the strengths of herbal medicine over scientific medicine are?

17. What are the customer complaints regarding the use of herbal medicine?

18. Please suggest what can be done in order to significantly reduce customer complaints

19. Other comments

Thank you
APPENDIX 4

SCIENTIFIC DOCTOR'S QUESTIONNAIRE

Please tick (v) in the appropriate box and complete the blank spaces

1. NAME (optional).................................................................

2. What is your opinion on Herbal medicine usage?
   - Very good □
   - Good □
   - Fair □
   - Poor □

3. What is your opinion on scientific medicine usage?
   - Very good □
   - Good □
   - Fair □
   - Poor □

4. What is your comment on the price of herbal medicine as compared to scientific medicine in Nairobi and its immediate environment?
   - Higher □
   - Same □
5. Herbal clinics in Nairobi and its immediate environment are
   Easily available  
   Many  
   A few  
   Scarce  

6. Where are most of the herbal clinics located in Nairobi?
   City  
   Estates  
   Suburbs  

   Other (please specify)  
   
   

7. How would you compare herbal medicine to scientific medicine
   More effective  
   Less effective  
   Unreliable  

55
8. Do you believe that herbal medicine can cure certain diseases that scientific medicine cannot cure?

Yes ☐
No ☐

If yes, please list such diseases:

9. In your opinion, why have some consumers resulted into herbal medicine usage?

More effective ☐
Affordable ☐
Safer ☐
Desperation ☐

Other (please specify):

56
10. Please indicate the weaknesses of herbal medicine:


11. What can be done in order to reduce herbal medicine weaknesses?


12. What would you say are the strengths of herbal medicine over scientific medicine?


13. Other comments:


Thank You