

**INFLUENCE OF MARKETING MIX ON MEDICAL DOCTORS' CHOICE OF
PRESCRIPTION DRUGS IN NAIROBI**

BY

MWANGI JACKSON GICHOHI

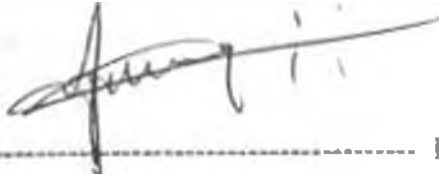
**A MANAGEMENT RESEARCH PROPOSAL SUBMITTED IN PARTIAL
FULFILMENT OF THE REQUIREMENT OF THE MASTER OF BUSINESS
ADMINISTRATION (MBA) DEGREE. SCHOOL OF BUSINESS,
UNIVERSITY OF NAIROBI**



SEPTEMBER 2006

DECLARATION

This management research project is my original work and has not been presented for award of a degree in any other university

Signed  Date ^{9th} November 2006

Mwangi Jackson Gichohi

D/61/P/8543/2000

This management research project has been submitted for examination with my approval as the University Supervisor

Signed  Date 9/11/2006

Mrs. Margaret Ombok
Faculty of commerce
University of Nairobi

DEDICATION

This paper is dedicated to my wife Monicah, who has encouraged me throughout the study period, my son Pithon and my parents, the late Pithon Mwangi who encouraged me to go for further studies and my mum Margaret who has always been my inspiration both with material and moral support, and their strongly held believe in education as the only sufficient investment diligent parents can give to their children.

ACKNOWLEDGEMENT

The MBA programme has been a long, difficult and challenging journey and the successful completion has been as a result of support received from many people.

I would sincerely want to thank all the people who gave me inspiration, support and encouragement to pursue MBA programme and also those who gave me the guidance and assistance to come up with this paper.

Special thanks go to my supervisor Mrs. Margaret Ombok, Faculty of commerce, department of marketing, University of Nairobi for her continued advice, guidance, availability, encouragement, useful criticism and suggestions throughout the project work.

I also thank all the teaching, administrative and support staff of the University of Nairobi for their support throughout the study period.

Those who helped me with data analysis and presentation; Kibiku, Gichuru, Kingori and Mukundi and all the doctors who took their time to respond to my questionnaires, may God bless you all. May his name be praised he who makes all things possible.

TABLE OF CONTENTS

DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENT	iii
ABSTRACT	vii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background	1
1.1.1 The marketing mix and buyer choice	2
1.1.2 The Pharmaceutical industry in Kenya	3
1.2 Statement of the problem	6
1.3 Objective of the study	8
1.4 Importance of the study	8
CHAPTER TWO	9
LITERATURE REVIEW	9
2.1 The marketing mix	9
2.2 Product	11
2.3 Price	14
2.4 Place	17
2.5 Promotion	19
2.6 Summary of literature review	23
CHAPTER THREE	24
RESEARCH METHODOLOGY	24
3.1 Research design	24

3.2	Population	24
3.3	Sample and sampling design	24
3.4	Data collection method	24
3.5	Operationalizing the marketing mix variables	25
3.6	Data analysis	25
CHAPTER FOUR.....		26
DATA ANALYSIS AND FINDINGS		26
4.1	Introduction	26
4.2	Demographic characteristics of Respondents	26
4.2.1	Specialization of Respondents	26
4.2.2	Location of the respondents' clinic	26
4.2.3	Number of years in practice	27
4.2.4	Age bracket	27
4.3	Influence of Marketing Mix on the Doctor's Choice of Drug Prescription	28
4.4	Relationship between Marketing Mix Variables	31
CHAPTER FIVE.....		33
DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS		33
5.1	Introduction	33
5.2	Discussion	33
5.3	Conclusion	36
5.4	Recommendations	37
Limitations of the study		38
Suggestions for further research		38
REFERENCES		39
APPENDICES.....		41
Appendix 1: Letter to the respondents		41
Appendix 2: Questionnaire		42
Appendix 3: Operational Dimensions		45

LIST OF TABLES AND FIGURES

TABLE 4.2: SPECIALIZATION	26
TABLE 4.3: LOCATION OF THE RESPONDENTS' CLINIC	27
TABLE 4.4: NUMBER OF YEARS IN PRACTICE	27
TABLE 4.5: AGE BRACKET	27
TABLE 4.6: GENDER	28
TABLE 4.7: PRODUCT ATTRIBUTES	28
TABLE 4.8: PRICE ATTRIBUTES	29
TABLE 4.9: PLACE ATTRIBUTES	30
TABLE 4.10: PROMOTION ATTRIBUTES	30
TABLE 4.11: MARKETING MIX ELEMENTS	31
TABLE 4.12: CORRELATION BETWEEN MARKETING MIX VARIABLES	31

ABSTRACT

Most studies in the pharmaceutical industry have been on aspects of marketing like promotion, perception and distribution intensity. None of the above studies focused on the influence of marketing mix on doctors' choice of prescription drugs, hence there exists a gap that this study sought to fill. The objective of this study was to determine the extent to which the marketing mix influences medical doctors' choice of prescription drugs.

A descriptive survey was chosen because it would quantifiably characterise the extent to which marketing mix variables affect prescription drug decisions. The population of interest for this study consisted of all registered prescribing medical doctors practising in Nairobi. According to the Kenya medical directory of 2004-2005 Nairobi has a total of 520 registered prescribing medical doctors. A sample of 100 doctors was used in this study, which was fairly representative of the doctors' population in Nairobi. Convenience sampling was used to select the sample from prescribing doctors practising in Nairobi's low, medium and high income hospitals.

Primary data was collected using structured questionnaires, which were administered by the researcher to the medical doctors using a drop-and-pick later method. The questionnaire was divided into sections A and B consisting of the doctor's personal information and marketing mix elements which influence a doctor's choice of prescription drugs respectively.

Eighty eight doctors out of a target of one hundred responded and all questionnaires returned by respondents were usable for data analysis. This represented a response rate of 88%. Data was analysed using frequency distribution, percentages and correlation analysis methods and the results presented using tables. It was observed that marketing mix was an important aspect regarding influence on the doctor's choice of prescription drugs. The findings of the study showed that the most critical aspect in the choice decision is the product element followed by that of price. Majority of the doctors felt that the place element of the marketing mix had the least influence on their choice of prescription drugs. Most doctors also felt that the supportive

evidence of the efficacy of the product and higher patient dosage compliance were very crucial product aspects to consider while making the prescription choice decision. They also felt that the most important aspect of the price attribute determining their choice is the patients' buying power.

The marketing mix elements play a very important role in the prescription choice decision; however some elements are more important than others. The product element is extremely important since the doctors need to be certain that the drugs they prescribe to their patients are effective. Even if the doctor prescribed the most effective drug, unless the patient is willing and able to purchase the same, the whole treatment process would be an exercise in futility. For the patient to fully benefit from the treatment process, the right drug at the correct price must be available in the pharmacies which are approved by insurers as well as in the hospital formularies. For the pharmaceutical companies to succeed in selling their prescription drugs, they need to understand the extent to which each of the marketing mix elements influence the prescription choice decision so that they can adopt strategies which allow them to position their drugs as the products of choice in the market. The study was conducted in Nairobi and the influence of the marketing mix on Nairobi doctors' choice of prescription drugs may differ from those in the rural areas. As a result of such differences, the results may not be generalized. Future studies could be carried out on each element of the marketing mix to determine the extent to which each of them influences the choice decision on its own. Research can also be carried out to determine whether there are other factors which have an influence on the doctors' choice of prescription drugs and their extent of influence in relation to the marketing mix elements.

CHAPTER ONE

INTRODUCTION

1.1 Background

Businesses today are being subjected to the pressure of increasingly competitive national and global markets through globalisation and liberalisation of economies, combined with demands from investors and consumers for increased productivity, efficiency, innovation and quality of products and services. Kotler (1989) observes that marketing success depends on developing a sound marketing mix adapted to trends and developments in the marketing environment. The changing, constraining, and uncertain marketing environment vitally affects the company. The marketing environment is in continual flux, spinning off new opportunities and new threats. Instead of changing slowly and predictably, the environment is capable of producing major surprises and shocks.

The environmental changes have compelled all marketing professionals to look at different aspects of the marketing mix, inclusive of product, price, place and promotion as essential elements in building brands. In addition, pressures are mounting for businesses to be more responsible and accountable to their wider stakeholders: workforce, suppliers, communities, governments and general public. These enormous changes are taking place in the environment continuously and no industry has remained isolated from their impacts. Marketers must therefore study the impact of these marketing mix activities in order to determine their effectiveness from the firms' perspective and infer their implications for consumers and thus shed light on related public policy issues.

Kotler and Armstrong (1999) argue that today's marketing must be understood not in the old sense of making a sale but in the sense of satisfying consumer needs. They claim that if a marketer does a good job of understanding consumer needs; develops products that provide superior value; and prices, distributes and promotes them effectively, then products will sell very easily.

Kotler (1989) argues that as a result of the high cost of money, many companies are pursuing minor product improvements instead of gambling on major innovations. Much of the research is defensive rather than offensive.

1.1.1 The marketing mix and buyer choice

The marketing environment has undergone enormous changes in the last decade, posing serious challenges to the traditional marketing premise and practices. The role of marketing in an organization is viewed much differently today than it was at the turn of the century or even just two decades ago (Lazer and William, 1996). Marketing consists of individual and organizational activities aimed at facilitating and expediting exchanges within a set of dynamic environmental forces (Ferrell and Pride, 1996) Successful marketing is customer driven: it addresses customer needs and desires

Marketing as it is practiced today was introduced around the 1960, and the concept of the marketing mix and four P's of marketing- Product, Price, Place and Promotion began to appear in marketing literature (Kotler, 1989). Marketing mix is the combination of controllable marketing variables that a firm uses to pursue the desired level of sales in the target market (Churchill, 1995). Marketing strategies consists of selecting a target market and developing a marketing mix to satisfy that market's needs.

A firm can achieve marketing success by developing a consistent, integrated marketing mix that satisfies the needs of the target market better than competitors. Marketing is largely concerned with identifying market opportunities and responding to them by developing and executing effective marketing strategies. The practice of successful marketing requires constant assessment of the marketing environment to identify opportunities and to determine the best way to capitalize on them (William *et al.*, 1995). The only difficult is that the marketing environment is complex, turbulent and uncertain. Companies that operate in one or more foreign markets must decide how much, if at all, to adapt their marketing mix to local conditions (Kotler, 2000) The environmental changes compelled all marketing professionals to look at different aspects of the marketing mix, inclusive of pricing, promotion, media mix, distribution, redistribution, advertising, public relations and group selling processes as essential elements in building brands.

The marketing professionals shifted their emphasis to prescription demand, volume (revenues), costs and profitability. The use of traditional economic analysis to maximize profit by locating the point at which marginal cost equals marginal revenue was replaced with marketing mix strategies.

Organizations understood that it was their responsibility to focus their efforts on delivering superior value to their customers in the competitive environment. All of them tried to provide value added benefits through continuous working on quality, research and development, captive bulk manufacturing, marketing capabilities and competitive prices to consumers through newer and better methods. Internal integrations of all facets of business together with the view of marketing as a basic business philosophy have changed the role of marketing inside the organisation. Marketing has now become an integral part of business.

1.1.2 The Pharmaceutical Industry in Kenya

The pharmaceutical industry comprises of multinational companies (research based), generic manufacturers, drug importers, distributors, wholesalers, retailers and consumers. The pharmaceutical industry in Kenya has undergone tremendous growth in the last ten years; this has been largely due to the growing demand for better health care, the increasing need for better disease management and the ever increasing population (Naikuni, 2001). The provision of free health care, which was possible in the early days of post independence Kenya, has been hardly attainable. The ever-increasing demand placed on this industry has led to an increase in the number of products and firms in the local pharmaceutical industry.

Globally in the pharmaceutical industry, technology has altered substantially in the last 20 years. Firm (2000), observes that once, pharmaceutical companies could invent a miracle cure, patent it and look forward to 10 or 15 years of monopoly. After that, cheap generic copies would destroy the market almost overnight, but then the considerable profits would have been ploughed back into developing the next big drug. Advances in biology today mean that competitors can quickly find alternative ways to attack the same disease well before the patent has expired.

Champion (2001) observes that a new scientific or technological breakthrough can quickly transform an industry's competitive landscape. The pharmaceutical industry exhibits all the symptoms of this kind of strategic dislocation. Billions of dollars of investment capital have poured into the industry, resulting in the creation of a host of high-tech start-ups. At the same time the big drug companies, with their deep pockets have begun acquiring and forming partnerships with abandon, hoping to ride out the storm with their leadership positions intact. In 2001 Glaxo Wellcome merged with SmithKline Beecham to become the world's second largest drug company while in 2003 Pfizer acquired Pharmacia and Upjohn to consolidate its leadership position in the drug market while lately Sanofi synthelabo acquired Aventis to become the world's third largest pharmaceutical company (Gitobu, 2004).

Just like in the other parts of the world, the Pharmaceutical industry in Kenya exhibits some uniqueness. This is depicted by the regulation of the marketing of the pharmaceutical products. The industry in Kenya is specifically regulated in accordance with Cap 244 (Pharmacy and Poisons Act 1989) laws of Kenya. This law regulates the importation, manufacture, marketing, stocking and distribution of pharmaceutical products in Kenya. The law also requires that advertising of prescription drugs can only be on printed professional journals. The Pharmacy and Poisons Board must register all players in the industry who include pharmacists, pharmaceuticals technologists and medical sales representatives. The growth of the industry has also experienced intense competition, which has led to closure of scientific marketing offices by some multinational companies like Eli Lilly and Novo Nordisk, preferring to market their products through the distributors like Phillips Pharmaceuticals and Howse and McGeorge.

According to Kimani (2003) the pharmaceutical industry in Kenya sells three categories of drugs; over the counter drugs, as the name suggests these drugs are purchased over the counters of pharmacies, shops, supermarkets and even kiosks. These are mainly for minor day to day ailments like headaches, stomach upsets, colds and flu. Pharmacy assisted medicines, these drugs are only available at pharmacy outlets, and however a patient does not require a doctor's prescription to purchase them, since the pharmacist's guidance is adequate. Prescription only medicines, these are medicines available only at pharmacies and chemists upon presentation of a duly signed prescription form, from a registered medical practitioner. These usually treat more

complicated indications and care should be exercised while consuming the same. This necessitates the doctor's advice on their use.

This study will mainly emphasize on the prescription only medicines, where all marketing activities are directed mainly to the doctor. The basic marketing concepts that relate to the pharmaceutical industry are similar to those of other industries. However, the pharmaceutical industry has its own peculiarities and thus requires a modified marketing approach. Naikuni (2001) observes that in the industry, promotional activities include detailing to doctors, sponsorship of and to symposia, seminars, continuous medical education and product sampling. However for the new evolving market place and for the new century, this requires a new way of thinking about how promotion should be implemented and carried out. Smarta (1994) observes that till recently, the transaction or call between the doctor and the medical sales representative was considered to be the focus of Pharmaceutical marketing. It was essential to identify, Stimulate, facilitate and add value to each call to market pharmaceutical products. In recent times, there has been a shift from the focus on calls to one on relationships. Doctors, pharmacies and hospitals need to make long term commitments to maintain brand relationships, as marketing of brands provides updated quality, service and innovation.

Gonul (2001) observes that the health care industry in general and the prescription drug industry in particular employ an unusual combination of marketing effort, namely personal selling and free samples. Health care is largely viewed as a social good; hence marketing expenditures may be viewed as wasteful or excessive unless the marketing activity benefits the consumers. Intense personal detailing to doctors by prescription drug manufacturers is a time-honoured practice; it has a fundamental impact of decreasing a doctor's price sensitivity. It is therefore useful to bring insights into the mechanisms driving product choice in the prescription drug market and to study these mechanisms' effects on price sensitivity.

The marketing strategies employed in the pharmaceutical industry sharply contrast with those typically adopted in other markets. In the prescription drug market there is a distinct breach in the traditional buying decision process. The decision maker is the doctor, who chooses among an array of drug alternatives, but it is the patient who takes the drug and ends up paying either

out of pocket or through health insurance coverage for the choices made by the doctor. The role of the doctor as the customer comes out quite clearly. In the marketing of prescription drugs there is an important distinction from the traditional marketing practices. The involvement of doctors as key decision makers is the reason why they are the focus of most promotional efforts of pharmaceutical companies. From the drug manufactures point of view, doctors are the customers, and they have strong incentives to keep their patients satisfied with the provided medical service (Smarta, 1994).

1.2 Statement of the problem

The pharmaceutical industry plays a significant role in the Kenyan economy. It is only a healthy population that can be able to fully participate in development activities of any nation. The industry also employs a huge number of people and indirectly supports millions of others. The configuration of competitive forces such as intensity of competition, new entrants, substitute products, suppliers and buyers have transformed the environment a great deal creating the need for firms to change their competitive positions (Ongubo, 2003). Gionul (2001) notes that doctors may be viewed more favourably by their patients if they demonstrate additional responsiveness and empathy by considering the patients financial situation and the specifics of their health insurance plan when choosing among drugs of similar efficiency for a patient's medical condition. Often the recourse of patients who doubt the judgement of their healthcare providers is to seek another opinion. Even though switching doctors on the basis of an unsatisfactory experience related to drug costs is unlikely, potential loss of patients' patronage could be reasonable concern to doctors regardless of its causes.

Marketing activities should be directed to the doctor since he can infer a patient's willingness and ability to pay a higher price from either the type of insurance held or other cues revealed during the discussion with the patient. However the doctor's utility functions might not always match those of their patients because of constraints imposed by health management organisations' formularies or the increasing involvement of patients that has been enhanced by direct-to-consumer advertising of prescription drugs. These extra pressures on doctors from health management organisations, patients and manufacturers' medical sales representatives create a challenging environment in which the prescription decision is made. Physicians being

intermediaries in the buying decision process of prescription drugs are often placed in a situation of uncertainty as to which drug is the best for each particular patient's case. Considering the broad substitutability among many drugs on the market and the similar claims their manufacturers make, the prescriptions choice decision often critical is increasingly harder to make.

This is where the marketing mix elements come into play as the pharmaceutical marketers must convince the doctor that they have a superior product, offering higher benefits than competition. The price concept can be used to prove that it is the right product by using premium pricing for the expensive products as a signal of quality. The pharmaceutical marketers can assure the doctor that the product is available at the right places like hospital and HMO formularies or leading drug outlets and they must also be able to use the promotion concept of the mix to pass the message or information about the drug to the doctor in order to convince him to prescribe their drug as opposed to competition. Naikuni (2001) observes that doctors are bombarded by many brand names and they are expected therefore to switch from one brand to another depending on which marketer has the best marketing mix elements combination at a given time. Pharmaceutical firms therefore need to design their marketing mixes with doctors in mind if they have to operate successfully. They need to understand how their marketing mixes influence the doctors' choice of prescription drugs.

Studies have been conducted in the pharmaceutical industry; Naikuni (2001); Kimani (2003); Gitobu (2004) conducted studies on promotion, key opinion leader and distribution intensity respectively. Apungu (2003) carried out a survey of marketing factors that influence customer choice of petrol stations in Nairobi while Ongubo (2003) looked at the determinants of brand loyalty for prescription brand medicine. Most studies in the pharmaceutical industry have been on aspects of marketing like promotion, none of the above studies focused on the influence of marketing mix on doctors' choice of prescription drugs, hence there exists a gap that the proposed research seeks to fill by seeking answers to the following research question: To what extent does the marketing mix influence medical doctors' choice of prescription drugs?

1.3 Objective of the study

The objective of this study was to determine the extent to which the marketing mix influences medical doctors' choice of prescription drugs.

1.4 Importance of the study

When the study is successfully completed, there may be several beneficiaries who include:

- (i) Pharmaceutical companies may have a better understanding and insight into the extent to which marketing mix influence doctors' prescription patterns.
- (ii) Pharmaceutical marketers can also benefit by identifying the most critical aspects of the marketing mix that influence doctors' prescription patterns.
- (iii) Academicians who may be interested in pursuing further research in the marketing mix elements with specific reference to the pharmaceutical industry.

CHAPTER TWO

LITERATURE REVIEW

2.1 The marketing mix

Marketing enables citizens of any given country to consume products and services that they would not otherwise consume. It raises a people's standard of living and creates employment (Kibera and Waruingi, 1998). Marketers are skilled in stimulating demand for a company's products. They seek to influence the level, timing and composition of demand to meet the organisation's objectives (Kotler, 1999).

According to Smarta (1994) the concept of pharmaceutical marketing has gone through a process of evolution, subtle changes in the marketing concept and practice have fundamentally reshaped pharmaceutical marketing, earlier it was seen as a set of social and economic processes in the form of licensing, franchising, trading and selling. Champion (2001) observes that an industry in flux creates vast opportunities, but to seize them, you have to understand how the current upheavals will create different sources of value and then reinvent your company to capitalize on them.

Marketers use numerous tools to elicit desired responses from their target markets; these tools constitute a marketing mix, which a firm uses to pursue its marketing objectives in the target market. Marketing mix decisions must be made for influencing the trade channels as well as the final consumers. From a buyer's point of view, each marketing tool is designed to deliver a customer benefit, customer's four C's; customer solution, customer cost, convenience, communication.

Winning companies will be those who can meet customer needs economically and conveniently and with effective communication (Kotler, 1999). Kibera and Waruingi (1998), observe that although marketers can manipulate these variables, the way they 'mix' them will determine the effectiveness of their marketing programmes. According to Churchill (1995) marketing mix is the mix of controllable marketing variables that the firm uses to pursue the desired level of sales in the target market. The marketing mix consists of four elements (4P's) product, pricing,

placement, (channels of distribution) and promotion (communication). William *et al* (1995) define marketing mix as the overall marketing offer to appeal to the target market consisting of decisions in four basic areas: product, pricing, communication and distribution

Baker (1992) observes that in common with many other professions, the practice of marketing is often made complex and difficult due to the sheer of diversity of the problems with which it is confronted. To a large extent this diversity is due to the fact that the principal actors in exchange processes are people or organisations comprised of people, and so exhibit the dynamic and interactive behaviour associated with human beings. In marketing, one conceptual framework which is particularly useful in helping practitioners structure their thinking about marketing problems is that of the so-called "marketing mix".

To devise a product or service which will be seen as different in the eyes of prospective consumers, to the point where they will prefer it to all competing substitutes, is obviously the ultimate objective of the marketer. The pharmaceutical firms also apply this marketing concept and market their products to the end users. This process involves communicating the functional features and benefits of their ethical brands (Naikuni, 2001). In devising this unique selling proposition or bundle of benefits, the marketer can use the 4'P's' of marketing which he can combine in an almost infinite number of ways to achieve different end results.

According to Kimani (2003), product, price, promotion and distribution are factors that within limits are capable of being influenced or controlled. The pharmaceutical industry in Kenya is faced with changing business environment, viz, inflation, low-purchasing power, competition etc. Players in the industry need to leverage their businesses using the elements of the marketing mix. Baker (1992) explains that marketing strategy can be viewed as reflecting a marketing mix of these four elements, product, place, price and promotion. Every market has its "own" logic whereby excellence on an element of the mix, is often a necessary condition for success. Knowing the key factor in the marketing mix is crucial in drawing up a marketing strategy since it means knowing what to emphasize. This actually explains the importance of this study to the pharmaceutical players operating in Kenya. There is a wide diversity among marketers on what elements compose the marketing mix (Baker, 1992).

Misumi (2003) observes that pharmaceutical marketers in Kenya need to identify the best mix of marketing components since it is clear that there is no widely accepted list that can be used by these marketers. Pharmaceutical marketers, just like other marketers need to appreciate that there is no single or definitive statement of the mix elements and the practitioner must select the elements which are most important to the product – market situation with which he is concerned.

2.2 Product

Stanton et al (1994) argues that a product is a set of attributes assembled in an identifiable form; each product is identified by a commonly understood descriptive (or generic) name. However consumers are not really buying a set of attributes, but rather benefits that satisfy their needs. Each brand must be treated as a separate product such that Kodak colour film and Fuji colour film are different products just like Squibb's aspirin and Bayer's aspirin are separate products. Any change in a feature (design, colour, size, packaging), however minor, creates another product. Each such change provides the seller with an opportunity to use a new set of appeals to reach what essentially may be a new market. Pain relievers (Tylenol, Anacin) in capsule form are a different product from the same brand in tablet form even though the chemical contents of the tablet and the capsule are identical. Seemingly minor product changes can be the key to success (or failure) in international markets.

Since consumers buy want satisfaction in the form of the benefits they expect to receive from the product, to design effective marketing programmes, organisations need to know what kinds of products they are offering consumers. The idea of 'product' as potential customer satisfaction or benefits is very important. Baker (1992) argues that the basic point about any product is that it is a bundle of attributes. Producers wrongly assume that small differentiating features will be perceived when they won't, with the result that greater emphasis is given to creating subjective differences between competitive products through service and promotional efforts. Most of the pharmaceutical products in the Kenyan market are designed and developed elsewhere then brought here. However the marketers in Kenya are involved in designing strategies needed to change existing products, add new ones, branding and packaging (Ronoh 2002). Vinayak (2001) explains that the product has always remained the key component of marketing mix. The demand can be influenced by making the product appropriate, attractive and easily available to

target consumers. Designers have been adding value to pharmaceuticals for years. Kabiru (2004) argues that based on perception rather than reality, value is a trade-off between price that is the customer's investment and benefits that is what the customer gets. Customers will only buy your product if they determine that it's perceived value exceed the price they have to pay for it. In the marketing of prescription drugs there is an important distinction from the traditional marketing practices, reason being that the involvement of doctors as key decision makers makes them focus of most promotional efforts of pharmaceutical companies (Naikuni 2001).

Gonul (2001) observes that in addition to detailing, doctors are often supplied with substantial amounts of free products for direct assessment on the effectiveness of a drug, which they can dispense to patients at no cost. Research based pharmaceutical companies will mainly give free samples to doctors only when introducing a drug into the market for the first time. The concept of free samples has been misused by some pharmaceutical companies especially generic manufacturers from India and China who have resulted into 'blocking' competitors from the doctors memory list by way of heavily sampling a doctor with a given brand of a drug such that it becomes impossible for the doctor to recall any other brand when prescribing to his patients (Misumi, 2003). This is a concept that has become very common in the Kenyan Pharmaceutical industry today. This has been worsened by registration of too many brand names of a particular drug by the Pharmacy and Poisons Board (Kenya drug index, 2004). However, both research based pharmaceutical companies and generic manufacturers concur that dispensing samples in the health care industry is different from doing so in non-pharmaceutical markets because drug samples are often accompanied by detailing and accepting them might imply some commitment to prescribe the product in the future (Gonul, 2001). Samples can be the only visible reminder of the product after the medical sales representative has left the doctor's office. Samples can have a more lasting influence on the doctor because they add tangibility to the sales presentation.

Niedrich and Swain (2003) argue that a market pioneer is generally thought of as the first company to sell a brand in a new product category. This is very true in the Kenyan pharmaceutical industry where it is observed that the first brand of a particular drug to be sold in the country is normally viewed by a majority of doctors as the 'original' drug (Naikuni, 2001). This has however created confusion in situations where the research brand is not patented in

Kenya and due to some reason a generic product manages to get registration documents earlier and is also launched in the Kenyan market before the research brand. This creates a lot of confusion as well as an uphill task for the research company to later on launch their product and convince doctors that they are selling the original product. However, while it is commonly believed that market pioneers enjoy a competitive advantage relative to later entrants, conflicting findings in field studies have motivated a debate about the existence of this pioneering advantage (Niedrich and Swain, 2007). In the pharmaceutical industry in Kenya, doctors' associate superior product attributes with the pioneering brand, and companies frequently attempt to communicate pioneer status to consumers using a variety of wordings. This has always compelled the players in the industry to always be in a rush to get registration for their products faster than competition so as to gain the pioneer status.

Smarta (1994) observes that the high level of competition has forced the drug manufacturers to substantially alter their technology so as to remain afloat. Companies have changed the quality of many bulk drugs; others have practiced 'backward integration' and used bulk drugs for captive consumption as well as selling to others. Some innovations include the development of timed-release drugs, sustained release technology, transdermal technology. Intravenous manufacturing technology went through enormous changes from glass bottles to polypropylene bottles. Similarly, technology for bottling, liquid manufacturing, capsules manufacturing and packaging has been tremendously improved, and today 'blister' packs are common place. All these are efforts by pharmaceutical manufacturers to offer a more competitive product to the doctor's eye.

Naikuni (2001) notes that increased competition and faster diffusion have resulted in the shortening of product life cycles. Because of enormous costs and risks involved, new product launches are infrequent and are more thoroughly planned. He further observes that product development is a key marketing function. It includes planning and developing the right goods to be marketed. He also observes that in the pharmaceutical industry in Kenya, especially among the multinational companies, there is very little they undertake locally, since most of the product developments are done in their mother countries where they have their research centres. Feedback is however forwarded to their headquarters and thus however small the role, they still

are involved in the design and development of new product or improvements of existing products

Marketers are also involved in designing strategies needed to change existing products, add new ones, branding or packing. Ronoh (2002) explains that in the pharmaceutical industry, manipulating the product features such as formulation can offer great competitive advantage. According to Naikuni (2001), new products are important for the long-term survival of the pharmaceutical firms. It is quite evident that the successful firms currently are those who have had new products in the last two decades, and also having others in the pipeline. Branding is also becoming quite important whereby line extension or product improvements are being done on some brands and therefore increase their lifespan. These product developments influence doctors' decision. Naikuni (2001) explains that these new improvements or line extension are carried out with extreme caution as any product failure may damage a firm's reputation, image as well as their long-term business objectives and plans. He further explains that in the pharmaceutical industry, products fail in the market due to various factors; the prices are too high as compared to existing alternatives, the side effects profile associated with a given drug are more than its substitutes, less marketing effort, little or no improvements to current therapies, entry of newer more potent therapies. A firm thus, must critically look at the industry and develop products that are going to be a success. For their continued survival pharmaceutical companies have to come up with newer innovative products.

2.3 Price

Price is the amount of money and/or other items with utility needed to acquire a product. As an allocator of resources price determines what will be produced and who will get the goods and services produced (Stanton, *et al*, 1994). Price affects a firm's competitive position and its market share hence has a considerable bearing on a company's revenues and net profits. Kabiru (2004) argues that price is a perception of value which is never constant. The challenge therefore is to always position your product with the value going up i.e. either lower your price, increase your benefits or increase your benefits more than you increase your price. In the pharmaceutical industry, the doctor, who is the consumer, can infer a patient's willingness and ability to pay a higher price from either the type of insurance held or other cues revealed during

the discussion with the patient (Gonul, 2001). Patients' potential difficulty in making price comparisons with other drugs after a prescription is written and filled could dampen the price sensitivity exhibited by a doctor who wants to demonstrate goodwill to the patient. It might often be sufficient to make the patients believe that their price concerns have been addressed in the best possible way given their condition, which thus becomes a credence issue (Smarta, 1994). Consumer advocates often criticize pharmaceutical firms for what they consider excessive and wasteful expenditure in detailing and promotion. These expenses, the critics argue, unnecessarily raise the prices of prescription drugs.

According to Misumi (2003), different pharmaceutical companies employ various strategies while pricing their drugs. New entrants into the industry often price their drugs low to penetrate the market and gain customers. Naikuni (2001) observes that when research based companies acquire registration of a new drug in Kenya, they price it high to gain maximum amount of profit per unit in the shortest time possible before the generics flood the market because of the weak patency protection, in the industry. Generic manufacturers quite often price their products deliberately low so as to crush their competitors or push them out of the market. Some companies will set a price that is seen by doctors as honest and reasonable hoping to gain mileage from this. Like in any other industry, companies hoping to remain competitive and be considered for any proposal will always set market-determined prices. Companies that set their prices for maximum profit and maximum sales must ensure that they have the ability to differentiate their products so as to reduce the price sensitivity of the consumers.

Gonul (2001) observes that intense personal detailing to doctors by prescription drug marketers is a time-honoured practice. Drawing a natural parallel between detailing drugs and advertising consumer goods, it can be argued that detailing similar to advertising is both a market power tool and an information source. Personal detailing by marketers of prescription drugs has a decreasing impact on the doctor's price sensitivity (Smarta 1994). It is useful to glean insights into the mechanisms driving product choice in the prescription drug market and to study these mechanisms' effects on price sensitivity. Gonul (2001) observes that doctors have strong incentives to keep their patients satisfied with the provided medical service. He further explains that doctors can infer a patient's willingness and ability to pay a higher price from either the type

of insurance held or other cues revealed during the discussion with the patient. Accommodating patients' price sensitivity while accounting for their medical conditions along with giving free samples to some needy patients may be considered a tangible indication of care and involvement that can further enhance the relationship between the doctor and patients (Smarta 1994). However doctors might regard a higher price as a signal of quality, a price premium justified by the higher efficacy of the drug, and therefore prescribes the more expensive drug when drug efficacy is of prime consideration.

Kotler (1997) observes that multinationals face several specific pricing problems when selling abroad. This is the same case observed with multinational pharmaceutical companies operating in Kenya. They must deal with price escalation, transfer prices, dumping charges, and gray markets (Naikuni, 2001). Pharmaceutical firms operating in Kenya have also to contend with parallel importations of their own brands that come with far much lower prices, making it almost impossible for them to off load their stocks into the market (Kimani, 2003). Good examples of worst hit companies here is Pfizer with their male potency enhancer Viagra and Eli Lilly with their male potency enhancer Cialis. These two companies have tried all means including changing shape of the tablet, engraving letters on the tablets, using watermarks on the package as well as highlighting all these features in the media but every time they make a change on their locally sold brand, the parallel importers take less than two weeks to again bring the brand with the exact new features. This brings the issue of concern on the safety and efficiency of these parallel imports.

Vinayak (2001) observes that although non-price factors have become relatively more important in buyer choice behaviour in recent decades, in developing nations, for majority of the people especially with commodity type of products, price has remained the major determinant of buyer choice. Stanton (1994) argues that every marketing activity including pricing should be directed towards a goal. The management should decide on its pricing objective before determining the price itself. To be useful, the pricing objective that management selects must be compatible with the overall goals set by the company and the goals for its marketing program.

Ferrell & Pride (1996) argue that price is intertwined with all the marketing mix variables yet it is one of the most convenient variables to change. The manipulation of price permits a marketer

to adjust the marketing strategy to current demand and supply situations. Price often is used symbolically to emphasise quality or it can be used to attain a deserved profit level. Pharmaceutical companies price their products with the aim of recouping their research and development expenses within the period the drug is still under patent (Naikuni, 2001). It is therefore one of the most important components of the marketing mix.

Ronoh (2002) argues that in the pharmaceutical industry, pricing is a very sensitive issue. When a company comes up with an innovative product and successfully patents, they price it in such a way that they will be able to recoup their investment in research and development in the period that the patent runs. In the pharmaceutical industry, especially in generic products market, there is little differentiation in the products with the same chemical composition (Vinayak, 2001). He also explains that traditionally, Kenyan pharmaceutical products have remained high priced but with the increasing competition from low cost sources like India and China, the prices have become the most vibrant tool of competitive strategy. Owing to the state of the Kenyan economy and large number of competitive brands in the market, pricing is the main strategy for gaining market share.

Ongubo (2003) observes that Large volume buyers such as health management organizations (HMOs), Kenya Medical Supplies Agency (KEMSA), which purchases on behalf of the Ministry of Health and non governmental organisations such as Mission for Essential Drugs (MEDs), have made pharmaceutical companies review their pricing strategies such as; selective market pricing, discounts and credit terms. The changing nature of competition and the economic hardship currently facing Kenya is forcing most drug firms to use pricing as a strategy to gaining market share (Vinayak, 2001).

2.4 Place

Distributor's role within a marketing mix is getting the product to its target market (Stanton et al 1994). The most important activity in getting a product to market is arranging for its sale from producer to final customer. Other common activities are promoting the product, storing it, and assuming some of the financial risk during the distribution process. A distribution channel consists of the set of people and firms involved in the transfer of title to a product as the product

moves from the producer to ultimate consumer or business user. A channel of distribution always includes both the producer and the final customer for the product in its present form as well as any middlemen such as retailers and wholesalers. The channel for a product extends only to the last person or organization that buys it without making any significant change in its form. Stanton et al (1994), observes that a company wants a distribution channel that not only meets customers' needs but also provides an edge on competition.

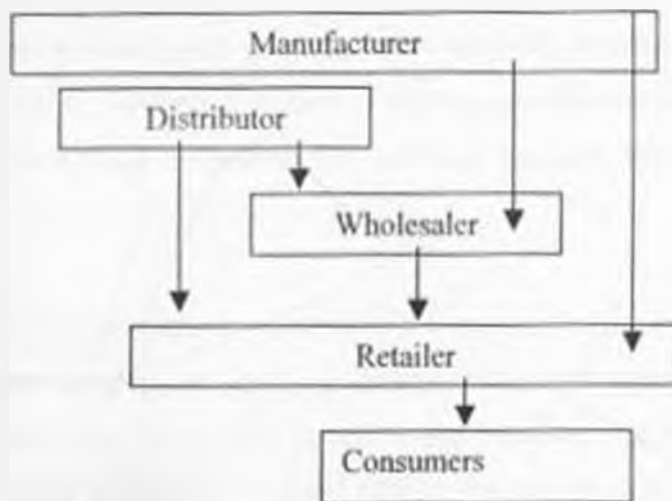
Distribution channels in the Kenyan pharmaceutical industry are uniquely narrow. Muiva (2001) reported having an effective distribution network was considered most important to compete effectively in the local pharmaceutical industry, followed by a skilled marketing team and an effective product mix. The presence of a good distribution network enables products to penetrate widely into the market. This is due to the nature of marketing activities of prescription drug marketers. These companies regard the doctor as their customer since he is the one who makes the choice on behalf of the patient (Gonu, 2001). This means that the prescription drugs must be distributed in a way such that they will be available at places where the doctors need them.

According to Kotler (1997), many multinationals think their job is done once the product leaves their factory. He argues that they should pay more attention to how the product moves within the foreign country. Similarly, pharmaceutical firms operating in Kenya should take a whole channel view of the problem of distributing their products to the final users. Ferrell and Pride (1996) observe that distribution is one of the less flexible variables in the marketing mix. This is because decisions about distribution often result in long-term commitments to intermediaries or in commitments of resources to company owned vertically integrated systems. Stanton et al (1994) explains that place or distribution is one of the important marketing mix components that marketers use to select and manage the trade channels through which products will reach the right market at the right time. Rosenbloom (1999) observes that when the target market places a high level of emphasis on how a product is sold, how timely and conveniently it is made available and where it is sold, distribution becomes the leading variable in the marketing mix.

In Kenya, the channels of distributing ethical products are narrow. The Pharmacy and Poisons Act (cap 244) clearly defines where these products should be dispensed. These premises should

be registered with the board through a qualified pharmacist and permitted to physically handle the drugs. Ethical products can only be dispensed through licensed pharmacies or clinics. Vinayak (2001) observes that with increasing competition and product multiplicity, to make the product available in the pharmacies is an important but difficult task for any marketer. This is further complicated by the fact that pharmacies are hesitant to stock new drugs in their shelves for fear of becoming dead stock; while doctors want their patients to get a drug immediately it is prescribed without delay.

Fig 1.1: Distribution Chain in the Pharmaceutical Industry



Source: Raja B. Smarta (1994) Strategic pharmaceutical marketing. Page 314.

2.5 Promotion

It is through promotional activities that a firm communicates directly with potential customers. Stanton *et al* (1994), observes that promotion is the element in an organization's marketing mix that serves to inform, persuade and remind the market of a product and the organisation selling it, in hopes of influencing the recipients' feelings, beliefs or behaviour. The five forms of promotion include personal selling, advertising, sales promotion, public relations and publicity. The pharmaceutical industry in Kenya, mainly use personal selling and sales promotion in their marketing activities to doctors and pharmacies respectively (Misumi, 2003).

According to Stanton *et al* (1994) personal selling is the direct presentation of a product to a prospective customer by a representative of the organization selling it. In the pharmaceutical

industry these marketers are known as medical sales representatives or pharmaceutical representatives, while the presentation to the doctor is known as detailing and the process is a 'call' (Gonul, 2001).

Sales promotion is demand-stimulating activity designed to supplement advertising and facilitate personal selling. To be effective, promotional activities must also be coordinated with product planning, pricing and distribution, the other marketing mix elements. An effective promotional mix is a critical part of virtually all-marketing strategies. When deciding on the promotional mix, management should consider the nature of the market including the type of customer, the prospects readiness to buy, and the geographic scope of the market. The nature of the product including unit value, the degree of customisation required and the amount of presale and post-sale service. The stage of the product life cycle and the funds available for promotion (Stanton *et al* 1994).

Firm (2000) observes that as competition becomes more intense, consultancies such as PriceWaterhouse Coppers are teaching pharmaceutical companies to build relationships with doctors. Among other things, that means strong branding and making the drug look twice as good as an equally good rival. Gonul (2001) observes that there is a trade-off between the benefits acquired through time spent with pharmaceutical sales representatives and the opportunity cost of that time, which can be spent otherwise. Information about new drugs and their applications and side effects is largely available from other sources; doctors have access to medical symposia and conferences, research articles and medical journals. There is also anecdotal evidence that inertia and loyalty to specific drugs play some role in the choice of a drug prescribed by a doctor.

Firm (2000) observes that Pharmaceutical marketers expect doctors to benefit from spending time with medical sales representatives because the information they receive ultimately leads to higher patient recovery rates, that speak well of the doctor's competence and expertise. Due to the nature of their work, majority of doctors do not have time to attend medical symposia and read journals so their only source of new information could be the pharmaceutical sales representatives (Ongubo, 2003). The prescription trends of doctors who do not have time for

drug marketers indicate that they take too long to use new medication while on the other hand may continue prescribing outdated and sometimes drugs which have already been withdrawn from the market. Pharmaceutical sales representatives offer information on generic and current modes of therapy, the appropriate drug usage, indications, contraindications and side effects (Firm, 2000).

When used as a persuasive tool, promotion affects the doctor by focusing on the differentiating features and attributes of the product and thus reduces price sensitivity (Gonul, 2001). It is clear that doctors retrieve drug alternatives from memory before writing a prescription, this makes it even more important for pharmaceutical sales representative to engage in reminder promotion; which requires them to 'call' on the doctors regularly (Smarta,1994). He further observes that most of them will make a presentation of the drug to the doctor once or twice every month. With more drugs for treating similar indication coming into the market, we have seen the frequency of calls increase across the board. In the prescription drug industry, doctors receive visits from the representatives of competing pharmaceutical companies, it is expected that the persuasive aspect of the pharmaceutical sales representative will be mitigated by physicians' increased awareness of competitors prices (Gonul, 2001). He also notes that the persuasiveness of detailing and sampling activity will be cancelled out across the visits of different sales representatives, making the increased awareness of drug features and availability the only remaining effect to influence doctors.

Ndiho (2001) observes that the emergence of managed care has reduced the impact of pharmaceutical sales representatives; however they are still a strong source of information in the promotion of drugs. It is still unresolved whether pharmaceutical promotion or detailing is a warranted or a redundant promotional activity (Smarta, 1994). Pharmaceutical promotion or detailing is a valuable, though not unique or entirely accurate source of information for doctors providing them with useful product knowledge about drug toxicity, efficacy and cost to the patient, thus offering a more customized service and enhancing social welfare (Firm, 2000). In the pharmaceutical industry today, there has been a shift from the focus on 'calls' to one on relationships. Doctors and other customers like retail pharmacies and hospitals need to make long-term commitment to maintain brand relationships as marketing of brands provides updated

quality, service and innovation (Smarta, 1994). Given the increased importance of long-term strategic relationships with both doctors and retail outlets, pharmaceutical companies increasingly have to place greater emphasis on relationship management skills. These skills are present in individuals rather than being related to organization structures, rules or tasks hence key marketing personnel who are able to acquire these skills become increasingly valuable as business assets. Establishing a relationship should be the outcome of a call and result from customer satisfaction.

Many doctors consider themselves immune to the power of drug marketing. They are scientists not influenced by marketing techniques, or so they believe (McCall, 1995). Yet again and again, a new drug-often presenting little advantage over previously available drugs along with a whopping price tag-comes into the market, accompanied by an advertising blitz, and within months becomes one of the top selling drugs (McCall, 1995).

Kotler (1997) explains that companies can run the same advertising and promotion campaigns used in the home market or change them for each local market i.e. communication adaptation. Ronoh (2002) argues that modern marketing calls for more than developing a good product, pricing it attractively and making it accessible. He observes that companies must also communicate with present and potential stakeholders and the general public. Ferrell and Pride (1996) observe that promotion mixes are methods of communicating with target markets about the values contained in an offering. Promotion is used for a variety of purposes and its symbolization aspects make a direct contribution to increasing the value of an offering. In a study of promotional mix elements within the multinational pharmaceutical companies in Kenya, Naikuni (2001) reported that personal selling was ranked the most important promotional tool by 37.5% of the respondents, followed by sales promotion with 21%, publicity and public relations 15%, direct marketing 14% and advertising 2.5% in that order.

According to Hirschler (2003), one study of 1000 doctors across England showed that those who saw drug industry representatives at least once a week were more likely to prescribe new drugs when an old one would do just as well. Bennet (1997) states that due to the special characteristics of drugs, competition takes undesirable forms. In particular, because of the life saving nature of

many drugs and the fact that patients do not pay for them directly in many countries, there is unlikely to be substantial price competition but rather competition in product quality, innovation and brand awareness.

2.6 Summary of literature review

Marketing mix is the set of marketing tools that the firm uses to pursue its marketing objectives in the target market. Marketing mix decisions must be made for influencing the trade channels as well as the final consumers (Kotler 1989). Each marketing tool is designed to deliver a customer benefit. The marketing concept holds that the key to achieving its organizational goals consist of the company being more effective than competitors in creating, delivering and communicating customer value to its chosen target markets (Churchill 1995). One key to marketing success is developing a consistent integrated marketing mix that satisfies the needs of the target market better than competitors (William et al 1995). The concept of pharmaceutical marketing has gone through a process of evolution; subtle changes in the marketing concept and practice have fundamentally reshaped pharmaceutical marketing. The environmental changes have compelled all marketing professionals to look at different aspects of the marketing mix inclusive of pricing, promotion, distribution as well as product as essential elements in building brands (Smarta 1994). The involvement of doctors as key decision makers is the reason that they are the focus of most promotional efforts of pharmaceutical companies (Gonul 2001). He also observes that in the marketing of prescription drugs there is an important distinction from the traditional marketing practices since the decision maker is the doctor, who chooses among an array of drug alternatives, but it is the patient who takes the drug and ends up paying for the choices made by the doctor. The researcher therefore recognises the need to have a better understanding of the influence of marketing mix on doctors' choice of prescription drugs.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research design

A descriptive survey was conducted to establish the influence of marketing mix on doctors' choice of prescription drugs in Nairobi. A descriptive survey was chosen because it would quantifiably characterise the extent to which marketing mix variables affect prescription drug decisions (Cooper and Schindler, 2003). In the current study only the key features of the phenomenon were known, the descriptive study was necessary to generate detailed information regarding the key aspects in order to develop their profile.

3.2 Population

The population of interest for this study consisted of all registered prescribing medical doctors practising in Nairobi. The criteria for this selection was based on the fact that doctors in Nairobi are more representative of the general prescription patterns among doctors practising in Kenya, Nairobi being the largest town with the highest population of doctors in the country. According to the Kenya medical directory of 2004-2005 Nairobi has a total of 520 registered prescribing medical doctors. This excludes doctors who do not prescribe drugs to patients like radiologists and anaesthetists.

3.3 Sample and sampling design

A sample size of 100 doctors was used in this study. This was fairly representative of the doctors' population in Nairobi. Misumi (2003) in a related study used a similar sample size. Convenience sampling was used to select the sample from prescribing doctors operating in Nairobi's low, medium and high income hospitals.

3.4 Data collection method

Primary data was collected using structured questionnaires, which were administered to the medical doctors using a drop-and-pick later method. The questionnaire was divided into two sections. Section A consisted of the doctor's personal information while section B dealt with marketing mix elements which influence a doctor's choice of drug prescription.

3.5 Operationalizing the marketing mix variables

The marketing mix variables that were tested in this study included product, price, promotion and place. Operational dimensions of these variables are presented in appendix 3. A likert scale was used to determine the extent to which each dimension influenced doctors' choice of prescription drugs.

3.6 Data analysis

Data was analysed using descriptive statistics. Frequencies and percentages were used to analyse data for section A and B of the questionnaire. The analysed data was presented on tables.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This section presents an analysis of data collected. After they were filled-in and returned, the questionnaires were edited and coded. All questionnaires returned by respondents were usable for data analysis. Eighty eight doctors out of a target of one hundred responded. This represented a response rate of 88%.

4.2 Demographic characteristics of Respondents

In this section, data on the demographic profiles of respondents, that is their specialization, location of their clinics, number of years in medical practice, their age bracket and gender was analysed using frequencies and percentages.

4.2.1 Specialization of Respondents

Medical specialization of the respondents was as follows:

Table 4.2: Specialization

Specialization	Frequency (n)	Percent (%)
Cardiologist	8	9.1
Ear, Nose and Throat specialist (ENT)	28	31.8
General practitioner (GP)	4	4.5
Gynaecologist	12	13.6
Oncologist	4	4.5
Paediatrician	24	27.3
Physician	8	9.1
Total	88	100.0

From Table 4.2, it was observed that the highest number of respondents was Ear, Nose and Throat specialists (31.8 %), followed by Paediatricians (27.3 %). The lowest number comprised of General practitioners and oncologists (4.5 %) each.

4.2.2 Location of the respondents' clinic

Location of clinic where most of doctors were concentrated was tabulated as follows:

Table 4.3: Location of the respondents' clinic

Location of Clinic	Frequency (n)	Percent (%)
Aga Khan Hospital	12	13.6
Gertrude Hospital	4	4.5
Kenyatta National Hospital	36	40.9
M P Shah Hospital	12	13.6
Nairobi Hospital	24	27.3
Total	88	100.0

From Table 4.3, it can be observed that most of the respondents have their practice located at Kenyatta National Hospital (40.9 %), followed by Nairobi hospital (27.3 %). Gertrude hospital had the least number of respondents (4.5 %) despite being a paediatric hospital. This can be attributed to the fact that there is no provision for private medical practice within the hospital.

4.2.3 Number of years in practice

Doctors' period of experience in the medical profession was as follows:

Table 4.4: Number of years in practice

Years in Practice	Frequency (n)	Percent (%)
6-10	4	4.5
11-15	24	27.3
> 15	60	68.2
Total	88	100.0

Table 4.4 shows that most respondents had been practicing medicine for at least 15 years (68.2 %) while a few had 6-10 years of medical practice (4.5 %). A significant number of respondents had between 11 and 15 years of medical practice (27.3 %). The results indicated that no respondent had less than 6 years of experience as the target group was consulting doctors. This was attributed to the fact that to become a medical consultant, one must have a masters degree whose eligibility requires one to have practised medicine for at least two years after first degree.

4.2.4 Age bracket

The doctors' age bracket was tabulated as follows:

Table 4.5: Age bracket

Age Bracket	Frequency (n)	Percent (%)
30-40 Years	16	18.2
41-50 Years	40	45.5
51-60 Years	28	31.8
1-60 Years	4	4.5
Total	88	100.0

From Table 4.5, it was observed that most of the respondents belong to the age group of 41-50 years (45.5%). There were so few respondents above the age of 60 years (4.5%). The age group of 51-60 years had a significant number of respondents (31.8%).

4.2.5 Gender

Gender of the respondents was as follows:

Table 4.6: Gender

Gender	Frequency (n)	Percent (%)
Male	76	86.4
Female	12	13.6
Total	88	100.0

From Table 4.6, it was observed that most of the respondents were male (86.4%). Female respondents comprised only a very small percentage (13.6%).

4.3 Influence of Marketing Mix on the Doctor's Choice of Drug Prescription

4.3.1 Product Attributes

This section shows the extent to which the various attributes of the product influence the doctors' prescribing decision.

Table 4.7: Product Attributes

Product Attributes	Very Important		Important		Less important		Least important		Not at all important	
	n	%	n	%	n	%	n	%	n	%
Source of medicine (Europe, Asia, Africa, Local)	24	27.3%	36	40.9%	8	9.1%	8	9.1%	12	13.6%
Patient attitude towards the source of medicine	16	18.2%	32	36.1%	16	18.2%	8	9.1%	16	18.2%
Patient compliance (Dosage, compliance)	60	68.2%	16	18.2%	4	4.5%	-	-	-	-
New innovations or combinations of drugs	28	31.8%	44	50.0%	12	13.6%	-	-	4	4.5%
Easy to remember brand names	16	18.2%	44	50.0%	16	18.2%	8	9.1%	4	4.5%
Quality of medicine package	16	18.2%	28	31.8%	20	22.7%	12	13.6%	12	13.6%
Form of delivery of the medicine	18	20.5%	28	31.8%	8	9.1%	-	-	-	-
Supportive evidence of the efficacy of the medicine	81	92.0%	4	4.5%	-	-	-	-	-	-
Reputation of the source of the medicine	60	68.2%	24	27.3%	-	-	4	4.5%	-	-

From Table 4.7, it is clear that majority of the respondents felt that the most important product attribute as far as their prescription decision is concerned is the supportive evidence of the

efficacy of the medicine (95.5%). The next important product attributes are patient compliance and reputation of the source of medicine (68.2%). The product attributes which respondents felt were not important as far as their prescription choice decision is concerned include the patient attitude towards the source of medicine (18.2%), Source of medicine (13.6%) and the quality of medicine package ((13.6%).

4.3.2 Price attributes

This section shows the extent to which the various price attributes influence the prescription choice decision.

Table 4.8: Price attributes

Price Attributes	Very important		Important		Less important		Least important		Not at all important	
	n	%	n	%	n	%	n	%	n	%
Price in relation to competing products	4	4.5%	68	77.3%	8	9.1%	4	4.5%	4	4.5%
Price of the drug in relation to the severity of the indication	32	36.4%	36	40.9%	-	-	12	13.6%	8	9.1%
Patient buying power	36	40.9%	40	45.5%	12	13.6%	-	-	-	-
Economic status of the patients in your area of practice	16	18.2%	52	59.1%	20	22.7%	-	-	-	-

From Table 4.8, one can make an observation that the most important price attribute is the patient buying power (40.9%) followed by the price of the drug in relation to the severity of the indication (36.4%). The other most important attribute is the economic status of the patients in the respondent's area of practice (18.2%). The least important attribute as far as the prescription decision is concerned is the price of the medicine in relation to the competing products (4.5%).

4.3.3 Place attributes

This section indicates the extent to which the various place attributes influence the prescription choice decision.

Table 4.9: Place attributes

Place Attributes	Very important		Important		Less important		Least important		Not at all important	
	n	%	n	%	n	%	n	%	n	%
Medicine availability in pharmacies approved by insurers	12	13.6%	18	41.4%	4	1.5%	8	9.1%	16	18.2%
Your personal relationship with the company selling the medicine	-	-	20	22.7%	12	13.6%	16	18.2%	40	45.5%
Availability of the medicine in hospital formularies	12	13.6%	28	31.8%	24	27.3%	8	9.1%	16	18.2%
Sponsorship of medical conferences by the company	8	9.1%	28	31.8%	-	-	12	13.6%	40	45.5%
Sponsorship for free medical camps by the company	8	9.1%	24	27.3%	4	1.5%	8	9.1%	40	45.5%
The local agent representing the principle company	12	13.6%	16	18.2%	16	18.2%	12	13.6%	32	36.4%

From Table 4.9, it was clearly observed that the most important place attributes include medicine availability in the pharmacies approved by insurers, availability of the medicine in hospital formularies and the local agent representing the principle company (13.6%). Most respondents felt that their personal relationship with the company selling the medicine, sponsorship of medical conferences by the company and the sponsorship for free medical camps by the company are not important as far as their prescription choice decision is concerned (45.5%).

4.3.4 Promotion attributes

This section shows the extent to which the various promotional attributes influence the prescription choice decision.

Table 4.10: Promotion attributes

Promotion Attributes	Very important		Important		Less important		Least important		Not at all important	
	n	%	n	%	n	%	n	%	n	%
Experience with the medicine through samples given for patients	12	13.6%	11	50.0%	21	27.3%	4	4.5%	4	4.5%
Information from medical representative	24	27.3%	36	40.9%	20	22.7%	4	4.5%	4	4.5%
Constant reminders about the medicine	4	4.5%	40	45.5%	28	31.8%	8	9.1%	8	9.1%
Knowledgeable medical representative	28	31.8%	36	40.9%	20	22.7%	-	-	4	4.5%
Sincere medical representative presentation	32	36.1%	14	40.0%	8	9.1%	-	-	1	4.5%

Medical literature about the medicine	48	95.5%	28	51.8%	8	9.1%	-	-	-	-
Education programme about the medicine (CME)	24	27.3%	36	40.9%	4	4.5%	-	-	-	-
Fellow doctor's recommendations	12	13.6%	48	51.8%	8	9.1%	12	13.6%	8	9.1%

Table 4.10 clearly shows that the most important promotion attribute affecting the prescription decision is the medical literature about the medicine (95.5%). The second most important promotion attribute is a sincere medical sales representative presentation (27.3%). The respondents felt that constant reminders about the medicine (9.1%) and fellow doctor's recommendations least affected their choice of prescription medicine (9.1%).

4.3.5 Marketing Mix Elements in General

This section outlines the most critical marketing mix element as far as the choice of prescription medicine by doctors is concerned.

Table 4.11: Marketing Mix Elements

Marketing Mix Elements	Very important		Important		Less important		Least important		Not at all important	
	n	%	n	%	n	%	n	%	n	%
Product	48	54.5%	36	40.9%	4	4.5%	-	-	-	-
Price	36	40.9%	48	51.8%	4	4.5%	-	-	-	-
Place	8	9.1%	24	27.3%	12	13.6%	12	13.6%	12	13.6%
Promotion	24	27.3%	56	61.6%	4	4.5%	4	4.5%	-	-

From Table 4.11, it can be clearly observed that in general the element of the marketing mix with the most significant influence as far as the prescription decision is concerned is the product (54.5%). Price is the second element of the marketing mix as far as the level of importance in prescription decision is concerned (40.9%). The aspect of the marketing mix with the least impact on the choice of prescription drugs is the place element (9.1%).

4.4 Relationship between Marketing Mix Variables

This section determines the extent to which one element of the marketing mix influences the other.

Table 4.12: Correlation between Marketing Mix Variables

Marketing Mix Elements	Product	Price	Place	Promotion
Product	1.000	0.183	0.540	0.269
Price	0.183	1.000	0.307	0.135
Place	0.540	0.307	1.000	0.235
Promotion	0.269	0.135	0.235	1.000

From Table 4.12, it can be observed that there is a high correlation between product and place (0.540). This shows that you need a good product available at the right place for it to influence the choice of prescription drugs. The correlation between price and place is not very high (0.307), while that between product and promotion (0.269), place and promotion (0.235) and price and product (0.183), are all not very significant hence not relevant. The very low correlation between price and promotion (0.135) implies that a very aggressive promotional activity reduces the price sensitivity of the doctors. This implies that the doctor's price sensitivity is only influenced to a small extent by the level of promotion

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study intended to determine the influence of marketing mix on the doctor's choice of prescription drugs in Nairobi. In the literature review, the marketing mix was found to constitute the elements of product, price, place and promotion. All the elements were seen to be influential as far as the prescription choice decision is concerned. The aim of the study was to confirm the extent to which each of the marketing mix elements influenced the prescription decision and also to determine the most critical elements as far as the prescription choice decision is concerned.

5.2 Discussion

From the results, it was observed that the marketing mix was indeed an important aspect as far as its influence on the doctors' choice of prescription drugs is concerned. This confirmed the observation made by Smarta (1994) that the pharmaceutical firms also apply the marketing mix concept, to market their products to the end users by combining the marketing mix elements in an almost infinite number of ways to achieve the desired end results.

Majority of the doctors felt that the supportive evidence of the efficacy of the product and higher patient dosage compliance were very crucial product aspects to consider while making the prescription choice decision. This confirmed the observation made by Smarta (1994) that due to the high level of competition, companies have had to come up with some innovations including the development of timed release drugs, sustained release technology, as well as change of intravenous manufacturing from glass bottles to polypropylene bottles. These improvements are meant to improve both the efficacy and the patient dosage compliance levels. Doctors also felt that easy to remember brand names and the quality of medicine package played a very insignificant role as far as their prescription choice decisions are concerned. This contradicted an observation made by Stanton *et al* (1994) that each brand must be treated as a separate product such that Kodak colour film and Fuji colour film are different products just like Squibb's aspirin and Bayer's aspirin are separate products, and that any change in a feature however minor,

creates another product. Stanton *et al* (1994) argue that each such change provides the seller with an opportunity to use a new set of appeals to reach what essentially may be a new market

Most doctors noted that the most important aspect of the price attribute determining their choice of prescription drugs is the patients buying power. This confirms the observation made by Gonul (2001) that in the pharmaceutical industry, the doctor can infer a patient's willingness and ability to pay a higher price from either the type of insurance held or other cues revealed during the discussion with the patient. Most doctors noted that the price of the drug in relation to the competing products is least significant in affecting the prescription decision. This confirms the observation made by Smarta (1994) that patients' potential difficulty in making price comparisons with other drugs after a prescription is written and filled could dampen the price sensitivity exhibited by a doctor who wants to demonstrate goodwill to the patient, and it thus might be sufficient to make the patients believe that their price concerns have been addressed in the best possible way given their condition.

The availability of drugs in pharmacies approved by insurers as well as in hospital formularies was seen by majority of the doctors as a very important aspect influencing their choice of prescription drugs. This is in agreement with an observation made by Gonul (2001) that the presence of a good distribution network enables products to penetrate widely into the market and that due to the nature of marketing activities of prescription drug marketers they regard the doctor as their customer since he is the one who makes the choice on behalf of the patient.

Sponsorship of medical conferences and free medical camps by the companies promoting the drugs were not influential aspects in the prescription choice decision. This contradicts an observation made by Firm (2000) that as competition becomes more intense; consultancies such as PriceWaterhouse Coopers are teaching pharmaceutical companies to build relationships with doctors.

Most doctors observed that the medical literature about the drugs and a sincere medical representative presentation are very important aspects which influence the choice of the prescription drug. This confirms an observation made by Firm (2000) that pharmaceutical promotion or detailing is a valuable, though not unique or entirely accurate source of information

for doctors providing them with useful product knowledge about drug toxicity, efficacy, and cost to the patient. The doctors however felt that very frequent reminders by medical representatives were not a very significant aspect in influencing their choice of prescription drugs. This is in line with findings made by McCall (1995) that many doctors consider themselves immune to the power of drug marketing, since they are scientists not influenced by marketing techniques, or so they believe. The aspect however contradicts an observation made by Gonul (2001) that doctors retrieve drug alternatives from memory before writing a prescription, this makes it even more important for pharmaceutical sales representative to engage in reminder promotion, which requires them to 'call' on the doctors regularly.

In general, it is clear that as far as the doctors' prescription choice decision is concerned, the most critical marketing mix element is the product. An observation by Baker (1992) that the idea of 'product' as potential customer satisfaction or benefits and that the basic point about any product is that it is a bundle of attributes explains why majority of the doctors feel that the product element is a very important aspect in their prescription choice decision. Vinayak (2001) also observed that the product has always remained the key component of marketing mix. A good number of doctors also feel that the price element is a relatively important aspect in their prescription decision. Gonul (2001) made an observation that like in any other industry, companies hoping to remain competitive and be considered for any proposal will always set market-determined prices. Companies that set their prices for maximum profits and maximum sales must ensure that they have the ability to differentiate their products so as to reduce the price sensitivity of the consumers. Majority of the doctors felt that the place element of the marketing mix has the least influence on their choice of prescription drugs. To some extent, this concurs with an observation made by Kotler (1997) that most multinationals think their job is done once the product leaves their factory; he urges them to pay more attention to how the product moves within the market.

The study also shows that there is a very high correlation between the elements of product and place. This basically means that the prescription choice decision of the doctors is highly influenced to prescribing good products which are available in the right places like insurance approved pharmacies or hospital formularies. This also implies that there are certain instances in

which doctors fail to prescribe certain products which would be the best for certain indications and instead settle for less effective products just because they are available in hospital formularies or in pharmacies approved by insurers. There is a very low correlation between price and promotion elements of the marketing mix. This implies that intense promotional activities have a lower tendency of reducing the price sensitivity of the doctors. A similar observation was made by Gonul (2001) who noted that intense personal detailing to doctors by prescription drug marketers is a time-honoured practice which similar to advertising, is both a market power tool and an information source, with a decreasing impact on the doctors price sensitivity.

5.3 Conclusion

From the results above, it is clear that the marketing mix elements play a very important role in the prescription choice decision. Even though all the elements are important in the choice decision, some elements are more important than others. The product element is extremely important since the doctors need to be certain that the drugs they prescribe to their patients are effective. The only way to be sure that the drug is effective is through studying all the available supportive evidence of the efficacy of the product. Most of the supportive evidence is found in medical journals, medical symposia and literature provided by companies promoting the drugs. Some products are very effective but only if the patients take them according to the recommended dosage. This is more so with antibiotics where patients must strictly comply with the dosage since any alteration renders the drug ineffective and may as well result into development of resistance.

The patients' purchasing power is also a crucial aspect influencing the doctor's prescription choice decision. This is due to the fact that even if the doctor prescribed the most effective drug, unless the patient is willing and able to purchase the same, the whole treatment process would be null and void. For the patient to fully benefit from the treatment process, the right drug at the correct price must be available in the pharmacies which are approved by the insurers as well as in the hospital formularies. This is especially so for the patients with medical covers since the insurance companies only deal with specific pharmacies and hospitals. This is also significant since some hospitals require their doctors to only prescribe only those drugs that are included in their formularies

Medical literature about the prescription drugs are a very important source of information for doctors. Most of the medical information is provided by the drug marketers through their interaction with the doctors in the form of medical journals, clinical papers and case studies. It's important to acknowledge the fact that the doctors are usually busy with patients both in their clinics as well as the hospitals. They rarely even get time to attend medical symposia, conferences or even continuous medical education. This implies that doctors largely depend on drug marketers to access new scientific information. It is only through this kind of new information that doctors can embrace the current treatment methods available.

5.4 Recommendations

For pharmaceutical companies to succeed in selling their prescription drugs, they need to understand the extent to which each of the marketing mix elements influence the prescription choice decision so that they can adopt strategies which allow them position their drugs as a products of choice.

According to the results in this study, pharmaceutical companies need to improve the quality of their products as well as provide doctors with as much as possible information regarding the efficacy of their drugs. The dose regimen, presentation and composition of the drug that they come up with should be able to enhance the patient drug compliance. This requires the drug to be easily administered, be palatable and have a simple dosage of once or twice a day in order to improve the chances of the patient completing the dose.

Companies must also accept that it is not enough to just have a good product at the right price but the product must also be available in the places it is most required for it to feature on the doctors' priority list of prescription drugs. They must put more emphasis to ensure that their drugs are included in hospital formularies as well as in all the insurance approved pharmaceutical outlets.

The concept of pharmaceutical promotion is capable to have an effect on the other elements of the mix. The study has clearly shown that promotion has very little influence on the doctors' price sensitivity. This is one indicator that the pharmaceutical companies should concentrate on

other marketing mix elements like improved products which are available in the right places at the right price.

Limitations of the study

Considering that it is difficult to have a perfect research situation, it is important to note that this research had some limitations. The study was conducted in Nairobi. The influence of the marketing mix on doctors in Nairobi may differ from those in the rural areas. As a result of such differences, results may not be generalized.

Suggestions for further research

This study was broad and dealt with all the marketing mix elements in general and how they influence the choice decision when they are in play as a mix. Future studies could be carried out on each element of the marketing mix to determine the extent to which each of them influences the choice decision on its own. A study can also be carried out to determine whether there are some unique elements which influence a given speciality of doctors more than others.

Research can also be carried out to determine whether there are other factors which have an influence on the doctors' choice of prescription drugs and their extent of influence in relation to the marketing mix elements.

REFERENCES

- Apungu, C. G. (2003), **A survey of factors that influence customer choice of petrol stations in Nairobi**. Unpublished MBA report, University of Nairobi.
- Baker, M. J. (1992), **Marketing strategy and management**. The McMillan press Ltd.
- Champion, D. (2001), "Mastering the value chain". **Harvard business review**, June 2001.
- Cooper, D.R. and Schindler, P.S. (2003), **Business Research Methods** 8th Ed New York: McGraw-Hill
- Firm, D. (2000), "The full picture. Pharmaceutical industry" **The Business-Weekend feature** July 2000.
- Gitohu, M. (2004), **Determinants of distribution intensity among firms in the Kenyan pharmaceutical industry**. Unpublished MBA report, University of Nairobi.
- Gonul, F. F. (2001), "Promotion of prescription drugs and its impact on physicians' choice behaviour" **Journal of marketing**. July 2001
- Hirschler, B. "Doctors drug firm link criticized". (2003, June 03), **Daily Nation** p.7.
- Kabiru, A. (2004), "Market intelligence". **The business and finance Journal** March 2004.
- Kibera, F. N. Waruingi, B. C.(1998), **Fundamentals of marketing, an African perspective**. Kenya literature bureau, Nairobi.
- Kimani, C. N. (2003), **A survey of the multinational pharmaceutical firms awareness and practice of key opinion leader management**. Unpublished MBA report, University of Nairobi.
- Kotler, P. (1989), **Principles of marketing**. Prentice Hall International Inc, Englewood cliffs, New Jersey.
- Kotler, P. (1997), **Marketing management. Analysis, planning, implementation and control** Prentice Hall International, Inc, New Jersey.
- Kotler, P. (1999), **Marketing management. The millennium edition**. Prentice Hall of India New Delhi.
- Kotler, P. Armstrong, G. (1996), **Principles of marketing** Prentice Hall of India, New Delhi.

- Misumi, A. N. (2003), **Perception of medical doctors towards personal selling practices of medical representatives of pharmaceutical firms in Nairobi**. Unpublished MBA report, University of Nairobi.
- Muiva, C. (2001), **A survey of the use of competitive intelligence systems in the Kenyan pharmaceutical industry**. Unpublished MBA report, University of Nairobi.
- Naikuni, J. K. (2001), **Promotional mix elements within the multinational pharmaceutical companies in Kenya**. Unpublished MBA report, University of Nairobi.
- Ndiho, J. M. (2001), **An empirical investigation of the marketing practices within the pharmaceutical industry in Nairobi**. Unpublished MBA report, University of Nairobi.
- Niedrich, R. W. and Swain, S. D. (2003), "The influence of pioneer status and experience order on consumer brand preference". **Journal of the Academy of marketing science**, Fall 2003, Volume 31 ,number 4
- Ongubo, J. N. (2003), **Determinants of brand loyalty for prescription brand medicine by doctors in Nairobi**. Unpublished MBA report, University of Nairobi.
- Ronoh, K. W (2002), **Direct marketing: The case of pharmaceutical industry in Nairobi**. Unpublished MBA report, University of Nairobi.
- Smarta, R. B. (1994), **Strategic pharmaceutical marketing** Wheeler publishing, New Delhi.
- Stanton, W. J.; Fitzel, M. J.; Walker, B. J. (1994), **Fundamentals of marketing** McGraw-Hill Inc. Singapore.
- Wamalwa, C. W. (2002), **A survey of the strategic implications of the enactment of the industrial property bill on the pharmaceutical firms in Kenya, case of pharmaceutical manufacturers and distributors**. Unpublished MBA report ,University of Nairobi.
- Waruingi, S. M. (2003), **A survey of the aspects of personal selling process perceived as critical in the purchase of agrochemical products by the rose flower growers in Kenya**. Unpublished MBA report, University of Nairobi.

APPENDICES

Appendix 1: Letter to the respondents

University of Nairobi
Faculty of commerce
School of Business
P.O. BOX 30197
Nairobi
8th August 2008

Dear respondent,

COLLECTION OF SURVEY DATA

I am a postgraduate student at the University of Nairobi, at the school of business studies. In order to fulfil the degree requirement, I am undertaking a management research project on marketing mix elements effect on doctors' choice of prescription drugs. The study is titled;

"The influence of marketing mix on doctors' choice of prescription drugs in Nairobi"

You have been selected to form part of this study. This is therefore to kindly request you to assist me collect the data by filling out the accompanying questionnaire, which I will collect from your premises. The information provided will be used exclusively for academic purposes. My supervisor and I assure you that the information you give will be treated with strict confidence. At no time will you appear in my report. The findings of this research can be availed to you upon completion of the research on request. In case of any queries pertaining to this project, please do not hesitate to call me on 0733-742951 or 020- 537673.

Jackson Gichohi Mwangi
Candidate

Margaret Ombok
Supervisor

Appendix 2: Questionnaire

The questionnaire below has two parts. Section A is aimed at giving a general background of your practice. Section B deals with the aspects of the marketing mix which may influence the choice of prescription drugs by doctors.

Section A

1. What is your name (optional) -----
2. What is your area of specialisation -----
3. What is the location of your practice -----
4. How long have you been practising medicine
 - (i) <5 years []
 - (ii) 6-10 years []
 - (iii) 11-15 years []
 - (iv) > 15 years []
5. Please tick the age bracket in which you fall
 - (i) 30-40 years []
 - (ii) 41-50 years []
 - (iii) 51-60 years []
 - (iv) > 60 years []
6. What is your gender?
 - (i) Male []
 - (ii) Female []

Section B

1. Please indicate the extent to which the following statements influence your choice of prescription drugs for your patients

	Very Important 5	Important 4	less Important 3	least Important 2	not at all Important 1
Product					
Source of medicine (Europe, Asia, Africa, Local)	[]	[]	[]	[]	[]
Patient attitude towards the Source of medicine	[]	[]	[]	[]	[]
Patient compliance (Dosage, compliance)	[]	[]	[]	[]	[]

New innovations or combinations of drugs	[]	[]	[]	[]	[]
Easy to remember brand names	[]	[]	[]	[]	[]
Quality of medicine package	[]	[]	[]	[]	[]
Form of delivery of the medicine	[]	[]	[]	[]	[]
Supportive evidence of the efficacy of the medicine	[]	[]	[]	[]	[]
Reputation of the source of medicine	[]	[]	[]	[]	[]
Price					
Price in relation to competing products	[]	[]	[]	[]	[]
Price of the drug in relation to the severity of the indication, expected response and desired efficacy	[]	[]	[]	[]	[]
Patient buying power	[]	[]	[]	[]	[]
Economic status of the patients in your area of practice	[]	[]	[]	[]	[]
Place					
Medicine availability in pharmacies	[]	[]	[]	[]	[]
Approved by insurers	[]	[]	[]	[]	[]
Your personal relationship with the company selling the medicine	[]	[]	[]	[]	[]
Availability of the medicine in Hospital formularies	[]	[]	[]	[]	[]
Sponsorship of medical conferences by the company	[]	[]	[]	[]	[]
Sponsorship for free medical camps by the company promoting the medicine	[]	[]	[]	[]	[]
The local agent (importer/distributor) representing the principle company	[]	[]	[]	[]	[]

Promotion

Experience with the medicine (brand) through samples given for patients	[]	[]	[]	[]	[]
Information from medical representative	[]	[]	[]	[]	[]
Constant reminders about the medicine	[]	[]	[]	[]	[]
Knowledgeable medical representative on the medicine presented to you	[]	[]	[]	[]	[]
Sincere medical representative presentation	[]	[]	[]	[]	[]
Medical literature about the medicine	[]	[]	[]	[]	[]
Education programme about the medicine (CME)	[]	[]	[]	[]	[]
Fellow doctors recommendations	[]	[]	[]	[]	[]

Thank you for taking time to respond to this questionnaire.

Appendix 3: Operational Dimensions

Dimensions of the:	Extended Definitions	Relevant Issues	Questions
			To what extent do the following issues affect your choice of prescription drugs
Product Quality	Brand name	Ease of remembrance	Easy to remember brand name Loyalty to specific drugs used successfully for a long duration
	Efficacy of the Product	Response rates	Is the drug effective in the particular indication
		Innovations/Combinations	New or combinations of drugs
Origin	Europe/USA Asia Locally manufactured	Where is the drug manufactured	Experience of the drugs from samples given previously Source of the medicine Patient attitude towards the source of the medicine Reputation of the source
	carton packed Blister packs Loose packs Bottle packs	How well is the drug packed	Quality of the medicine package
Form of delivery of the medicine	Tablets Capsules Syrups Gel	Ease of administration Dose compliance	Can the drug be easily taken Will the patient comply with the dose regimen
Labelling/Package Insert	Indications/Side effects	Supportive evidence on efficacy of the drug Is co-administration with other drugs possible	Is the label/insert informative Can the drug be given with other relevant drugs
Place/Distribution			
	Point of need	Hospital formularies Hospital pharmacies	Is the drug listed in the formulary Is the drug available in the hospital pharmacy?
	Outlets	Wholesale pharmacy Retail pharmacy	The local agent representing the principal company
	Convenience	Accessible by patients	Is the drug available in pharmacies approved by insurers
Price			
	Competitive	In relation to	How is the drug priced relative to

	Perception of value Product Benefit Buying power	competition Reasonable price Price sensitivity Practice locality	competition How is the drug priced in relation to the indication, expected response and the efficacy desired Highly priced drug as a signal of quality Is the patient covered by insurance or paying out of pocket How well off economically are the patients in your location of practice
Promotion	Advertising	Information on current modes of therapy Reminder promotion Advertising blitz	Does the advertising literature provide information on current modes of therapy Constant reminder promotion Product launch with pomp and advertising blitz
	Personal Selling	Direct presentation Persuasion/branding	Detailing by knowledgeable medical representatives Level of persuasion and relationships build by the representative
	Sales Promotion	Demand stimulation Sampling activity	Request for prescription support by representatives Sampling activity and related gifts by medical representatives
	Publicity	General Awareness	Reference about a given drug from fellow doctors