

**PERCEPTIONS AND ATTITUDES OF MEDICAL DOCTORS AT THE  
AGA KHAN UNIVERSITY HOSPITAL TOWARDS GENERIC DRUGS**

**BY**

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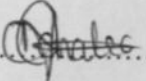
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## DECLARATION

I declare that this Management Research Project is my own work and that all the sources have been accurately reported and acknowledged, and that this document has not previously in its entirety or in part been submitted at any University in order to obtain an academic qualification.

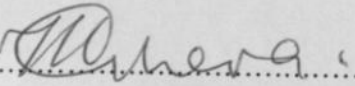
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## ACKNOWLEDGEMENT

I dedicate this document to my loving husband Aslam, and to my wonderful parents AbdulRehman and Yasmin, and to my siblings Ashfan, Arzina and Shaila whose love, encouragement and support remind me everyday of how fortunate I am to have them in my life.

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## ABSTRACT

The research objectives for the study were to assess medical doctors' perceptions and attitudes towards generic drugs available at the Aga Khan University Hospital and to establish the factors which influence the prescription of generic drugs. The findings would benefit a number of groups of people/sectors. These include the government, manufacturers of generic drugs, Kenya Medical Association and the general academia.

The study employed a descriptive research design. A descriptive research collects data and characteristics about the population or phenomenon being studied. The population for the study comprised medical doctors who worked at the Aga Khan University Hospital, Nairobi. A convenient sample of 33 completed a semi-structured questionnaire. Part A of the questionnaire gathered data on the profile of the respondents. Part B and C elicited information that addressed research objectives of the study.

Data analysis involved editing, tabulation and computation of descriptive statistics using the Statistical Package for Social Sciences (SPSS) and the Microsoft Excel Spreadsheets Application. All the respondents indicated that they had recommended usage of generic drugs before, with 60% of the doctors indicating that they had made a prescription for a generic drug on the particular day they were completing the questionnaire.

The attitudes and perceptions based on product benefits revealed that the respondents to a large extent (mean score of 4 on a scale ranging from 1 to 5) agreed that generic drugs are cost effective, of high quality, and are as effective as the branded drugs. The only benefit aspect that they moderately (mean score of 3) agreed to was with packaging materials. The research results therefore generally reflected the common practice in the marketing of generic drugs. Generic drugs are also perceived to be frequently (mean score of 3) as effective as, but much cheaper than, brand-name drugs.

In terms of place (distribution) aspects, the respondents to a large extent (mean score of 4) agreed that generic brands penetrated the pharmaceutical market due to aggressive marketing. The respondents to a larger extent (70%) agreed that generic drugs are cheaper than branded ones while they moderately (60%) agreed that generic drugs offer value for

money. Of the various promotion activities used to promote generic drugs, free samples were used to a large extent, followed by sponsorships. However, write-ups and advertising were used to a moderate extent.

Hospital formulary, experience with a particular drug, origin of a particular drug, insurance coverage of the patient, and patients' own inclination were considered to influence the usage of generic drugs to a large extent. Overall, it can be argued that the organizations to a moderate extent influence the prescription of drugs.

Since the current study was based on respondents working at the Aga Khan University Hospital in Nairobi the results might not be entirely representative. Therefore a much broader research should be conducted in other hospitals to determine whether the same results would be found.

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## LIST OF ABBREVIATIONS

AIDS	–	Acquired immune Disease Syndrome
ARIPO	–	African Regional Industrial Property Organization
FDA	–	Food and Drug Administration
HIV	–	Human Immune Deficiency Syndrome
MBA	–	Masters in Business Administration
HMOs	–	Health Management Organizations
MoH	–	Ministry of Health
NHSSP	–	National Health Sector Strategic Plan
NHIF	–	National Hospital Insurance Fund
TRIPS	–	Trade-Related Aspects of Intellectual Property Rights
USA	–	United States of America
WHO	–	World Health Organization

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background

Since the introduction of generic drugs to the pharmaceutical market a sometimes emotional debate exists whether they are well-investigated and of high quality. There is some uncertainty about whether evidence of bioequivalence is enough to guarantee efficacy and safety of generic drugs. Some physicians ask the question if competent authorities are able to ascertain that the pharmaceutical quality of generics is acceptable. Doctors and patients sometimes are ill at ease about the interchangeability of innovator and generic products (Saudi, 2008).

Generic substitution has become a common practice since the late 1970s in the United States. At that time, many of these generics caused bioavailability problems, which fuelled suspicions about their efficacy and safety; and also raised questions on the Food and Drug Administration (FDA) standards for bioequivalence.

For most drugs, current bioequivalence testing generally enables clinicians to routinely substitute generic for innovator products. Published findings, however, suggest that certain drugs may not be ideally suited for generic substitution when a patient is already on that drug. These are the so called critical dose medicinal products (drugs with a narrow therapeutic range). When starting a new therapy with any generic drug, however, its similarity to the innovator drug in terms of efficacy, safety and quality is guaranteed (Stoppler and Barbra, 2009).

The patent protection of pharmaceuticals in Kenya is based on the African Regional Industrial Property Organization (ARIPO) patent system. Kenya's patent laws have been revised from the traditional British based format to the ARIPO system, which was created by the Lusaka agreement in 1976. Additionally, the Kenyan government passed the Kenya Industrial Property Bill in 2001. This bill allows Kenya to import and produce more affordable medicines for HIV/AIDS and other diseases. Other players in the sector include the *National Hospital Insurance Fund (NHIF)*, and Health Management Organizations

(HMOs). Established in 1972, The NHIF is Kenya's single largest financier of health services apart from the Government. HMOs on the other hand are health insurance agencies that provide health facilities and services to registered members at a fee. Kenya is estimated to have about 10 large and medium sized HMOs, who between them support about 200,000 medically covered persons.

### **1.1.1 The concept of attitude**

There are many definitions of attitude. For example Katz (1970), defines attitude as 'the predisposition of an individual to evaluate some symbol or object or aspect of his/her world in a favorable manner'. There are three main elements of attitude that provide a basis for various theorists to focus on. These are the cognitive component (beliefs/knowledge); affective component (feelings) and the cognitive component (behavioral).

In other words we believe/know (cognitive component) something, for example, recycling is good for the environment. We also believe that looking after the environment is a good thing. This forms our positive feelings (affect) towards recycling behavior. We are therefore more likely to intend to engage in recycling behavior (cognitive factor) and ultimately to engage in the behavior itself (Lindsay and Norman, 1977).

Attitude models often record behavioral intentions rather than actual behavior. One of the purposes of research is to assess how people will behave in the future, for example in response to new stimuli such as additional resources – help lines, clinics, etc. One of the problems, however, is that reported behavioral intentions often don't match up to actual behavior.

'Attitudes' therefore is one of the most important phenomena that a social marketer needs to understand. Understanding attitudes however is not a straightforward issue as there is much disagreement about the nature of attitudes, how they are formed, and how they determine our behavior. Attitude theory research is a key focus for consumer behavior theorists and derives from the field of psychology (Lindsay & Norman, 1977).

### **1.1.2 The Concept of Consumer Behavior**

Belch and Belch (2007) define consumer behavior as 'the process and activities people engage in when searching for, selecting, purchasing, using, evaluating, and disposing of products and services so as to satisfy their needs and desires. Consumer behavior is the study of when, why, how, and where people do or do not buy a product. It blends elements from psychology, sociology, social anthropology and economics. It attempts to understand the buyer's decision making process, both individually and in groups. It studies characteristics of individual consumers such as demographics and behavioral variables in an attempt to understand people's wants. It also tries to assess influences on the consumer from groups such as family, friends, reference groups, and society in general.

Consumer behavior study is based on consumer buying behavior, with the consumer playing the three distinct roles of user, payer and buyer. Relationship marketing is an influential asset for consumer behavior analysis as it has a keen interest in the re-discovery of the true meaning of marketing through the re-affirmation of the importance of the consumer or buyer. A greater importance is also placed on consumer retention, customer relationship management, personalization, customization and one-to-one marketing. Social functions can be categorized into social choice and welfare functions (Kibera and Waruingi, 1998).

Consumer behavior is influenced by demographics, psychographics (lifestyle), personality, motivation, knowledge, attitudes, beliefs, and feelings. Understanding consumer behavior itself deals with the ultimate objective of designing consumer actions aimed at satisfying needs of every individual. On the other hand, external influences on consumer behavior include culture, sub-culture, locality, royalty, ethnicity, family, social class, reference groups, lifestyle, and market mix factors (Kibera and Waruingi, 1998).

### **1.1.3 The concept of customer perception**

According to Lindsay & Norman (1977), perception is the process by which organisms interpret and organize sensation to produce a meaningful experience of the world. Sensation usually refers to the immediate, relatively unprocessed result of stimulation of sensory receptors in the eyes, ears, nose, tongue, or skin. They continue to assert that perception, on the other hand, better describes one's ultimate experience of the world and typically involves

further processing of sensory input. In practice, sensation and perception are virtually impossible to separate, because they are part of one continuous process.

Lindsay & Norman (1977), thus conclude that perception in humans describes the process whereby sensory stimulation is translated into organized experience. That experience, or percept, is the joint product of the stimulation and of the process itself. Because the perceptual process is not itself public or directly observable (except to the perceiver himself, whose percepts are given directly in experience), the validity of perceptual theories can be checked only indirectly.

Consumer perception is a key factor in the development of product strategies, as consumers want to evaluate a product or service along several levels. The basic characteristics of a product are inherent to its generic version and are defined as the fundamental advantages that the product can offer to a consumer. Generic products can be made distinct by adding value through extra features, such as quality or performance enhancements. The final level of consumer perception involves augmented properties, which offer less tangible benefits, such as customer assistance, maintenance services, training, or appealing payment options. In terms of competition with other products and companies, consumers greatly value these added benefits when making a purchasing decision, making it important for manufacturers to understand the notion of a “total package” when marketing to their customers. For example, when manufacturing automotive parts, a high-performing product will provide the customer base with basic benefits, while adding spare parts, technical assistance, and skill training will offer enhanced properties to create a total package with increased appeal to consumers. (www.thomasnet.com)

#### **1.1.4 Conventional and Alternative Medicine**

Conventional western medicine is organized around the Theory of Diseases, which believes that a person becomes sick because he or she contracts a disease. In this model, each disease is seen as an independent entity which can be fully understood without regard to the person it afflicts or the environment in which it occurs. Conventional treatments are treatments of diseases, not of people. Most of the drugs employed in conventional medicine are designed to act as chemical strait jackets, preventing the cells of the body from performing some function

that has become hyperactive. The side effects of these drugs are a direct extension of their actions and may be fatal.

Alternative systems of healing supply a perspective that can help to reverse the "one size fits all" philosophy of conventional medical practice. All alternative systems of healing, ancient or modern, share one common characteristic which separates them from conventional Western medicine. They all approach sickness as a dynamic event in the life of an individual, a problem of balance and relationship, the result of disharmony between the sick person and his or her environment. This approach to understanding illness is called biographical.

### **1.1.5 Branded and Generic Drugs**

A brand is the sum of all characteristics, tangible and intangible, that make an offer unique and therefore desirable to the targeted consumer over the competition. It is considered to be the energy of a company and this, in effect, dictates its personality. It not only tells us what a company is and what it does, but also distinguishes one organization from another. By its brand, a company communicates a clear message to all its stakeholders and it is therefore of utmost importance that this message targets its audience in a manner that exceeds expectations (Interbrand, 2006). The American Marketing Association (AMA) defines a brand as a "name, term, sign, symbol or design, or a combination of them intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of other sellers."

The World Health Organization (WHO) defines a generic drug as a pharmaceutical product, usually intended to be interchangeable with an innovator product that is manufactured without a license from the innovator company and marketed after the expiry date of its patent or other exclusive rights. Branded medication on the other hand derives its definition from the fact that a brand name is a name given to a drug by the manufacturer. The use of the name is reserved exclusively for its owner (Aaker, 1991)

### 1.1.6 The Pharmaceutical Sector in Kenya

The pharmaceutical sector in Kenya consists of three segments namely the manufacturers, distributors and retailers. All these play a major role in supporting the country's health sector, which is estimated to have about 4,557 health facilities countrywide.

Kenya has National policies that guide healthcare and pharmaceuticals. The Kenya Health Policy Framework (1994) sets out the policy agenda for the health sector up to the year 2010. To operationalize this framework paper, the National Health Sector Strategic Plan (NHSSP, 1999-2004) was developed in 1994. The tasks specified in the plan include: Strengthening of the central public policy role of the Ministry of Health; Adoption of an explicit strategy to reduce the burden of disease; Definition of an essential cost effective healthcare package; Emphasis on decentralization of healthcare delivery through redistribution of health services to rural areas; Special focus on essential key priority packages based on the burden of disease and the required support systems to deliver these services to Kenyans.

Currently, medical care is a pre-requisite among employers; the law requires that every employer ensure the provision of proper medicines and attendance to employees, unless otherwise provided for by the government.

Additionally, the Kenyan government passed the Kenya Industrial Property Bill in 2001. This bill allows Kenya to import and to produce more affordable medicines for HIV/AIDS and other diseases. Other players in the sector include the *National Hospital Insurance Fund (NHIF)*, and Health Management Organizations (HMOs). Established in 1972, The NHIF is Kenya's single largest financier of health services apart from the Government. HMOs, on the other hand, are health insurance agencies that provide health facilities and services to registered members at a fee. Kenya is estimated to have about 10 large and medium sized HMOs, who between them support about 200,000 medically covered persons.

Besides the pharmaceutical industry, the Kenya Medical Association (KMA) too plays a significant role in the practice and dispensation of medicine. The KMA is a voluntary professional organization that was formed by medical practitioners in Kenya. As a voluntary membership association, KMA seeks to promote the practice of medicine and improve the delivery of medical services in Kenya.

As the voice of doctors in the country, the Association seeks to uphold high standards of practice, and promote adherence to medical ethics and conduct among its members. The KMA is committed to being at the forefront of healthcare management by enhancing and integrating professionalism among its members, integrating members into policy negotiation, formulation and implementation, and building alliances with other healthcare professional association and regulatory bodies to meet the health needs and expectations of Kenyans ([www.kma.co.ke](http://www.kma.co.ke)).

#### 1.1.7 The Aga Khan University Hospital, Nairobi

Established in 1958, The Aga Khan University Hospital, Nairobi (AKUHN) is a private, non-profit institution that provides tertiary and secondary level healthcare services.

The decision to upgrade the Hospital to a tertiary level teaching hospital was taken in order to respond to the healthcare needs of the people of East Africa. AKUHN is a premier provider of ambulatory care and quality in-patient services, including critical care.

The Hospital plans to strengthen existing partnerships with the Ministry of Health and other universities offering health education, with an aim to share experiences, strengthen the public sector delivery systems and collaborate on teaching and research.

Aga Khan University Hospital, Nairobi (AKUHN) is one of the most comprehensive University Hospitals, with leading specialists in every field of medicine. With dedicated staff, modern facilities, state-of-the-art technology, commitment to quality care, and a role in educating future clinicians, the hospital has earned a reputation as a healthcare leader. Whether providing specialty care to neonates, or offering comprehensive tertiary care to adults, AKUHN delivers excellence in healthcare and exceptional services that one expects from a first-rate medical institution. The Hospital is making continuous dramatic advancements in improving the healthcare of the communities it serves. ([www.agakhanhospitals.org](http://www.agakhanhospitals.org))

At AKUHN the paths to excellence are many. Patient care remains at the core of its mission, and is the hallmark of its history. Attracting outstanding physicians in every specialty has

enabled the hospital to develop an exceptional breadth of leading specialized programs. The work of AKUHN specialists has made immeasurable contributions to the fields of cardiology, oncology, gastroenterology and neurosurgery.

## 1.2 Statement of the Problem

Kenya spends about 8% of its GDP on health. Per capita expenditure per person stood at about US\$ 11 per person in 2003. Out of this, US\$ 6 came from budgetary resources, which also included donor contributions with the balance of about US \$5 coming mainly from out-of-pocket expenditure. This expenditure fell far below the World Health Organizations' (WHO's) recommended US\$34 per capita. Out-of-pocket expenditure thus accounted for 53% of the total cost of healthcare, with the remainder being Government contributions from general taxation (25%), Social Health Insurance (15%), private prepaid health plans (5%) and non-profit institutions expenditure at 2%. The above scenario means the current healthcare financing system depends mainly on out-of-pocket expenditure and is therefore 75% privately financed.

From the Monitoring and Evaluation report by the Ministry of Planning and National development produced in the year 2007, the proportion of the health sector budgetary allocations to the total government budget has been increased from 7% in 2003/04 to 8.6% in 2005/06. The Ministry of Health's budget allocation for drugs increased from 9.4 % in 2002/2003 to 10.7% in 2004/05. In 2005/06, essential drugs for rural health facilities worth Kshs750 million were procured and distributed with each health facility getting one kit every three months. Today, the country can boast of having adequate drugs in all rural health facilities. Reforms implemented in the health sub-sector focused mainly on re-orienting policy towards preventive healthcare, while ensuring efficiency and effectiveness in service delivery countrywide.

The Government's Vision 2030 (Government Printer, 2007), blueprint on the health sector focuses on improvement of the overall livelihoods of Kenyans by providing an efficient and high quality care system with best standards. This will be done through a two-pronged approach of devolving funds and delegating management of healthcare to the communities and district medical officers, leaving the Ministry to deal with policy and research issues. Secondly, by shifting the bias of the National Health Bill from curative to preventive care,

specific strategies will involve provision of a robust healthcare infrastructure network and improving the quality of healthcare service delivery to the highest standards and promotion of partnerships with the private sector. In addition, the Government will provide access to those excluded from healthcare due to financial reasons. To achieve these goals, the health sector's flagship projects for 2012 among others are to:

- revitalize Community Health Centres to promote preventive healthcare (as opposed to curative intervention) by promoting healthy individual lifestyles.
- de-link the Ministry of Health from service delivery in order to improve management of the country's health institutions primarily by devolution of health management to communities and healthcare experts at district, provincial and national hospitals.
- create a National Health Insurance Scheme in order to promote equity in Kenya's healthcare financing.
- scale up the output-based approach system to enable disadvantaged groups (e.g. the poor, orphans) to access healthcare from preferred institutions.

Given the high expenditure that the Government incurs in the treatment of its citizens, it is imperative that the government looks for other effective, low-cost means of providing healthcare without compromising on quality of medicine that its citizens get. One of these ways is the use of the generic drugs. However, there have been different perceptions regarding the use of generic drugs among different players in Kenya. It is out of this that this study sought to establish the perceptions attitudes of medical doctors towards the use of generic drugs. The study focused on doctors who prescribe drugs to patients at the Aga Khan University Hospital, Nairobi.

There have been a number of valuable studies related to factors influencing prescribing habits of medical doctors (Misumi, 2003; Ongubo, 2003; Kamau, 2006), all of which concentrate on the strategies and factors affecting the marketing of the drugs. However, none of these studies focuses on the perceptions and attitudes of medical doctors towards the drugs themselves; which is a core determining factor in their prescription. This study is therefore aimed at filling this research gap.

The study attempted to answer the following questions:

- a) what were the medical doctors' perceptions on the efficacy of generic drugs?

- b) what were the attitudes of doctors towards generic drugs?
- c) what factors influenced the prescription of generic drugs at the hospital?

### **1.3 Objectives of the Study**

The research objectives for the study were:

- i. to assess medical doctors' perceptions on attitudes towards generic drugs available at the Aga Khan University Hospital; and
- ii. to establish the factors which influence the prescription of generic drugs.

### **1.4 Importance of the Study**

This study would benefit a number of groups of people/sectors. These include the government, manufacturers of generic drugs, Kenya Medical Association and the general academia.

The government would have a better understanding of doctors' perceptions and attitudes toward generic drugs and this could assist in the development and targeting of educational campaigns to promote rational drug use. The government could also get some insights that could be useful in evaluating its goals for the health sector as indicated in its Vision 2030.

Drug manufacturers could use the feedback to improve the quality and marketing of their drugs. It would aid them in formulating better marketing strategies, as it will give them an insight into the concerns that doctors have regarding generic drugs. It could also help them approach prevailing misconceptions with a better understanding, hence reducing the gap that might exist between them and the doctors that prescribe their drugs and finally the patients that use their drugs too.

The Kenya Medical Association (KMA) would be able to understand and appreciate the attitudes and perceptions of its members towards generic drugs. They will be able to advice the government, especially when formulating 'essential drugs' lists and policy regarding various conditions such as HIV/AIDS and TB.

To the general academia, this would go a long way in building a body of knowledge on the perceptions of doctors towards generic drugs. Various stakeholders could use the study facilitate further research on perception towards generic drugs.

1.1 Introduction

This chapter covers consumer behavior and its influences. The 4Ps of marketing (product, price, promotion and place) that influence the purchase of a consumer product are also highlighted. A literature review is presented as well as the meaning of generic and branded drugs has also been included. The literature review has been done by searching various literatures from textbooks, magazines, journals and some internet sources.

1.1.1 Understanding Consumer Behavior

Beck and Beck (2007) define consumer behavior as the process and activities people engage in when searching for, selecting, purchasing, using, evaluating and disposing of products and services so as to satisfy their needs and desires. This has been described using a black box model as shown in Figure 1.

Consumer behavior is influenced by both internal and external influences. Internal influences include demographics, psychographics (lifestyle), personality, motivation, knowledge, attitudes, beliefs and feelings. External influences on the other hand include culture, subculture, society, family, community, friends, social class, reference groups, lifestyle, and word of mouth.

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1.1.1.1 Black Box Model

The black box model shows the interaction of stimuli, consumer characteristics, decision process and consumer response. It can be distinguished between interpersonal stimuli (outside the consumer) or intrapersonal stimuli (within the consumer). The black box model is referred to as the black box theory of consumer behavior where the focus is not on the processes inside a consumer, but the relation between the stimuli and the response of the consumer.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter covers consumer behavior and its influences. The 4Ps of marketing (product, price, promotion and place) that influence the attitude of a consumer towards any product have also been discussed. A discussion on conventional versus traditional medicine as well as the meaning of generic and branded drugs has also been included. The literature review has taken into account various literatures from textbooks, magazines, journals and some internet materials.

#### **2.2 Understanding Consumer Behavior**

Belch and Belch (2007) define consumer behavior as 'the process and activities people engage in when searching for, selecting, purchasing, using, evaluating, and disposing of products and services so as to satisfy their needs and desires'. This has been described using a black box model as shown in Figure 1.

Consumer behavior is influenced by both internal and external influences. Internal influences include demographics, psychographics (lifestyle), personality, motivation, knowledge, attitudes, beliefs, and feelings. External influences on the other hand include culture, sub-culture, locality, royalty, ethnicity, family, social class, reference groups, lifestyle, and market mix factors.

##### **2.2.1 Black Box Model**

The black box model shows the interaction of stimuli, consumer characteristics, decision process and consumer responses. It can be distinguished between interpersonal stimuli (between people) or intrapersonal stimuli (within people). The black box model is related to the black box theory of behaviorism, where the focus is not set on the processes inside a consumer, but the relation between the stimuli and the response of the consumer.

The marketing stimuli are planned and processed by the companies, whereas the environmental stimulus is given by social factors, based on the economical, political and cultural circumstances of a society. The buyer's black box contains the buyer characteristics and the decision process, which determines the buyer's response.

**Figure 1 - The Buyer's Black Box Model**

ENVIRONMENTAL FACTORS		BUYER'S BLACK BOX		BUYER'S RESPONSE
Marketing Stimuli	Environmental Stimuli	Buyer Characteristics	Decision Process	
Product	Economic	Attitudes	Problem recognition	Product choice
Price	Technological	Motivation	Information search	Brand choice
Place	Political	Perceptions	Alternative evaluation	Dealer choice
Promotion	Cultural	Personality	Purchase decision	Purchase timing
	Demographic	Lifestyle	Post-purchase	Purchase
	Natural	Knowledge	behavior	amount

Source: Kibera and Waruingi, 1998 *pg. 9*

The black box model considers the buyers response as a result of a conscious, rational decision process, in which it is assumed that the buyer has recognized the problem. However, in reality many decisions are not made in awareness of a determined problem by the consumer.

### 2.2.2 Consumer Decision Stages

Consumer decision process goes through many stages. These stages include; Information search, Information evaluation, Purchase decision, Post-purchase evaluation, internal influences and external influences. Information search commences once a consumer has recognized a problem. The customer then searches for information on products and services that can solve that problem. Belch and Belch (2007) explain that consumers undertake both an internal (memory) and an external search. Sources of information include personal sources, commercial sources, public sources and also personal experience.

The relevant internal psychological process that is associated with information search is perception. Perception is defined as 'the process by which an individual receives, selects, organizes, and interprets information to create a meaningful picture of the world. The selective perception process entails selective exposure by consumers in who they select and which promotional messages they will expose themselves to. It also entails selective attention. Consumers select which promotional messages they will pay attention to. Consumers also apply selective comprehension; consumers interpret messages in line with their beliefs, attitudes, motives and experiences, and selective retention; consumers remember messages that are more meaningful or important to them. Understanding this process helps in the development of an effective promotional strategy, and in the selections of sources of information that are more effective for a brand (Belch and Belch, 2007).

On the other hand, information evaluation involves consumer comparisons on the brands and products that are in their evoked set. Consumers evaluate alternatives in terms of the functional and psychological benefits that they offer. The marketing organization needs to understand what benefits consumers are seeking and therefore which attributes are most important in terms of making a decision.

Purchase decision occurs once all the alternatives have been evaluated. The consumer is then ready to make a purchase decision. Sometimes purchase intention does not result in an actual purchase. The marketing organization must facilitate the consumer to act on their purchase intention. The organization can use a variety of techniques to achieve this. The provision of credit or payment terms may encourage purchase, or a sales promotion such as the opportunity to receive a premium or enter a competition may provide an incentive to buy now. The relevant internal psychological process that is associated with purchase decision is integration. Once integration is achieved, the organization can influence the purchase decisions much more easily (Belch and Belch, 2007).

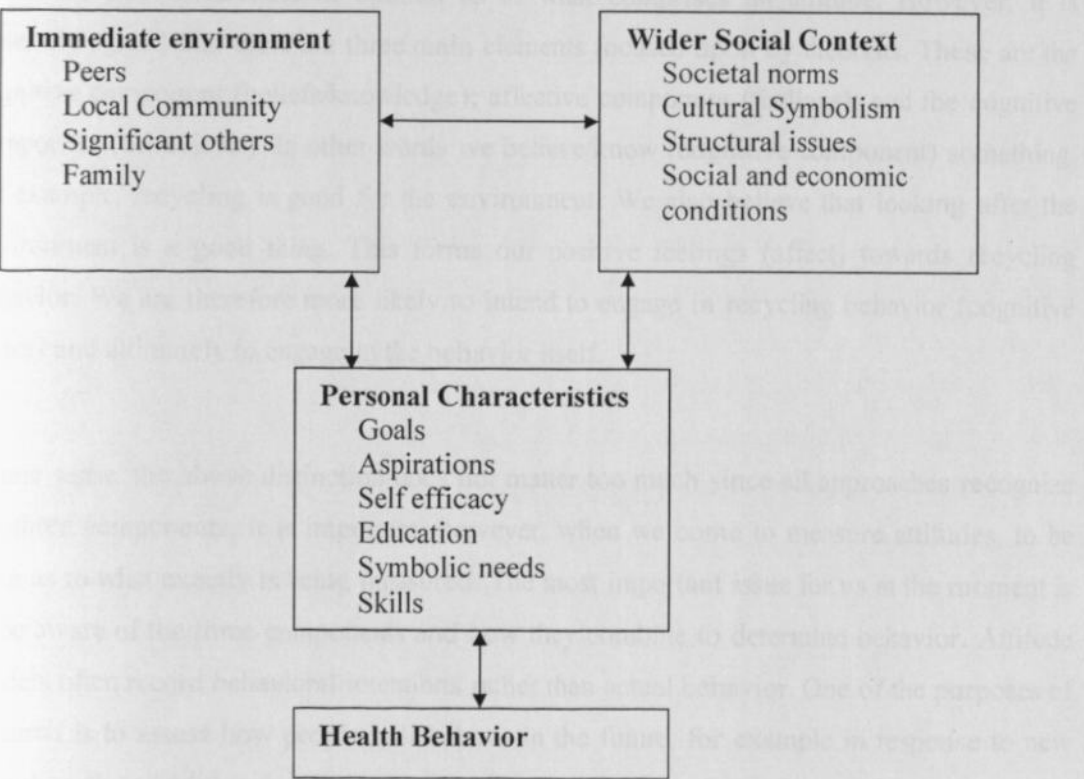
Post-purchase evaluation is a stage that is common for customers when they experience concerns after making a purchase decision. This arises from a concept that is known as "cognitive dissonance". The customer, having bought a product, may feel that an alternative would have been preferable. In such circumstances the customer will not repurchase immediately, but is likely to switch brands next time. To manage the post-purchase stage, it is the job of the marketing team to persuade the potential customer that the product will

satisfy his or her needs. Then, after having made a purchase, the customer should be encouraged that he or she has made the right decision. Post purchase evaluation is not necessarily affected by advertisement (Kibera and Waruingi, 1998).

2.2.3 General Factors that Influence Consumer Behavior

A large number of factors influence our behavior. Kotler and Armstrong (2008) classify these as psychological (motivation, perception, learning, beliefs and attitudes); personal (age and life-cycle stage, occupation, economic circumstances, lifestyle, personality and self concept); social (reference groups, family, roles and status) and cultural (culture, subculture, social class system). Figure 2, adapts these factors to a health behavior context, providing a model which also explicitly emphasizes, together with cultural factors, other features such as the economic environment, as an element of the wider social context.

Figure 2 - Factors that Influence Consumer Behavior



Source: Hastings, Gerard (July 2007), *Social Marketing - Why Should the Devil Have All the Best Tunes?*

The immediate environment approximates to Kotler's social factors. Commercial and social marketing emphasize the influence of family, friends and others on our decisions. Peer group pressure is an important influence and may be negative or positive.

#### 2.2.4 The Importance of Understanding Attitudes

One of the most important phenomena for a marketer to understand is that of 'attitudes'. Understanding and appreciating the importance of attitudes is not a straightforward issue, as there is much disagreement about the nature of attitudes, how they are formed, and how they determine our behavior. Despite the many definitions, attitude is generally defined as 'the predisposition of the individual to evaluate some symbol or object or aspect of his world in a favourable manner' (Katz, 1970).

There are also differences in opinion as to what comprises an attitude. However, it is generally agreed that there are three main elements focused upon by theorists. These are the cognitive component (beliefs/knowledge); affective component (feelings); and the cognitive component (behavioral). In other words we believe/know (cognitive component) something, for example, recycling is good for the environment. We also believe that looking after the environment is a good thing. This forms our positive feelings (affect) towards recycling behavior. We are therefore more likely to intend to engage in recycling behavior (cognitive factor) and ultimately to engage in the behavior itself.

In one sense, the above distinction does not matter too much since all approaches recognize the three components; it is important, however, when we come to measure attitudes, to be clear as to what exactly is being measured. The most important issue for us at the moment is to be aware of the three components and how they combine to determine behavior. Attitude models often record behavioral intentions rather than actual behavior. One of the purposes of research is to assess how people will behave in the future, for example in response to new stimuli such as additional resources – help lines, clinics, etc. One of the problems, however, is that reported behavioral intentions often don't match up to actual behavior.

### 2.3 The Elements of Marketing

Perceptions towards products/services by consumers usually focus on the 4Ps of marketing. These are the product, price, place and promotion (Table 1). These Ps are discussed in the ensuing section.

Table 1 – Marketing Mix elements

Marketing P	Specific aspects
Product	Quality, features, options, design, name, brand, packaging & labelling, sizes, ancillary services, guarantee/warranty
Price	List price, discounts, payment time, payment terms
Place	Distribution channels, coverage, location, storage, transport External accessibility, internal accessibility
Promotion	Personal selling, advertising, sales promotion, public relations

Source: Researcher

#### 2.3.1 Product

Product is the physical product or service offered to the consumer. In the case of physical products, it also refers to any services or conveniences that are part of the offering. Product decisions include aspects such as function, appearance, packaging, service and warranty.

When placing a product within a market many factors and decisions have to be taken into consideration. These include the product design, product quality, product features and the branding. *Product design* usually is the selling point for the organization such as the case for the iMAC, the new VW Beetle or the Dyson vacuum cleaner. Quality has to be consistent with other elements of the marketing mix. For instance, a premium based pricing strategy has to reflect the quality a product offers. Product features entail consideration of what will be added to increase the benefit offered to the target market. ([www.learnmarketing.net](http://www.learnmarketing.net)).

Branding is one of the most important decisions a marketing manager can make. The value of brands in today’s environment is phenomenal. Brands have the power of instant sales; they convey a message of confidence, quality and reliability to their target market. A brand is a

tool which is used by an organization to differentiate itself from competitors. For instance what is the value of a pair of Nike trainers without the brand or the logo? How does this change a customer's perception? Brand competitiveness is enhanced by a five-step process. These steps include determination of the competitive set; creation of a well-defined value proposition; identification of the key differentiators; articulation of a clear customer promise and outlining key value dimension rankings. (Aaker, 1991).

Like most organizations in the global arena, pharmaceutical companies also employ several different strategies to market their products. These include product mix, product adaptations and differentiations, among others. Since pharmaceutical companies deal with multi mix products, product mix is of particular importance. Product mix is the set of all products and items that a particular seller offers for sale (Kotler, 2003). Product mix is a combination of products traded by the same organization to reinforce their presence in the market, increase market share and improve turnover for higher profitability.

### 2.3.2 Place/Distribution

Place refers to the distribution channels through which the product would reach the consumer. Distribution channels are the pathways that companies use to sell their products to end-users. Distribution is a key element in the entire marketing strategy. It helps to expand a product's reach and to grow revenue. An evaluation of distribution channel or channel marketing/management at any time is essential. This is because the distribution system generally performs transactional, logistical, and facilitating functions. In the Pharmaceutical industry various pharmaceutical companies use different agents for distribution of their products to the retail shops/pharmacies that dispense the medicines (Kibera and Waruingi, 1998).

Distribution decisions include market coverage, channel member selection, logistics, and levels of service. Distribution is a major factor in an organizations marketing strategy when targeting a new customer segment, launching a new product, or looking for ways to aggressively expand its business. For pharmaceutical companies, as is the case for all distributors, placement/location of the pharmaceutical outlet is very important as it directly affects the accessibility of the products to the consumer (Kibera and Waruingi, 1998).

The distribution strategies employed depend on the type of product being distributed. The three common distribution strategies are intensive distribution, exclusive distribution and selective distribution. *Intensive distribution* is commonly used to distribute low priced or impulse purchase products such chocolates and soft drinks. *Exclusive distribution* involves limiting distribution to a single outlet. The product is usually highly priced, and requires the intermediary to place much detail in its display stand. An example is the sale of vehicles through exclusive dealers. *Selective distribution* involves choosing a small number of retail outlets to distribute the product. Selective distribution is common with products such as computers, television sets, and household appliances, where consumers are willing to shop around and where manufacturers operate in a large geographical spread. If a manufacturer decides to adopt an exclusive or selective strategy they should select an intermediary that has experience of handling similar products, credible and is known by the target audience (Kotler, 2003).

### 2.3.3 Promotion

Promotion refers to the avenues available for the organization to proliferate product information among the target audience. Promotion decisions are those related to communicating and selling the potential consumers. Since these costs can be large in proportion to the price, a break-even analysis should be performed when making promotion decisions. It is useful to know the value of a customer in order to determine whether additional customers are worth the cost of acquiring them. Activities such as personal selling, sales promotions and even targeted selling are some of the activities that pharmaceutical companies use. Most of the promotion activities by pharmaceutical companies are usually below the line activities (Kibera and Waruingi, 1998).

A successful product or service means nothing unless the benefit of such a service can be communicated clearly to the target market. An organization's promotional strategy and activities can consist of advertising, public relations, sales promotions, personal selling and direct mail. All these have an influence on the attitude that a consumer adopts towards a product.

Advertising is any paid form of non-personal presentation and promotion of ideas, goods and services through any form of mass media. Public relations involve developing and fostering a

positive relationship between an organization and its public constituents. The art of good public relations is not only to obtain favorable publicity within the media, but it also involves being able to successfully handle negative attention. Sales promotion is commonly used to obtain an increase short term sales. It could involve using discount coupons or special offers. Personal selling is the marketing of a product service on a one to one basis. Direct Mail is the sending of publicity material to a named person within an organization. It allows an organization to use its resources more effectively by allowing organizations to send publicity material to a named person within the target segment. By personalizing advertising, response rates increase thus increasing the chance of improving sales (Kotler, 1993).

A push strategy in marketing is used when there has been a development or improvement on a new product which is unknown to the consumer. As there is no consumer demand in the product launch, the product and the information are "*pushed*" to the consumer by distribution and promotion. An example of this is a perfume product. Women do not request to smell a fragrance they never smelled before; it is simply "*pushed*" to them, through the advertisement. The potential of market failure of a product can greatly be increased due to information asymmetry. Information asymmetry occurs when producers know more, or have better information, about a product than the consumers. To alleviate the problem information asymmetry, the supply/distribution chains can be controlled in a way that signals that the consumer's concerns are being met. This can be reached by promotion or other services like personal dialog (Kotler, 2000).

A pull marketing strategy is an advertising and promotional strategy that is meant to entice the prospect to buy a particular product or service. In this system the consumer requests the product and "*pulls*" it through the delivery channel. An example of this is the car manufacturing company Ford Australia. Ford Australia only produces cars when they have been ordered by the customers. Pull marketing creates a sense of increased, time limited value for the product (Robert, 2004).

#### 2.3.4 Pricing

Price is the monetary value that a prospective buyer is charged, in the market, in exchange for the product. Pricing includes not only the list price, but also discounts, financing, and other options such as leasing. Pricing decisions should take into account profit margins required yet sensitive to the competition prices to avoid out pricing your products/ service.

There are many ways to price a product. The use of any pricing strategy depends on the number of factors among them being the objective of the company and also the market dynamics for each product market segment. Premium pricing, penetration pricing, economy pricing, and price skimming are the four main pricing policies/strategies however there are other important approaches to pricing (Kibera and Waruingi, 1998).

Zeithmal and Bitner (2004), cite that for credence services such as medical treatment, customers look at the price as a surrogate for quality. Too high a price can set consumer expectations that may be difficult for the firm to meet. On the other hand, too low a price can interfere with the perceived quality of the service. The pricing strategy must therefore be guided by the firm's positioning strategy (Payne, 1993; Craven, 1990). It is vital that when setting a price, value proposition and competitive position are aligned, so as to maximize revenue and profits. For example, there are three scenarios of pricing that can be set; highest price, average price and lowest price.

Organizations apply different pricing strategies depending on the objectives of the organization, the activity of its competitors, and the stage at which the specific market is. Some of the pricing strategies used include market penetration pricing, competitive pricing and cost-plus based pricing strategy among others (Kibera and Waruingi, 1998).

Monroe (2003) and Kotler (1993) observe that premium pricing uses a high price where there is uniqueness about the product or service. This approach is used where a substantial competitive advantage exists. Such high prices are charged for luxuries such as Mercedes Benz, Savoy Hotel rooms, and Concorde flights. Penetration Pricing is pricing that is artificially set low in order to gain market share. Once this is achieved, the price is increased. This approach was used by France Telecom and Sky TV. Economy pricing is a no-frills low price. The cost of marketing and manufacture are kept at a minimum. Price Skimming is charging a high price because a company has a substantial competitive advantage. However, the advantage is not sustainable. The high price tends to attract new competitors into the market, and the price inevitably falls due to increased supply. Manufacturers of digital watches used a skimming approach in the 1970s. Once other manufacturers were tempted into the market and the watches were produced at a lower unit cost, other marketing strategies were implemented (Kotler, 1993).

Nagle and Reed (2002), also observe that organizations use other approaches to pricing. *Psychological pricing* is used when the marketer wants the consumer to respond on an emotional, rather than rational basis. For example, 'price point perspective' 99 cents not one dollar. Nagle *et al* (2002) continues to argue that *Product Bundle pricing* is used by sellers to combine several products in the same package. This also serves to move old stock. Videos and CDs are often sold using the bundle approach. *Promotional pricing* used to promote a product and it is a very common application. There are many examples of promotional pricing including BOGOF (Buy One Get One Free). *Geographical pricing* is evident where there are variations in price in different parts of the world. *Value pricing* approach is used where external factors such as recession or increased competition force companies to provide 'value' products and services to retain sales (Kotler, 1993).

#### 2.4 Alternative Medical Systems, Ancient and Modern

Conventional Western medicine is organized around the Theory of Diseases, which believes that a person becomes sick because he or she contracts a disease. In this model, each disease is seen as an independent entity which can be fully understood without regard to the person it afflicts or the environment in which it occurs. Conventional treatments are treatments of diseases, not of people. Most of the drugs employed in conventional medicine are designed to act as chemical strait jackets, preventing the cells of the body from performing some function that has become hyperactive. The side effects of these drugs are a direct extension of their actions and may be fatal (Stopper and Barbra, 2009).

Alternative systems of healing supply a perspective that can help to reverse the "one size fits all" philosophy of conventional medical practice. All alternative systems of healing, ancient or modern, share one common characteristic which separates them from conventional Western medicine. They all approach sickness as a dynamic event in the life of an individual, a problem of balance and relationship, the result of disharmony between the sick person and his or her environment. This approach to understanding illness is called biographical.

In the biographical concept of illness, the "disease" itself has no independent reality. The healer's job is not to identify and treat the disease entity, but to characterize the disharmony of each particular case, so that they can be corrected. These disharmonies are described differently in different cultures. The language which describes them may be magical or

naturalistic, but the diagnostic and therapeutic focus is always on the person who is ill and the context in which the illness occurs, rather than on the disease itself (Saudi, 2008).

Integrated medicine perceives illness biographically and at the same time uses the powerful database of modern biological and behavioural science to help describe the varied disharmonies which undermine the health of each individual.

These disturbances originate, almost entirely, with dietary, environmental or social conditions. Although the media are full of stories about "cancer genes", for example, the scientific evidence is that greater than 90% of cancers are environmentally induced. When identical twins are reared in separate environments, the rate at which each twin develops cancer is comparable to the cancer rate in the adoptive family, not the biological family. The publicity accorded to "cancer genes" serves to cripple individual initiatives at cancer prevention and to displace scrutiny from cancer's environmental and dietary triggers. Integrated Medicine exists to empower people to improve their health by improving the four pillars of healing: interpersonal relationships, diet, environment, and a person's innate system of detoxification and repair (Saudi, 2008).

### 2.5 Meaning of Brands

A brand is the entire experience that an organizations prospects and customers have with a product/service offering. It's what it stands for, a promise made, and the personality it conveys. Branding is crucial for products and services sold in huge consumer markets. It's also important in Business to Business because it helps a product stand out from its competition. It brings a competitive position and value proposition to life, like the successful consumer brands like Disney, Tiffany or Starbucks. Successful branding also creates "brand equity" – the amount of money that customers are willing to pay just because of what the brand stands for. In addition to generating revenue, brand equity makes a product more valuable over the long term. An organization can strengthen its relationships with its customers by defining a clear brand strategy and using it in every interaction with the market.

Aaker (1991) came up with five key product features that influence positioning of a product/service. These are conformance quality, durability, reliability, reparability and design.

- i. Buyers expect products to have a high conformance quality, which is the degree to which all the produced units are identical and meet the promised specifications. Suppose a Porsche 944 is designed to accelerate to 60 miles per hour within 10 seconds. If every Porsche 944 coming off the assembly line does this, the model is said to have high conformance quality. The problem with low conformance quality is that the products will disappoint some buyers (Schmitt & Simonson, 1997).
- ii. Durability is regarded as a measure of the product's expected operating life under natural or stressful conditions, and is a value attribute to certain products. Buyers will generally pay more for vehicle and kitchen appliance that have a reputation for being long lasting. However, this rule is subject to some qualifications. The extra price must not be excessive. Furthermore, the product must not be subjected to rapid technological obsolescence, as is the case with many electrical devices like personal computers.
- iii. Reliability is a measure of the probability that a product will not malfunction or fail within a specified time period. Buyers will normally pay a premium for more reliable products. Maytag, which manufactures major home appliances, has an outstanding reputation for creating reliable appliances.
- iv. Reparability is a measure of the ease of fixing a product when it malfunctions or fails. An automobile made with standard parts that are easily replaced is said to be of high reparability. Buyers prefer products that are easy to repair. Ideal reparability would exist if users could fix the product themselves with little cost in money or time. Some products include a diagnostic feature that allows a customer support consultant to correct a problem over the telephone or guide the user in correct it. Many computer hardware and software companies offer technical support over the phone, or by fax or e-mail.
- v. Design: The Integrating Force - As competition intensifies, design offers a potent way to differentiate and position a company's products and services. In increasingly fast-paced markets, price and technology are not enough. *Design* is the factor that will

often give a company its competitive edge. It is the totality of features that affect how a product looks and functions in terms of customer requirements.

Despite the fact that brands can be positioned using a combination of attributes, it is important that the attribute/benefit strategy becomes the basis of any positioning. This exploits a particular service benefit, attributes or features. According to Stanton (1984), a company can associate its product or service with its attitudes or benefits to its customers. For instance in the motor vehicle industry, Toyota claims durability and affordability while Volvo emphasizes on safety. Service is usually experiential. A competitive positioning strategy can be implemented in form of price cuts, styling the product above the competitor or creating superior position through promotion campaigns. However a firm has to remain focused and resist the temptation of copying what its competitors are doing as it may not do it in any better way (Kotler, 2003; Aaker, 2003).

## 2.6 Generic Drugs

Generic drugs are marketed under a non-proprietary or approved name rather than a proprietary or brand name. Generic drugs are generally as effective as, but much cheaper than, brand-name drugs. For example, paracetamol/acetaminophen is a chemical ingredient found in a number of brand-name painkillers such as Panadol, but is also sold as a generic drug (paracetamol). Because of their low price, generic drugs are often the only medicines that the poorest can access. The Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement does not prevent governments from requiring accurate labeling or allowing generic substitution. Indeed, it is argued that competition between drug companies and generic producers has been more effective than negotiations with drug companies in reducing the cost of drugs, in particular those used to treat HIV/AIDS.

Stopper and Barbara (2009) on the other hand note that generic drugs are copies of brand-name drugs that have exactly the same dosage, intended use, effects, and side effects, route of administration, risks, safety, and strength as the original drug. In other words, their pharmacological effects are exactly the same as those of their brand-name counterparts. Branded medications on the other hand derive their definition from the fact that a brand name

is a name given to a drug by the manufacturer. The use of the name is reserved exclusively for its owner.

The World Health Organization observes that a counterfeit medicine is a medicine that is deliberately and fraudulently mislabeled with respect to identity and/or source. Counterfeiting can apply to both branded and generic products. Counterfeit products may include products with the correct ingredients or the wrong ingredients, lacking active ingredients, with incorrect quantities of active ingredients, or fake packaging.

Stopper and Barbara (2009) observe that many people become concerned because generic drugs are often substantially cheaper than the brand-name versions. Consumers often wonder if the quality and effectiveness have been compromised to make the less expensive products. The USA, FDA (Food and Drug Administration) requires that generic drugs be as safe and effective as brand-name drugs.

Actually, generic drugs are only cheaper because the manufacturers have not had to incur the expenses of developing and marketing a new drug. When a company brings a new drug onto the market, the firm has already spent a substantial amount of money and time on research, development, marketing and promotion of the drug. A patent is granted that gives the company that developed the drug an exclusive right to sell the drug as long as the patent is in effect.

As the patent nears expiration, manufacturers can apply to the FDA for permission to make and sell generic versions of the drug and without the start-up costs for development of the drug, other companies can afford to make and sell it more cheaply. When multiple companies begin producing and selling the same drug, the competition among them can also drive down the price even further.

So there's no truth in the myths that generic drugs are manufactured in poorer-quality facilities or are inferior in quality to brand-name drugs. The FDA applies the same standards for all drug manufacturing facilities, and many companies manufacture both brand-name and generic drugs. In fact, the FDA estimates that 50% of generic drug production is by brand-name companies.

Another common mis-belief is that generic drugs take longer to act. The FDA requires that generic drugs work as fast and as effectively as the original brand-name products.

Sometimes, generic versions of a drug have different colors, flavors, or combinations of inactive ingredients than the original medications. Trademark laws in the United States do not allow generic drugs to look exactly like the brand-name preparation, but the active ingredients must be the same in both preparations, ensuring that both have the same therapeutic effects.

However, for narrow therapeutic, critical dose drugs, or for highly variable drugs, safe switching between products cannot be assured. These drugs need special precautions and blood level monitoring upon switching. FDA firmly believes that approved generic and brand drugs can be dispensed with the full expectation that the consumer will receive the same clinical benefit (Saudi, 2008). Performing the switch process is an advisable practice to reduce healthcare costs in countries with strong post-marketing surveillance program, but caution is to be exercised when narrow therapeutic index drugs or highly variable drugs are prescribed (Saudi, 2008).

For most drugs, current bioequivalence testing generally enables clinicians to routinely substitute generic for innovator products. Published findings, however, suggest that particular drugs may not be ideally suited for generic substitution when a patient is already on that drug. These are the so called critical dose medicinal products (drugs with a narrow therapeutic range). When starting a new therapy with any generic drug, however, its similarity to the innovator drug in terms of efficacy, safety and quality is guaranteed.

The results provided further evidence that risk perceptions about generic prescription drugs depend on the medical condition being treated. This information may be useful for patient education. Pharmacists may need to provide additional information and reassurance when dispensing a generic prescription drug that is used to treat a more serious medical condition. The results also provide preliminary support for the hypothesized relationship between the risk consumers perceive in purchasing a generic prescription drug and the required cost savings.

Saudi (2008) argued that the relationship between perceived risk and cost savings suggests that financial incentives to purchase the generic version of a prescribed drug may be successful, even for people who perceive some risk in using a generic prescription drug. However, greater cost savings may be necessary to convince consumers to purchase generic prescription drugs with a perceived higher risk. An interesting implication of this finding is that manufacturers of generic prescription drugs might be able to increase consumer purchases of their products by pricing generic drugs in a perceived high-risk category with greater cost savings over the brand name product. The results also suggest that relatively small differential copayments for brand name and generic drug products (e.g., \$5 for generic prescription drugs and \$10 for brand name prescription drugs) may only be successful in persuading consumers to use generic prescription drugs for low-risk medical conditions.

The results also suggested that even generous financial incentives may be unsuccessful in increasing generic prescription drug use for serious medical conditions. About 27% of respondents said they would refuse a generic version of a heart medication, no matter what the cost savings. An alternative strategy for increasing these consumers' purchases of generic prescription drug products is to modify their risk perceptions. Pharmacists potentially could do so by educating them about generic prescription drugs. However, further research is needed to better understand the factors that make some individuals unwilling to purchase generic prescription drugs.

Stoppler and Barbara (2009) bring out an interesting secondary observation from the study; that the medical condition being treated influenced cost savings even after accounting for the differences in the perceived risk of using a generic drug to treat that condition. This was apparent in the raw data, as some people reported different amounts of cost savings for each medical condition despite having reported the same risk ratings across all five medical conditions. Perhaps individuals perceived prescription drug costs to be higher for treatments of more serious medical conditions, despite the considerable variability in the costs of prescription drugs used for the treatment of any given medical condition. For example, some heart medications are inexpensive and some cough and cold medications are expensive. Respondents also could have been considering the cost of a previously purchased prescription drug.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the relevance of research methodology and procedures chosen for this study. Firstly, methodological implications in descriptive research are discussed, after which an explanation of the sample and the way in which the results were obtained are presented. This is followed by the description of the questionnaire used to collect responses from the sample. The chapter is concluded with a description of the statistical procedures used in the analysis of the data, as well as a description of the research objectives.

#### **3.2 Research Design**

This was a descriptive research design. According to Donald and Pamela (2003) and Boyd, Westfall and Stasch (1990), descriptive research describes data and characteristics about the population or phenomenon being studied. This research would answer the questions of *who, what, where, when and how* of the subject area. A descriptive research is needed if the purpose of the study is to generate detailed information on key factors or attributes required to develop profiles of defined entities. This study is concerned with generating detailed information on the attitudes of the medical doctors at the Aga Khan University Hospital, Nairobi regarding generic drugs. Kisyoka (2005), Bett (2005) and Awinyo (2008) have used this design in their academic researchers.

#### **3.3 Target Population**

The population for this study comprised of medical doctors who work at the Aga Khan University Hospital, Nairobi. According to the Medical Directors office at the Aga Khan University Hospital, there are 500 doctors who work/consult at the hospital.

#### **3.4 Sampling Method**

The researcher targeted doctors who work at the Aga Khan University hospital in Nairobi. The researcher targeted to get 50 doctors to complete the questionnaires. Convenient

sampling was used. This targeted doctors who would be available at the time the research assistants are allowed to collect data at the hospital.

### **3.5 Data Collection Method**

The focus of the study was on attitudes and perceptions, hence the importance of primary data. Prior to the commencement of the research, the researcher will visit the relevant institution to introduce herself to the concerned supervisor and to seek consent to carry out the research.

The study used a semi-structured questionnaire. The questionnaire was structured in a way that allowed the researcher to gather information that would satisfy the objectives of the study. The questionnaire had both closed and open-ended questions. Part A of the questionnaire gathered data on the profile of the respondents. Part B and C would elicit information that would answer the research questions for the study. The questionnaire will primarily use a Likert-type scale.

The researcher would identify assistant researchers at the hospital who will administer the questionnaires on her behalf. The research assistants will however be trained and briefed on the purpose of the study and how to approach the respective doctors.

The researcher would also follow up and drop the questionnaires to the Hospital Ward Administrators who assisted in giving out the questionnaires to the doctors who attended to the patients in their wards.

### **3.6 Data Analysis and presentation**

Data analysis is the extraction of meaningful information from raw data. This involved editing, tabulation and computation of descriptive statistics.

Data entry and analysis was done using the Statistical Package for Social Sciences (SPSS) and Microsoft Excel. In the study questions/statements were pre-coded. This made editing and tabulating easy to carry out (Saunders and Thornhill, 2007). The coding was done in

such a way that allowed creation of data matrices that would be handled by the Statistical Package for Social Sciences (SPSS) and the Microsoft Excel.

Descriptive statistics were used to present the findings. The measures of central tendency that were computed included the Mean Score, frequencies and percentages. This study used the mean score to assess the various attributes of generic drugs by the doctors. The mode will assist in determining the most favorable variable (Mugenda and Mugenda, 1999). Mean scores and percentages were computed as appropriate. The research results have been presented in Tables and charts with narrative explanations for each.

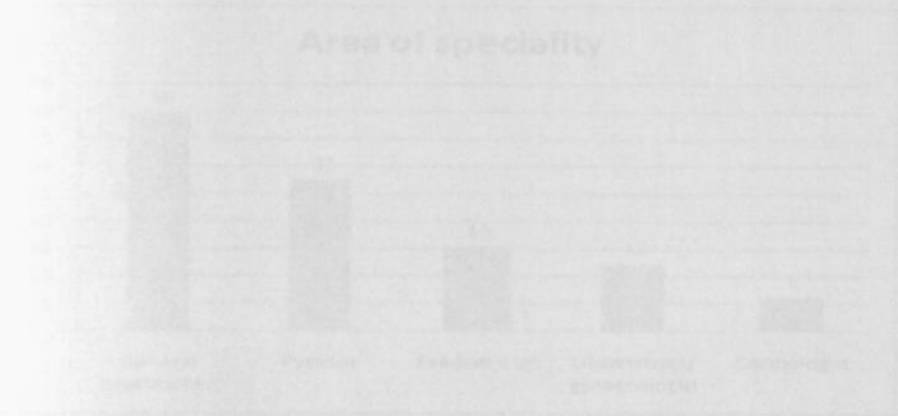
3.2 Profile

The researcher had targeted to interview 50 medical doctors at the Aga Khan University Hospital. Out of this, 31 doctors responded to this study, representing a response rate of 62%. The profile of these respondents is covered in the section that follows. It covers their area of specialty, years of practice, period worked at Aga Khan University Hospital, gender, age, and education level.

3.2.1 Area of specialty

As represented in Figure 3, almost four out of every ten respondents are general practitioners. Only 37% indicated that they are physicians, 15% pediatricians, 12% neurologists and only 4% cardiologists.

Figure 3 – Area of specialty



## CHAPTER FOUR

### FINDINGS AND DISCUSSION

#### 4.1 Introduction

This chapter discusses the findings of the study based on the analysis and interpretation of primary data collected from the respondents working at the Aga Khan University Hospital (AKUH). The findings cover the profile of the respondents, the prescription of generic drugs and the factors as well as organizations that have influenced the prescription of generic drugs. The findings are covered in the ensuing sections.

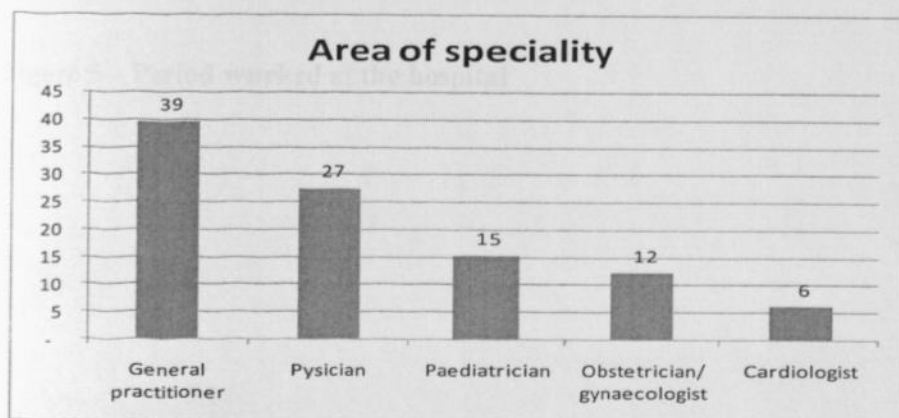
#### 4.2 Profile

The researcher had targeted to interview 50 medical doctors at the Aga Khan University Hospital. Out of this, 33 doctors responded to this study, representing a response rate of 66%. The profile of these respondents is covered in the section that follows. It covers their area of specialty, years of practice, period worked at Aga Khan University Hospital, gender, age, and education level.

##### 4.2.1 Area of specialty

As represented in Figure 3, almost four out every ten respondents are general practitioners, while 27% indicated that they are physicians, 15% pediatricians, 12% obstetricians/gynecologists and only 4% cardiologists.

Figure 3 – Area of specialty

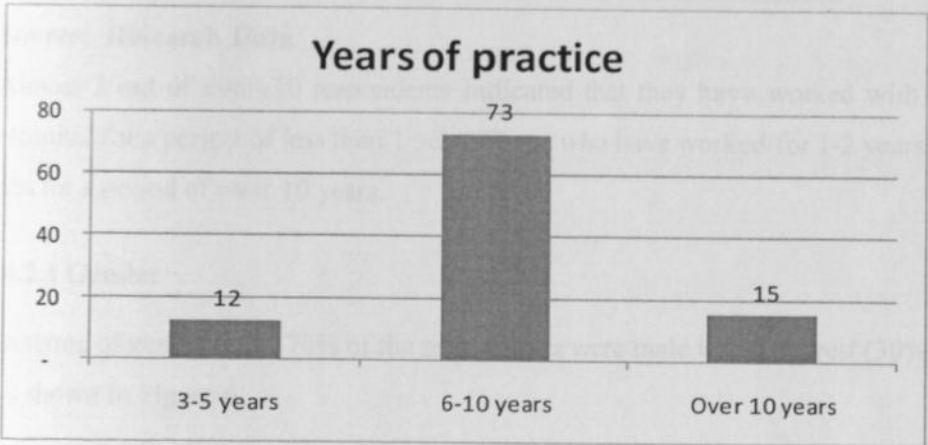


Source: Research Data

4.2.2 Years of practice

Majority (73%) of the respondents indicated that they have practiced in the medical profession for a period of 6-10 years as indicated in Figure 4.

Figure 4 – Years of practice



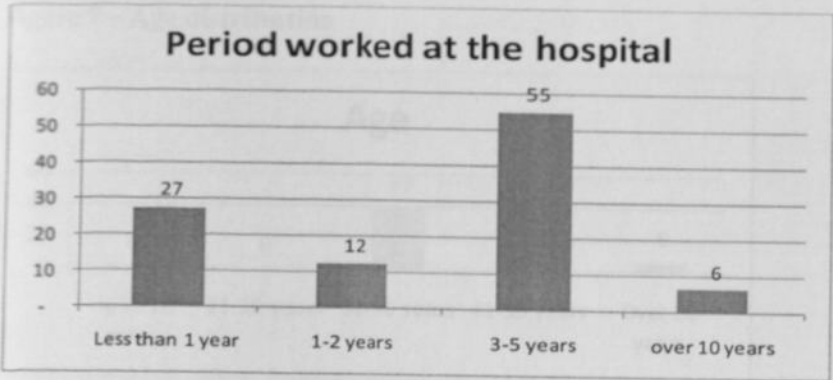
Source: Research Data

Those who have practiced between for 3-5 years were 12%. On the other hand 15% indicated that they have over 10 years of practice.

4.2.3 Period worked at the hospital

Slightly over half of the respondents indicated that they have worked with the hospital for a period of 3-5 years (Figure 5).

Figure 5 – Period worked at the hospital



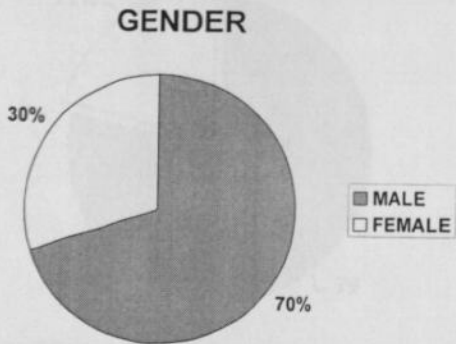
Source: Research Data

Almost 3 out of every 10 respondents indicated that they have worked with the Aga Khan Hospital for a period of less than 1 year. Those who have worked for 1-2 years were 12% and 6% for a period of over 10 years.

4.2.4 Gender

In terms of gender split, 70% of the respondents were male while the rest (30%) were female as shown in Figure 6.

Figure 6 – Gender

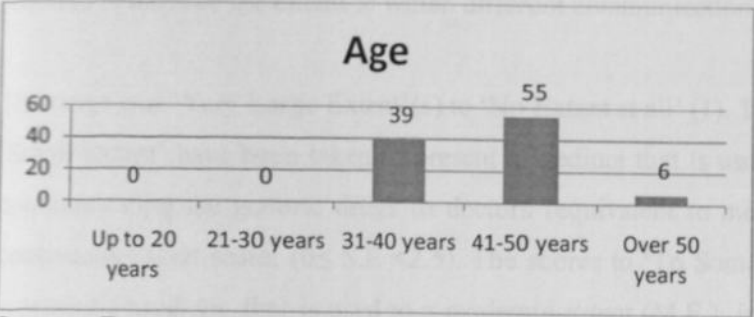


Source: Research Data

4.2.5 Age

Based on analysis by age, all the doctors that responded to this study were aged over 31 years and above (Figure 7). Four out of every ten respondents are aged between 31 and 40 years, 55% between 41 and 50 years and 6% over 50 years.

Figure 7 – Age distribution

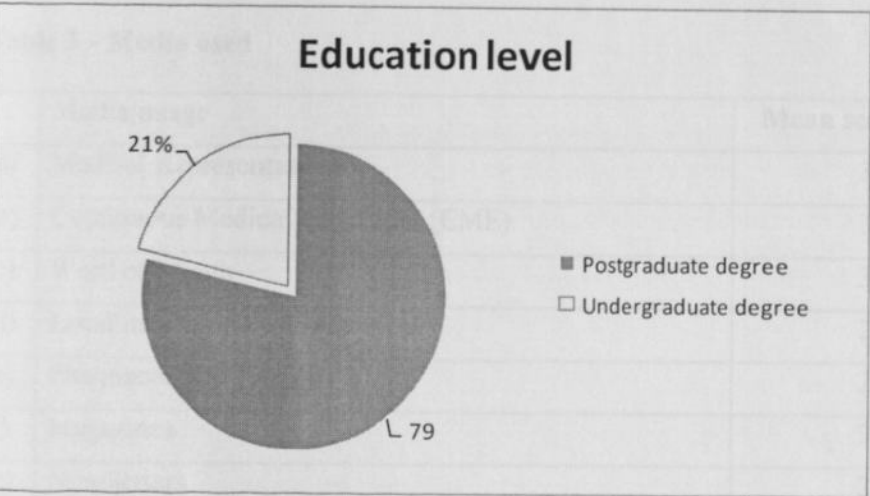


Source: Research Data

4.2.6 Education level

The respondents to this study have a minimum of undergraduate level of education. 79% indicated that their highest education level is up to degree level, while 21% indicated they have a further postgraduate qualification (Figure 8).

Figure 8 – Education level



Source: Research Data

4.3 Awareness of Generic Drugs

The study had also sought to establish how the doctors got to know about generic drugs. They were asked to indicate the extent to which different communication channels made them aware of the generic drugs. The researcher was interested in determining the extent to which different communication channels were used to make the doctors aware of the generic

drugs. This was measured in way of a five-point Likert scale, where respondents were required to indicate the extent to which different communication channels were used.

The range was ‘Very Large Extent’(s) to ‘No Extent at all’ (1). The scores of ‘No Extent’ and ‘Small Extent’ have been taken to present a medium that is used to a small extent (S.E) in communicating the generic drugs to doctors (equivalent to mean score of 0 to 2.5 on the continuous Likert scale;  $0 \leq S.E < 2.5$ ). The scores to ‘To Some Extent’ have been taken to represent a medium that is used to a moderate extent (M.E.) in communicating the generic drugs to doctors (equivalent to a mean score of 2.5 to 3.5 on the continuous Likert scale;  $2.5 \leq M.E. < 3.5$ ). The score of both ‘Large Extent’ and ‘Very Large Extent’ have been taken to represent a medium that is used to Large Extent (L.E.) in the market (equivalent to a mean score of 3.5 to 5.0 on a continuous Likert scale;  $3.5 \leq L.E. < 5.0$ ). This categorization has been used to interpret the findings in this section and the ensuing relevant sections.

Table 2 indicates the extent to which the different channels were used.

**Table 2 – Media used**

	Media usage	Mean score out of 5
a)	Medical Representatives	3.73
b)	Continuous Medical education (CME)	3.45
c)	Word of Mouth	3.06
d)	Local/international conferences	2.79
e)	Pharmaceutical journals	2.55
f)	Magazines	2.35
g)	Newsletters	2.27
h)	Newspapers	1.27

**Source: Research Data**

Overall it can be noted that only one channel, medical representatives that was scored 3.73 is used to a large extent in communicating generic drugs to doctors. The channels that are used to a moderate extent include Continuous Medical Education (CME) at 3.45; word of mouth (3.06); local / international conferences (2.79) and pharmaceutical journals (2.55).

4.4 Attitude and Perceptions of generic drugs

One of the objectives of this study was to establish the perceptions and attitudes toward generic drugs that are available at the Aga Khan University Hospital (AKUH). This has been presented in various sub-sections that cover recommendation of the generic drugs, reasons for recommendation and under the marketing Ps of product, place, pricing and promotion.

4.4.1 Generic drug recommendation

One of the aspects that the study sought to undertake was to find out when doctors had last made a prescription before, when and the reasons for the same.

All the respondents indicated that they have recommended the usage of generic drugs before (Table 3). When asked to indicate the last time that the doctors had made the prescription, six out of every ten respondents indicated that they had made the prescription on the particular day that they were completing the questionnaires.

Table 3 – Last time prescription was done

	Last time the prescription was done	Frequency	Percentage
a)	Today	19	58
b)	Yesterday	10	30
c)	This week	8	12
d)	Last one week	0	0
e)	Last one month	0	0
	Grand Total	33	100

Source: Research Data

On the other hand, three out of every ten respondents indicated that they had given a prescription of a generic drug the previous day and the rest (12%) within the course of the week.

The respondents were also asked to indicate the main reasons that made them prescribe generic drugs. The findings are indicated in Table 4. These findings indicate that medical

doctors prescribe generic medicines on a regular (daily) basis and hence reinforce the perception that generic medicines are in a larger bit used than the branded drugs.

**Table 4 – Reasons for prescribing generic drug**

	Reason for prescribing the generic drug	Frequency	Percentage
a)	Easily available	20	57
b)	Introduced by pharmacists	13	37
c)	Cheap alternative to the branded	2	6
	<b>Total</b>	<b>35</b>	<b>100</b>

**Source: Research Data**

Majority (57%) of the respondents indicated that generic drugs were easily available, while 37% indicated that it is because they were introduced by the pharmacies and only 6% indicating that they were cheap. It can be argued that availability of a product can easily elicit its use.

#### 4.4.2 Product benefit

Another analysis on the attitudes and perceptions was done based on the various Ps of marketing. In this analysis, the respondents were asked to agree with various statements that touched on the product features and benefits of generic drugs. The results are indicated in Table 5.

**Table 5 – Product benefits**

	Product benefit	Mean score out of 5
a)	Generic drugs are cost effective	4.24
b)	Generic drugs are of high quality	3.67
c)	Generic drugs are as effective as branded drugs	3.55
d)	Generic drugs packaging material is attractive	3.39

**Source: Research Data**

Overall the respondents to a large extent agreed that generic drugs are cost effective (4.24), of high quality (3.67) and are effective as the branded drugs (3.55). However the only benefit statement that was agreed to a moderate extent was their packaging materials being attractive (3.39). The findings therefore can be interpreted to mean that generic are as effective as the branded ones and this increases their (generic drugs) acceptability and usage.

4.4.3 Place/Distribution

In terms of place/distribution aspects, the respondents to a large extent agreed on the fact that generic brands penetrate the pharmaceutical market due to aggressive marketing (4.12); many brands of generic drugs are available for every innovator drug (3.49) and most pharmaceutical outlets prefer to stock and sell generic brands because of higher profit margins (3.46).

Table 6 – Place (Distribution)

	Place /Service aspect	Mean score out of 5
a)	Generic brands rapidly penetrate the pharmaceutical market due to aggressive marketing	4.12
b)	Many brands of generic drugs are available for every innovator drug	3.49
c)	Most pharmaceutical outlets prefer to stock and sell generic brands because of higher profit margins	3.46
d)	Generic drugs are easily found in many pharmaceutical outlets	3.27

Source: Research Data

The only aspect that they moderately agreed was the statement that generic drugs are easily found in pharmaceutical outlets at a mean score of 3.27 out 5.

4.4.4 Pricing

The respondents were asked to indicate the extent to which they agreed on two aspects that related to pricing. As indicated in Table 7, the respondents to a larger extent agreed that generic drugs are cheaper than branded ones while they to a moderate extent agreed that generic drugs offer value for money.

**Table 7 – Pricing**

	Pricing aspect	Mean score out of 5
a)	Generic drugs are cheaper than branded drugs	3.67
b)	Generic drugs offer value for money	3.33

Source: Research Data

**4.4.5 Promotion**

In terms of promotion, the respondents were asked to indicate promotion activities that are used to promote the generic drugs. Free samples had the highest mean score of 4.29 out of 5 implying that they are used to a large extent (Table 8). This was followed by sponsorships and CME programs at a mean score of 4 out of 5 each, an indication that they were also used to a large extent.

**Table 8 – Promotion aspects**

	Promotion /Service aspects	Mean score out of 5
a)	Free samples	4.29
b)	Sponsorships	4.00
c)	Continuous Medical Education (CME)	4.00
d)	Generic drugs are promoted through giveaways	3.87
e)	Generic drugs are promoted through personal selling	3.73
f)	There are a variety of gifts for generic drugs	3.48
g)	Write ups	3.07
h)	Generic drugs are well advertised	3.07

Source: Research Data

Promotion through giveaways and personal selling were also indicated as used to a large extent. On the other hand, write-ups and advertising are used to a moderate extent. The overall observation is that the manufacturers of generic brands want their customers to have as much information as possible, hence reducing information asymmetry, thereby reducing the information gap between the consumer and the product.

**4.5 – Influences on the usage of generic drugs**

The other objective of the study was to establish what influences the usage of generic drugs. The influences were looked at in two aspects i.e. the factors and also bodies that influence the usage of generic drugs.

**4.5.1 - Factors that influence the usage of generic drugs**

Table 9 shows the extent to which various factors influence the usage of drugs. Hospital formulary (4.33) is considered as a factor to a large extent. This was followed by experience with a particular drug (4.18), origin of a particular drug (4.12); insurance coverage of the patient (3.76) and patients influencing themselves (3.42). All these were considered to influence the usage of generic drugs to a large extent.

**Table 9 – Factors influencing usage of drugs**

	Factor	Mean score out of 5.
a)	Hospital formulary	4.33
b)	Experience with a particular drug	4.18
c)	Origin of generic drugs	4.12
d)	Insurance coverage of patient	3.76
e)	Patients themselves	3.42

**Source: Research Data**

4.5.2 - Bodies that influence prescription of generic drugs

The influence of other bodies on the prescription of the generic drugs was done. Largely it can be argued that the organizations to a moderate extent influence the prescription of drugs as indicated in Table 10.

**Table 10 – Bodies that influence prescription of generic drugs**

	Organization body	Mean score out of 5
a)	FDA (Food and Drug Administration – US)	3.06
b)	MHRA (Medicines and Healthcare Products Regulatory Agency – UK)	3.00
c)	WHO (World Health Organization)	2.73
d)	CGMP (Current Good Manufacturing Practices for Drugs)	2.46
e)	MCA (Medicines Control Agency)	2.36
f)	MCC (Medicines Control Council – S.A.)	2.00

Source: Research Data

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter provides the summary of the study findings, conclusions and recommendations arising. The chapter concludes with the limitation to the study and suggestions for further study.

The study had two objectives. The first one sought to assess medical doctors' perceptions and attitudes towards generic drugs. As far as the first objective is concerned, the study revealed that doctors generally viewed generic drugs as being cost effective, of high quality, and as effective as the branded drugs. Doctors also believe that many generic drugs brands are available for every innovator brand.

The second objective sought to establish the factors which influence the prescription of generic drugs. Cost effectiveness, availability, Hospital formulary, experience with a particular drug, origin of a particular drug, insurance coverage of the patient, and patients' own inclination were considered to influence the usage of generic drugs to a large extent. Analyzing the results along the Marketing Mix Model, the below observations were made:

#### *Product benefit*

There are five key product features that influence positioning of a product/service. These are conformance quality, durability, reliability, reparability and design. The overall observation is that the perception on the generic drugs as a product is almost positioned similar to branded drugs. The attitudes and perceptions based on product benefits indicated that the respondents to a large extent agreed that generic drugs are cost effective, of high quality, and are effective as the branded drugs. However the only benefit aspect that they moderately agreed to was packaging materials that they indicated are attractive. The findings generally therefore reflect the practice in the marketing of generic drugs is marketed under a non-proprietary or approved name rather than a proprietary or brand name. Generic drugs are also perceived to be frequently as effective as, but much cheaper than, brand-name drugs.

### *Place/Distribution*

In terms of place/distribution aspects, the respondents to a large extent agreed on the fact that generic brands penetrate the pharmaceutical market due to aggressive marketing. However, the only aspect that they moderately agreed was that generic drugs are easily found in pharmaceutical outlets.

### *Pricing*

The respondents were asked to indicate the extent to which they agreed on two aspects that related to pricing. The respondents to a larger extent agreed that generic drugs are cheaper than branded ones while they to a moderate extent agreed that that generic drugs offer value for money. These findings indicate that producers and marketers of generic drugs use marketing penetration strategies.

### *Promotion*

Various promotion activities are used to promote generic drugs. Free samples are used to a large extent, followed by sponsorships and Continuous Medical Education programs. Personal selling and giveaways were also indicated as being used to a large extent. On the other hand, write ups and gifts are used to a moderate extent. The findings generally denote that marketers of this product use push promotion strategies (Kotler, 2003)

## **5.2 Limitation of the Study**

This study covered doctors at the Aga Khan University Hospital in Nairobi. In as much some of the doctors may be consulting for other hospitals, taking a sample from the Aga Khan University Hospital might not be representative to enable the results be generalized.

## **5.3 Recommendations**

If generic drugs are to become an integral part of the government's strategy towards reduction of the economic burden of healthcare for its citizens, it is important that the government give special attention to the factors that affect their use.

To positively influence the prescription of generic drugs, Medical doctors need to be more informed about the quality of generic drugs and their manufacturers. This will give medical doctors more confidence when prescribing generic drugs. This could be achieved by adopting policies that allow only drugs from companies with certification from International Health Agencies to make it through the system.

Generic drug manufacturing companies need to pay special attention towards personal selling strategies, and increase the sampling of their products

Financial organizations like insurance agencies could be encouraged to include cover for generic drugs over branded ones, so as to encourage their prescription and inclusion in hospital formularies.

Overall, reassuring the members of the health community about the quality, effectiveness and economic advantage of generic drugs will greatly affect their prescription, and allow the country to reap the benefits of good healthcare at lower cost.

As the government of Kenya works reducing the economic burden of healthcare on its citizens, towards one its goals of vision 2030

#### **5.4 Suggestions for further research**

The study was based on respondents working at the Aga Khan University Hospital in Nairobi. A much broader and more inclusive research that would cover other hospitals and members of the healthcare community would give us more insights on how generic drugs are perceived and the various factors that influence their use.

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University of Nairobi  
School of Business  
Department of Marketing  
P.O. BOX 30197  
NAIROBI

27 September 2010

The Medical Director  
The Aga Khan University Hospital  
Nairobi

Dear Sir/ Madam:

#### RE: PERMISSION TO CONDUCT STUDY

I am a post-graduate student at the University of Nairobi, at the School of Business. In order to fulfill the degree requirement, I am undertaking a management research project on attitudes towards generic drugs. The study is entitled:

*"Perceptions and attitudes towards generic drugs: The case of medical doctors at the Aga Khan University Hospital"*

It is to kindly request you to permit me to collect the data needed for my research. The research will be carried out by requesting doctors practicing at the hospital to answer the attached questionnaire.

The information/data provided will be used exclusively for academic purposes. My supervisor and I assure you that the information collected will be treated with strict confidentiality.

Your kind consent will be highly appreciated.

Thank you in advance.

Yours faithfully,

Maria  
Student

Prof. Kilera  
Supervisor

## APPENDIX 1 – LETTER –PERMISSION TO CONDUCT STUDY

University of Nairobi  
School of Business  
Department of Marketing  
P. O. BOX 30197  
NAIROBI

27 September 2010

The Medical Director  
The Aga Khan University Hospital  
Nairobi

Dear Sir,

### RE: PERMISSION TO CONDUCT STUDY

I am a postgraduate student at the University of Nairobi, at the School of Business. In order to fulfill the degree requirement, I am undertaking a management research project on attitudes towards generic drugs. The study is entitled:

***“Perceptions and attitudes towards generic drugs: The case of medical doctors at the Aga Khan University Hospital”***

This is to kindly request you to permit me to collect the data needed for my research. The research will be carried out by requesting doctors practicing at the hospital to answer the attached questionnaire.

The information/data provided will be used exclusively for academic purposes. My supervisor and I assure you that the information collected will be treated with strict confidence.

Your kind consent will be highly appreciated.

Thank you in advance.

Yours faithfully,

Nazila  
Student

Prof. Kibera  
Supervisor

## APPENDIX 2 – INTRODUCTORY LETTER

University of Nairobi  
School of Business  
Department of Marketing  
P. O. BOX 30197  
NAIROBI

27 September 2010

Dear Respondent,

### RE: COLLECTION OF SURVEY DATA

I am a postgraduate student at the University of Nairobi, at the School of Business. In order to fulfill the degree requirement, I am undertaking a management research project on attitudes towards generic drugs. The study is entitled:

#### *“Perceptions and attitudes towards generic drugs: The case of medical doctors at the Aga Khan Hospital”*

You have been selected to form part of this study. This is to kindly request you to assist me collect the data by filling out the accompanying questionnaire.

The information/data you provide 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 your name appear in my report.

Your cooperation will be highly appreciated.

Thank you in advance.

Yours faithfully,

Nazila

Student

Prof. Kibera

Supervisor

## APPENDIX 3 – QUESTIONNAIRE

### SECTION A – ORGANISATION AND RESPONDENT PROFILE

1) Name (optional): \_\_\_\_\_

2) Area of specialty: (Tick that applies)

- |                              |     |
|------------------------------|-----|
| a) Cardiologist              | [ ] |
| b) General practitioner      | [ ] |
| c) Physician                 | [ ] |
| d) Surgeon                   | [ ] |
| e) Obstetrician/gynecologist | [ ] |
| f) Any other (specify) _____ |     |

3) Years of practice /experience: (Tick that applies)

- |                     |     |
|---------------------|-----|
| a) Less than 1 year | [ ] |
| b) 1-2 years        | [ ] |
| c) 3-5 years        | [ ] |
| d) 6-10 years       | [ ] |
| e) Over 10 years    | [ ] |

4) Length of time that you have worked in the hospital: (Tick that applies)

- |                     |     |
|---------------------|-----|
| a) Less than 1 year | [ ] |
| b) 1-2 years        | [ ] |
| c) 3-5 years        | [ ] |
| d) 6-10 years       | [ ] |
| e) Over 10 years    | [ ] |

5) Your gender? (Tick that applies)

- |           |     |
|-----------|-----|
| a) Female | [ ] |
| b) Male   | [ ] |

## SECTION C – USAGE OF GENERIC DRUGS

6) What is your age bracket? (Tick as applicable)

- a) Up to 20 years [ ]
- b) 21 – 30 years [ ]
- c) 31 – 40 years [ ]
- d) 41 – 50 years [ ]
- e) Over 50 years [ ]

7) What is your highest level of education?

- a) Undergraduate Degree [ ]
- b) Postgraduate Degree [ ]
- c) Others (specify) \_\_\_\_\_ [ ]

## SECTION B – AWARENESS OF GENERIC DRUGS

8) Companies that manufacture and market generic drugs use different methods to raise awareness on the same. To what extent did you get to know about generic drugs from the following media?

	Media usage	(5) Very Large extent	(4) Large extent	(3) Moderate extent	(2) Small extent	(1) Not at all
a)	Continuous Medical education (CME)					
b)	Medical journals					
c)	Pharmaceutical journals					
d)	Local/international conferences					
e)	Newspapers					
f)	Newsletters					
g)	Magazines					
h)	Word of Mouth					
i)	Medical representatives					
i)	Other (Please specify) _____					

### SECTION C – USAGE OF GENERIC DRUGS

9) Have you ever recommended the usage of any generic drug?

- a) Yes      [   ]      b) No      [   ]      c) Not sure      [   ]

10) If your answer to Q10 above is yes, when is the last time that you prescribed a generic drug?

- a) Today      [   ]  
b) Yesterday      [   ]  
c) This week      [   ]  
d) Last one week      [   ]  
e) Last one month      [   ]  
f) Any other (please indicate) \_\_\_\_\_

11) If your answer to Q10 above is yes, what made you prescribe the generic drug?

- a) It was the only one available for the ailment I was treating      [   ]  
b) The drug is on trial      [   ]  
c) The drug had been introduced to me by a pharmacist      [   ]  
d) My friends/colleagues in the profession have also recommended it      [   ]  
e) Any other (please indicate) \_\_\_\_\_

12) Please indicate the extent that you agree with the following **Product Benefit** statements of generic drugs?

	<b>Product/Service aspect</b>	<b>(5) Strongly agree</b>	<b>(4) Agree</b>	<b>(3) Neutral</b>	<b>(2) Disagree</b>	<b>(1) Strongly Disagree</b>
a)	Generic drugs are of high quality					
b)	Generic drugs packaging material is attractive					
c)	Generic drugs are cost effective					
d)	Generic drugs are as effective as branded drugs					
e)	Any other (please indicate) _____					

13) Please indicate the extent that you agree with the following statements in regard to **Distribution** of generic drugs?

	Place /Service aspect	(5) Strongly agree	(4) Agree	(3) Neutral	(2) Disagree	(1) Strongly Disagree
a)	Generic drugs are easily found in many pharmaceutical outlets					
b)	Many brands of generic drugs are available for every innovator drug					
c)	Generic brands rapidly penetrate the pharmaceutical market due to aggressive marketing					
d)	Most pharmaceutical outlets prefer to stock and sell generic brands because of higher profit margins					
e)	Any other (please indicate) _____					

14) Please indicate the extent that you agree with the following statements in regard to **Pricing** of generic drugs?

	Pricing/Service aspect	(5) Strongly agree	(4) Agree	(3) Neutral	(2) Disagree	(1) Strongly Disagree
a)	Generic drugs are cheaper than branded drugs					
b)	Generic drugs offer value for money					
c)	Any other ( please indicate) _____					

15) Please indicate the extent that you agree with the following statements in regard to **Promotion** of generic drugs?

	<b>Promotion /Service aspects</b>	<b>(5) Strongly agree</b>	<b>(4) Agree</b>	<b>(3) Neutral</b>	<b>(2) Disagree</b>	<b>(1) Strongly Disagree</b>
a)	Generic drugs are well advertised					
b)	Generic drugs are promoted through give a ways					
c)	There are a variety of gifts for generic drugs					
d)	Generic drugs are promoted through personal selling					
e)	Write ups					
f)	Continuous Medical Education (CME)					
g)	Sponsorships					
h)	Free samples					
i)	Any other ( please indicate)_____					

16) To what extent do the following factors influence the writing of prescriptions for generic drugs?

	<b>Factor</b>	<b>(5) Very large extent</b>	<b>(4) Large extent</b>	<b>(3) Neutral</b>	<b>(2) Small extent</b>	<b>(1) Very small extent</b>
a)	Patients themselves					
b)	Insurance coverage of patient,					
c)	Hospital formulary					
d)	Origin of generic drugs (Africa, India, China, Europe and any other)					
e)	Experience with a particular drug					
f)	Any other ( please indicate)_____					

17) To what extent do the following bodies affect the prescriptions for generic drugs?

	Organization body	(5) Very large extent	(4) Large extent	(3) Neutral	(2) Small extent	(1) Very small extent
a)	WHO (World Health Organization)					
b)	FDA (Food and Drug Administration – US)					
c)	MHRA (Medicines and Healthcare Products Regulatory Agency – UK)					
d)	MCA (Medicines Control Agency)					
e)	CGMP (Current Good Manufacturing Practices for Drugs)					
f)	MCC (Medicines Control Council – S.A.)					
g)	Any other ( please indicate)					

18) Please share any other comments about generic drugs that you may have?

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*Thank you for taking time to complete the questionnaire.*