



Factors that effect patient compliance with prescribed drugs in Kanduyi Division, Bungoma District

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**Factors that Affect Patient Compliance
Prescribed Drugs in Kanduyi Division,
Bungoma District**

**FACTORS THAT AFFECT PATIENT COMPLIANCE
WITH PRESCRIBED DRUGS IN KANDUYI DIVISION,
BUNGOMA DISTRICT.**

BY

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
OF A MASTER OF ARTS DEGREE IN ANTHROPOLOGY, AT THE INSTITUTE OF
AFRICAN STUDIES, UNIVERSITY OF NAIROBI.

DECLARATION

This thesis is my original work and it has not been presented for a degree in any other University.



Eliud Wekesa

10/10/2001

Date

This thesis has been submitted for examination with my approval as the university supervisor.

DR R.N Kibiti

Date.

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I say *murio muno*.

ABSTRACT

This study examined the cultural, social and economic factors that affect patient compliance with drug prescriptions in Kanduyi Division of Bungoma District. The study adopted a patient-centered perspective rather than a medically-centred one. Unlike the latter, the former views patients as active decision making agents. Subsequently, patients' own ideas and attitudes about illness and treatment were given due attention. Their etiological concepts, definition of appropriate therapy, expectations of the clinicians and doctors and the meaning of medications in their daily lives were examined.

The study population comprised out-patients attending both public and private health institutions in Kanduyi Division. The sampling method used to select respondents was stratified random sampling. Stratification was along the following categories of the health institutions: dispensaries, health centres, nursing homes/medical centres and hospitals. The researcher selected 25 out patients from each of the above categories(strata). This yielded a sample size of a hundred respondents.

The methods of data collection were formal interview using a questionnaire, direct observation, informal interview and in-depth interviews with key informants.

The findings show that patients do make deliberate decisions about whether or not to follow the advice of doctors or clinicians. They carry out a cost benefit analysis of every treatment and medication prescribed. Similarly, they evaluate the clinician's or doctor's prescriptions against

their own ideas. Lastly, the drug is evaluated against its efficacy, cost and side effects. After such a 'calculation', they decide to comply or not. Therefore, an act of non-compliance which may be seen as irrational from the doctor's point of view, may be very rational when seen from a patient's point of view.

The study, therefore, recommends that clinicians and doctors should be sensitive to the patients lay ideas about illnesses and medications. They should try as much as possible to understand how patients and those around them view diseases origin and prognosis. Doing so will help them place illness into a wider context, thereby, helping in alleviating the physiological as well as socio-psychological ill-being.

It is also recommended that health education should include patient compliance as an important component. The public should be educated about the dangers of non-compliance and the need to follow clinicians' and doctors' advice and recommendations.

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CHAPTER ONE

INTRODUCTION AND PROBLEM STATEMENT

1.0 Introduction

Patient compliance, that is, adherence to the quantities and sequences prescribed for drug consumption, is a phenomenon of great concern and interest for both social and medical scientists. This assumes profound significance when the treatment given is in the form of drugs and medicines to be self-administered by patients in their respective homes. In this case, patients do have potential for considerable autonomy in the management of their treatment. This is so because, much as the doctor or clinician may have control over the type and quantity of drugs the patient gets, she/he would not be present to control how they are used by patients in their respective homes (Stimson, 1974). Indeed, it has been established that between a third and a half of the patients are non-compliant, that is, they do not take drugs in prescribed dosages, quantities and sequences (Donovan and Blake, 1992; Trostle, 1998).

This problem has stimulated the search for factors that are associated with non-compliance with medications. However, the causes of non-compliance are still inconclusive and even contradictory (Donovan and Blake, 1992). Trostle (1988:1300) attributes this state of affairs to the fact that compliance is often analysed as an ideology, “a system of shared beliefs that legitimise particular behaviour norms and values at the

same time that they claim and appear to be based on empirical truth.” This ideology views non-compliance as a deviant behaviour on the part of the patient.

From this perspective, the blame is directed entirely towards patients. Such patients are portrayed by researchers either as being ignorant or forgetful because they fail to comply. The causes of the problems in the patient-clinician relationship are always sought in patient behaviour and beliefs *per se*. This perspective is medically-centred, and has been championed by medical professionals. As such, it only mirrors and represents the medical professionals’ world-view.

This study suggests that a patient-centred perspective is necessary in order to explicitly expose the determinants of compliance or non-compliance. Donovan and Blake (1992:507) observed that patients make deliberate decisions about whether to comply with medical advice or not. They do this by carrying out a “cost-benefit analysis of each treatment, weighing up the cost and risks of each against the benefits, as they perceive them.” These decisions are made in the context of their beliefs, values, perceptions, responsibilities, personal and social circumstances within which they live.

1.1 Problem Statement.

Patient compliance or non-compliance is a problem that confronts medical practitioners and social science researchers as well. It has been found that it is one thing to seek treatment during illness episodes, but quite another thing altogether to take drugs in quantities and sequences prescribed by clinicians and doctors. Studies by scholars such

as Donovan and Blake (1992) and Trostle (1988) have established that non-compliance with medical regimens exists on a large scale. They indicate that between a third and a half of the patients do not take drugs as recommended by medical practitioners. Non-compliance behaviour includes taking an overdose of the drug, taking fewer tablets than prescribed, sharing drugs with another family member or friend, skipping taking drugs for a certain number of days, altering the doses of the drug and not adhering to the subsequent appointment schedules.

The low rate of compliance has stimulated the search for factors that affect it. However, despite a large array of studies, the findings are largely inconclusive and even contradictory. That is, while patient non-compliance is a universally observed phenomenon, the explanations for it are not clear. In view of this, an inquiry into the determinants of compliance is quite appropriate.

Most studies on compliance suggest a medically- centred perspective, an issue that has been pointed out by some scholars as being responsible for inconclusiveness of the findings. The notion of compliance has inherent power differential connotations between patients and doctors in favour of the latter. From this perspective, the assumption has been that clinicians or doctors give orders, which have to be followed obediently by the patients. This is reinforced by the view that a doctor or clinician, by virtue of professional expertise and training, is the only legitimate authority on medication use. Therefore, the patient who decides otherwise is portrayed as a deviant who fails to comply because of ignorance or forgetfulness (Donovan and Blake, 1992). By so doing,

doctors exonerate themselves from patients' actions even when the reality is that they play a significant role in determining what the patient will do after consultation. As Stimson (1974:97) puts it "studies paint the picture of the patient as a passive, obedient and unquestioning recipient of medical instructions."

Aligned to the above is the assumption that medical practitioners provide information and recommendations clearly to the patients. As such, failure to take medications as recommended becomes the problem of the patient (Garritty, 1981). The task of the researchers has been to find out what is in a patient that makes him/her 'deviant'. The researchers then proceeded to look for the defining characteristics of the patients, who are prone to non-compliance, so that potential non-compliance can be identified. Such an endeavour has been, and will always be, futile.

In view of the inherent flaws in the medically -centred orientation, this study sought to analyse the determinants of compliance or non-compliance from a patient-centred perspective. From this perspective, patients are viewed as 'active agents' in their treatment rather than passive partners (Conrad, 1985). Patients have their own ideas about medications. This information is obtained from a multiplicity of sources such as the general public, media, friends, neighbours and family (Helman, 1994). Patients, therefore, evaluate doctor's or clinician's actions against their own ideas about illnesses and medications. The drug's efficacy is equally evaluated against its past performance. In the end, people make choices regarding which advice makes sense to them and which

does not. Therefore, almost everyone can be a complier or non-complier with respect to medications at one time or another.

The following questions were used as a guide to this study:

- 1) What are the explanatory models of the patients and clinicians of a particular illness, and patients' expectations of medical practitioners?
- 2) Does perceived severity of the disease or ailment have any effect on patient compliance?
- 3) Does the use of the other therapeutic options have any effect on patient compliance?
- 4) What is the meaning of medications in people's daily lives?
- 5) What is the effect of the drug's undesirable side effects and financial cost on patient compliance?

1.2 Objectives of the Study

The broad objective of the study was to investigate the factors that affect patients' compliance with aforescribed drugs in Kanduyi Division of Bungoma District.

The specific objectives of the study were:

- 1) To examine the patients' and clinicians' explanatory models of illness episodes, and patients' expectations of the clinicians.
- 2) To find out whether perceived severity of the illness or ailment has an effect on patient compliance.

- 3) To investigate whether the use of alternative medication or therapies has any influence on patient compliance.
- 4) To examine the meaning of medications in people's everyday lives and how this is reflected in their use of medications.
- 5) To investigate whether the cost of medication in terms of undesirable side effects and financial implications has a role in influencing compliance behaviour.

1.3 Justification of the study

This study has clinical, economic and academic importance. In the clinical realm, non-compliance, that is, irregular, diminished or excessive consumption of medicine or modification of dosages has serious health consequences. Taking drugs on a lower dose can reduce their effectiveness and thus extend illness. This is because most of the drugs are generally ineffective until a minimum level of medication is taken. On the other hand, some drugs are dangerous if taken in excess, and may even cause death. In addition, Trostle (1988) points out that consumption that varies from accepted standards can cause the therapeutic effectiveness of the drugs to be misjudged in individual or in large-scale clinical trials.

Furthermore, taking lower doses of the drug than required leads to the development of drug resistance. Drug resistance poses serious health challenges for it comprises the effectiveness of the drugs. Some of the common diseases that have been observed to be developing resistance to traditional antibiotics include Cholera, dysentery, pneumonia, meningitis and gonorrhea (Indalo, 1997).

Non-compliance also carries some economic significance. A reasonable amount of money is spent on the procurement of the drugs. Therefore, when prescriptions made are taken incorrectly, kept, or worse, disposed off, then this amounts to a waste of financial resources. It is a waste because, in the end, there is little patient's benefit if any, in terms of cure or alleviated pain and discomfort. Thus, the ability to increase compliance or reduce non-compliance will, at least, ensure that money is well spent or saved, from both micro and macro-economic considerations.

At the academic and empirical level, the study serves the explanation purpose, that is, it specifies factors that are behind compliance and non-compliance. This should provide the academia with knowledge and also assist policy makers to design appropriate strategies and interventions to curb non-compliance or boost compliance.

1.4 Scope and Limitations

This study focussed on the Socio-cultural factors affecting patient compliance with drug prescriptions. Patient compliance is analysed in respect to taking drugs and observing dietary recommendations and other issues such as bed rest recommended by doctors or clinicians. However, this study only confined itself to drug prescriptions but not dietary and bed rest recommendations. Also, this study covered patient compliance with modern or western drugs but not traditional herbs.

Drugs are dispensed to patients in the forms of tablets, syrups, capsules, and injections. This study restricted itself to tablets, capsules and injections but not syrups because the latter brings in the problem of quantity measurement.

Finally, this study confined itself to observable side effects resulting from taking medication. No laboratory tests were conducted to assess non-visible bodily harm that may have been caused as a result of the patient taking the medication.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 Introduction

This chapter explores the works of several writers and authorities that are relevant to this study topic. It is subdivided into sub topics that are in correspondence with my study objectives. As the review of literature proceeds, the gaps in them are highlighted. Also presented is the theoretical framework that guided the study, The relevance as well as the strengths and weaknesses of the health beliefs model and symbolic interactionism theory are shown.

2.1 Literature review.

Patient compliance with medical regimens has generated a lot of interest and attention in medical and social science research. This is seen in the proliferation of literature, at least, in the West, on the topic in recent years. Donovan and Blake (1992: 507) report that an estimated “4,000 English language articles have been published up to 1985 and a further 4,000 have been listed on the medline alone up to 1990”. Despite the large quantity of literature on the topic, the reasons for non-compliance or compliance are still not conclusive and contradict one another.

The growth of interest in compliance has been linked to a combination of factors: increasing numbers of prescriptions, which made non-compliance more visible; mention of compliance by drug companies in their advertisements and interventions that were designed by health educators (Trostle, 1988). None of these factors can be singled out as

having had the greatest influence. Suffice it to say that all factors have intricately combined to make compliance an interesting research topic.

The greatest proportion of literature on this topic has been produced by medical professionals. Therefore, what is reflected in most of the literature is the proper patient behaviour from the medical point of view. Trostle(1988) contends that compliance literature teaches clinicians how to manipulate patients' behaviour without questioning their own beliefs or increasing their patient understanding.

2.1.1 Doctor-Patient interaction

Most studies on compliance emphasise the centrality of practitioner-patient interaction. The problem of non-compliance is sought in the doctor/clinician-patient interaction. Garrity (1982:216) found an association between doctor-patient communication and compliance. He found that "clarity and explicitness" of a practitioner in a clinical encounter is positively associated with compliance. Also, he established that similarity of the doctors' and patients' perception of what the patients should do was strongly related to patient compliance.

Based on these findings, many authors suggest ways and means of improving doctor or clinician-patient communication, thereby increasing compliance. These include increasing doctors' or clinicians' friendliness, encouraging co-operation between doctors and patients, encouraging doctors to be more patient sensitive and centred, and improving doctors' teaching skills (Donovan and Blake, 1992). The suggestion made in these

studies is that compliance can be improved by making some changes in the practitioner-patient interaction.

However, some authors do not view doctor-patient interaction, as a whole, to be crucial in impacting on the patient behaviour (including compliance) after clinical consultation. Finkler and Correa (1996) contend that much as patient-doctor interaction is significantly emphasised, only particular aspects of it are instrumental in affecting patient satisfaction, compliance and positive outcome. But there is no agreement amongst scholars on what these particular aspects of interaction are.

By and large, many researchers who locate non-compliance in patient-doctor interaction do so from a medically- centred perspective. In fact, the concept of compliance suggests a powerless, dependent lay person, and the powerful, dominant professional. The dominant professional (doctor) gives orders, advice or suggestions and the lay person (patient) obediently carries them out (Trostle, 1988). The assumption is that patients ought to follow doctors' or clinicians' orders and instructions on the account of the latter's professional training. To these researchers, non-compliance is irrational and, in fact, deviant behaviour. They maintain that patients who fail to comply do so intentionally or unintentionally because of their ignorance or forgetfulness.

When practitioners label their patients as non-complaint they, in essence, distance themselves from patient's actions. They deny legitimacy of any action by the patient that tends to contradict the clinical prescription. Their task has been to look for characteristics

of people who are likely to default, that is, what there is about a patient that predisposes him/her to non-compliance (Garrity 1981).

According to Trostle (1988), such an approach analyses compliance as an ideology, which defines patient's behaviour in terms of professional expectations and ignores the health behaviour that contradicts the professional view. This leaves the control of the therapeutic encounter solely in the hands of the doctor or clinician. Hayes-Bautista (1976) identifies the existence of a power symmetry between patients and clinicians in favour of the latter. Despite this power imbalance, patients often struggle to gain some control. Non-compliance can be viewed in this case as an attempt by the patient to gain some control by "modifying unsatisfactory treatment" (Hayes-Bautista, 1976:235).

There is an alternative orientation, that is the patient-centred perspective, on patient compliance. However, this perspective is rather less developed and hardly mentioned, except in very few and isolated studies. The patient centred perspective looks at patients as active participants in their treatment (Conrad, 1985). Patients get information about medication and other health related issues from a myriad of sources. Part of this information does, indeed, come from doctors and other practitioners. However, most of it comes from the general public, media, family members and the like. People consult regularly amongst themselves, family, friends and neighbours about life's issues. It is, therefore, likely that doctor's or clinicians actions and prescriptions will be discussed and appraised and, decisions to comply, or not, stem from such evaluations.

Patients are capable of making choices about their medication and treatment regimes rationally in the context of the prevailing social, economic and cultural conditions. From the patients point of view, then, non-compliance is a response to a series of socio-economic realities competing with the clinical realities (Conrad, 1985). Therefore, non-compliance is rational in the sense that it is a by-product of a consideration of clinical realities vis-à-vis competing realities of work, play, friendship and family life.

2.1.2 Doctor/ clinician and patient explanatory models.

Explanatory models, a term coined by Kleiman (1980), refers to notions about an episode of sickness and its treatment that are employed by all those engaged in a clinical process. Explanatory models, therefore, give explanations of sickness and treatment in order to help choices among available treatments. They provide explanations for disease etiology, symptoms, physiological changes, severity, natural history and treatment of illness. They are used by individuals to explain and manage illness episodes and are influenced by the context in which they are employed by individuals such as economic conditions, social organisation and the dominant ideology or religion of society. (Helman, 1994).

Patients and doctors hold their own explanatory models about sickness episodes. This means the doctor-patient consultations are actually transactions between the lay and medical explanatory models about a particular sickness. Not infrequently, medical and lay models do differ in terms of how they interpret causes, diagnosis and appropriate treatment.

The medical definition of ill-health is based on “objectively demonstrable physical changes in the body structure and function, which can be quantified by reference to normal psychological measurements” (Helman, 1994:104). This definition leaves out the social, cultural and psychological dimensions of ill health and the context in which it appears, factors that determine the meaning of disease for patients. As a consequence, factors such as personality, religious beliefs and the cultural and socio-economic status of the patient are more often than not considered as irrelevant in diagnosis and prescriptions.

Clinical diagnosis is evidently a subtle and problematic process. Medical practitioners have their own pre-conceptions and assumptions which inevitably play a significant role in the diagnostic process (Pearson, 1989). On the other hand, the mere fact that western diagnosis relies a great deal on patients’ descriptions makes matters more complicated. The patient’s hazy recollection sometimes leaves out minute and necessary details. Also, many a patient may not explain their problems in medical terms probably due to acute pain or even nervous strain. As such, the process is characterized by flaws with accuracy failing to reach perfection (Jones and Jones)

The patients’ perspective of ill health is part of the wider world-view that is used to explain misfortunes in general. Generally, lay models or theories of illness place causation of illness in either the supernatural world (deity, god or ghost), social world (witch/sorcerer) or the natural world. Foster and Anderson (1978) divide these causality concepts into personalistic and naturalistic systems. In the personalistic system, illness is caused by an active agent who may be a supernatural being (a deity), a human being

(sorcerer) or non-human being (e.g. ancestor). In naturalistic systems, illness is explained in impersonal terms, that is, lack of equilibrium between elements in the body (heat/cold) and conditions in natural and social environment. In many cases, illness for the lay is attributed to the combination of two or more causes or interactions between the natural, supernatural and social worlds.

Africans traditionally use personalistic etiologies to account for the majority of illness episodes. Supernatural agents that are considered to cause disease include spirits, ghosts and ancestors. The belief in spirits is wide-spread in African societies. The spirit are usually grouped into such categories as mountain spirits, forest spirits and water spirits (Parinder, 1958). Each society has its own understanding of the nature of the spirits and their effect on people's lives. Ancestors mostly bring diseases as punishment to those who break taboo or those who do not perform certain ceremonies.

Witches and sorcerers are the social agents that are traditionally linked to a host of disease and illness episodes. The belief in witchcraft and sorcery is evident in African societies. In this case, the individual manipulates certain forces using magical power to cause illness to the intended party.

Some authors make a distinction between witchcraft and sorcery, while others do not. For example, Evans-Pitchard (1937), in his study among the Azande, found a dichotomous distinction between the two. Among the Azande, the difference between a sorcerer and a witch is that the former use techniques of magic and derives his/her power

from medicine while the latter does not use magical spells but rather uses hereditary psycho-physical powers. Other writers like middle tone and winter (1963) and Turner, 1964 (cited in marrick, 1987) are opposed to this distinction and maintain that such a dichotomy does not exist in some societies. The Nandi of Kenya, for example, do not have such a dichotomous distinction between witchcraft and sorcery (Hunting, 1953).

Naturalistic casual explanations are also found in African Societies. Ngubane (1977) reports that among the Zulu, naturally occurring diseases are called *Umkhulane*, that is, disease that just occur. Such diseases comprise serious cold, serious epidemics, such as small pox, and the like. Such diseases usually have seasonal changes and stages, as the case is for measles in children. Another frequently cited natural cause of some illness is cold and chilly weather.

Thus, the explanation for disease etiology in Africa is dualistic (Warren, 1975). African etiological concepts, therefore, do differ in basic ways from those of western society. The casual explanation directs the process of health seeking behaviour. Culture defines etiological concepts of disease and illness, methods of diagnosis and therapy (Kimani, 1988). Therefore, for the treatment to be acceptable to patients, it must make sense to them in terms of explanatory models.

A consensus between the patient and doctor about the causes of illness, diagnostic label and desirable treatment for the condition is seen as vital for a successful clinical

encounter. The search for a consensus between the clinician and the patient has been referred to as negotiation (Helman, 1994).

In the process of negotiation, each party tries to influence the other in regard to the outcome of the consultation, diagnosis and treatment prescription.

According to Ubel and Lowenstein (1997), clinicians should strive to reach informed consent with their patients by providing adequate information about the medication that they prescribe. Clinicians need, they say, to look for the best method that combines patient's values with medical factors in order to arrive at a medical recommendation that best reflects the patient's values. Clinicians should pay due attention to the emotional, behavioural and socio-economic context of the patient. This ensures that all dimensions of the patient's sickness are treated (Helman 1994)

2.1.3 Perceived severity of the medical condition

The perceived seriousness of a particular health problem varies from person to person. The patient evaluates the gravity of the sickness against several factors and conditions that obtain at any particular time. The degree of seriousness of illness may be evaluated against difficulties that confront an individual as a result of an illness episode which may, in turn, be seen in the light of medical or clinical implications. The issues of concern for the individual centers around the possible outcome of the disease such as death, reduced physical and mental functioning or permanent disability. Again, the perceived

seriousness of a condition may be extended to broader and more complex implications, such as one's job family life and social relations (Rosenstock, 1974).

Consequently, a feeling of susceptibility to a disease thought to be serious triggers some action. The particular course of action is not well defined from the word go. Rather, such a health related action is shaped by demographic, socio-psychological and structural variables (Cockerham, 1992). That is, while an individual may perceive a given course of action to be effective in reducing the threat of disease, the option may not be taken if it is, for instance, defined as expensive, unpleasant, painful or unconvincing. For example, a patient may appreciate the efficacy of certain recommended drugs but may lack the financial means to purchase all of them. At the same time, the prescribed drugs with known side effects and contraindications may not be taken by patients.

Becker *et al* (1974) extend the concept of susceptibility to mean the probability of the reoccurrence of the health problem. They found that mothers who perceive certain diseases to be a threat to their children and saw the threat of its reoccurrence, complied with prescribed regimens. They thought that by following doctor's recommendations, this would lead to a reduction or even an elimination of the threat. Such mothers are said to have total confidence in a physician's ability and accuracy of diagnosis and the efficacy and effectiveness of the treatment. These factors provided mothers with an incentive value of compliance.

2.1.4 Therapeutic options

People all over the world have varied therapeutic options. During an illness episode, people choose among alternative medications. The choice is influenced by such factors as availability, cost and efficacy of the therapy. One or a combination of therapies may be utilized in a bid of alleviate sickness. In Africa, the therapeutic options available can be broadly divided into two medical systems, namely, traditional and western systems. These two operate in Africa without necessarily clearly defined boundaries.

Traditional medicine refers to the indigenous systems of medicine which are firmly rooted in the culture of the people and therefore, part of their heritage. As such, it may evoke considerable admiration and even emotional attachment to a significant section of the people.

According to Sofowara (1982), traditional medicine can be described as the total combination of knowledge and practice used in diagnosis, prevention and elimination of the physical mental and social conditions (disease) based on past experience and observations, and often handed down from generation to generation, either verbally or in writing. Traditional medicine effectively provides psycho-social support because of its magico-religious component (Foster and Anderson, 1978).

The practitioners in traditional medicine are people recognized in the community as competent to provide health care by the use of plant, animal and mineral substances, and other methods. They include herbalists, physiotherapists, diviners, seers, spiritualists,

birth attendants and the like (Sindiga; Nyamwaya, 1992). These types flow into one another and are sometimes combined into same the individual (Harley, 1970). The forms of traditional medicine range from herbalism, acupuncture, hair therapy, vinegar and honey, to auras and baths (Law, 1976). Some of these forms are currently recognized in western medicine.

Authors have levelled certain criticism against traditional medicine as lacking in standardization and preset dosage (Sofowara, 1982). But recommendations provided by traditional practitioners, such as half a glass or full a glass, can rightly be termed as dosage.

Western medicine refers to the medical system that evolved in the industrialized nations of the Western and which was introduced in Africa via missionaries. Falola and Ityaryar (1991) note that prior to its introduction in Africa, western medicine had benefited from germ the theory, as well as knowledge of pathology, physiology, human anatomy and technology brought about by the industrial revolution. Its introduction, they contend, therefore, brought new changes in Africa. These include: emphasis on curative care, leading to the building of hospitals and medical schools; expensive curative approach, which entails travelling to hospitals and paying bills; and inaccessibility to health care due to shortage of facilities.

The introduction of western medicine did not completely eradicate or replace traditional medicine. It only provided an alternative and contributed significantly to pluralism in

Sample DV-2003 Green Card Lottery Entry Envelope (Generic Example)

6 - 10 inches (15-25 cm) long

3.5 - 4.5 inches
(9-11 cm) wide

<p>Native Country Name Full Return Address</p>	<p><input type="checkbox"/></p>
<p>DV-2003 Program Kentucky Consular Center XXXX Visa Crest Migrate, KY 4190X-XXXX, U.S.A.</p>	

Sample DV-2003 Green Card Lottery Entry Envelope (Example for Applicant Who is Native of Poland)

6 - 10 inches (15-25 cm) long

3.5 - 4.5 inches
(9-11 cm) wide

<p>Native Country: Poland Jarek Wroslaw 40673 Copernicus Street Warsaw, Poland 34M-211</p>	<p><input type="checkbox"/></p>
<p>DV-2003 Program Kentucky Consular Center 3003 Visa Crest Migrate, KY 41903-3000, U.S.A.</p>	

health care. Sofowara (1982), notes that introduction of the western medical system to a people whose health problems were previously met by an indigenous system just creates alternatives. Most people still resort to traditional medicine., especially for those ailments that are thought to be best or effectively combated by traditional medicine (Melrose, 1982). Kimani (1995) reports that traditional healers successfully manage those diseases whose etiology is not very clear and the pattern of occurrence irregular. Such diseases are mostly believed to be caused by witchcraft, sorcery, and a breakdown of rules of conduct in the society. She contends that traditional healers satisfactorily manage infertility and other obstetric and gynaecologic disorders. Maclean (1971) and Imperator (1977) report that traditional medical practices still flourish in the rural and even urban areas of Africa. Kimani (1995) on her part observes that in Kenya urban traditional healers appear to thrive in low income areas of the towns. Therefore, it is not uncommon today to find a person who believes that illness is caused by witchcraft going to a traditional healer for the remedy.

The plurality of health care has given clients a range of choices to pick from. In fact, people now utilize the services of modern health practitioners, traditional healers, as well as healers who combine the bible and traditional medicine at ago. In the end, the person may not tell exactly which of the practitioners actually cured him/her(Wandibba, 1997).

Since both medical systems do co-exist in the same environment, the chances of competition and conflict are very high, with each system trying to outwit the other. But a cursory look at both systems will reveal their close association. In fact, there are modern drugs which are directly derived from traditional medicine and used for the same ailments

as in traditional medicine (Melrose 1982). What is required is due recognition of each system as striving to attain a better health status for the population, their different modes of treatment notwithstanding.

Nyamwaya(1995) gives 4 areas where traditional and western medicine interact. The first is sequential zigzag where a patient starts using one form and then moves to the next one and then reverts to the earlier one (oscillates between the two). The second one is what he refers to as supplementary where one uses only one of the two forms. The third one is described as competition where the decision is made to use either one form depending on various factors. Finally, is what is described as complimentary, where by both types of medicine are considered as necessary for complete healing.

Studies done in Kenya by scholars such as Nyamwaya (1982) and Mwabu (1986) have shown a wide range of therapeutic options. These include western medical services offered in government hospitals, health centres, private hospitals, traditional healers and medicine, faith healing, drugs sold over the counter or in pharmacies. It was the interest of this study to establish whether the use of these alternative medication has an effect on patient compliance with drug prescriptions.

2.1.5 The meaning of medication

People have certain ideas and attitudes about the use of medicines. The most common idea is that one takes medicine if one feels sick. Sometimes people on a medication course stop taking medicines when symptoms disappear. People also have notions of the

appropriateness of the drugs for their personal illness. Harwood (1978) (cited in Heinemann, 1994) undertook a study among the Puerto Ricans in New York to find out attitudes and ideas of these people about medications. These people divided all medications, food and illness into three groups, namely, hot, cold and sometimes cold. Penicillin is regarded as “hot” drugs that is appropriate for a cold illness such as rheumatic heart disease. So, individuals with “hot” conditions like diarrhoea would not accept penicillin treatment. Also, pregnant women do avoid taking “hot” drugs because such medications are believed to cause “hot” illness such as rashes.

People also have ideas about what sort of medicines they like. Buchler (1964) observed that people on the Grand Laymans Island in the West Indies prefer to take medications in liquid form, something that is related to their customary use of bush tea. The physical properties of the drug itself such as taste, shape and colour may not endear it to some people. In the same vein drugs with known undesirable side effects may not be taken fully (Donovan and Blake 1992).

Moreover, the success of the treatment or medication is often evaluated differently by clinicians and patients. Patients more often than not see the disappearance of symptoms as an indication of successful therapy or treatment. As such, patients, in most cases, stop taking drugs immediately disease symptoms disappear. However, the disappearance of the disease symptoms does not necessarily mean that the sickness has effectively been combated.

2.1.6 Socio-demographic variables

Socio-demographic factors such as social class, age, sex, education and marital status have been given necessary attention in compliance literature and studies. The interesting thing to note is that there seems to be no consistent relationship between compliance (non-compliance) and these factors. One would expect such a factor as education to have positive relationship with compliance. A highly educated person is expected to have some awareness concerning the proper use of medication and the harmful effect of non-compliance. However, most researchers do not find any significant correlation between non-compliance and the aforementioned socio-demographic factors see for example (Hayes-Bautisa, 1976; Conrad, 1985; Donovan and Blake, 1992).

Economic status is perhaps the only factor that has had a consistent relationship with compliance. Studies substantiate the relationship between poverty and lack of access to medical care (Cockerham, 1992). A person from a lower economic status may not have the financial resources required to procure all the required drugs that she or he could not obtain from the hospital.

2.2 Theoretical framework

This inquiry was informed by the health belief model and the symbolic interactionism theory.

2.2.1 Health belief model

The health belief model (HBM) was developed in the early 1960s by group of social scientists working with United States Public Health Services to explain preventive health

behaviour. However, it was later adopted by Becker *et al.* (1974) to explain other health-related behaviour, including patient's compliance.

The model assumes that beliefs and attitudes of persons are critical determinants of health-related actions. Within the framework, health behaviour depends or hinges on the value placed by a person on a certain outcome, and the person's belief that a given action will bring that outcome (Cockerham, 1992).

The gist of the model is that a high perceived susceptibility, severity of threat and belief in effectiveness of a proposed behaviour will, in the absence of barriers, lead to the higher propensity to change one's behaviour (Burger and Burns, 1988). According to this model, then, a health related action taken by an individual is due to that particular individual's perception that she/he is personally susceptible and that an occurrence of the disease would have some severe personal implications. The assumption in the model is that by taking a particular action, susceptibility to health condition and severity of the disease would be reduced.

2.2.1.1 Relevance of the model to the study

In terms of compliance, the health belief model suggests that patients are more likely to comply with doctors' or clinicians' recommendations and instructions when they feel susceptible to illness, believe the illness to have potential serious consequences and do not anticipate major obstacle such as side-effects or prohibitive cost (more benefits and fewer costs).

The extent to which the health threat is visible (cue) is a major impetus in triggering action (Rosenstock, 1966). The problem may be seen in terms of medical and clinical consequences, or in terms of its effect on one's physical and mental functioning as well as the possible outcome such as death. The seriousness of the condition may even be broadened to cover issues like the effect of the disease on the job, family and social relations.

The merit of the model is that even when the individual recognizes susceptibility he/she may not take action unless the individual also recognises that being ill will result in serious difficulty.

2.2.1.2 Shortcomings of the model.

The model assumes that patients act after some calculations based on health related beliefs. It, therefore, assumes that health beliefs are the most important aspects of subjective experience upon which rational decisions are made. It thus, ignores other aspects of human experience such as preferences, values and tastes that may affect how illness treatments are managed.

The health belief model does not explain doctor-patient interaction necessitating the use of symbolic interactionism theory.

2.2.2 Symbolic interactionism

Symbolic interactionism is a term that was coined by Herbert Blumer, (1934), (Cited by John, 1983). It is a school thought within the purview of social psychology. As a theory,

it concerns itself with the process of social interaction and inter-personal behaviour. Its focus is on the way social interaction is shaped and guided by symbols and the meaning attached to such symbols (John, 1983).

According to the theory, how an individual responds to an action of another in the process of interpersonal interaction depends on the relationship in which that action is embedded and how one sees and feels about that action. Therefore, each socio-interpersonal interaction is a meaningful encounter. Each actor gives purpose and significance to the others conduct and both react accordingly as per the meaning they receive. The meaning of an individual's action emerges during the process of social interaction.

The theory postulates that a world of reality becomes known of human beings in the symbolic form that is perceived by them. Symbols include the written and spoken language, symbols of appearance, such as gestures, clothes and body posture, and manners. Each kind of symbol is part of a code which others can read (John, 1983).

2.2.2.1 Relevance of the theory to the study.

The perspective suggests that people bringing different and non-complementary expectations to the interpersonal encounter are likely to experience some conflicts. Clinical consultation is a social process and an interpersonal interaction between the patient and the practitioner. Therefore, some discord due to some differences of expectations between the patient and the clinician is likely. For example, if the patient expects the clinician to act in a particular way, such as spending time answering

questions, but the clinician neither expects this nor does this, then some discord is likely, even though not expressed openly. This discord may result in feelings of dissatisfaction and failure to follow the practitioner's advice.

2.2.2.2 Shortcomings of the theory

Since the subject matter of the theory is individuals in the interactions process but not social structure, the theory sees life only in interpersonal spheres (angles) or perspectives. The theory, therefore, ignores the interplay of social structure. Furthermore, social structure is seen just as an out-come of individual decisions. In a nutshell, the theory grants too much autonomy to the individual.

2.3 Hypotheses

Based on the research problems, objectives of the study and literature review, the following hypothesis were posited:

1. Congruence of patients' and clinicians' explanatory models increases patient compliance.
2. The perceived severity of the disease is likely to increase patient compliance with a prescribed regimen.
3. The incompatibility of the drug administered with other therapeutic agents reduces patient compliance.
4. The nature of the drug administered influences the patient's compliance behaviour.

5. The cost of medication, in terms of undesirable side effects and financial implications influence the patient's compliance behaviour.

2.4 Operational definition of variables.

1 Dependent variable

Patient compliance: This refers to the extent to which the patient's behaviour, in terms of taking medication, coincides with medical advice. It is, therefore, a patient's adherence to the afore-scribed drugs. This is indicated by quantities of drugs actually taken, sequence of taking drugs and adhering to the subsequent appointment schedule.

2. Independent Variables

Explanatory models: This refers to notions about an episode of sickness and its treatment that are employed by those engaged in the clinical process (Kleinmann, 1980). These include doctor's/clinician's and patient's perception of the causes of illness, its appropriate treatment and the patient's expectations of the practitioners.

Severity of illness: This refers to the seriousness of the condition of the ill being. It is indicated by the observed behaviour that points to the magnitude of pain, inconvenience caused to one's social being, job and family life and the chances of the disease leading to death, or physical and mental impairment.

Drug incompatibility: This refers to the extent to which the drug administered does not go well together (exist together, rhyme) with other treatments applied. This is indicated by modification of the drug dose in order to combine well with other treatment options.

Nature of the drug: This refers to the physical properties and attribute of the drug. This is indicated by the drug's colour, taste, smell and form (liquid, tablet).

Cost of medication: This refers to the side effects and financial implications of the prescribed drug. Side effects include feeling dizzy, nausea, more sick, heartburn, and skin irritations, among others. Financial implications include cash money spent on the procurement of the drug.

CHAPTER THREE:

METHODOLOGY

3.1 Site

3.1.1 Location and size

Kanduyi Division is situated in the southern part of Bungoma District, Western Province, Kenya. Bungoma District is located on the southern slopes of Mt Elgon and it is within the Lake Victoria Basin. The district borders Mt. Elgon District to the north-west, Transoia District to the north, Lugari District to the east, Kakamega District to the south-east, Busia and Teso Districts to the west and south-west and the Republic of Uganda in the north west at Lwakhakha (Government of Kenya, 1996; 1997). The division is divided into five administrative locations and ten sub-locations.

Kanduyi Division borders Webuye Division to the east and north-east, Central and Sirisia divisions to the north and north-west, and Bumula division to the south-west. To the south the division borders Kakamega District with river Nzoia forming the common border. The division covers an area of 318 square kilometres (Government of Kenya, 1996; 1997). The division is divided into five administrative locations and ten sub-locations.

3.1.2 Topography and climate

The region has a surface of wide, almost flat, land separated by shallow rivers and resistant hills and ranges standing above the ground level forming Sang'alo hills, Mwibale hill and several other small hills. Most areas of the division lie below 1,500 metres and so form a basin that is prone to swamps, water logging and flooding, especially along river valleys. Clay soils are prevalent in these areas, which render roads impassable during wet seasons. In other areas, soils are well drained and they range from reddish-brown to yellowish-brown (Government of Kenya, 1997).

The position of Kanduyi in relation to Mt. Elgon influences both rainfall and temperature (Government of Kenya, 1996). Generally, Bungoma District receives rainfall throughout the year (Nasimiyu, 1985). The division receives both convectional and relief rainfall. There are two rainy seasons, that is, long and short rainy seasons. The long rains normally commence in March and continue into June while short rains start in July and continue into October. Farming activities such as planting and top dressing are carried out during the long rains.

The region experiences a mean annual temperature of about 21 to 22 degrees centigrade. The variations in temperatures are not significant in the region. However, the months between April and July tend to have lower temperatures while December to February tend to have higher temperatures. The climatic conditions make the

division, just as the whole district, a high agricultural potential and ideal for crop and animal husbandry (Government of Kenya, 1996, 1997).

3.1.3 Economic activities

Agriculture and animal husbandry are the main stay of the local community. The crops grown include maize, beans, sorghum, sweet potatoes, bananas, sugarcane, tobacco and an assortment of vegetables such as cowpeas, kales, pumpkin, *chisaka*, *murere* and *kimiro* (Nasimiyu, 1985).

Animals kept include cattle, goats sheep and poultry. Ownership of a large number of cattle, sheep and goats is, traditionally, a reflection of wealth. Cattle provide milk from which butter and ghee are derived. Cattle are also used to settle bride wealth payment obligations. Sheep and poultry have been, traditionally, domesticated for ritual purposes. Most sacrifices are accomplished by slaughter of chicken and sheep. Livestock are also used as items for exchange (Nasimiyu, 1985; Nangendo, 1994).

Other economic activities include trading, fishing, agro-forestry production, pottery, basket-making, and bicycle repairs (Government of Kenya, 1996, 1997).

3.1.4 Health facilities

Health facilities in the division are provided by a number of agencies, which include the Ministry of Health, non-governmental organizations, mission/church and other private agencies like companies and individuals. These have given rise to different

health institutions in the division. These range from hospitals, nursing homes, health centres, dispensaries and clinics owned by companies and individuals, (Government of Kenya, 1997). Some of these include Bungoma District Hospital, Lumboka Memorial Hospital, Bungoma Nursing Home, Elgon View Nursing Home, Lady Irene Nursing Home, Nzoia Sugar Medical Centre, Bulondo Sub-health Centre, Mechimeru Dispensary, Kibabii Dispensary, Prison Dispensary and Central Medical Clinic.

3.1.5 Population

Kanduyi Division is dominantly inhabited by Babukusu (Luyia Sub-group). However, people of different ethnic backgrounds are found in the division especially in the urban centres such as Bungoma Municipality , Nandolia Market Centre and Bukembe Market Centre.

Demographic figures indicate that Kanduyi Division is one of the highly populated areas of the district and it shows a high population growth rate. The division has the largest population in the district after Webuye Division. According to the 1989 census projections, the division was to have a population of 139,684 in 1999. Population density of the division is one of the highest in the district (Government of Kenya, 1997).

The division has a high population because of good fertile soils and a favourable climate for agriculture as well as concentration within the urban centres of Bungoma municipality and Nandolia. The high population density has led to an increasing

fragmentation of land and is threat to environment due to destruction of vegetation for fuel and to give room for settlement.

3.1.5.1 The People.

Babukusu are one of the sub-groups of the luyia ethnic group. Abaluyia are a Bantu-speaking ethnic group who migrated to Western Kenya at different times in the past. They have a diversity of historical roots with Bantu and non-Bantu origins. This has given rise to some variations in their dialects, customs and practices. Despite these variations, they speak mutually intelligible Luyia dialects and share many cultural traits (Were, 1967).

Babukusu trace their common origin from *Mubukusu*, a mythical ancestor (Were, 1967). The people are a partilineal society. This means that an individual gains membership of his or her father's clan by birth. Inheritance of property is strictly along male lines of descendants. In Polygynous marriage and family, only sons are given inheritance rights of the land that the mother cultivates(Nasimiyu, 1985).

The Bukusu society is divided into clans with each clan having its distinct and identifying name. Each clan has its own prohibitions and taboos, which regulate its social life and behaviour. For example, the *Balonja* clan does not allow its members to keep cattle which are brown with black stripes (Chikhafu Ching'enda).

Babukusu observe exogamous marriages. This means that an individual is prohibited from marrying his or her clan. Exogamy has to be observed on both the mothers and father's side. It is desirable for the marriage to result in children since children, especially males, are highly valued. The value placed on children is one of the factors that have contributed to prevalence of polygynous marriages as men take on other wives when their current ones do not give forth to children of the desired sex or are barren. In addition, Nasimiyu (1997) observes that the economic importance of women is another factor behind polygynous marriages as additional wives were a source of extra labour.

Circumcision is the important initiation rite that all males have to go through in order to be transformed into adults. All those circumcised in the same year belong to the same age-grade (Wesonga, 1985). In the past, young adults formed a standing army that had to wade off external transgression. Indeed, Babukusu have a history of resistance to external invasion. The final war of resistance pitted them against the British at Chetambe fort in 1895 (Wandibba, 1985).

Traditional healers and practitioners in Bukusu community include herbalists, diviners, traditional birth attendants and priests. These practitioners do command a lot of mystical powers. They are often consulted by people of all walks of life in order to remedy their health problems. Diseases that are appropriate to such therapies include sudden and violent illness, repeated bad dreams, and other forms of illness that occur as a result of curse or failure to perform certain rituals (Wangeer, 1949).

3.2 Study Population

The population of the study comprised outpatients attending public and private health institutions. Those selected for interviews were males and females over 18 years of age and residing within the boundaries of Kanduyi Division. Also, interviewed were key informants comprising modern medical practitioners such as doctors, clinical officers, nurses and dispensing pharmacists. Others were church leaders, local administrators and other knowledgeable people in the research topic in the community.

Key community informants, for instance the health personnel, are important because they deal directly with patients. Other key respondents were purposively selected by virtue of the in being opinion leaders, knowledgeable and had interest in the topic of research.

3.3 Sampling

Due to time and financial constraints, *inter alia*, a sample of the patients was drawn to represent the study population. (Hinkle *et al.* (1992) observed that it is very important for the researcher to operate with a sub-set of the sample of the population if it is impossible or practically not feasible to study all members. However, a lot of care needs to be exercised in order to come out with a sample that is representative of the population. If a representative sample is obtained, then the findings are generalisable to

the whole population and hence external validity is maximized. One way of maximizing external validity is through randomization (Kerliger, 1974).

The method that was used in this study was stratified random sampling. Stratification was along the type of the health institutions in the division. To be as representative as possible, all the cadres of health institutions in the division were represented.

First, the health institutions in the division were divided into four categories, each forming a stratum. The categories that were arrived included dispensaries, health centres, nursing homes/medical centres, and hospitals. The researcher started with the category of both private and public dispensaries. All the dispensaries in the division were assigned arbitrary numbers. The numbers were written on the pieces of paper of equal size and then folded in the same way. All the folded pieces of paper were then put into a box and then shaken thoroughly. The researcher, there after, randomly picked one paper from the pile. The dispensary that was randomly picked from the box was selected, as an area where respondents would be selected from.

The same procedure was done for the remaining categories. The process yielded the following health institutions as areas where respondents were selected: Central Medical Clinic, Bulondo Sub-health Centre, Nzoia Sugar Medical Centre and Bungoma District Hospital. Finally the researcher went on to select 25 out-patients from each of the health institutions. These were selected randomly using convenient sampling on their various days of consultation. The researcher came up with a sample size of a 100 respondents to

whom the questionnaires were administered. Each responded was recruited and interviewed partially just before consultation. The same responded was followed to his/her home after, Say, three or so days depending on the duration of his/her medication.

The key informants were purposively selected depending on their knowledge of the study topic, their interest in the same and their willingness to participate.

3.4 Methods of data collection.

This study used well-known first –hand data collection methods. These were: formal interview, direct Observation, Interview schedule for key informants and Informal interviews.

3.4.1 Formal interview

This study used a questionnaire as the major instrument of data collection. The questionnaire was designed and administered to every respondent. The researcher constructed questions whose wording and sequence were fixed and identical for every respondent. This was meant to ensure that variations in response are attributed to actual differences between respondents and not the researcher.

The written questionnaire had both closed and open-ended questions. The questions were formulated in relation to the study hypotheses. A draft questionnaire was pre-tested during the pre-testing stage. This facilitated the identification and correction of all forms

of mistakes on the questionnaire. At this stage, additional questions were incorporated and inappropriate ones left out.

The questionnaire was used to gather information on the respondents' background, their medical information(diseases and prescribed medication), patients' and clinicians' explanatory models, Patients' own assessment on the gravity of their illnesses, therapeutic options used by patients, the meaning of medications in the patients everyday lives, side effects of the medications and the financial implications of the prescribed drugs.

3.4.2 Direct observation

This method was used side by side with the survey method. This entailed careful, accurate watching and noting of phenomena. Among the issues observed were the respondent's behaviour in the examination room, the nature and type of prescriptions, and the clinician's communication with the patients.

The researcher carefully noted and recorded the nature of interaction between the patients and the health care personnel. By observing the activities and behaviour of the patients and clinicians, it was possible to gather very important information that could not be captured by the questionnaire.

The researcher also observed and noted the types of prescriptions recommended and given to the patients. He also made a physical count of the remaining drugs at the patient's home. In this way, the researcher was able to cross-check and ascertain the

extent to which the patients had adhered to prescriptions. Direct observation, therefore, supplemented data obtained through formal interviews.

3.4.3 Key informants

An interview guide was formulated and administered to the key informants. A key informant was any person who was especially knowledgeable in the study topic, interested in the research theme and displayed experience and willingness in the particular issues. People with such characteristics were purposively selected to illuminate and elucidate issues of interest.

The key informants included health personnel, local leaders, church elders and other members of the community that were found to have a wealth of information. All key informants, with the exception of the health personnel, were considered to be representative of the large Bukusu community. These gave their opinions, attitudes and knowledge about medicines and drug taking behaviour. Older key informants were particularly relied upon to provide an array of information on traditional therapy and the community's etiological concepts.

3.4.4 Informal interviews

The delicacy of the research topic necessitated a great deal of flexibility and versatility on the part of the researcher. Thus, the researcher, out of necessity, had to cultivate informal interviews with the research subjects. This point is underscored by Cohen (1981), who

observes that social science scholars often have to deal with delicate social relationships of a dynamic nature.

An informal interview constitutes a casual conversation with people as the researcher proceeds with his/her work. The conversation takes place without any detailed and strict procedure. Questions that address the study topic are posed to people in a casual manner without adhering to any format.

This study opted for the informal interview in order to supplement the information obtained by other methods. In his defined role, the researcher could meet a friend, a relative or any person. A conversation would develop concerning the mission of the researcher in the area. The researcher's tools of work could be source of attraction and prompted them to ask some questions. The researcher would then follow up with his questions on the research theme.

At certain times the respondent's neighbour, wife husband or child would wish to be talked to concerning the research topic. After the formal interview, the researcher allowed such people to present their views, after explaining to them the research theme. Such conversation elicited very important information that was not forthcoming by the use of other methods.

3.5 Data analysis

Once collected, the data were coded, grouped and interpreted by the use of descriptive statistics. *Hinkle et al.* (1982) defined statistics as the theory and procedures used for the

purpose of understanding data. There are two types of statistics, namely descriptive and inferential statistics.

The descriptive statistics used included percentages, frequencies, mean, mode and range. Blalock (1978) views this branch of statistics to be important because it gives a concise picture to data.

3.6 Problems encountered in the field.

This study was not done without hurdles since problems kept emerging from time to time in the course of fieldwork. Some problems were solved in the field while others could not be solved.

Firstly, tracing the recruited respondents was quite a difficult task. This problem was exacerbated by the fact that the respondents were selected from medical institutions, most of which were miles away from their respective homes. Some respondents deliberately misled the researcher about the directions to their homes. The features that they mentioned such as hills, schools, markets or rivers as being near to their homes were in most cases very far. Even for those who gave correct and clear directions, it was a taunting task accessing them. This made my research last three and half months instead of the planned two months.

Most respondents mistook the researcher for a medical practitioner. They often expected and, in fact, asked the researcher to help solve their health problems as well as those of

friends or relatives. There were cases where the researcher was requested to provide a different prescription from the one hitherto provided, as this was considered to be ineffective. Others presented the researcher with their long-term health problems. Although the researcher went to great pains to explain his academic background, their reaction indicated that some of them did not believe him. In most cases, the researcher advised them to seek treatment from the medical hospitals and clinics around.

The other problem was presented by medical doctors. They insisted that they were bound to keep medical information about their patients in strict confidence. They were not ready to allow the researcher to see their patients or, worse still, note their diagnosis. Those in the public health institutions insisted that the researcher had to, first of all, get clearance from the medical officer of health. Those from a company hospital insisted that the researcher had to obtain permission from the company management. The manager concerned was away on official duties, so, the researcher had to wait for two weeks before he came back.

Furthermore, the doctors and clinicians suspected that the researcher had been sent by the government to spy on how they treated patients. The researcher clarified that his was purely an academic pursuit.

3.7 Ethical considerations

A great deal of consideration was given to ethical issues since the subject of patient compliance touches on the confidentiality and privacy of the respondents. The researcher

made a series of consultations with relevant authorities prior to actual interviews. Before visiting the health institutions to recruit respondents the researcher had to get official permission from the district medical officer of health. The researcher explained to the patients the nature and objectives and implications of the research before recruiting them as respondents. They were assured that their medical conditions(diseases and prescriptions) and other information would be kept in strict confidence.

Again, the researcher did not monitor how patients took medications all the time that they were supposed to take them because this would be tantamount to the invasion of their privacy and, hence, unethical. Respondents were interviewed on the day of clinical consultation and then followed later to their homes on the last day taking their prescribed drugs.

Finally, for confidentiality purposes, respondents were not interviewed in the presence of other people. Where necessary the researcher had to ask for permission from husbands before interviewing their wives.

CHAPTER FOUR

SOCIO-CULTURAL AND ECONOMIC DIMENSIONS OF PATIENT COMPLIANCE

4.0 Introduction

This chapter presents and discusses the findings of the study based mainly on the qualitative data. The data are presented and discussed from one point to the next one without a clear sense of which findings are more important or even more central to the purpose of the study. Finally, the data are sub-divided into sections and headlines that are in correspondence with the hypotheses of the study.

4.1 Socio-demographic characteristics of the respondents

The researcher administered the semi-structure questionnaire to a total of one hundred respondents who were above 18 years and resident in the study site at the time of the field work. The respondents had varying socio-economic characteristics.

4.1.1 Age and sex

The respondents were of varying ages ranging from 18 to 74 years. Their average age was 30.3 years. The modal age bracket was between 22-26 years. The researcher interviewed both men and women. Of these 48% were men and 52% were women.

4.1.2 Marital status

The table below shows the marital status distribution of respondents.

Table 4.1: Marital status of respondents

Marital status	Frequency	Percentage
Never married	30	30
Married	58	58
Widowed	9	9
Divorced/separated	3	3
Total	100	100

As shown in Table 4.1, the majority (58%) of the respondents were married, 30% were single(never married) , 9% were widowed and 3% were either divorced or separated.

4.1.3 Educational level

Table 4.2 below gives a break down of the stage of formal education reached by the respondents. Each of this stage has a number of years conventionally held.

Table 4.2: Education status of respondents

Educational level	Frequency	Percentage
No formal Education	7	7
Primary	38	38
Secondary	34	34
College	17	17
University	4	4
Total	100	100

As indicated in Table 4.2 the majority of respondents had formal education. Of all the respondents, only 7% did not attend any formal schooling, 38% reached primary level, 34% reached secondary level, 17% reached college level while 4% attained university level of education.

4.1.4 Religious status

The majority of respondents were Christians (91%). Over half (57%) were Protestants while 34% were Catholics and Muslims (5%). In addition, there were adherents of African traditional religion (3%) while 1% reported no affiliation to any religion.

4.1.5 Occupation

The respondents were also asked about their occupation. Sixty percent of them reported that they were farmers mostly engaged in crop and livestock husbandry. Teachers comprised 8%, civil servants comprised 4%, factory workers consisted of 12% while traders consisted of 4%, and 2% reported that they were home makers (house wives).

4.2 Medical information

The respondents' medical conditions were diagnosed by the respective clinicians or doctors. Table 4.3 below shows the frequency and percentage distribution of disease as diagnosed by the medical practitioners.

Table 4.3: Respondents medical diagnosis

Name of disease	Frequency	Percentage
Clinical malaria	43	43
Urinal tract infection(U.T.I)	10	10
Upper respiratory tract infection (U.R.T.I)	7	7
Malaria, urinal tract infection	6	6
Upper respiratory tract infection and malaria	8	8
Skin disease	8	8
Chest pain	4	4
Mastitis	2	2
Sinusitis	3	3
Otitis media	1	1
Loss of libido	1	1
Lumbago	2	2
Diarrhoea	3	3
Soft tissue injury	2	2
Total	100	100

As the table indicates, malaria constituted the majority (43%) of the disease incidence. Other diseases with noticeable occurrence in the study area are urinal tract infections (10%), skin diseases (8%) and upper respiratory tract infections (7%).

These findings closely resemble those in the Bungoma District Development Plan(1997).In this booklet, Malaria and acute respiratory infections are listed as the most prevalent, accounting for more than 65% of the total morbidity cases in the district. Malaria's high incidence is attributed to the fact that the region has sugar belt zones and other vegetation provide conducive habitat to the adult mosquito(vector).Also disused quarry pits, which hold stagnant water are also a major contributory factor. On the other hand, respiratory infections' prevalence is attributed to the humid tropical atmosphere and low environmental sanitation(Government of Kenya, 1997).

4.3 Patients' and doctors/ clinicians' explanatory models

In order to establish their explanatory models, respondents were asked about the type of the diseases they thought they were suffering from, their causes and what they considered to be appropriate treatment for their ailment. Concerning the type of disease, the following statistics were obtained (Table 4.4).

Table 4.4: Respondents’ definition of their diseases

Response	Frequency	Percentage
Malaria	48	48
Cough/flu	15	15
General body pain or injury	3	3
Sexually transmitted disease	10	10
Backaches	2	2
Diarrhoea	3	3
Erection problem	1	1
Breast disease	2	2
Skin scratching	8	8
Do not know	4	4
No response	4	4
Total	100	100

Table 4.4 shows that the majority (48%) of the respondents thought that were suffering from malaria, with some referring to it as *Maleria*. The respondents referred to all upper respiratory tract infections as coughs/flu (*sifuba*). The respondents thought that all urinal tract infections were sexually transmitted diseases (STDs). Women respondents referred to these diseases as *endwasi*. Men, on other hand, referred to then as *bulwalwe bwe bakhasi*, which, literally translates to the “diseases of women,” implying contraction from

female sexual partners. This demonstrates that men blame their women counter parts for incidences of sexually transmitted infections.

When juxtaposed against the clinicians' or doctors' diagnosis, 49% of the patients' perception tallied with medical practitioners', 43% differed while the rest(8%) could not be clearly placed as these were either no-responses or they responded that they did not know their ailment. Of those whose definition of the disease was similar with the medical practitioner, 71.43% complied with medical prescriptions. On the contrary, those whose perception was dissimilar with the practitioners' diagnosis, 81.39% did not comply with medical prescriptions.

In response to a question about the causes of their illness, the following tabulated statistics were obtained (Table 4.5).

Table 4.5 :Respondent's perceived disease cause

Cause	Frequency	Percentage
Fluctuation in weather	30	30
Mosquito bites	24	24
Nature (on its own design)	8	8
Witchcraft	15	15
Sexual partner	11	11
Cannot tell	7	7
No response	5	5
Total	100	100

From Table 4.5, it can be observed that patients have their own explanations concerning disease etiology. Eighty-eight percent attributed their disease to a certain cause whether, supernatural or natural. For example, malaria is ascribed to two principal causes, fluctuation in weather and mosquito bites. A good proportion of those without any formal schooling and those with primary level education cited cold weather to be the cause of malaria. Those with more years of formal education cited mosquito bites to be responsible for malaria bouts. This can, mainly, be attributed to their formal education that has exposed them to the germ theory. The others could have heard from friends, peers, relatives or through the media.

The terminology used by the patients to label certain illnesses is different from the medical labels. In this case, most respondents used the term malaria or *malaria* to ascribe to all the ailments that are characterised by fever, chills and shivering. So when a patient told a medical practitioner that he/she had malaria he/she meant that the disease symptoms were fever, feeling very cold and shivers. Likewise, when the respondents used the term *bulwalwe bwe bakhasi*, or *endwasi*, this was their way of saying that their diseases were manifested by vaginal or penis discharge and feeling of pain in the sexual organs or even in the groins when passing urine.

The terminology used by the patients and medical practitioners may bring mutual misunderstanding between the two parties with clinical or compliance implications. The same term may have entirely different meaning for the doctor and the patient. The technical medical jargon may be incomprehensible to the lay patient. In the same vein,

lay terminology may be incomprehensible to the clinician, especially those who are not aware of lay or folk theories of illness causation.

The above findings are also confirmed by Blumhagen (cited by Helman, 1994). His study found that the lay meaning of “hypertension” was different from medical definition of “hypertension”. In the same study, the lay beliefs about “germs” and “viruses” did not have any bearing with what is described in microbiology. The lay beliefs viewed germs and viruses as being vulnerable to antibiotics and antibiotics were demanded by patients even when the diagnosis was a viral infection.

As expected, witchcraft was also cited to be responsible for some illnesses experienced by the respondents. What emerged from the discussion with key informants, is that there appears to be no clear division of other diseases and those caused by witchcraft. In fact, such diseases may have symptoms similar to others. However, what appears certain is that prolonged ailment that does not respond to medication starts being suspected as having its origins from the designs of witches, sorcerers or evil eye.

The non-medical key informants were unanimous on the fact that when a disease starts, for example, as a simple headache and persists on to develop other complications, then it would be attributed to supernatural or magical forces. Some ailments that are ascribed to supernatural and magical forces include *bikumba* (casting of bones), *kumusambwa* (spirit possession), body wasting and weakening, odema and sudden, instant cardiac arrest or collapsing.

Most informal discussants also admitted that some of these illnesses do start as simple headaches or stomachaches and, sometimes take a long time before seriousness of the disease becomes obvious, thereby necessitating a re-evaluation. They said that witchcraft is inflicted on people if the person responsible is envious of their progress and success. In other cases, it is due to some social conflict emanating, for instance, from land disputes.

Asked about the appropriate and effective cure for such sickness, 68% mentioned traditional medicine, 14% indicated faith healing (praying), 2% cited modern medicine, and a further 16% cited a combination of modern medicine, traditional therapy and faith healing.

In a bid to obtain relief, patients try a number of therapies. People may seek treatment from modern health care providers, but when the ailment does not respond to such treatment, they resort to traditional medical practitioners.

When respondents were asked what they felt was appropriate treatment, the following responses were obtained (Table 4.6).

Table 4.6: Respondents' expectations

Response	Frequency	Percentage
Injection and tablets	34	34
Injection only	30	30
Tablets only	26	26
Clinician to determine	6	6
Urine, blood and stool analysis	4	4
Total	100	100

The above results clearly indicate that patients have their own views concerning what is appropriate treatment for their respective conditions. Their views concerning appropriate treatment is a function of either their past experience with illness and medicines or may have been obtained from significant others' experience like that of friends, family members, neighbours, and the like. Patients, therefore, expect certain forms of treatment which makes sense to them, in terms of their own view of ill health (Helman, 1994).

When asked further to evaluate the forms of treatment that they obtained, 16% indicated that it was very good, 22% said it was good, 30% reported that it was fair, 24% said that it was poor, while 7% did not give any response.

The ability of the doctor/clinician to fulfill the expectations of the patient has a bearing on what the patient would do with the drugs. In this case, 48% of the respondents had their

expectations met while the rest (52%) had their clinicians failing the expectation test. Of those whose expectations were made, 75% complied with medical prescriptions, but those whose expectations were not met, only 25% complied.

4.4 Disease severity

Disease severity as a variable was included on the assumption that the gravity of the disease would influence patient compliance behaviour. In order to assess the seriousness of their condition, respondents were asked about the nature of their illness, illness prognosis, the implication of ill being on the respondent's existence and whether the respondents felt susceptible to their illness.

When asked to indicate the magnitude of their sickness, 20% reported that it was very serious, 30% said that it was serious, 34% indicated that it was moderate while 8% said that their illness was not at all serious (minor). A further 5% pointed out that they did not know or could not tell the seriousness, while 3% gave no response.

The above responses emanated from the respondent's subjective evaluation of their sickness. They therefore, reflect what the respondents define as serious and what is not, depending on the socio-economic realities obtaining at that point in time.

What can be deducted from the above statistics is the fact that most patients only seek medical attention when they felt that their disease was serious or bound to be serious. Indeed, 84% of the respondents reported their condition to be ranging from moderate to

very serious, with only 8% reporting that it was minor. Besides, only 6% of the respondents went for medical attention after one day of sickness. The rest went for consultation after between two to fourteen days, with the majority seeking medical attention after three days.

It can also deduced that most people do not seek medical attention immediately with the onset of the disease symptoms. They first wait to see the progress of their illness. They apply self-medication by use of over the counter drugs or traditional herbs. The condition warrants medical consultation only when it appears unabated by the above means. Also illnesses such as simple headaches, stomachaches, simple fevers and common colds, are seen as too minor to warrant medical attention. In addition, the host of ailments or sickness such as shock, stress, and the like, do not have medical significance.

Concerning illness prognosis, the following results were obtained (Table 4.7).

Table 4.7: Respondents’ illness prognosis

Response	Frequency	Percentage
The disease would escalate	35	35
The disease would cause death	18	18
Other complications may develop	15	15
The disease would cause sterility	11	11
The condition would affect performance at place of work and one's social relations	20	20
No response	1	1
Total	100	100

From Table 4.8 it can be seen that majority (68%) of the respondents feared that their illness may grow more serious and lead to other complications or death, if the correct therapeutic intervention was not sought. Others reported fear of sterility (11%), especially those who suspected themselves to have been infected by sexually transmitted disease (STDs). A good proportion of them (20%) indicated that their condition of ill being would prevent them from going to their places of work, or affect their performance in formal or informal employment, or in domestic chores.

Fears of one or a combination of the afore-mentioned eventualities necessitated the search for a corrective therapy before the condition could get out of hand. These findings concur with Rosenstock's (1974) observations. According to him, an illness seriousness is assessed from medical or clinical and social implications. The concern of the individual is focused on such issues as the possibility of death, impaired physical or mental functioning, permanent disability and much more complex issues such as how the state of sickness affects one's job, daily chores and also how one's social life is interrupted. The probable disease course is deduced from the patient's experience with the disease or from significant others such as family members, friends, colleagues and neighbours.

The feeling of sickness and the perception of the gravity of the illness have a bearing on patient compliance. Of those who reported that their condition ranged from moderate to very serious, 61.9% complied. About sixty-one percent of those who stopped taking medication reported that they were not feeling at all "ill" or thought that they were cured. One respondent put it succinctly: *kamalest kalio khusilikha balwale; yaba noonile mala wachililila khumila kamalesi aba okonaka busa* (medicines are there to cure the sick; continuing to talk to them when cured is tantamount to wasting or misusing them).

The key informants and informal interviewees agreed that the majority of patients take medications only when they feel "ill". Most people think that symptomatic relief signals the end of sickness or complete cure. However, the disappearance of symptoms does not mean that the disease has been completely combated. The disease-causing organism

requires a full dose of medication to be completely exterminated. Short of this, they mutate into a new shape there by acquiring or developing some drug resistance. Indalo (1997) reports that drug resistance compromises the drug's effectiveness.

Pertaining to whether the respondents felt susceptible to that particular illness, 48% answered in the affirmative while the rest (52%) answered in the negative. Of those who felt susceptible, 68.8% complied while only 23.1% did not comply.

From the above statistics, it is apparent that perceived seriousness and susceptibility impacted on patient's compliance. Patients who view their condition as serious and at the same time feel that they are susceptible to this condition are more likely to adhere to the consumption of drug qualities and sequences recommended. Susceptibility implies probability of disease recurrence. The probability of the recurrence of the disease presents a threat to the patients. They have to do something within their means to reduce or eliminate this ominous threat. Such patients comply trusting that following the clinician's instructions to the latter would result in the reduction or elimination of the threat (Becker *et al* 1974).

4.5 Alternative Medication

In the course of their treatment and in the search for "sound" therapy, patients do employ a variety of therapeutic options at their disposal. Asked whether they were utilising some other medications in addition to the one received from the clinic, 54% answered in the

negative. Of those that employed other medications, 37% of them indicated over the counter drugs, 31% employed traditional herbs, 12% faith healing, 16% utilised a combination of traditional herbs, *chang'aa* over the counter drugs and faith healing while 4% had no response for this question.

These findings are also confirmed by Nyamwaya's (1982) and Mwabu's (1986) studies of the use of therapeutic options in Kenya. According to them, the options range from western medicine provided in public and private hospitals, clinics and health centres, traditional medicine and traditional doctors, drugs sold over the counter and in pharmacies and faith healing. Western medicine comes in the form of injections, tablets, syrups, lotions, and capsules. On its part traditional, medicine is in forms of herbs, acupuncture, honey and baths (Law, 1976).

Patients make choices concerning which particular therapy to employ during illness episodes. Perceived disease etiology is one factor which features prominently in determining the appropriate treatment for a particular ailment. Other factors that come to bear on the choice of the therapeutic agent include availability and affordability and the perceived efficacy of the therapy.

There appears to be no pattern or particular way that is followed by health seekers in the utilisation of these health care facilities. What is certain is that one starts with one form and may change to another or combine with the other in the course of the disease

prognosis. The person's decision to engage any type stems from one's definition of one's illness, its perceived etiology and appropriate remedy.

The key informants were unanimously agreed that the first type of medication employed comes from its relative appropriateness to the particular ailment. For example, the illness discerned as deriving its origin from witchcraft (*bulosi*) will be referred to a traditional doctor. However, the same victim may, as well, be taken to a modern health care provider in order to obtain relief for consequences of that disease, such as spots or lesions. Again prayers may be used to help treat the same. The rationality to combine the various alternative medications stems from the fact that certainty about disease causality and efficacy is not absolute. The only barometer used by the patients to measure the efficacy of the medication is the disappearance of disease symptoms. Therefore, with persistence of the disease symptoms, other forms of therapy may be resorted to.

It was hypothesised that incompatibility amongst these alternative medications contributes to patient non-compliance. When asked about whether medications were incompatible, 66.6% reported lack of incompatibility while 33.3% reported some in compatibility.

Lack of incompatibility was reported by the majority of respondents because most of them used alternative medication, one at a time. The key informants reported that it is not in order to combine traditional medicine and western medicine at the same time.

Rather, they contended, it is wise to utilise one form at a time in order to eliminate any chances of hazardous effects of their incompatibility.

When those who reported incompatibility were asked about what they do in such cases, the responses were as shown Table 4.8

Table 4.8: Respondents' actions in face of therapeutic incompatibility

Response	Frequency	Percentage
Modify dosage	9	25
Use one form at a time	14	38.9
Stop use over counter drugs obtained	10	27.8
Go for advice at hospital	3	8.3
Total	36	100

There are no wide scale incompatibility cases because the majority of respondents avoided mixing alternative medications. Whenever respondents employed medications, they took them on different occasions.

4.6 Nature of medication

The nature of the drug was operationalised to include its physical properties (like colour, taste and smell) and form (injections, tablets, capsules or syrup). The drugs prescribed for the patients came in different forms (Table 4.9).

Table 4.9: Form of medication

Form	Frequency	Percentage
Injection only	24	24
Tablets/capsule only	29	29
Syrup only	5	5
Injections and tablets	42	42
Total	100	100

From Table 4.9, it can be seen that injections and tablets comprised just less a half (42%) of drugs prescribed, with syrups accounting for the least (5%).

Asked to evaluate the form of their drugs, 41% attested to liking both tablets and injections being together. Thirty percent said that they hated injections, 22% said that they liked injections only but detested capsules and tablets, while 7% had no response.

When asked further about injections, 48% stated that they went for all subsequent ones while 52% said that the did not. The respondents gave different reasons for not going for all injections. About thirty-eight percent said that injections cause swelling, 27% cited lack of money to settle outstanding medical bills while 34.6 attested to stopping going for injections once they felt they had recovered.

It is evident from the above statistics that the form of the prescribed drugs will be taken enthusiastically by some while others would loath it. The taking or detesting of any particular form comes from the patient's perception of efficiency of the said drug. During an informal interview one person retorted: *Kamelesi kekamechi katubanga nekamafuki bwangu* (syrups mix with blood faster). The assumption, according to this respondent, is that since syrups mix with blood, then they start to work faster and thus are more efficacious than others.

Concerning injections, the majority who loath them do so on account of their swelling effect or the pain they inflict when being applied. The non-medical key informants agreed that some people's bodies are averse to injections. Such bodies swell around the area where injections are applied. They were also unanimous that some people fret pain that accompany the administration of the injection even when no swelling is reported. Also, those who fail to clear medical expenses avoid going for the remaining injections.

Those who like injections have some trust in their efficacy and effectiveness. Such people believe that treatment is not complete without an injection. Some patients would grumble to others or show discontent to the clinicians who do not prescribe injections. The dissatisfaction usually shows itself through the patient's failure to take the tablets, capsules or syrups orally as required.

The key informants pointed out that the injections have certain advantages that make them popular amongst a section of patients. First, they have the unique advantage of

being either intra-muscular, intra-vascular or intra-venous, and so they cannot be vomited out for those patients who vomit. Also, they do not have the disadvantage of being misplaced or shared out among family members or friends, as is the case with oral tablets and syrups.

On the other attributes such as colour and taste, 41% attested to having a problem with them while the rest (59%) did not indicate any misgivings. Most of them had a problem with the taste, especially, the bitter taste as exhibited by the “quinine” type of drugs. Some patients complained about *bukhamba* (sourish taste in the mouth).

Asked about what they do when they have problems with the taste or colour of drugs, only 17% indicated that they stop taking them altogether. The rest reported taking some precautions to counter the bitter or sour taste of the drugs. Some reported that they take a lot of water while others said that they just swallow them without chewing. What was gathered from the key informants was that many people do not stop taking medication on account of their bitterness because the cost of the threat of sickness by far outweighs that of a bitter taste.

4.7 Cost of medication

The cost medication was operationalised to include the financial cost incurred in the procurement of medications and side effects that arise from taking the drugs. In order to assess the financial cost incurred in obtaining the prescribed drugs, respondents were asked questions regarding how they obtained the drugs, the distance from their homes to

the health institutions, the means of transport they used when going to the clinic and whether or not they honoured the scheduled subsequent appointments which clinicians and doctors.

On how the respondents obtained prescribed drugs the following results was obtained(Table 4.10).

Table 4.10: How respondents obtained prescribed drugs

Response	Frequency	Percentage
Obtained all drugs from clinic	25	25
Bought some drugs from chemist	44	44
Bought all drugs from chemist	22	22
Borrowed drugs from a friend, family members etc	9	9
Total	100	100

From Table 4.10 it can observed that only 25% of the respondents were lucky to obtain all the drugs from their respective clinics. The rest had to dip deeper into their pockets in order to procure part or all of the prescribed drugs. Lack of the required drugs was mainly witnessed in public health institutions.

The drug that were readily available in public institutions included procaine penicillin fortified (ppf.), chloroquine and aspirin. Other drugs, like fansidar, brufein and panadol, had to be bought by the patients. The main anti-malaria drug prescribed in public health institutions was chloroquine, while fansidar and comaquine were prescribed for the same in the private clinics. The main pain-killers given by clinicians in public health institutions were aspirin and panadol while brufein was preferred by private clinicians.

Of those who were required to buy some or all the drugs, only 24 respondents (32%) indicated that they bought all the required drugs, while the rest (68%) did not. Of those respondents who did not buy all the required drugs, 66.6% responded that they lacked money to buy all of them, 21.58% indicated that they did not see the need as they thought that they had completely recuperated, while 11.76% reported that since they were not responding to the treatment, it was useless to buy any more, or so they thought.

Concerning the distance covered by respondents from home to their respective clinics, the following results were obtained (Table 4.11).

Table 4.11: Distance from home to the health centre

Distance in kilometres	Frequency	Percentage
0 –5	23	23
5 – 10	32	32
15 – 20	28	28
Over 20	17	17
Total	100	100

Table 4.11 indicates that the majority (77%) of the respondents travelled over 5 kilometres to their respective clinics. Thus, for the majority of the respondents, some transport expenses were incurred in order to reach their clinics.

In response to a question about the mode of transport that they used to go to the clinic, 16% went on foot, 61% used a bicycle, 8% used a car and 15 % used a bicycle and a car. The bicycle was the modal form of transport with “boda-boda” (hired bicycles) accounting for the majority.

The majority of respondents had to incur some transport expenses in the form bicycle hire or paying for car fare on their way to the health institutions. Such costs did also affect their honouring of the subsequent scheduled appointments with the clinicians or doctors. Of those who had appointment schedules, only 24% of them did honour the appointment of those who did not go for subsequent appointments, 40% said they lacked fare, 25%

stated that they lacked money to settle outstanding medical fees, while the rest (35%) were either committed with other personal matters or did not see the need as they thought that they had completely recovered.

Concerning side-effects, 46% of the respondents attested to having them while the rest (54%) did not report any side effects. Those side-effects reported the following.

(See Table 4.12).

Table 4.12: Respondents' observed side effects

Response	Frequency	percentage
Skin irritation	28	60.87
Dizziness and vomiting	9	19.56
Hallucinations	2	4.35
Faster heart beat	2	4.35
Increase in body temperature	5	10.87
Total	46	100

From Table 4.12, it is clear that skin irritation was the most frequently cited form of side effect. This is the case because most treatment, especially for malaria, and in public health institutions in particular, uses chloroquine.

Concerning what respondents do in the face of the effects, 65.2% said that they continue taking medications in the face of side effects if only they still feel that they are sick, otherwise, they stop. About seven percent indicated that they take them back to the clinicians for further medical advice, while 28.3% reported that they take all medications whether they have side effects or not.

The key informants agreed that the cost of medication is becoming one of the leading causes of non-compliance. This due to the hard economic times and reduced government budgetary allocation for health services and subsequent cost sharing arrangements in the provision of health facilities. Most public health facilities are perennially without essential drugs. People who in most cases are poor, cannot afford the exorbitant cost of the prescriptions.

On the side effects, the key informants were of the view that it is only when patients feel sick that they take drugs in the face of their side effects. Otherwise, when they feel better or cured, they immediately do away with them, by either throwing them away or keeping them, to become part of the “family pharmacy”. These would be given to family members with disease symptoms that are throughout could be alleviated by these drugs.

No other variable is frequently associated with non-compliance in the literature as side effects. For example, Donovan and Blake (1992) contend that many patients who do not comply do so to reduce fears of side effects. On his part, Conrad (1985) reports that the

side effects that interfere with the normal daily social interaction are responsible for the reduction or termination of medication. Patients, who do not completely terminate medication, take fewer tablets with hope that this would reduce the side effects.

4.8 Conclusion.

This chapter presented and discussed the findings of the study. The findings indicate that some patients complied fully while others did not comply with clinicians'/doctors' prescriptions. Of all the respondents who sought treatment, 51% did not comply with the prescribed regimens. Of these, only 21.5% did not comply due to forgetfulness and confusion(ignorance). The findings, therefore, demonstrate that patients make deliberate decisions on whether to follow everything that the clinicians/doctors instruct them or not.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

In this chapter, a summary of the findings of this study is presented. Also, the chapter gives the conclusions drawn from the findings as well as the recommendations made by the researcher.

5.1 Summary

The thrust of this research was to investigate the soci-economic and cultural factors that influence and enhance patient compliance. The research was in response to the gaping need for more inquiries into the determinants of compliance since the previous findings on the topic are largely inconclusive and even contradictory. This state of affairs is attributed, by a host of scholars, to the fact that the notion of compliance has been approached from medically-centred perspective. From this perspective, the patients are seen as having no option but to adhere obediently and unquestioningly to the prescription, and those who do not are apportioned all the blame and portrayed as either ignorant or forgetful.

As a shift this common and “faulty” approach, this study sought to analyse the determinants of patient compliance from a patient-centred perspective. From this perspective, patients are viewed as legitimate, active partners in their treatment rather than passive participants. Cognizance was given to the fact that patients are decision-making individuals. They employ a cost-benefit calculus to arrive at rational and sound decisions in their everyday life. The treatment they receive is also given the same analysis. To do this, they draw upon the information at their disposal, which comes from such sources as family members, the general public, friends, neighbours and the media. The treatment given is evaluated against their own ideas about medication and illness. As such, they make choices about which treatment regimen makes sense to them and which does not.

This study has clinical as well as economic importance. From the clinical point of view, non-compliance reduces the effectiveness of the drugs. Also, some drugs are dangerous if taken in excess and may even cause death. On the other hand, the consumption of lower dosages than required leads to drug resistance. In the economic realm, non-compliance contributes to a waste of money that is used to purchase drugs that are never taken correctly, are just kept or even thrown away.

This study was informed by the health belief model and the symbolic interactionism theory. The gist of the health belief model is that people’s beliefs and attitudes are the principal determinants of health-related behaviour. It, therefore, suggests that patients are more likely to comply with medical prescriptions when they believe that the illness has

serious health consequences, feel susceptible to the illness and do not fore-see major obstacles like side-effects or prohibitive cost.

Symbolic interaction theory concerns itself with social-interpersonal relationships guided by symbols such as the spoken and written language, gestures, clothing, body posture and manners. The theory postulates that the people with different and varied expectations are likely to experience some conflict during the inter- personal encounter. Clinical or medical consultation is a social and interpersonal process involving the clinician and patients. The theory, therefore, suggests that differences of expectations between the two parties may result in some discord, which will eventually lead to patient's dissatisfaction and non- compliance.

The research findings established that non- compliance with medical prescriptions exists in the research area. Of all the patients who sought medical attention, 51% were non-compliant. Of these only, 11 respondents (21.5%) were non-compliant because of confusion and forgetfulness. Four respondents did not understand the prescriptions, for example, confusing the writing '1x2' meaning multiplying the figures to arrive at two tablets at ago. The rest (7 respondents) reported that they forgot once in a while to take the required drugs.

The findings demonstrate that the patients hold various explanatory models for their sickness episodes. The etiological concepts and expectations of the patients may differ or

tally with those of the clinicians. Subsequently, they determine the reactions of the patients to the medications offered by the medical practitioners.

When compared with clinicians' diagnosis, 49% of the patients' perception were similar with clinicians', 43% differed while 8% could not be clearly placed. Where there were similarities, 71.43% of the respondents complied with medical prescriptions while where there were dissimilarities, only 18.6% complied with medical prescriptions.

The findings show that most patients seek medical attention when they feel that their condition is serious or is bound to be serious. Most of them do not go for consultation immediately the symptoms show, but wait to observe the progress of the illness. They first apply self-medication and decide to consult medical practitioners when they see no changes. Also, most patients take medication only when they feel sick and terminate the same when they start feeling better.

Concerning alternative medication, 42% of the respondents indicated that they used such medication. These ranged from over-the-counter drugs, traditional medicine and *chang'aa*, to faith healing. However, most of the respondents did not report incompatibility among the therapies because most of them used one form of therapy at a time.

The findings indicate that medications given to patients ranged from injections, tablets, capsules to syrups. These forms are either liked or loathed by the patients, depending on

their tastes and preferences. Those that are received enthusiastically boost patient compliance while those that are not liked may not be taken fully.

Finally, the cost of medication in terms of side-effects and financial implication impacted on patient compliance. Drugs that elicited side-effects such as skin irritations, vomiting, dizziness, and so on, were not taken fully. Also, a good number of the respondents indicated that they lacked money to buy all the required drugs, to go for scheduled appointments and to settle the outstanding medical bills.

5.2 Conclusions

It is evident that non-compliance and compliance with medical prescriptions exist.

The explanatory variables, namely, explanatory models, severity of illness, drug incompatibility, nature of the drug administered and the cost of medication, affect patient compliance, in one way or another. Perhaps the best way to state this is to say that all the aforementioned variables have an important joint effect on patient compliance. The variables are interrelated, thus making it difficult to attribute observed effects to only one variable or the other.

It can also be observed that patients take medication reflexively. Of all the respondents that were non-compliant, only eleven of them did so on account of ignorance and forgetfulness. The rest (40) made deliberate decisions either to take medications as recommended or terminate them, skip some days and modify dosages. The decision was arrived at by considering the benefits of the treatment and the cost that entailed taking the

treatment. Each regimen is analyzed in isolation concerning how it meets the patient's expectations, its appropriateness to the ailment, its effectiveness and its desirable cost. Also, the meaning of medication in people's daily lives comes to count in as far as continuation or termination of the regimen is concerned.

The socio- demographic characteristics of people do not significantly affect their compliance behaviour. Even the medical doctors did not report that they themselves are non-compliant at one time or another. Also, some highly educated respondents were non-compliant with medical regimens while some respondents with little education or none did comply. What appears certain is that the decision to comply or not stems from the attributes of the treatment itself such as its efficacy, appropriateness, cost, side effects and how people understand medication taking behaviour, rather than socio-demographic attributes of the people.

Finally, the clinician- patient interaction is characterized by a differential and deferential power relation in favour of the former. Most patients do not amass enough courage to put all the questions that they have to the clinicians. Neither do they repudiate what they think to be inappropriate prescription nor do openly show dissatisfaction and disaffection. Thus, they fail to offer substantial guidance to the clinicians, and also they do not participate effectively in partnering with clinicians in order to arrive at an appropriate and acceptable treatment. On the other hand, clinicians do not recognise the legitimacy of the patient's ideas and information concerning medications. With their patronizing tendencies, they deny patients the opportunity to express the same.

5.3 Recommendations

Clearly, there is considerable need for a more focused research on patient compliance with medical regimens, given the existence of non-compliance. To have a breakthrough to this end, I would suggest that the patient- centred perspective or orientation should be the *modus operandi*. This is in view of the fact that the sufferers of illness do manage the daily existence of which medications are only part.

Further, it is recommended that the researchers should be broad in the coverage of diseases. Rather than deal with patients with particular ailments only such as arthritis, tuberculosis, epilepsy and the like, as has often be the case, I would recommend that conditions (ailments) be broadly grouped into chronic illnesses and acute illnesses. The researcher could then select which category of illness to focus on. Such an approach would ease matters and allow for generalizations.

Third, clinicians should duly appreciate the legitimacy of the patients' lay ideas about illness and medication. As such, they should try to discover how patients and those around them view disease origin and prognosis. The effect of illness on patients other aspects of life such as income, socio-psychological well being, is equally of utmost importance. The clinician could gather information about patients' cultural, religious and socio- economic background. This will ensure that ill health is placed in a wider context, thereby helping in treating the physiological as well as socio-psychological ill being.

Fourth, I would suggest that all the clinicians should strive to improve their interaction and communication with patients. To do this, the clinician should try to gain insights into culturally specific presentation of illness, especially the terminology utilised. They should also encourage patients to state their experiences and interpretation of their own condition. The patients should seize this opportunity to unequivocally express their expectations and misgivings of certain medications if any. This will ensure that the acceptable and appropriate medication is prescribed.

Lastl, but not least, this study found that many a patient terminates medication upon the disappearance of disease symptoms or when they start to feel better. This implies that the efficacy of the therapy is judged by its own ability to alleviate symptoms and also the patients take medications only when they feel that they are ill. However, symptom cessation is not always a sign of complete recovery. Therefore, a great deal of health education is required to create awareness about the dangers of not finishing the prescribed dosages and the need for taking the drugs even without symptoms.

APPENDIX ONE

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APPENDIX TWO

QUESTIONNAIRE

Respondents background

- 1 Name of the responded
- 2 Sex of the respondent
1 Male 2 Female
- 3 Age of the respondent.....
- 4 Marital status: 1 Never married 2 Married 3 Divorced 4
Separated 9 other (specify).....
- 5 Educational status: 1 Never attended school 2 Primary 3 College
4 University 9 Other (specify).....
- 6 Respondent's religion: 1 Catholic 2 Protestant 3 Muslim
4 Hindu 5 African traditional religion
9 Other (specify).....
- 7 Respondent's occupation.....
- 8 Respondent's approximate monthly income.....

Medical information

- 9 Name of the clinic (s) attended.....
- 0 Name (s) of the drugs prescribed.....
- 1 Name (s) of the disease (s).....
diagnosed.....
- 2 Quantity and sequence recommended for the drug consumption.....
.....

Patient's explanatory model

- 3 How are suffering? (list symptoms as explained by the patient).....
.....
- 4 What disease or illness do you think you are suffering from?.....
.....
- 15 What do you think caused this sickness?.....
.....
- 16 For how long have you been sick?.....
- 17 What do you think is the appropriate treatment for his ailment?.....
- 18 Are your family members aware of this condition? 1 Yes
2 No skip to 20
- 19 What do they think is the cause of your sickness?.....
- 20 Who decided for you to come to this clinic? 1 Self 2 Family member (s) 9
Other(specify).....

After consultation

- 21 How would you evaluate the treatment that you received? 1 Very good 2 Good
3 Fair 4 Poor 10 Don't know
- 22 How do you feel now? 1 Better 2 Same 3 Worse 9
Other(specify).....
- 23 How would you evaluate your condition (problem)?
1 Fully alleviated 2 Partially alleviated 3 Not at all alleviated
- 24 Please explain your answer to question 23.....
.....
- 25 In your understanding, are there any diseases that can affect one because of
misconduct against the ancestors or the gods? 1 Yes
2 No-skip to 28
- 26 Please name some.....

- 27 How are such diseases cured?
 1 Traditional healer 2 Modern medicine 3 Faith healing
 9 Other(specify).....
- 28 Why?.....
- 29 Do think the evil eye, witches, and sorcerers are responsible for the occurrence of some diseases?
 1 Yes
 2 No-skip to 31
- 30 Name some.....
- 31 Could your sickness be one of those belonging to number 25 and 29? 1 Yes
 2 No

Severity factors

- 32 what do you think is the nature of your condition? 1 Very serious 2 Serious
 3 Moderate 4 Minor 9 Other(specify).....
- 33 What would happen if nothing was done about it?.....

- 34 Does this condition affect your daily work, job, social relation and the like?
 1 Yes
 2 No-skip to 36
- 35 Please explain how.....skip to 37
- 36 Please explain.....
- 37 Have you ever suffered from this condition before? 1 Yes
 2 No-skip to 39
- 38 How often?.....
- 39 Do you feel susceptible to this condition? 1 Yes
 2 No

Incompatibility of therapies

- 40 Are you on any other medication besides the one you received from the clinic?
 1 Yes
 2 No-skip to 48
- 41 Please specify.....

- 42 Does use of the above treatment affect you in any way?
1 Yes
2 No-skip to 48
- 43 Please explain.....
.....
- 44 Have you done any thing to make the alternative medications compatible?
1 Yes
2 No-skip to 46
- 45 Please explain.....
.....
- 46 How would you evaluate this alternative medications?
1 Better 2 Worse 3 Not different 9 Other(specify).....
- 47 Please explain the answer to question 46 above.....
.....
- 48 What do you always do when the alternative medication are not compatible?

Nature of the drug

- 49 In what form is your treatment?
1 Tablets only 2 Injection only Injection and tablets 4 liquid form
and tablets 5 liquid only 9 other(specify).....
- 50 How would you evaluate the form of your drug?.....
.....
- 51 How do you like the form of your drugs?.....
.....
- 52 In case of injections do you always go for subsequent ones?
1 Yes-skip to 54
2 No
- 53 Please explain.....
.....
- 54 Do you have any problem with the taste or colour of your drugs?
1 Yes
2 No-skip to 56
- 55 Please explain.....
.....
- 56 What do you do in such cases?.....
.....

Cost (financial and side effects)

- 57 How did you obtain the prescribed drugs? 1 Free from clinic-skip to 60
2 Bought some from the chemist 3 Bought all the prescribed drugs from the
chemist 9 Other(specify).....

- 58 Did you buy all the required drugs?
1 Yes-skip to 60
2 No
- 59 Please explain.....
.....
- 60 How far is the clinic from your place of residence?.....
- 61 By what means do you go to the clinic?.....
- 62 Do you always go for the subject scheduled appointments with the
doctors/clinicians?
1 Yes-skip to 64
2 No
- 63 Please explain
.....
- 64 Do you feel any undesirable effects since you started taking the drugs?
1 Yes
2 No-skip to 67
- 65 Please explain
- 66 What have done about this state of affair?.....
.....
- 67 What do you always do when drugs have side effects?.....
.....

APPENDIX THREE

INTERVIEW SCHEDULE FOR KEY INFORMANTS

SECTION ONE: MEDICAL PERSONNEL

1. Please comment about patient compliance with the prescriptions and
2. recommendations that you provide in this area.
3. Do patients have their own ideas about disease causality and befitting treatment for a particular ailment? Please explain further.
4. How do you advise them in case their view contradicts your professional view?
5. Do patients pose questions to you in the course of clinical consultation?
6. Do patients complain about certain drugs or ask for particular drugs. Please explain further.
7. Generally comment about the distance from the clinic to patients' respective homes?
8. Do patients honour the appointment schedules that you make with them. Please explain further.
9. What are the main factors that influence patient compliance with medical prescriptions in this area?

Section two: opinion leaders

1. How would you evaluate the clinicians/doctors approach to patients? Do they spent enough time with respondents?

2. Do you always follow what doctors and clinicians advice you? Do you some times doubt some things that doctors and clinicians tell you? Please elaborate further?
3. Are the drugs given in the clinics appropriate for all the diseases that you know?
4. Do you subscribe to the view that some diseases can be effectively treated by traditional medicine? How do such diseases manifest themselves?
5. How do you like some properties of the drugs such as form, taste and colour?
6. What therapeutic options do you have in this community? Are they always compatible with one another? Please explain further
7. Are the drugs prescribed by clinicians affordable to all the patients? Please explain further?
8. Do you have any praises and complains to make about clinicians and the drugs that they prescribe? Elaborate further?
9. What factors do think mainly affect patient compliance with medical prescriptions in this area?