Reasons for the Low Utilization of Public Sector Health Facilities in the Kintampo District: A Community Based Study.

A Dissertation

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DECLARATION

I declare that all the work in this study has been the result of my own research, except where specific references have been made, and that it has not been submitted for any other degree, nor is it being submitted concurrently in candidature for any other degree.

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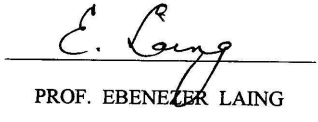

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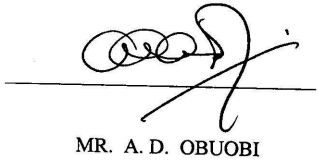

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DEDICATION

This work is dedicated to three people who have endured for an entire year the absence of my presence at home. They have also been the source of inspiration to complete this course of study. These three wonderful people are:

Charl, my lovely wife,

Sally my pretty daughter,

And Little Benny, the crown of my life.

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ABSTRACT

Low utilization of health services is a common problem in developing countries. In Ghana, the Ministry of health has set a target of 0.3-0.5 per capita outpatient attendance to be achieved over a five-year period. Resources are being provided to all health facilities to enable them achieve the target by 2001. However, in the Kintampo district the outpatient attendance has consistently fallen short of the expected yearly targets.

This study examines the reasons for low outpatient attendance at public sector health facilities, using secondary data from health facility records and a survey of adults within the district. A random sample of 184 adults were selected from the eight sub district capitals and interviewed.

It was found in the study that outpatient attendance for clinical services was particularly low in seven out of the eight sub-districts. Other findings showed that proximity to health facility, presence of a doctor, availability of drugs and treatment outcome are the reasons for people attending public sector health facilities; whilst the cost of services, type of illness suffered by clients, and low income are the reasons for non-attendance.

It can thus be concluded that in rural areas where income levels are low, increasing cost of services to the patient within public sector health facilities and the type of illness suffered may be the major reasons for the low utilization of public sector health facilities.

It is recommended that the district health managers should put in place adequate measures in the health facilities to prevent illegal fees, which adds to the cost of services borne by patients. In addition, efforts should be made to attract more staff to the rural areas; and incentive packages combined with an educational campaign for the communities to report promptly to the health facilities any illness suffered.

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CHAPTER 1.

INTRODUCTION

Utilization of health services has been a major concern in the recent past. Within the last three decades, a lot of research has been done to come out with the reasons for the low utilization of health services. Different categories of people have been involved in the research: medical doctors, social scientists, anthropologists, geographers, economists and planners. The work has been done in both the developing and the developed countries.

This concern in the utilization of services is due to the fact that it is an important indicator in health care provision. Utilization serves as a guide in the operations, planning of new health facilities and identification of research needs; also the provision of health infrastructures and services to improve the health status of the general population are dependent on the utilization of services.

Again, the concern reveals the problems associated with utilization in different parts of the world. In developed countries, there is high utilization of health care. For instance, on the average, a person uses health services four to six times in a year. However, in the developing countries it is not uncommon to have on the average a person using health services of less than one per year (1).

Utilization of health services is sometimes equated with having access to health facilities and services. The idea is that when people have access to health care then they would use

the facilities. Access, though important, only indicates that potentially people would use the facilities and the services provided. To know that access has been achieved, utilization should have taken place. Thus, the provision of health facilities and services are not adequate enough to improve the health status of the general population. In addition to that, structures that enable people to use the facilities must also be provided.

Research into the behaviour of those who use health services has identified a number of variables that influence the utilization of health services. These include (a) health delivery related characteristics like type of facility, location, accessibility, type and number of providers, cost and quality of services (b) community related characteristics such as culture, financial support and transportation; and family related characteristics like age, sex, income, social status and family size.

Despite these observations, there is still lack of complete understanding as to why and how people use health facilities. This is because the factors influencing the choice of services cannot in most situations predict the behaviour of persons using the services. For instance a person with high income and high social status is expected to use modern health services; yet in many developing countries, such a person may be seen consulting a spiritualist for his or her health needs. In this instance, the individual is influenced by his cultural beliefs instead of his social status and income in the selection of the type of services to use.

However, with the identification of these variables, a lot of effort has been made to overcome some of these barriers. Both international agencies and governments have collaborated in their effort to reduce these barriers. One concept put forth to deal with the accessibility of health services is the primary health care programme which was adopted as a new concept for health service delivery in 1978. In Sub Saharan Africa, the Bamako Initiative in 1986 that involves the community in the delivery of health services was another effort on the part of some international agencies and governments to overcome the cost barrier. Some governments have even come out with policies that exempt some vulnerable groups from payment of fees, all in the effort to eliminate the barriers of utilization

In Ghana, after more than fifteen years of implementation of the primary health care, the Ministry of health still records an average outpatient attendance of less than one visit per person per year in its health facilities (2). A value of less than one visit per person per year according to studies done suggests gross under utilization of health services provided (3). Gish concurs with this view and states that an average health facility visit of less than one implies that up to one - half of the population are effectively outside the health delivery system (1).

This has enormous implications for health delivery to the general population. It means that for a country like Ghana, the majority of the people who live in rural communities can still not access the health services available in public health facilities. In addition, the scarce resources used by government to provide facilities for services are not being

effectively used. Furthermore, the health development goals of the nation cannot be attained.

In this study, utilization means outpatient attendance for clinical services provided by the government health facilities in the Kintampo district. The public sector health facilities are all the government health centres in the district. Each health centre in the Kintampo district is supposed to serve a specific catchment area. The catchment area in this study is defined as the population living within the boundaries of a health sub-district.

The study had the aim of finding out the reasons for the low utilization of health facilities at Kintampo district. It was hoped that some of the factors that act as barriers to the use of services provided at government health facilities would be found to enable the district health office to plan programmes and activities that would improve the use of these health facilities.

1.1 PROBLEM STATEMENT.

The problem in Kintampo district is low utilization of services provided by public sector health facilities. The Kintampo district with a population of 164,573 (projections from the 1984 census and a 3% growth rate) has eight public sector health facilities, one of which serves as the district hospital (fig 4, appendix 1)

Utilization of services is assessed by utilization rates. One such measure is the per capita outpatient attendance, which is the total number of patient visits to a health facility divided by the catchment population of the health facility. It measures the average person's visit to a health facility per year. A value of less than one indicates under utilization of services provided by the health facility. In Ghana, the Ministry of Health (MOH) recognizing that outpatient attendance for clinical services in the country was very low, came out with a per capita outpatient attendance target of 0.3 – 0.5 over a five- year period (1997 – 2001) in its five-year programme of work (2).

In Kintampo district, for a period of three years (1996 – 1998), outpatient attendance had fallen far short of expected yearly targets. The per capita outpatient attendance had remained between 0.12 and 0.13 over the three - year period. For instance in 1998, using the MOH per capita attendance of 0.3 a total of 49,372 attendance was expected in all the health facilities in the district. However, the actual attendance was 19,462.
Again when Kintampo district attendance was compared with that of the neighbouring districts, Kintampo district attendance was the lowest (Table 1 below).

Table 1. Comparison of Total Outpatient attendance in 1998 of selected districts in Brong Ahafo region.

District	Population	Total Out patient attendance	Out patient attendance per capita
Atebubu	158,486	49,159	0.31
Kintampo	164,573	19,462	0.12
Nkoranza	231,035	42,160	0.18
Techiman	137,252	95,516	0.70
Wenchi	237,208	56,034	0.24

Source: National Centre for Health Information Systems, MOH, Ghana.

Also, a study of hospital attendance preference done in Kintampo district by the Kintampo Health Research Centre indicated that more than one-third of the communities prefer to use hospitals outside Kintampo district.

This problem is important for a number of reasons. Primarily, the MOH has invested scarce resources in putting up health facilities to ensure that people in the communities have access to health care. However, if these facilities are not being used for whatever reason then the health development goals of the government cannot be met. It implies that resources are not being used effectively. Secondly, the per capita outpatient attendance of 0.12 indicates that more than one – half of the population are not using the modern health services provided to meet their health needs. Thirdly, the problem implies that achieving the medium term health goal of an outpatient per capita attendance of 0.5 by 2001 is unattainable if the performance of the district continues as it is.

Notwithstanding these problems, the government continues to provide resources in an effort to solve some of the problems. In the district presently, the outpatient unit within the hospital has been expanded with more rooms and modern facilities provided. Policies

have also been put in place to provide free outpatient services to children, the elderly and pregnant women. Outreach services have been extended to most of the communities in order to bring services closer to them. All these are efforts made to resolve some of the problems. These efforts have not resulted in improved per capita outpatient attendance in the district but rather it has fallen from 0.13 to 0.12 per capita from 1997 to 1998.

1.2 RESEARCH OBJECTIVES

The general objective for the study was to find the reasons for the low utilization of services provided by public sector health facilities by clients in the district.

The following specific objectives were examined to

1. Determine the level of utilization of health facilities in the district for 1998, by type and location.
2. Find out the factors that influence the utilization of health facilities in the district
3. Make recommendations to the District health management team concerning what can be done to improve utilization of health facilities.

1.3. BACKGROUND INFORMATION

Kintampo is one of the largest districts in the Brong Ahafo region of Ghana with an area of 7162 square kilometres. The district is within the Savannah ecological zone of the country. The centre of the country can be located in the district.

The district has five boundaries. The northern part is bounded by the Black Volta, the western by Wenchi district and the eastern by Atebubu district, Techiman district to the south and to the southeast Nkoranza district.

1.3.1 Population

The population of the district is estimated to be 164,573 based on the 1984 population census, with a growth rate of 3%. Table 2 shows the demographic profile of the district by age. This number implies that if there is an average of one health facility visit per year then within the year the district is to expect about 160, 000 outpatient attendance.

Table 2. District population by age, 1999.

Age in years	Percentage of Total Population	Population
Under 1	4	6,583
1 - 5	16	26,332
6 - 14	27	44,435
15 - 60	48	78,995
60+	5	8,558
Total	100	164,573

Source: Kintampo District Annual Report, 1997.

1.3.2 Socio-Economic Characteristics

The main economic activities within the district are in the agriculture and service sectors. Majority of the working class are farmers and/or sellers of agricultural products. Others are engaged in agro-processing. The farmers are mostly peasant farmers. Small-scale merchandizing and dressmaking form the bulk of the workers in the service sector. A few workers are in government employment. This group includes the civil servants, teachers and district assembly workers.

Kintampo has two market days. Tuesdays as the yam market day and Wednesdays as the general market day. People come from all the sub-districts to trade. Some of the people from the sub-districts use the market days to visit the district hospital. This is because it is easier to get transportation to Kintampo Central on this day. Also it is on this day that most of the farmers generate some income to enable them pay for the cost of health services.

1.3.3 Health Delivery System.

The health delivery within the Kintampo district is based on the district health system concept. Within this system there are three levels of service delivery. The first level is the delivery of service within the communities either by a village health worker or community health nurses through outreach clinics. The second level is the health centre level where clinical, preventive and maternal services are provided. The third level is the district hospital level where some specialist services are expected to be provided. These levels are also supposed to be referral points from level one to level three.

1.3.3.1. Management of District Health Services

For the management of health services, the district health system is divided into the following structure: the district health management team (DHMT) and the sub district health teams. The DHMT works at the district level providing support for the sub districts. The support is in the form of supervision, provision of logistics and incentives to staff. The sub district health teams work within the community where the health facility is located and its catchment area. They operate both static and outreach services to the population within the catchment area. The static services are those provided within the facilities whilst the outreach services are those in which staff from the health facility move into the community to give the service. The static services include clinical services, preventive services like vaccination, weighing of children and health talks, and maternal services where staffing permits. In the outreach services, however, only preventive services are provided.

1.3.3.2 Health Resources

Health Facilities

In Kintampo district there are eight health sub districts. In each sub-district there is a government health facility. The facilities are made up of one district hospital, three health centres and four rural clinics. A rural clinic is where there is a nurse in charge of the facility. The district hospital acts as a health centre to the catchment population and serves also as the referral centre for all the other health facility in the district. The remaining seven health facilities serve a catchment area with a minimum of ten thousand people.

There are a few private facilities and a number of traditional facilities within the district where the population has the choice to use. Apart from these, the districts nearby have hospitals which are easily accessed geographically by some of the sub districts than the Kintampo district hospital. The distribution and location of the public sector health facilities is shown in fig 4 (appendix 1).

Staffing

Staffing is an acute problem in the district, especially for the provision of clinical services, that is, treatment of health complaints presented at the facility. There is one doctor in the district hospital and three medical assistants in the entire district. One works in the district hospital and the remaining two are in charge of two health centres. Three Enrolled Nurses are in charge of three rural clinics. The last rural clinic has no clinical staff. A community health nurse provides only child and maternal services to the community. In the district hospital, ward assistants have been trained to assist in outpatient service delivery. The few nurses available work in the maternity unit and the children's ward. In the remaining sub-districts, it is virtually a one – person station for clinical work except one health centre where there is a midwife who is responsible for maternal services.

Research Centre

The Kintampo Health Research Centre supports the district health services by providing logistics to the hospital. Some of the staff from the Research Centre assist at the hospital when some work is being undertaken there. For instance one of the doctors in the Centre assisted to run outpatient clinic in the hospital for some period.

1.3.3.3 Service Delivery

The services provided at the health facilities generally are outpatient services for clinical, preventive and maternal needs. The clinical services include consulting a health provider, provision of essential drugs, giving of injections and dressing of wounds. In addition to these basic services, the district hospital provides laboratory services, theatre services, in-patient services and mortuary services.

The main causes of outpatient attendance within the district include malaria, diarrhoeal diseases, pneumonia, and upper respiratory tract infection, road traffic accidents and anaemia.

The potential patient who uses any of the health facilities for clinical services goes through the following procedure. At the clinic, he first registers at the records unit. He pays six hundred cedis for identity card, six hundred cedis for an out patient history and treatment card and five hundred cedis as consultation fee, making a total of one thousand seven hundred cedis. Then the patient consults with the provider and is given a

prescription to collect drugs for treatment. For malaria, which is the major cause of outpatient attendance an adult client is given a course of chloroquine, paracetamol and multivite. This would cost him less than a thousand cedis. This brings the total cost of services for the one visit to nearly three thousand cedis. For a child the syrups for the same treatment would be about three thousand cedis, making a total of nearly five thousand cedis. Receiving his medication ends his contact with the health facility till the next episode of illness.

This study is intended to answer the following questions:

1. Which sub districts' attendance accounts most for the low utilization in Kintampo District? And
2. What are the major factors contributing to the low level of utilization?

The answers to these questions would be very useful for the district health office in mapping out strategies to improve health-care coverage to the whole population in the district.

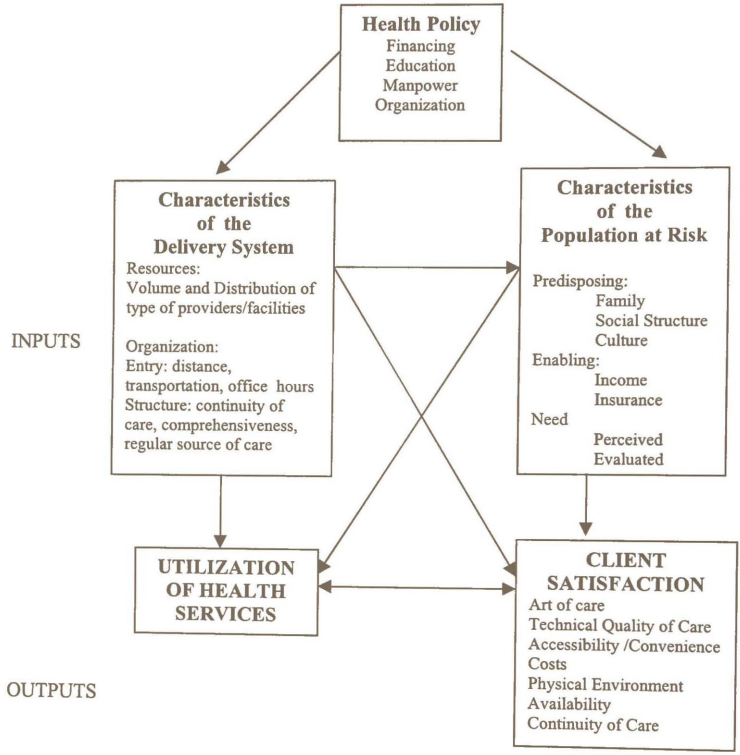
1.4. CONCEPTUAL FRAMEWORK

In any research work the choice of variables to be studied has to be made. This is even more crucial in the study of utilization of health services where there are various complex interactions of variables that influence the choice by an individual. These interactions involve the characteristics of the health service delivery, the characteristics of the community and the characteristics of the family.

In this study, Aday and Andersen's model of utilization depicted in Fig. 1 (27) was chosen as the framework to study the factors that influence choice of health services in Kintampo district. In this model, utilization of health services is understood to be the interaction of two sets of characteristics: those of the family or individual and those of the health care delivery system, both of which are affected by health policy. Based on this model, two approaches for evaluating utilization have been identified. The first is to identify the characteristics, which facilitate or discourage utilization. The second is to evaluate the characteristics of an individual's passage through the health system such as utilization rates and patient satisfaction.

The second approach was used in this study and five variables were selected for study due to the limitations of time and cost. These variables were income levels, health need (characteristics of the individual), cost of services (characteristics of the health delivery system) and patient satisfaction, which is the individual's perception of the quality of the services delivered. The operational definitions of these variables are given in appendix 4.

Fig.1. CONCEPTUAL FRAMEWORK FOR THE STUDY OF UTILIZATION IN KINTAMPO DISTRICT



1.5. LITERATURE REVIEW

Within the last three decades, a lot of research has been conducted into utilization of health facilities. This research has yielded a wealth of information explaining why people use health services. Among the reasons for using health services are factors related to the health service delivery, community-related characteristics and those related to the family. Examples of these factors include accessibility to health facilities, cost of services, income, financial support and social status among others.

Various models have also been developed to study utilization of health services. These models, with many modifications are used to describe and determine factors that predict the use of health facilities in both the developed and developing countries (4). The most used model by researchers is Andersen's model of 'predisposing', 'enabling' and 'need' factors in explaining utilization of health services (27).

Research has also identified that utilization of health facilities is a very important indicator in finding out how health services are being delivered to the general population. The utilization enables the service providers to know which communities have access to health care and how to plan for new facilities. It also enables them to identify the health needs of the population. Access by the general population to health facilities and services contributes to improved health status and provides sufficient contact with the population, which enables the health care system to achieve its health delivery goals (1).

In many of the work done on utilization of health services, there have been emphasis on ensuring that the population have access to health services. The emphasis has been more

in developing countries where there is under-utilization of health facilities and services. Though ensuring access to health care has been noted to improve utilization of services, many policy makers think ensuring access automatically results in utilization of services. Fielder (5) however, explains that access only indicates potential utilization of the services provided; utilization of services is the actual use of the services provided and evidence that access has been achieved.

1.5.1. Studies in Utilization

In many of the utilization studies done, there is a general agreement on the variables related to the health systems and the potential users that may influence utilization in any given circumstance. In the developed countries, Bailey and Philips (6) have noticed a major theme of 'inequality'which focuses on unequal provision of care relative to need, physical accessibility and social access. Also the effects of variables influencing utilization in many health systems in the developed world is beginning to clarify the effects of individual variables.

In developing countries however, Gish has observed that cost, distance, social status and the attitudes of both health workers and the population largely determines access to almost any specific level or type of health care (1). In addition, Philips (4) has noted that the existence of pluralistic health systems in many developing countries is a distinctive feature that has a great effect on utilization. This implies that people have a choice of types of therapies to utilize; and these are used in preference to one another, sequentially or concurrently making utilization patterns appear very complex.

The most used model for studying utilization has been Andersen's model. There have been a lot of modifications to this model to suit the circumstances under study. Other models have also been designed and used under different circumstances. Although most of these models have been developed and refined in developed countries, studies indicate that it is possible to apply these models to health systems in third world countries with modifications when necessary (4,6).

Many of these models also recognize group of factors that influence utilization. There are those that may predispose towards utilization; these include family's size, composition and beliefs. Certain enabling factors such as the family or community's resources may enhance or frustrate utilization in spite of predisposition to use. Need (measured by illness or symptoms) is the final factor that determines whether utilization occurs or not depending on the predisposing and enabling factors.

Some limitations have been identified in the use of these models. It has been noted that results based on Andersen's model have generally yielded relatively low levels of overall explanation in the variation in utilization rates (7). Another limitation relates to the use of utilization rates as a measure of health service use. It has been found that utilization rates do not permit the determination of the degree to which services were not used for any number of reason (5).

1.5.2 Factors Influencing Utilization

The individual variables that influence utilization are best understood using Andersen's model. Fieldler (5) using the model explained that access to medical care is an

interaction of two sets of characteristics: the population characteristics and the characteristics of the health delivery system. The population characteristics are made of the predisposing, enabling and need variables. The health delivery system characteristics however, comprise the resources and organization of the system.

Income:

This variable is an enabling factor that empowers the individual to attain health services. Many studies in the developed and developing countries indicate that income is a very important variable that affects utilization (5-12). Income is a very important indicator of one's socio-economic class, which in turn determines ones ability to access health care. In Ghana, however, there is no available data on social classes based on income levels. Proxies are used in determining socio-economic status. One proxy often used is occupational status (10), and another one is possession of durable household goods. This has been shown to have a positive relationship with socio-economic status (13).

Health Status:

This is the state of being well or not. It is a need factor which is measured in a variety of ways. Some of the measurements are the number of symptoms shown, number of disability days experienced, and self-perceived health status (4,5). This is the major factor that will determine whether utilization would occur or not depending on the predisposing and enabling factors. In most developing countries, though this factor is crucial in utilizing services, it is influenced greatly by the individual's health knowledge, attitudes, beliefs and practices. Phillips (4) suggests that the cultural factor should be factored in any model developed for studying utilization in a developing country.

A study done in Kenya revealed that choice of services varied depending on the nature of the illness and whether it was a first or subsequent visit to a health provider (14). The study also showed that government clinics though fairly well dispersed in the area, were used by 30% of the respondents, and about 25% and 20% went to pharmacy shops and mission clinics respectively. 6.5% of respondents in the study indicated that they had treatment from traditional healers.

Cost of Services:

This is a characteristic of the health delivery system. In some countries including Ghana, government health facilities provide curative services virtually free of charge or at very nominal user charges. The cost of using health services is most often considered to be the immediate user charges. It has however been suggested that a better assessment of cost of using health services should be the money paid out for charges, drugs and transport and the value of time, which involves travelling and waiting at the facility (4). For the health delivery system, it is important according to Gish (1) to determine cost borne by these three important groups as a matter of basic efficiency in service delivery. These groups are the government costs, the community costs (including non-governmental organizations) and the costs to individuals and families involved in using health services. Studies have shown that the introduction of user charges in government health facilities affects utilization of health services. This effect is felt more by rural dwellers than by their urban counterparts (4,10). The question that has been asked and needs to be answered by all stakeholders in the delivery of health services is what can and should consumers pay for publicly provided health care in poor countries?

Distance:

Distance is one variable that has received extensive investigation. Most studies collapse the distance, time and transportation into one variable namely accessibility. The assumption in modeling access is that (a) the nearer one is to services the greater is the access; and (b) people living in areas with more services have greater access to health care. These assumptions have been found not to be tenable in a fee-for-service environment (1). Most studies have found that distance is a barrier to utilization (4-8,15). Interestingly, a study done in Kintampo, Ghana, found that though health facilities were near, clients did not use them (11). This indicates that access though desirable is not an end in itself but has to be complimented by other factors like quality of care.

Patient Satisfaction:

Patient satisfaction is another important variable in the use of health services. This is because the ultimate validator of the quality of care is its ability to achieve and produce health and satisfaction (5). Improving quality of care and presentation of care has also been found to be at times more important in influencing health service use than improving economic and physical accessibility (6).

Fieldler's literature review reveals two approaches to patient satisfaction. First, satisfaction data is used as a proxy for the effectiveness or quality of care. Secondly, it is used as a predictor of health and illness behavior by assuming that differences in satisfaction influence access and utilization (5,16).

Instruments used in assessing patient satisfaction include item measures and scale measures (17-19). Some of the indicators used in assessing patient satisfaction include:

- The art of care (humanness or amount of caring shown to patients)
- Technical quality of care
- Accessibility/convenience
- Finances
- Physical environment
- Availability of medical personnel
- Continuity of care and
- Efficacy/ outcomes of care (5).

Fieldler notes that few studies deal with all the indicators since some of them are highly related. He then cautions the use of satisfaction data by quoting Ware et al. The warning is that there must be a demonstrable evidence that patient satisfaction scores can detect the specific nature of problems with care and services before they are used to make judgements about specific characteristics of providers and services, and also used in planning programmatic interventions.

In Ghana a number of studies have been done to assess the effects of most of the variables discussed above on utilization. What was identified as barrier to utilization include cost of services, levels of income (10-12), quality of services (10,16), distance, cultural beliefs and education (12). This confirms what pertains in developing countries.

With so much work already done, why is there the need for further research into utilization in another district? The answer is found in Kloos' literature review (8), which indicates the need to periodically evaluate utilization of health services for guidance in the operation, planning of new facilities, and identification of needs. In addition, WHO recommends utilization as an indicator among others in monitoring and evaluating health care provision (20).

Moreover, despite the general agreement on the variables influencing utilization, there is less agreement as to their relative importance. It has been noted that a decision to highlight certain variables within a particular research has to be made. This is because utilization is an outcome of many complex interactions of numerous factors past and contemporary. These factors act at different stages and often in different directions and it is practically impossible in most utilization studies to comprehensively encompass all possible factors that can play a part in the process of utilization. (6).

So this study into the reasons for the low utilization of public sector health facilities in the Kintampo district will concentrate on the following variables as the possible factors that explain the reasons for low utilization: patient satisfaction, cost of services, income and health status.

It is hoped that the results of this study would provide the district health administration with the baseline data and the necessary data required for planning and monitoring health service provision in the district.

CHAPTER 2.

METHODOLOGY

2.1. SAMPLING DESIGN

2.1.1 Target Population

The target population was any adult aged 18 and above who had registered in any government health facility to consult a health provider for clinical services. Those who had taken their children or relatives to register and consult a health provider were also included in the target population. The latter group was included because they were responsible for the costs of services provided and it was their choice to take the person to the clinic.

2.1.2 Sample size.

The sample size was calculated based on the per capita outpatient attendance for 1998, which was 0.12 (in percentage that is 12%). Using the 95% confidence interval and a 5% margin of error, the sample size calculated came to 163 adults (refer appendix 3 for formulae for sample size calculation). Additional 22 units were added to correct for any factors that may decrease the yield of usable responses. This value was based on the assumption that for a 10% non-participation and a 5% non response to any given question the sample size must be multiplied by a factor of 1.18 according to Kish (21).

2.1.3 Sampling Technique

A probability sampling was used in selecting the respondents. First, the Kintampo district was stratified into the eight health sub districts. Based on the sample size, a proportionate sample was estimated for each sub-district. To control for distance, the community where the government health facility was located in the district was selected. This was based on the assumption that the nearer one is to services the greater is the access (7). Thus the eight sub district capitals were selected for the administration of the questionnaire.

In Kintampo Central however, where there are many sub communities, the sampling was done by listing all the suburbs within the sub-district; then using paper ballots, six communities were selected from the list. Respondents were then selected from these suburbs.

The respondent selection followed the following procedure. The community visited was divided into two sections using the main road passing through the community as the dividing line. The centre of the first section of the divide was determined through a cursory tour of the community. Next, the direction for selecting houses was determined through the spin of a pen. Afterwards the number of houses within the direction chosen was estimated. The first house was randomly chosen. In the house, one person aged eighteen and above was selected and interviewed. If there were more than one person aged eighteen and above in a house, a paper ballot was used to select the respondent. This was done so that any bias towards the selection of respondents would be eliminated.

The next house visited was the house whose main gate was opposite the one we came from. This method was used because the houses were not systematically numbered and due to the limitation of time and cost involved, mapping and numbering of the houses was not a feasible option. The process continued till the number required from the section was obtained. The procedure was followed for the next section. In instances where there was no eligible respondent in the household, the interviewer selected the next house and continued with the process.

2.2 RESEARCH DESIGN

A descriptive study, using secondary data from health facility records and a survey of adults aged eighteen and above was undertaken in Kintampo district. The data from the health facilities covered a period of one year (Jan. – Dec. 1998). The data collected from the clinical registers were used to establish for each health facility the per capita out patient attendance. The period was chosen because the out patient attendance used in estimating the sample size covered that period. In the community, 184 adults from eight selected communities were interviewed. The survey was conducted so that data can be gathered from the community members to enable the investigators get the community's perspective for not using health facilities provided for their health needs.

In the design five variables were selected for study. These were utilization of services provided by government health facilities, cost of services, income levels, health status and patient satisfaction with services provided. The operational definitions of these variables are given in appendix 4.

The variables were chosen to clarify the relationships between health delivery characteristics and individual characteristics that influence the choice of health care.

A probability sampling was used in selecting respondents and the technique for collecting data was interviewing. The interview schedule was developed in English but it was administered in Akan. It was pre-tested in one of the communities, which was not part of the areas sampled. Research assistants were chosen from the Rural Health Training School in Kintampo. To avoid bias due to interpretation of English, all the research assistants were taken through the objectives of each question and also the acceptable interpretation to use for each question. Time and cost constraints did not allow for complete translation of the questionnaire into Akan, which would have been desirable.

The analysis was primarily quantitative. A statistical software Epi Info 6.04 was used in analyzing the data collected.

2.3 DATA COLLECTION

Two sets of data were collected to answer the research questions. One set of data was from the community and the other from hospital records. The interview technique was used for the data collection in the community. A questionnaire was designed for that (Appendix 3). A format was designed to collect data from the daily clinical register in the health facility in each sub district.

Data collection lasted for three days. For the hospital data, one nurse each in the sub district health facility was taken through the format and assigned the task of collecting data on out patient attendance from January to December 1998. The data was collected from clinical registers instead of compiled returns submitted to the district health administration. This was done so that any errors in the compiled data would be removed. The health facility data collection took two days.

In the community, thirteen research assistants were recruited from Rural Health Training School in Kintampo. These students were in the second year Technical Officers' class (T.O. II). They had been taught research methodology in class thus working on this study was an incentive to apply what had been taught. Each student was responsible for one community. Another set of thirteen students within the same class were trained to be field supervisors. A third set of eight students were trained to receive data from the field and edit them. In all the training took three days. The community data collection was done in a day. Thirteen research assistants were used in the data collection instead of the planned five because it rained virtually every day during the period scheduled for data collection. Also this was the period for intensive farming. Within this period most adults leave home very early for the farm and come back late. In addition the cost of visiting the communities several times would have been outside the planned budget.
Out of the sample size of 185, a total of 184 interviews were conducted and one was rejected because the information on the questionnaire was incomplete.

2.4 DATA ANALYSIS

The data collected was analyzed using Epi Info 6.04. Frequency distribution for all the variables was run to check for errors in the data entry. Next frequencies for the variables of interest were run. Using dummy tables prepared, the frequency distribution was summarized into the form for presentation.

2.5 LIMITATION

Time and financial resources were the major constraints. These did not permit the systematic numbering of houses in the communities visited. In addition, communities could not be visited several times due to these constraints. Possible errors in using large research assistants could have been reduced. Furthermore, the sample size could have been increased to cover more people.

Another limitation was that the data collection instrument used a 12-month recall question, which stretches the demand made on respondents' memory. In addition, the data collection instruments could not be translated into Akan for the administration. Also the criteria used to assess income status may have some inadequacies. It was based on the possession of durable household goods, which was used in assessing income in the Ghana demographic and health survey of 1993. However there were some modifications to suit the purposes of the study.

CHAPTER 3.

RESULTS

This section is the presentation of findings obtained from the health facility records and from the survey of 184 respondents. The total respondents from the community survey were 183. Though they were 183 respondents, the results focuses on those who used facilities within Kintampo district and outside the district. Therefore, in some of the tables the total respondents would be less than 183. The tables are presented on pages 37-41.

Background Characteristics of Users of Kintampo Health Facilities.

Table 3 provides the characteristics of patients who used facilities within Kintampo district. The total number of respondents was 101 (i.e. N=101).

Sex.

Two thirds of the respondents were female. This gives an indication that females used the facilities more than males.

Age

From the table respondent's children who were taken to see a health provider and were under five years constituted a fifth (20%) of those who used health facilities in Kintampo district. The majority of the respondents (63%) who used the facilities in Kintampo district were in the economically productive age group (i.e. 15-60yrs). The elderly constituted less than five percent of the respondents. This shows that most of respondents who used the facilities were those in the productive age group and the below five year olds of respondents.

Persons Consulting the Health Provider

Most of the respondents used the facility because a child of theirs was sick (41.6%), whilst a quarter (25.7%) of the respondents visited the facilities because a relation was ill.

Ethnic Group.

Slightly more than half (55%) of the respondents were of Akan background and a fifth were Mos (22%). This is consistent with the ethnicity balance within the district. The remaining respondents were made up of migrant settlers in the district.

Religion

The majority of respondents were affiliated to the Christian Council (Catholics 29.9%, Protestants 24.8%) and Pentecostal Council (Pentecostals 14.9%) institutions. Traditional religion practitioners constituted only 2% of respondents whilst adherents of the Islamic faith formed about a tenth of respondents (12.9%).

Educational Level

Respondents with post-basic education (above middle or JSS) were less than 10%. Those with primary education and no formal education constituted about the same percentage of respondents 40.6% and 38.6% respectively.

Occupation

The majority of respondents who used facilities within the Kintampo district were Farmers (47.5%). Around a quarter of respondents were traders (23.8%). Civil servants and Teachers constituted 5% and artisans almost 15%. This indicates that the majority who used the facilities were peasant farmers. This has implications for their ability to purchase health care in the rural setting.

Outpatient Attendance

Table 4 shows the per capita outpatient attendance for 1998. The results show that the entire district per capita outpatient attendance was 0.11. This reflects the value obtained from the Centre for Health Information Management at M.O.H. headquarters. Kintampo district hospital achieved a per capita attendance of 0.24. This is close to the minimum national target of 0.3. Two facilities had per capita attendance, which is nearly the same as the district average attendance. These are Jema health centre (0.10) and a rural clinic in Amoma (0.09). The remaining facilities had values below the district average attendance. Two health centres were part of those facilities with values below the district average. In one of them, Dawadawa health centre, data was available for a three-month period. This was because the clinic started clinical services from September 1998. In Busuama sub district there was no clinical services provided.

From the analysis of the results, it appears that the outpatient attendance was low in Kintampo district because the sub-districts attendance were pretty low except Kintampo Central where the district hospital is situated. The hospital attendance included patients from all the other sub districts, thus the attendance does not represent only the Kintampo Central sub district. But it gives an indication that people prefer to use the hospital than the health centres that is nearer to them. This may be because of the type of staff available and the other resources available at the district hospital. Some of these are a laboratory and the presence of a doctor.

Utilization

From Table 5 three categories of people responded to the questionnaire. They were users of Kintampo district facility (55.2%), users of facilities outside Kintampo district (12.6%) and non-users of health facility (32.2%), which is the group of respondents who said they were not ill within the 12month recall period for evaluating utilization. These results show that slightly less than half (45%) of the respondents did not use Kintampo district health facilities. Interestingly, the third (32.2%) of respondents who did not use the facility because they were not ill may suggest that either the people in Kintampo district use health facilities only when their illnesses are very severe or they responded that they were not ill just to avoid the intrusion into their personal lives.

Reasons for Using a Health Facility

Tables 6 and 7 show the reasons for respondents using a public sector health facility within Kintampo district or outside it respectively. For users of facility within Kintampo district, nearly four-fifth (78.2%) gave proximity to the health facility as the most important reason. Slightly more than two-third (70.3%) gave presence of a doctor as the reason for using the facility; whilst about two thirds gave availability of drugs (63.4%) and treatment outcome (63.4%) as the reasons for their choice to use a facility within Kintampo district. Staff attitude and location of facility were mentioned by slightly more than half (54.5% and 55.4% respectively) of the respondents. Cost of services was mentioned by less than half (41.6%) of the respondents as the reason for using Kintampo facility, this was not surprising because during the gathering of background data most people talked to complained that the health facilities' charges were too high.

For those respondents who used facilities outside Kintampo district Table 7 shows that presence of a doctor (61.5%) was the main reason for their choice. Over half of the respondents (53.8%) stated that the attitude of staff was the reason for going outside the district. Treatment outcome (38.5%), cost of services (30.8%) and availability of drugs (46.2%) were not the key reasons for using facilities outside Kintampo district. These results seem to suggest that for those who use outside facilities presence of trained staff and their attitude are the key issues in using the facility not even the cost of services or availability of drugs, which are key determinants in the choice of using a facility.

Income Levels

In Table 8 about two thirds (66.3%) of respondents who used government health facilities within Kintampo district had low income and less than a tenth (4%) of them were in the high-income bracket. For those who used health facilities outside Kintampo district, about four out of five (82.6%) of the respondents were within the low-income bracket whereas those with high income constituted 4.3%.

From the analysis it appears most of the people have low income. Notwithstanding the cost involved in travelling outside the district, some of the respondents with low - income levels still used those facilities that were outside the district.

Health Status

Malaria was found to be the major reason for using a government health facility. This is consistent with values compiled at the district health administration. Table 9 shows that nearly half of the respondents (48.5%) who used Kintampo district health facility went

there with malaria. Similarly, slightly more than half (56.5%) of those who used facilities outside Kintampo district travelled long distances to consult health providers for malaria. These results seem to indicate that respondents who used health facilities outside Kintampo district did so not because of their health condition but for other reasons like presence of a doctor in their community clinic or attitude of staff in that clinic.

Cost of Services

Cost of services involved amounts paid for making a card, consulting the health provider and drugs received. Total money spent were these direct charges plus any additional money spent whilst in the health facility. These included transport cost, food, illegal fees, token fees and laboratory fees among others. In Table 10, about half (52%) of respondents paid less than five thousand cedis as the cost of services. This reflects the charges paid for the treatment of malaria, which is the main cause of out patient attendance in Kintampo district. The remaining half (48%), also paid five thousand and above as the cost for services for their health conditions.

However, less than 40% spent a total of less than five thousand in a single visit to the health facility. Nearly two thirds of respondents spent a total of more than five thousand in the single visit to the health facilities within Kintampo district. The results seem to suggest that clients pay extra fees in addition to the cost of services.

Patient Satisfaction

Table 11 shows the proportion of patients who expressed their perception of the quality of services provided in facilities in Kintampo district. These were those who registered to use the facilities in Kintampo district. Almost 90% of the respondents expressed satisfaction with the services provided.

Table 3. Background Characteristics of Respondents who used Kintampo District Health facilities, 1999.

Characteristic	Frequency	Percent
Sex:		
Male	36	35.6
Female	65	64.4
Age:		
Under five years	20	20.0
5 - 14 years	15	15.0
15 - 60 years	63	63.0
61 years and above	2	2.0
Person Consulting:		
Respondent himself	33	32.7
Respondent's Child	42	41.6
Respondent's Relative	26	25.7
Ethnic Group:		
Akan	55	54.5
Mo	22	21.8
Mamprusi/Bimoba/Chokosi	1	1.0
Dagomba/Gonja/Konkomba	8	7.9
Wala/Dagarti/Sisala	7	6.9
Other	8	7 .9
Religion:		
Catholics	30	29.7
Protestants	25	24.8
Pentecostals	15	14.9
Spiritualists	1	1.0
Islam	13	12.9
Traditionalists	2	2.0
No Religion	8	7.9
Others	7	6.9
Educational Level:		
No Education	39	38.6
Primary	13	12.9
Middle/JSS	41	40.6
SSS/Technical/Vocational	5	5.0
Post Secondary	3	3.0
Occupation:		
Farmers	48	47.5
Civil Servants	1	1.0
Traders	24	23.8
Teachers	4	4.0
Artisans	15	14.9
Others	9	8.9

Table 4. Per Capita Out Patient (OP) Attendance for Jan – Dec 1998, By Sub District and Facility Type, Kintampo District, 1999.

	Sub District	Facility Type A	Expected Attendance[3] B	Out Patient Attendance C	Population D	OP Per Capita E=C/D
1.	Kintampo Central	Hospital	16,120	12,955	53,734	0.24
2.	Dawadawa[1]	Health Centre	7,754	501	25,845	0.02
3.	Jema	Health Centre	5,234	1,688	17,446	0.10
4.	New Longoro	Health Centre	3,768	932	12,561	0.07
5.	Amoma	Rural Clinic	4,362	1,345	14,540	0.09
6.	Kunsu	Rural Clinic	5,349	900	17,830	0.05
7.	Anyima	Rural Clinic	3,736	501	12,454	0.04
8.	Busuama[2]	Rural Clinic	3,049	0	10,163	0.0
	District	Total	49,372	18,822	164,573	0.11

1. Data for Dawadawa Health Centre is for three months (September – December)
2. Busuama Rural Clinic does not provide clinical services
3. Expected Attendance is based on the national per capita attendance of 0.3

Table 5. Frequency Table of Utilization of Public Sector Health Facility by Respondents, 1999

	Utilization	Frequency	Percentage
1.	Users of Kintampo District Health Facility	101	55.2
2.	Users of Health Facility Outside Kintampo District	23	12.6
3.	Non Users of Health Facility*	59	32.2
	N=	183	100

* Non users are those who were not ill within the period under review.

Table 6. Frequency Distribution of Respondents' Reasons for Using a Facility within Kintampo District Between May 1998 – May 1999.

	Reason	Frequency	Percentage	95% Confidence Limit
1.	Proximity to Facility	79	78.2	68.9 - 85.8
2.	Presence of Doctor	71	70.3	60.4 - 79.0
3.	Cost of Services	42	41.6	31.9 - 51.8
4.	Staff Attitude	55	54.5	44.2 - 64.4
5.	Availability of Drugs	64	63.4	53.2 - 72.7
6.	Availability of Equipment	42	41.6	31.9 - 51.8
7.	Convenience of Clinic Day	36	35.6	26.4 - 45.8
8.	Location of Facility	56	55.4	45.2 - 65.3
9.	Means of Transportation	32	31.7	22.8 - 41.7
10.	Treatment Outcome (Cure)	64	63.4	53.2 - 72.7

N = 101. Respondents gave more than one reason to the question asked.

Table 7. Frequency Distribution of Respondents' Reasons for Using a Facility Outside Kintampo District Between May 1998 – May 1999.

	Reason	Frequency	Percentage	95% Confidence Limit
1.	Proximity to Facility	3	23.1	5.0 - 53.8
2.	Presence of Doctor	8	61.5	31.6 - 86.1
3.	Cost of Services	4	30.8	9.1 - 61.4
4.	Staff Attitude	7	53.8	25.1 - 80.8
5.	Availability of Drugs	6	46.2	19.2 - 74.9
6.	Availability of Equipment	5	38.5	13.9 - 68.4
7.	Convenience of Clinic Day	1	7.7	0.2 - 36.0
8.	Location of Facility	2	15.4	1.9 - 45.4
9.	Means of Transportation	1	7.7	0.2 - 36.0
10.	Treatment Outcome (Cure)	5	38.5	13.9 - 68.4

N = 13. Respondents gave more than one reason to the question asked.

Table 8. Frequency Distribution of Income Levels of Respondents, Kintampo, 1999.

	Income Levels	Users of Kintampo District Health Facility	Users of Health Facilities outside Kintampo District	Non Users of Health Facility
1	High	4 (4.0%)	1 (4.3%)	4 (6.8%)
2	Medium	30 (29.7%)	3 (13.0%)	12 (20.3%)
3	Low	67 (66.3%)	19 (82.6%)	43 (72.9%)
	N=	101	23	59

Table 9. Frequency Distribution of Health Conditions for which Services were sought by respondents, Kintampo, 1999.

	Health Status	Users of Kintampo District Health Facility	Users of Health Facilities outside Kintampo District
1	Malaria	49 (48.5%)	13 (56.5%)
2	Diarrhoea	6 (5.9%)	-
3	URTI	4 (4.0%)	1 (4.3%)
4	Abdominal Pain	10 (9.9%)	2 (8.7%)
5	Injury	4 (4.0%)	-
6	Other	28 (27.7%)	7 (30.4%)
	N=	101	23

Table 10. Frequency Distribution of the amounts paid for services provided to respondents who used health facilities within Kintampo District, 1999.

	Amount	Cost of Services	Total Money Spent
1	Less than C2,000	9 (9.0%)	1 (1.0%)
2	C2,000 - < C5,000	43 (43.0%)	34 (34.0%)
3	C5,000 - C10,000	24 (24.0%)	28 (28.0%)
4	C10,000 Plus	24 (24.0%)	37 (37.0%)
	N=	100	100

Table 11. Frequency Distribution of Respondent's Satisfaction with Services Provided

	Satisfaction	Frequency	Percent
1	Satisfied	89	88.1
2	Not Satisfied	12	11.9
	N=	101	100

CHAPTER 4.

DISCUSSION

Per Capita Outpatient Attendance

The per capita outpatient attendance is a measure of utilization of health services provided in a health facility. In developing countries it is not uncommon to have a value of less than one per year (1). A value of one indicates gross under utilization of the services provided (3). The Ministry of Health recognizes that gross under utilization is a problem in the country and has set a target of 0.3 to 0.5 per capita outpatient attendance over a five year period ending 2001 in its five year programme of work (2).

Thus the value of less than one (0.11) found in Kintampo district was expected but far below the national target. The Kintampo Central sub district per capita attendance of 0.24 was about double the district average attendance but less than the national minimum target of 0.3 per capita attendance per year. The reason for this observation is that the Kintampo Central sub district has the district hospital, which serves as the health centre for its catchment population and at the same time is the referral centre for the other health facilities. So people from the other sub districts are included in the outpatient attendance of Kintampo Central sub district. In addition, the district hospital has better resources in terms of personnel and infrastructure than the other health facilities, thus more people tend to use it.

The remaining health facilities had very low attendances. Each facility recorded less than two thousand patients per year. Meanwhile the expected attendance for each facility was more than three thousand person visits per year.

The results on outpatient attendance indicate that the low attendance is acute in the sub districts where there are no doctors in the facilities. The majority of respondents (56%) who had used the health facilities before, but are now going outside the district for health care indicated the availability of a doctor as one of the reasons for not using the facility. In addition, 61% of those who used facilities outside Kintampo district also indicated that the availability of doctors in those facilities influenced their choice. The lack of doctors in the district is consistent with the district background information where in the entire district there is only one medical officer for clinical work. The other prescribers within the district are three medical assistants and four Enrolled nurses. Thus the low attendance in the sub district facilities can be related to the absence of doctors.

Utilization

There were three categories of respondents from the study, those who used health facilities in Kintampo district, those who used facilities outside Kintampo district and thirdly those who reported that they were not ill during the period under review. Slightly more than half of respondents used the facilities and a third of respondents were not ill.

The results were contrary to the per capita OPD attendance recorded at the health facilities. What was found was that 55.2 % of the respondent used Kintampo facilities. This may be due to the fact that the period for the 12 – month recall questionnaire

(May1998 – May 1999) was different from the period for the OPD attendance records (Jan. – Dec. 1998). From May 1998 the district hospital had two doctors and also other changes had taken place. This includes displaying the amounts patients are to pay for their services, transfer of some staff who had problems with some clients from the district and completion of a modern out patient unit at the district hospital.

The major reasons given by those who used Kintampo district health facilities were proximity to health facility (78.2%), availability of doctor (70.3%), and availability of drugs (63.4%) and cure (63.4%). Staff attitude and location of facility were the other reasons given but the proportions were not significant (54.5% and 55.4% respectively). However, almost 60% of the respondents said they use the facility not because of the cost of services.

These results compare with studies done in Guinea where the presence of a doctor, availability of drugs and radical cure were among the key components for patients choice of a health facility (17).

The proximity to health facility confirms the assumption used in designing the sampling that the nearer the health facility the higher the utilization (7). The cost component is a reflection of what Waddington and Enyimayew (10) found in Ashanti Akim district in Ghana that user fees impacts more on rural dwellers than urban folks.

The third of respondents who indicated that they were not sick within the period indicates two things. Either the respondents were very healthy and required no visit to a clinic or

they just gave some answers to the questions posed on illness to avoid further probing. It may really be that more people in the district are very healthy. There are no records readily available to give concrete explanation for the observation. It is thus suggested that the district health managers undertake a research to determine the actual health status of its population.

For those who used health facilities outside Kintampo district, the major reasons were the presence of a doctor and the staff attitude. This implies that an improvement in the way patients are served would lead to an increase in utilization.

Income

Income levels were measured by the possession of durable household goods. This had been the method used in the Ghana demographic and health surveys (13). To categorize respondents into various income groups, a criterion was adopted based on the possession of durable household goods. A person having any two of the following items: electricity, television, fridge, and videocassette recorder plus either a motor vehicle (car) or tractor was classified to be of a high-income class. The low-income was classified as a person who possessed none or any or all of these items: a radio, a radio cassette player, a bicycle and a cart. The middle-income earner was between the two groups.

A third of patients who used the Kintampo district health facility were of low-income category. In contrast, more than four-fifth of patients who used outside Kintampo facilities were in the low-income bracket. This is interesting in the sense that the majority

of complaints taken to these institutions were malaria (56.5%). This shows that the choice of using a health facility at times is influenced more by patient's perceptions than by either economic or physical accessibility. This results is supported by the observation made by Bailey and Philips (6) that improving quality of care and presentation of care has been found to be at times more important in influencing health service use than improving economic and physical accessibility.

Health Status

Majority of the patients who used a Kintampo district facility presented with malaria (48.5%). This is reflected in the district annual report (22) on top ten causes of OPD attendance, which shows that malaria is the number one cause of OPD attendance.

This condition may also explain the low OPD attendances recorded in the district. This view is grounded in our observations during our study. In most of the communities we found a number of licensed chemical sellers and traditional healers. Also about a third of respondents said they had to wait for more than one hour before they see the health provider who is either a doctor or a nurse. With the combination of these two factors availability of alternate sources of healthcare and long waiting periods in government health facilities, a person would use the government health facility only when his health condition (malaria) is very serious and a complicated one.

This observation was collaborated by the fact that four- fifth of the respondents who used private sources of care indicated that they go to licensed chemical sellers. Similar results were found in a study done in Kenya where one quarter of respondents used pharmacy shops instead of the government clinic (4).

The inadequate staff in all the sub district health facilities may explain the waiting times observed. However, to reduce the complications of malaria that are sent to the facilities, the chemical sellers should be trained by the DHMT on how to manage uncomplicated malaria in order to prevent complications. This approach would also reduce the burden on the limited number of staff.

Cost of Services

For the sustainability of health services provided, user fees are charged in all public sector health facilities, even though the fees may not adequately cover the full cost of providing the service.

In Kintampo district the results showed that slightly more than half (52%) of the respondents paid less than five thousand cedis and the remaining half paid either five thousand cedis or more. These charges were consistent with the majority of the health complaints reported at the health facilities. However, when respondents were asked about the total amount of money spent on the single visit to the health facility, about a third said they paid less than five thousand and two thirds said they paid either five thousand cedis

or more. This total money spent included the cost of services plus any other expenditure made at the clinic.

This increase in the number of people paying five thousand or more from 48% as it relates to their cost of services to 65% regarding the total money spent is very important. It may be the major contributing factor to the low utilization of health services in the district. Taking into consideration the income levels of majority of the people who used the facilities, it means they have to pay more for the services for simple ailments like malaria, upper respiratory tract infection and diarrhoea.

A fifth of respondents indicated that they paid additional fees to the cost of services. It is significant to note that out of this number, 20% paid the money for laboratory fees. It implies that about four-fifth (80%) of those who paid additional fees did so illegally. This effect is more pronounced in the sub district health facilities where payment of consultation fees is a problem. Many people, in the sub district, it was learnt are unable to pay for the cost of treatment after paying the required registration and consultation fee of one thousand seven hundred cedis. Due to this situation, most of the patients in the sub districts consulted the licensed chemical seller in their community for their health needs. In the chemical sellers' shop, only the cost of treatment is paid. No money is paid for making a card or consultation fee. There is also no payment of additional fee to anybody.

This observation is consistent with what Waddington and Enyimayew (10) found in their study of the impact of user fees in the Ashanti Akim district of Ghana. They found that introducing user fees affects utilization of health services by rural dwellers more than their urban counterparts.

The policy of insisting on payment of registration fee of one thousand seven hundred cedis before consultation should be reviewed and a study of its impact on utilization since its introduction should be conducted at the sub district level.

Patient Satisfaction

When patients were asked about their expectations of services provided, almost nine out of ten of the respondents who used health facilities in Kintampo said they were satisfied with the services provided.

The reasons for the high satisfaction may be explained by the improvement in the services provided at the Kintampo district facilities especially the district hospital. There is a refurbishment of the infrastructure at the district hospital. Also some staff who were having difficulty relating to patients were transferred from the district. There is also a doctor available, drugs are available at reasonable cost and the facility is near to most of the respondents.

This perception of satisfaction with services as a resultant effect of improvement in the quality of services in the district hospital is supported by the observations made by Offei

(16). In his article on ensuring the quality of care he stated that the patient satisfaction approach in monitoring health service delivery ensures that the services provided are more responsive to the views and needs of the of the community.

There is a need to comment on the responses on satisfaction. Most of the respondents expressed the fear that their comments would be reported to the health workers and thus deprive them of using the facility when they had to. It appears those who said they were not satisfied with the services were daring to air their views. It is not the custom of Ghanaians to criticize an issue even when it is seriously affecting them. A better mechanism for assessing satisfaction in a community may be a focus group discussion where most of the respondents would be in a situation where the element of fear would be reduced. This was the method used in Guinea by Haddad et al (17) to assess a community's perceptions of primary health care services.

CHAPTER 5.

CONCLUSION

There were a number of factors that influenced the choice of using a health facility in Kintampo district. The factors were an interaction between the characteristics of the health care delivery system and that of the population.

It was found that the outpatient attendances were lower in the sub districts other than the one where the district hospital was located. It was also found that about a third of respondents reported that they were not ill. In addition, the study found that the factors which contributed to the choice of using a health facility in the Kintampo district were the proximity to health facility, presence of a doctor, availability of drugs and treatment outcomes.

Despite the limitations of the study, it can be concluded that the major reasons for the lower attendances in the Kintampo district were the high fees paid for services, the type of illness suffered and the low - income levels of the people in the district. Patients were willing to pay for the cost of treatment but high fees for registration and illegal fees charged to patients served as barriers to utilization.

RECOMMENDATION

The following recommendations are being made to the DHMT to enable them deal with the conclusions of the study as it relates to the low utilization of government health facilities in the Kintampo district.

1. To eliminate the effect of additional illegal fees to the cost of services, the district health administration should inform the communities of the charges they are to pay for services provided and also to put up these charges in all its health facilities. This would empower the communities to insist on the payment of the right amounts and ensure accountability on the part of the service providers.

2. The district health administration should work together with the district assembly to put in place incentive packages that would attract doctors and other health professionals to work in their sub districts

3. The district health administration should include in their educational campaigns to the communities the need to report promptly to the health centres any illness suffered for technical advice since delays in reporting sickness may lead to complications and deaths, which could have been prevented with early reporting.

4. The district health administration should undertake a study to find out the impact of the introduction of value OPD cards on the utilization of health services in rural health centres in order for a proper review of that policy to be undertaken.

APPENDIX

MAP OF GHANA SHOWING THE LOCATION OF THE STUDY AREA (KINTAMPO DISTRICT)

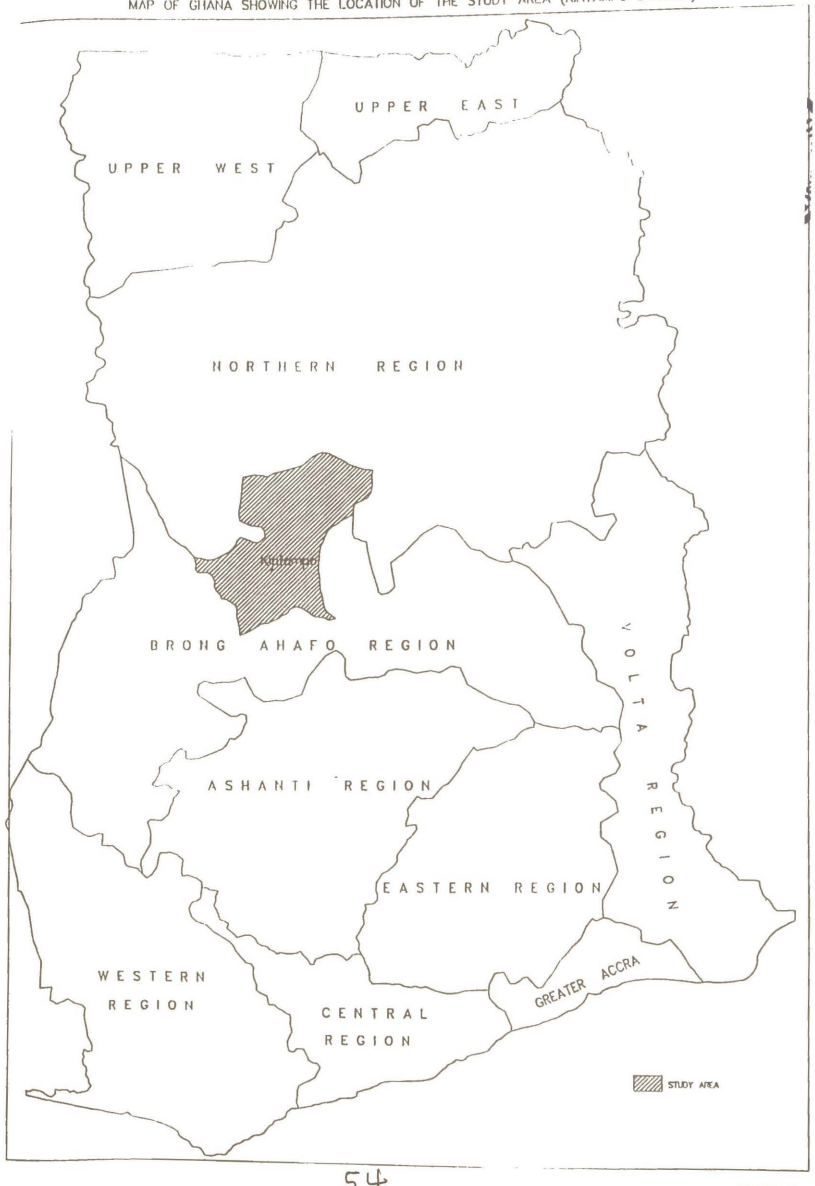


FIGURE 2

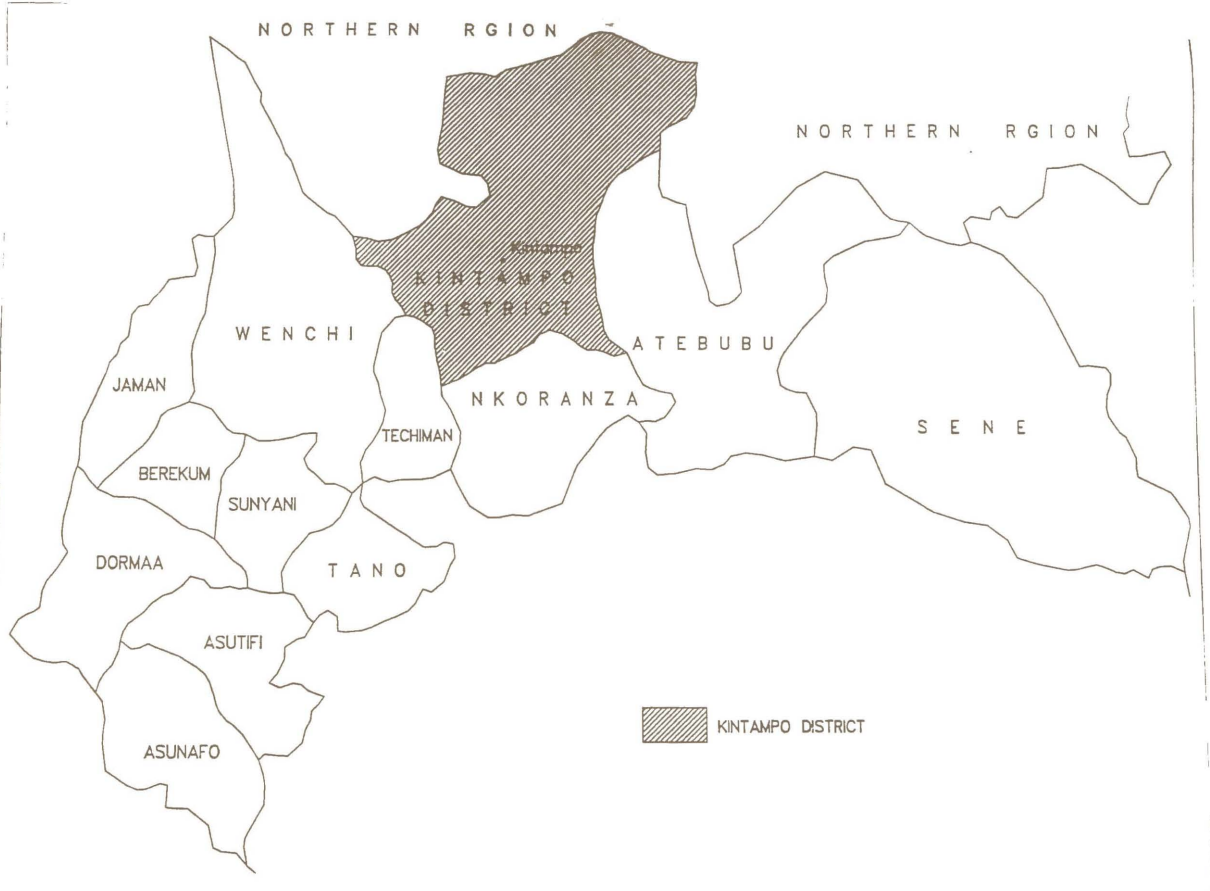
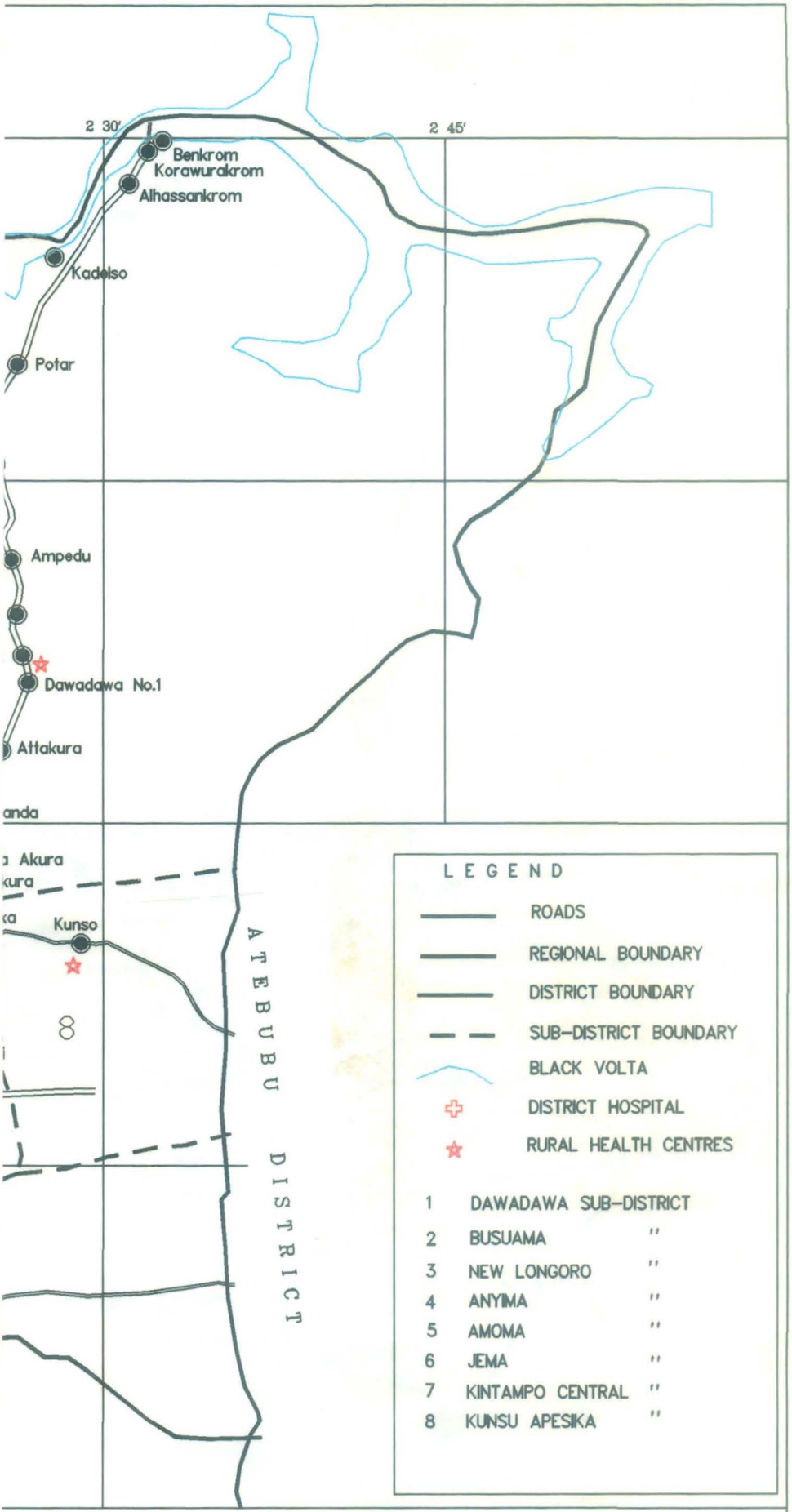
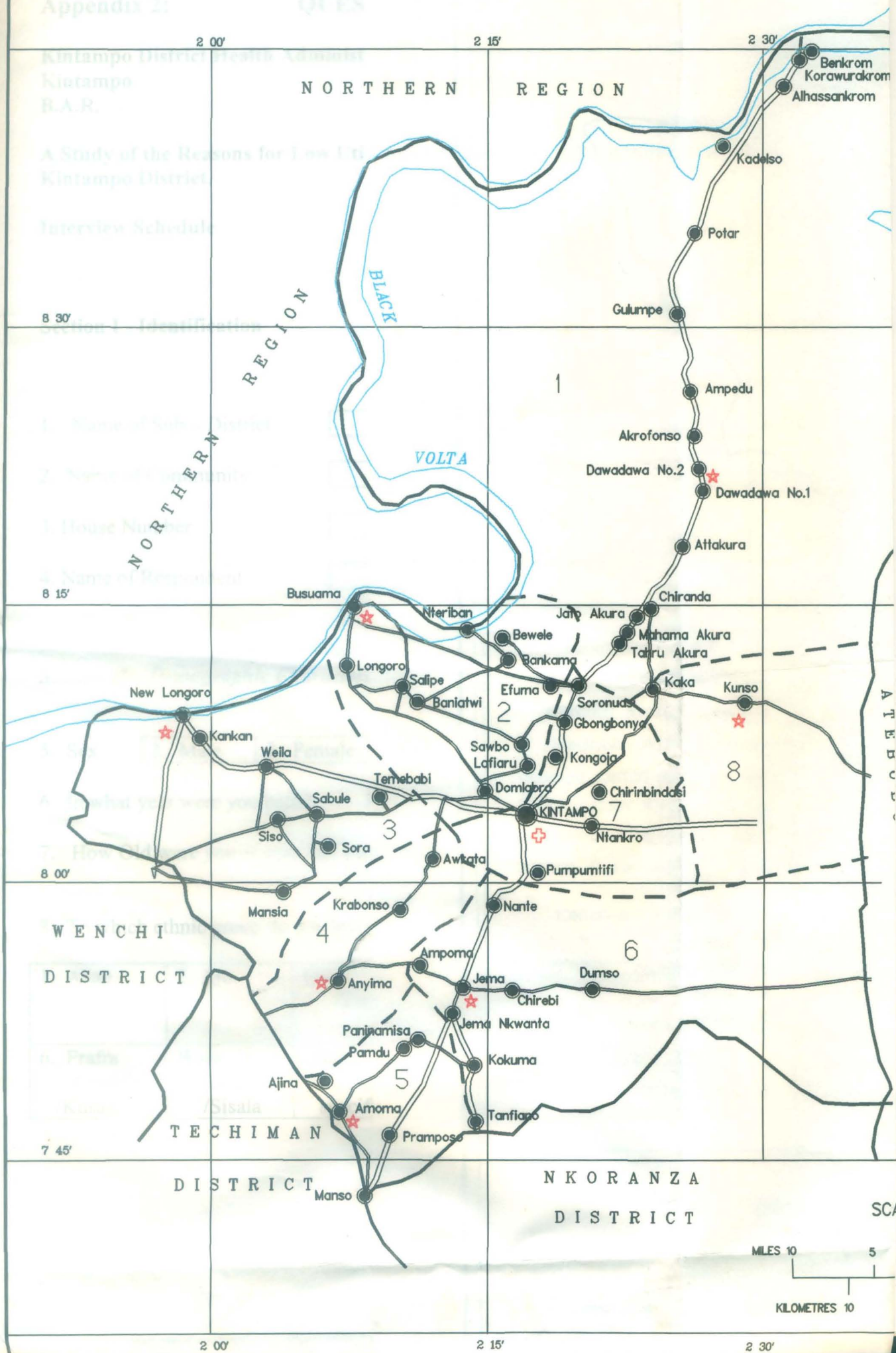


FIGURE 3

HEALTH FACILITIES WITHIN THEIR CATCHMENT AREAS



MAP OF THE KINTAMPO DISTRICT SHOWING GOVERNMENT HEALTH FACILITIES WITH



Appendix 2: QUESTIONNAIRE

Kintampo District Health Administration
Kintampo
B.A.R.

A Study of the Reasons for Low Utilization of Public Health Facilities in the Kintampo District.

Interview Schedule

Section I - Identification

1. Name of Sub – District [ ] subdist
2. Name of Community [ ] comm
3. House Number [ ]
4. Name of Respondent [ ]

Section II – Demographic Characteristics

5. Sex [1. Male | 2. Female] sex
6. In what year were you born? [1][9][ ][ ] dob
7. How Old were you at your last Birthday? [ ][ ][ ] ageres

8. To which ethnic group do you belong?

1. Akan	2. Mo	Ga /Ewe	4. Mamprusi /Bimoba /Chokosi	Dagomba /Gonja /Konkomba	ethnicgp
6. Frafra /Grushie /Kusasi	Wala /Dagarti /Sisala	Other ..... specify	99. No response		

9. What is your religious denomination?

1. Catholic	2. Anglican / Methodist / Presbyterian	3. Pentecostal / Charismatic	4. Spiritualist	religion
Islam	6. Traditional	7. No Religion	Other ..... Specify	

Section III – Socio-Economic Characteristics

10. Have you ever attended school? | 1. Yes | 2. No | educate

If No, circle 99 for Qu. 11

11. What is the highest level of education attained primary, middle/JSS, secondary or higher?

1. Primary	2. Middle /JSS	SSS/Comm. Voc./Tech	4. PostSec /Nursing / Poly	edulevel
5. University	6. Non Formal Educ.	99. N/A		

12. What is the number of years you completed at this level? | | | eduyears

13. What is your occupation?

Farmer	2. Civil Servant	3. Trader	4. Teacher	occupatn
5. Artisan	Other Specify.....	99. N/A		

14. Please indicate which of the following items you have in your household.

Electricity	1. Yes	2. No	income1
Functioning Television	1. Yes	2. No	income2
Functioning Fridge	1. Yes	2. No	income3
Functioning Radio/Cassette Player	1. Yes	2. No	income4
Functioning Video Deck	1. Yes	2. No	income5
Functioning Radio	1. Yes	2. No	income6
Bicycle	1. Yes	2. No	income7
Motor Cycle	1. Yes	2. No	income8
Tractor	1. Yes	2. No	income9
Motor Vehicle	1. Yes	2. No	income10
Horse/ Cart(truck)	1. Yes	2. No	income11

Section IV – Utilization of Health Facility for clinical services

15. During the period of May 1998 – May 1999, did you/your child/relative suffer from any illness or injury?

1. Yes	2. No	ilness

If yes, circle 99 for Qu.16-17

16. Assuming you/your child/relative suffered from an illness or injury, which health facility would you send him?

Sub-District Health facility	Kintampo Hospital	Techiman Hospital	Wenchi Hospital	
Atebubu Hospital	Sunyani Hospital	Other: Specify.....	99. N/A	facpref

17. Why would you send him to this facility?

Distance to health facility	1. Yes	2. No	Distanc1
Presence of a good doctor/doctor	1. Yes	2. No	Docavai1
Cost of services	1. Yes	2. No	Pricser1
Attitudes and conduct of staff	1. Yes	2. No	Stafatt1
Availability of Drugs	1. Yes	2. No	Drugava1
Availability of equipments	1. Yes	2. No	Equpava1
Inconvenient clinic days	1. Yes	2. No	Clinday1
Location of health facility	1. Yes	2. No	Locatfa1
Transportation cost	1. Yes	2. No	Transpo1
Rapid recovery/cure	1. Yes	2. No	Cure1
Other: specify.....			
Not applicable	99		

18. Within the period of May 1998 – May
child/relative in any government health faci
doctor/nurse about your illness?

1.

If yes, circle 99 for Qu. 19-23

19. Within the period of May 1998 – May
consulted or taken your child/relative to see
Kintampo District?

If No, circle 99 for Qu. 20-21

20. Which facility outside Kintampo distric

Nkoranza Hospital	Bamboi Health Centre	Tech H
Atebubu Hospital	Sunyani Hospital	Othe Speci

21. Why did you use this facility for your co

Distance to health facility
Presence of a good doctor/doctor
Cost of services
Attitudes and conduct of staff
Availability of Drugs
Availability of equipments
Inconvenient clinic days
Location of health facility
Transportation cost
Rapid recovery/cure
Other: specify.....
Not applicable

22. Within the period of May 1998 – May 19
relative to consult anyone about your illness
Kintampo district?

1.

If yes, circle 99 for Qu 24-26
23. Who did you consult?

Gov't Health Worker	2. Herbalist	3. Spiritualist	Chemical Seller	altprov
Private midwife	Friend / Relative	Other Specify.....	99. N/A	

24. Which government health facility did you use for consulting the doctor/nurse?

Kintampo Hospital	Dawadawa Health Centre	Jema Health Centre	Kunsu Rural Clinic	Anyima Rural Clinic	
Amoma Rural Clinic	New Longoro Rural Clinic	Busuama MCH/FP Clinic	Other Specify.....	99. N/A	govtfac

25. Who in particular was ill yourself, your child, or your relative?

1. Self	2. Child	3. Relative	Other: specify.....	99. N/A	perscons

26. What is the age of the person who consulted the doctor/nurse?

1. U 5yrs	2. 5 – 14 yrs	3. 15 – 60 yrs	4. 61 + yrs	99. N/A	agepers

Section V – Health Status

If respondent answered **No** for Qu.15, circle 99 for Qu.27
For Qu. 27-30, **Prompt** respondent when necessary.
27. What illness/complaint did you see the doctor/nurse/practitioner about?

Malaria	1. Yes	2. No	malariaH
Diarrhoea	1. Yes	2. No	diarreaH
Headache	1. Yes	2. No	headachH
Fever	1. Yes	2. No	feverH
Abdominal pain	1. Yes	2. No	abdpainH
Cough	1. Yes	2. No	coughH
Intestinal worm	1. Yes	2. No	wormsH
Anaemia	1. Yes	2. No	anemiaH
Injury/Accident	1. Yes	2. No	injuryH
Other: specify			
Not applicable	99		

28. What illness/ailment do you normally send to a government health facility in Kintampo District?

Malaria	1. Yes	2. No	malariaG
Diarrhoea	1. Yes	2. No	diarreaG
Headache	1. Yes	2. No	headachG
Fever	1. Yes	2. No	feverG
Abdominal pain	1. Yes	2. No	abdpainG
Cough	1. Yes	2. No	coughG
Intestinal worm	1. Yes	2. No	wormsG
Anaemia	1. Yes	2. No	anemiaG
Injury/Accident	1. Yes	2. No	injuryG
Other: specify			
Not Applicable	99.		

29. What illness/ailment do you take elsewhere?

Hypertension	1. Yes	2. No	hypert
Diabetes	1. Yes	2. No	diabetes
Boil	1. Yes	2. No	boil
Skin disease	1. Yes	2. No	skindis
Headache	1. Yes	2. No	headachA
Fever	1. Yes	2. No	feverA
Abdominal pain	1. Yes	2. No	abdpainA
Other: specify.....			
Other: specify.....			
Not Applicable	99.		

30. Where do you take these ailments?

Herbalist	1. Yes	2. No	herbal
Drug Store/Chemical Seller	1. Yes	2. No	chemsel
Spiritualist	1. Yes	2. No	spirit
Friend/ Relative	1. Yes	2. No	frirel
Self treatment	1. Yes	2. No	seftreat
Health worker in the community	1. Yes	2. No	hwincomm
Other: specify.....			
Not Applicable	99.		

Section VI – Accessibility

31. Is there a government health facility in your sub-district?	1. Yes	2. No	knowfac

If No, Circle 99 for Qu.32-38

32. Do you use this facility/ a facility in Kintampo District?	1. Yes	2. No	99. N/A	usefac

If No, circle 99 for Qu.34-38

33. Why don't you use this facility?

Distance to health facility	1. Yes	2. No	Distanc3
Presence of a good doctor/doctor	1. Yes	2. No	Docavai3
Cost of services	1. Yes	2. No	Pricser3
Attitudes and conduct of staff	1. Yes	2. No	Stafatt3
Availability of Drugs	1. Yes	2. No	Drugava3
Availability of equipment	1. Yes	2. No	Equpava3
Inconvenient clinic days	1. Yes	2. No	Clinday3
Location of health facility	1. Yes	2. No	Locatfa3
Transportation cost	1. Yes	2. No	Transpo3
Rapid recovery/cure	1. Yes	2. No	Cure3
Other: specify.....			
Not applicable	99		

34. Why do you to use this facility/ a facility in Kintampo District?

Prompt respondent when necessary

Distance to health facility	1. Yes	2. No	Distanc4
Presence of a good doctor/doctor	1. Yes	2. No	Docavai4
Cost of services	1. Yes	2. No	Pricser4
Attitudes and conduct of staff	1. Yes	2. No	Stafatt4
Availability of Drugs	1. Yes	2. No	Drugava4
Availability of equipments	1. Yes	2. No	Equpava4
Inconvenient clinic days	1. Yes	2. No	Clinday4
Location of health facility	1. Yes	2. No	Locatfa4
Transportation cost	1. Yes	2. No	Transpo4
Rapid recovery/cure	1. Yes	2. No	Cure4
Other: specify.....			
Not applicable	99		

35. By what means do you normally visit the health facility?

Walk	2. Bicycle	3. Motor	
Public Transport	Other: Specify.....	99. N/A	meansfac

If not by public transport, circle 99 for Qu.37.

36. How much does it cost you to travel to the health facility and back?

1. < 1000	2. 1000-5000	3. 6000-10000	4. >10000	99. N/A	travcost

37. How long does it take you to get to the health facility?

1. < 30min	2. 30min-<1hr	3. 1-3hrs	4. > 3hrs	99. N/A	distime

38. How long do you have to wait in the health facility before you can see the doctor/nurse?

1. < 30min	2. 30min-<1hr	3. 1-2hrs	4. > 2hrs	99. N/A	waitime

Section VII – Cost of Services

*If respondent answered **No or N/A** for Qu.18*

39. Did you pay anything for registering to see the doctor/nurse and for other medical services provided?

1. Yes	2. No	99. N/A	payserv

If No, circle 99 for Qu. 38.

40. How much did you pay for making a card, consulting the doctor/nurse and treatment?

1. < 2000	2. 2000-5000	3. 5000-10000	4. > 10000	99. N/A	costserv

41. Were you given receipts for these payments?

1. Yes	2. No	99. N/A	recetCCD

42. Did you pay for any additional fees?

1. Yes	2. No	99. N/A	addifees

If No, circle 99 for Qu. 43.

43. What were those fees for?

1. Doctor	2. Nurse	3. Lab	Token fee
Dressing /Injection	Don't Know	Other Specify.....	99. N/A

resfor41

44. Were you given receipt for these payments? | 1. Yes | 2. No | 99. N/A | recetAF

45. What was the total amount of money spent on transport, food and hospital charges on this single visit to the health facility?

1. < 2000	2. 2000-5000	3. 5000-10000	4. > 10000	99. N/A

totalcost

Section VIII – Patient Satisfaction with Quality of Service

Finally, let me ask you; are you satisfied with the services provided by health facilities in Kintampo District?

1. Yes	2. No

satisfac

*For Qu. 47, **Prompt** respondent when necessary*

What reasons do you have for your answer?

Questioning of patients	1. Yes	2. No	patques
Good clinical examination	1. Yes	2. No	clinexam
Use of diagnostic equipment	1. Yes	2. No	usequip
Appropriate prescription	1. Yes	2. No	appresc
Drugs dispensed rapidly	1. Yes	2. No	rapdisp
The way advise is given on drugs	1. Yes	2. No	advdrugs
The way injection is administered	1. Yes	2. No	injadmin
Good drugs dispensed	1. Yes	2. No	gdrudisp
General reception given	1. Yes	2. No	receptn
Compassion and support from staff	1. Yes	2. No	stafcomp
Staff shows kindness, respect and are polite	1. Yes	2. No	stafresp
Staff shows interest and pay attention to me	1. Yes	2. No	stafattn
Get access to Doctor on arrival	1. Yes	2. No	acesdoc
Presence of a good doctor	1. Yes	2. No	gdocpres

Availability of drugs	1. Yes	2. No	phamava l
Availability of equipments	1. Yes	2. No	matavail
Cleanliness of place	1. Yes	2. No	cleanplc
Free services provided	1. Yes	2. No	freeserv
Method of payment of fees	1. Yes	2. No	paymode
Recovery and rapid cure	1. Yes	2. No	recovery
Other1: specify.....			
Other2: specify.....			
Other3: specify.....			
Other4: specify.....			

Section IX – Interviewer's Visit and Observations

1. Date [ ][ ][ ][ ][ ][ ]

2. Name of Interviewer [ ]

Results of interview:

i completed all questions	No competent respondent at home at time of visit	iii Respondent refused to answer questions	iv. Interview postponed	Other: Specify..... .....

4. No of respondents aged 18+ in the house visited? [ ][ ]

6. Comments about the respondent:.....
.....
.....
.....

7. Comments on specific questions:.....
.....
.....
.....
.....

Appendix 3: FORMULAE FOR CALCULATING SAMPLE SIZE

$$N = \frac{Z*Z\,(P * Q)}{D * D}$$

Where:

N = *minimum sample size*

Z = *the value of 95% confidence interval on the normal distribution curve*

P = *the prevalence of the outcome measure in the population*

Q = *100 – P*

D = *the precision value*

Appendix 4: TABLE OF VARIABLES AND OPERATIONAL DEFINITIONS

SN	Variable	Operational definition	Scale of Measurement
1	Utilization	Registrations at the out patient department of any government clinic to consult a health provider for curative services.	Nominal
2	Income	Possession of certain household goods	Nominal
3	Cost of services	Amount paid for card consultation and treatment	Nominal
4	Health Status	Complaints or symptoms presented at OPD	Nominal
5	Patient Satisfaction	Response to expectation of service provided at a government clinic	Nominal

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