DETERMINANTS OF THE USE OF FORMAL HEALTH CARE SERVICES IN BUTALEJA SUB-COUNTY, BUTALEJA DISTRICT, UGANDA

BY

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(BA.SS)

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DECLARATION

I, Muhofah Titus do hereby declare that this research entitled ***Determinants of Use of Formal Heath Services in Butaleja District*** is my original work and has never been presented anywhere else for any academic award. I hereby submit it to Makerere University for the degree award of Master of Arts in Population and Development.

Signed: ……

Researcher

Date: …….

APPROVAL

This dissertation has been submitted for review with my approval as University supervisor.

Supervisors

Dr. L. Atuhaire ..... Date .....

Dr.W.Kaberuka.....

Date .....

DEDICATION

To my late father, James Muhofa and my mother Nerima Tabitha who nurtured me and shaped me to face quite ably the challenges of education and life of this world.

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Equal tribute goes to the authorities in Butaleja district, notably the Chief Administrative Officer and the Chairpersons of the Local Councils from where the respondents were selected; and to all the respondents who eagerly responded to my interviews. I wish, particularly, to thank Mr. Micheal Wanje, the Ag. Chief Administrative Officer of Butaleja District, whose warm hospitality and professional approach made my fieldwork very smooth.

Last, but not least, I wish to thank my beloved wife, Margaret, and my children, Emmanuel, Samuel, Caroline, Patience and Jimmy, who endured a lot of my absence up to late in the night, as I tried to make sense out of this work.

ABSTRACT

This study investigated the determinants of the use of formal health care services, specially the relationship between economic factors, socio-demographic characteristics and institutional factors and use of formal health care services.

The study was quantitative. A multi-stage sampling method was used to select respondents while survey questionnaires were used to collect data. Data was analysed with the help of Pearson chi square statistic and a logistic regression model. The use of formal health care services in Butaleja sub county was very low at only 11.8 percent.

The study revealed that there was a significant relationship between age, sex, educational background, income, religion, household size and occupation of respondents and the use of formal health care services. The results on education revealed that on average individuals who had obtained some education in Butaleja sub-county do not seek the rural health care services when compared with those with no educational attainment.

The results further revealed that respondents were satisfied with the quality of health services and health staff and that the distance to nearest health centres was reasonably low. But however, respondents were not overall satisfied with the status of health facilities of area.

The result suggests that health care decisions take place within the constraints imposed by the demand side barriers. These findings indicate the importance of demand-side barriers in accessing health care. The study, therefore, recommends interventions that will address the demand side barriers to access to formal health care services. These include interventions that raise income for the people, health education and community based mobile clinics. It is proposed that such measures should contribute towards improved use of health services but also, and more importantly, to address the key determinants of access to health and to change the health behaviours.

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CHAPTER ONE

INTRODUCTION

1.1 Background to Study

The problem of access to and use of health services is a global one. It affects both developed and developing countries. For example, the government in the United Kingdom has been reforming the public health system over the past ten years to make basic health services provision more efficient, affordable and accessible to all (Blair, 2002). However, the level of development and access to and the use of health services differ between poor and rich countries.

In Sub-Saharan Africa, the healthcare systems are poorly developed and always overstretched in terms of capacity, availability of drugs and qualified personnel. Usually, financial costs are among the most important barriers for poorer people in accessing health care. Thus in setting out the public actions to enhance the quality of life of the poor, the government of Uganda through the Poverty Eradication Action Plan (PEAP) emphasizes health care as one of the key areas. Health services provision is based on Minimum Health Care Package (MHCP). The aim of this minimum package is for the state to guarantee free access by the population to a set of basic health services it can afford. In essence, the package represents a health insurance that the state provides its population (WHO, 2000).

All this effort has been to rebuild the health care system that had collapsed due to political turmoil of the 1970s and 1980s. Before this, in the mid 1960s, Uganda had one of the best health care systems in Africa. The Government, therefore, embarked on health sector reforms in the early 1990s focussing on the decentralization of health services, privatization, broadening health

financing through introduction of user charges and broadening the provider mix with emphasis on effective use of non governmental resources, all aimed at freeing resources that could eventually be spent on the poor.

With the restoration and rehabilitation of social services, there is now a complex relationship of health care delivery system involving public and private sector provision, thus lessening the Ministry of Health's burden of solely providing health care services to the populace (Mutabwire, 2006).

For the purpose of this study, formal health services are considered to be health services provided by well-established organisations that are either government or private and are registered and run by trained health personnel. In Uganda health care services are provided along the decentralization model of governance in line with the decentralization policy. The Ministry of Health (MOH) through the decentralization development policy was restructured to perform more of a coach role than as a player; hence making the Ministry of Local Government a key intermediary between Local Authorities and the Central Government.

The decentralized system is based on the district as a unit under which there are lower local Governments and administrative units. These include Local council V (District), Local council IV (County), Local Council III (Sub County), Local council II (Parish), and Local council I (Village level). The health care delivery system is designed along this decentralized public system, with a corresponding health unit for each level of local government or administrative unit.

Although macroeconomic targets of an inflation rate of 5.7% and economic growth of 7% a year have been attained from 1987 to 2004, health service delivery seems not to have improved. Between 1990 and 2003 the mean distance to hospitals increased from 9 to 12kms, while that to private clinics remained at only 3kms (UBOS, 2003). Meanwhile health seeking behaviour is rather poor; for example, in a study conducted in Iganga and Kabale, 62.3% and 68.4% respectively of the respondents said that the type of action taken in seeking health care is home remedy. In the National House Hold Survey done by UBOS (2003), 11% of the people who fell sick opted for home treatment while 7% sought none. At the same time the level of poverty has begun rising. It is currently at 38% after decreasing from 51% to 35% between 1990 and 2000.

In light of this, the current study investigated the factors that determine the use of formal health services taking Butaleja Sub County in Butaleja District as a case study area.

1.2 Statement of the Problem

Uganda has made progress in improving the health of its population: life expectancy increased from 45 years in 2003 to 52 years in 2008; HIV prevalence reduced from 30 per cent in the 1980s to 6-7 per cent in 2008; and polio and guinea worm have been eradicated (UDP,2010). The Under-five mortality rate (U5MR) improved from 156 in 1995 to 137 deaths per 1,000 live births in 2006; the infant mortality rate (IMR) decreased from 81 to76 deaths per 1,000 live births respectively. Under-weight prevalence reduced from 23 per cent to 16 percent over the same period; stunted growth from 41 per cent to 38.5 per cent and Wasting increased from 4 percent to 6 percent. Maternal Mortality Rate (MMR) reduced from 527 to 435 per 100,000 live births between 1995 and 2006, but remains very high (UDP, 2010).

The above registered improvements have been due to expansion of health care services in Uganda (UDHS, 2006). However, the utilization of the health facilities remains low (Uganda Poverty Status Report, 2005; UDHS, 2006). The assumptions underlying this inquiry are that the use of formal health care services is low in Uganda particularly in rural areas, and that it is possible and important to understand the broad factors shaping this phenomenon. It should be noted that while the importance of socio-demographic and cultural factors in shaping the use of health care services has been alluded to in the literature (Addai, 2000; Fosu, 1981), little research on the relative importance of such factors has been carried out in Uganda. Therefore, this study represents one of the few studies geared specifically towards understanding factors which have been sustaining low levels of use of health care services in Butaleja sub-county.

1.3 Objectives of the study

1.3.1 General objective

The overall objective of the study was to examine the factors that determine the use of formal health care services in Butaleja Sub-County.

1.3.2 Specific objectives

i. To examine the relationship between socio-demographic characteristics and the use of formal health care services
ii. To establish the relationship between economic characteristics and use of formal health care services
iii. To investigate the relative importance of institutional factors in influencing the use of formal health care services

1.4 Research questions

i. How do socio-demographic characteristics such as age, sex, marital status determine the use of formal health care service delivery?
ii. How do economic characteristics such income, education determine the use of formal health care service?
iii. What is the relative importance of institutional factors such as staff and accessibility in influencing the use of health care services?

1.5 Significance of the Study

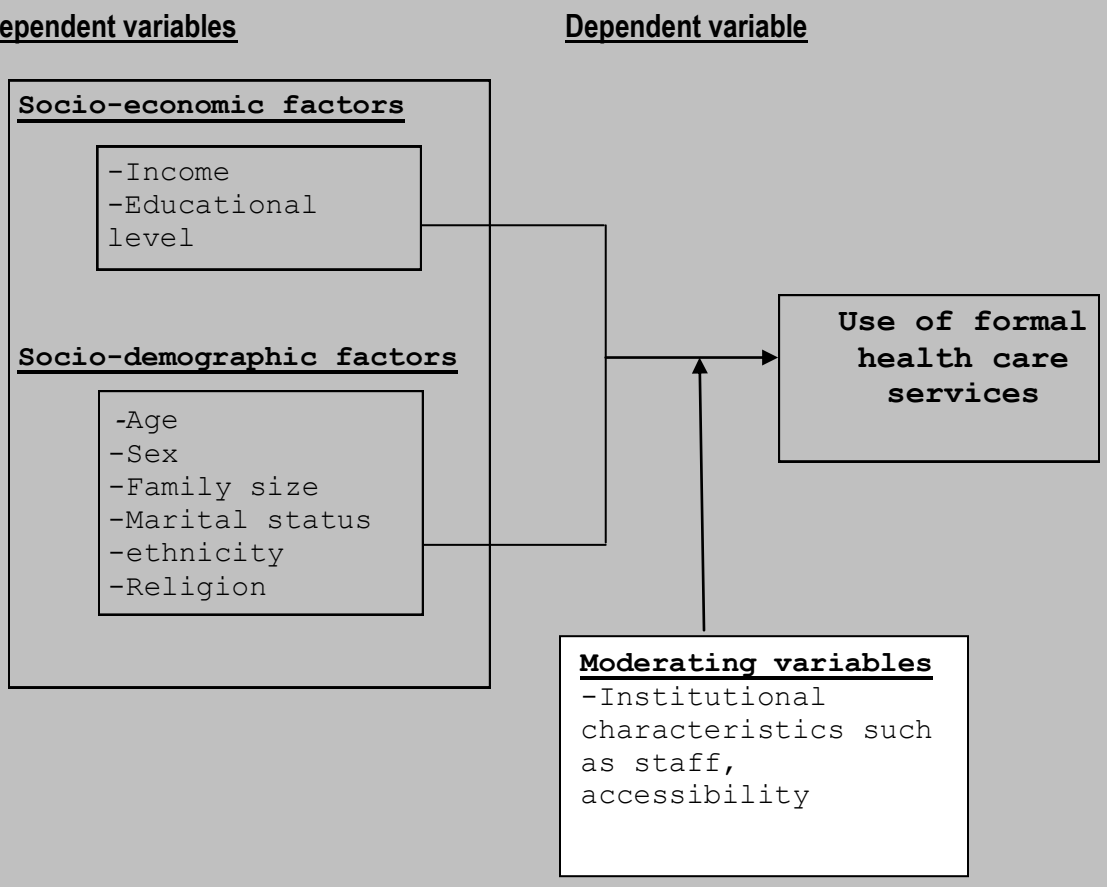
An understanding of the determinants of the use of health care services in Butaleja is needed for policy formulation and implementation directives. For instance, if it can be empirically established that economic factors are the most important determinants in the use of health care services, then related solutions can be designed.

Furthermore, the area of study, Butaleja, is a new rural eastern Uganda district that has not been the subject of any study on health related issues. This study, therefore, contributes to the knowledge base on access to health services by highlighting and bringing to the fore the specific factors that determine the access to formal health services in this area. Its findings could help the district authorities to plan and improve the delivery of health services to the people in the district.

1.6 Conceptual Framework

The conceptual framework takes into consideration that for health care services, the decision to use health care service is often perceived as one of the individual choice. A review of the literature suggests that in developing countries the use of modern health care services can be explained from two perspectives: Socio-demographic and economic explanation. The framework also shows that these explanations are conditioned by institutional factors such as health staff, accessibility and government policies such as decentralization. The framework is not designed to test any formal theory of health seeking behaviour. Nevertheless, each of the independent variables selected for inclusion in the study is based on reviewed literature. This is shown in the figure 1 below.

Figure 1: A Conceptual framework showing factors influencing the use of formal Health Care services



1.7 Outline of the Dissertation

The chapters of the study were organized in the following manner: Chapter one provide the introduction and background of the study, the problem statement, objectives, research questions, significance of study and conceptual framework; Chapter two address the literature review related to the study, chapter three covers the methodology of the study, chapter four presentation, interpretation and discussion of findings and chapter five conclusions and recommendation of findings.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents the reviewed literature on health care delivery in Uganda and on the factors that determine the use of formal health care services.

2.2 Healthcare Delivery of Uganda

One of the underlying philosophies for the decentralisation policy is community participation to ensure accountability and sensibility in service delivery and governance. Community participation in health service delivery and administration is supposed to be promoted through the decentralized governance system (Bossert et al., 2000). The health care delivery system at local levels in Uganda is multi-layered with services provided from Health Centre II to 1V as lower units, and with each district having a hospital at the top of the hierarchy (Mutabwire, 2006). This structure is ideally supposed to play a critical role in health care service delivery.

At the sub county or Local Council III (LC III) and at the village (LC I) levels there are health committees ostensibly serving to provide local representation equivalent to the district health committee (Hutchinson, 1998). Sub county health committees have now been established in most districts, but little information is available as to the effectiveness of these recently established institutions.

Another potential avenue for popular participation is the health unit management committee. These are nine-member committees that are elected, appointed, or named *ex-oficio* to oversee health facilities, personnel, inspections, expenditures, constructions, and maintenance concerns, and to

decide how revenue from user fees will be used by facilities at the district level (Bossert et al., 2000). While this would seem a praiseworthy institution for local participation and oversight, Hutchinson (1998) has noted that there are numerous problems, particularly with the issue of revenue management.

In the districts surveyed by Bossert et al. (2000), it was found that health unit management committee members generally perceived themselves as financial administrators and overseers, but not as representatives of or liaisons for local communities. Moreover, although user fees were then supposed to be used to improve the quality of care through the purchase of drugs and supplies, for instance, it was found that the majority (62.9 percent) of revenues in the sample was directed to staff salaries and incentives. But districts with stronger administrations in which more resources were invested in training and oversight of the health unit management committees, there was significantly lower levels of revenue expenditure on staff (13-37 percent). In general, however, the health unit management committees have not been associated with any noteworthy improvement in service quality, and in fact have been accused of complicity in drug leakage and other abuses (Hutchinson, 1998).

2.3 Determinants of the use of health care

To explore the issues of the use of health services, there is need to consider the knowledge of the key determinants of the use of health care services. A review of the literature suggests that in developing countries, the use of modern health care services can be explained from three competing perspectives. The first explanation suggests that the socio-demographic characteristics of individuals affect the underlying tendency of a person to seek care (Anderson & Newman, 1973). This has been termed as the 'characteristics hypotheses'. Socio-demographic attributes are

perceived as framing decisions such as seeking health care. This explanation postulates that people will act rationally when considering the most effective means of reaching a given goal, such as health-seeking behaviour (Heath, 1976).

The basic argument of this explanation is that people with the same socio-demographic attributes will seek health services equally, irrespective of their cultural background. This line of reasoning is based on the understanding that individuals behave within decision fields whose parameters differ with their positions in the stratification system. Low use of health care services in the context of the characteristics perspective is seen to be a reflection of low levels of socio-demographic attributes such as education, occupation, age and other such variables. According to Addai (2000), a number of socio-demographic characteristics of the individual affect the tendency to seek care. In this respect, good examples are age and sex, which have been examined as determinants of health care use repeatedly in the economic literature (Leslie and Gupta, 1989). The greater confidence and experience/exposure together with greater responsibilities within the household child care have been suggested as explanatory factors for their predisposition to use services frequently (Kwast and Liff, 1988). Other studies that demonstrated that age and gender are key factors affecting differences in the use of health services are those by Hong, Dibley and Tuan (2003), and Knutsen, (1994).

Age positively influences health care utilization because old age is usually associated with greater confidence and experience/exposure and when combined with greater responsibilities within the household, it leads to older people seeking health care more than young ones (Addai, 2000; Kwast and Liff, 1988). Evidence on marital status indicates that married persons are more likely to seek

formal health care than those who are single, separated or divorced. This finding is consistent with the result obtained by Harmon and Nolan (2001) and Kirigia et al., (2005).

A second standpoint is the accessibility explanation. The 'accessibility hypothesis' is based on the assertion that access to health facilities and personnel are equally important in the use of health services, especially in developing countries (Grant, 1990). For instance, studies by Adedoyin & Watts (1989) in Nigeria have shown that accessibility is a major determinant of greater use of health facilities and improvement in health conditions. Accessibility to health services has been shown to be an important determinant of utilization of health services in developing countries. In most rural areas in Africa, the majority of women for instance, live more than five kilometres from the nearest health facility (World Bank, 1994). The scarcity of vehicles, especially in remote areas, and poor road conditions can make it more difficult for women to reach even relatively nearby facilities. Walking is the primary transportation, even for women in child labour (World Bank, 1994). For example, in Tanzania, 84 percent of women who gave birth at home intended to deliver at health facility but did not due to distance and lack of transportation.

Another consideration attributes the level of use of available health care services to the cultural context within which decisions about the use of traditional or modern services are made (Adetunji, 1991; Fosu, 1981). The cultural perspective on the use of health services suggests that medical need is determined not only by the presence of physical disease, but also by the cultural perception of illness. What constitutes a threat to health, especially among pregnant women and children, tends to be culturally relative (World Bank, 1994).

The assumption underlying the cultural explanation is that individuals may attribute little seriousness to certain health situations because they may consider such conditions to be normal based on their cultural understanding and experience of that condition (Azevedo et al., 1991). Although accepting the logic of the characteristics explanation of the use of health services, the cultural hypothesis assigns equal importance to the independent role of cultural factors in shaping decisions such as seeking health, the general argument of the cultural perspective is that as societies modernize, the decisions individuals make pertaining to health-seeking practices, depend both upon the enduring models of their cultural origin and upon their current involvement in modernizing experiences.

In most African rural communities, the formal health care service deliveries coexist with indigenous health care services (Orley, 1980). For example, pregnant women in rural areas have a number of reproductive health care service options: the modern medical system, herbalists, diviners and spiritualists. A choice has to be made regarding the preferred source of service delivery between existing options. In the study of the response of parents to childhood diseases in the Nigerian Yoruba community, Adetunji (1991) found that mothers used alternative sources of health care rather than hospital clinics and maternity centres. The study reports that parents' perception of the seriousness of a condition and the religious beliefs of mothers were important determinants in their health-seeking response.

An individual's decision to use a particular source of health care service is assumed to be partially determined by the person's understanding of the source of diseases (Jordan, 1978). In rural communities where the influence of culture on decision making is expected to be high, individuals may seek professional care only after exhausting their own folk remedies and family resources

(Warren, 1978). Also, a potential user of a health care service may lean towards one particular health service delivery mode, depending on the previous evidence regarding the efficacy of the alternatives available.

The other factor identified as repeated positively associated with utilization of maternity care services is maternal education (Addai, 2000; Akin & Hutchinson, 1999; Celik and Hotchkiss, 2000). Although, in general, women in higher socioeconomic group tend to exhibit patterns of more frequent use of maternal health services than women in the lower socioeconomic groups, factors such as education appear to be important mediators (Addai, 1998; Leslie and Gupta, 1989). Similar findings have been got elsewhere for example by Mbagaya et al.,(2005) who in their study in rural Kenya found that parents' schooling particularly that of the mothers was likely to influence their behaviour in seeking health care services for their children.

Poverty has remained a major factor limiting health service utilization and women remain the poorest amongst the poor in most developing countries like Uganda. This translates to the inability to afford transport to health units for both preventive and curative services and other related costs (See Gertler & Vander Gaag, 1988). For example, women fear to go to hospital or health centres because they are poorly dressed and they know they will not be treated well by some health workers. Moreover Poverty limits people's choices and often causes delay in accessing timely care especially where they have to spend on another member of the family who may not be well prepared for emergencies which may arise. Poverty is such a fundamental problem in people's health that programs intending to empower masses for health should incorporate the issue of income generation. However, evidence indicates that income has a positive impact on the use of health care services. For example, income is reported to increase the likelihood of health service

use in countries such as Burkina Faso (Develay and Sauerborn et al., 1996) and Thailand (Raghupathy, 1996). Income also has a positive impact on the attendance at immunization clinics in Ghana (Bosu, et al., 1997). Most of these studies, however, do not make clear precisely why income has an impact on the demand.

A study in Burkina Faso, for example, suggested that transport costs accounted for 28 percent of the total costs of using hospital services (Ensor and Copper, 2004). Many studies reveal the unsurprising fact that household use of services tends to decline with distance. This is a key reason urban citizens use services more than their rural counterparts.

However, the impact of distance is not ambiguously negative. Some studies have found that people will travel long distances to obtain treatment. In Uganda the poor are more likely than the better-off to spend time travelling to facilities where the quality was higher, possibly because the opportunity cost of their time (wages forgone) is lower (Akin and Hutchinson, 1999).

2.3 The demand for health services by the people

There is a contradiction relating to the availability of health facilities or access points and the actual utilization of the services. On one hand, many reports (for example UBOS, 2003; Okuonzi, 2004) show that health facilities have increased in number as a result of the growth in private clinics and by this it is assumed that access to health services has also increased over time. On the other hand, home treatment in Uganda is still a common practice and between the periods of 1990/2000 and 2002/2003 the mean distance to hospitals increased from 9 to 12kms, while that to private clinics remained at only 3kms (UBOS, 2003). Similarly, in a study conducted in Iganga and Kabale by Lucas and Nuwagaba (1999), 62.3% and 68.4% respectively of the respondents said that the type of action taken in seeking care is home remedy.

The above shows that it is not just a question of available facilities. There is no effective demand for health services which is the result of poverty. In Lucas and Nuwagaba's (1999) study, one of the key problems was the cost of health services. Officially there are no user-charges having been abolished in 2001 (Okuonzi, 2004), however, in health centres people are diagnosed and then told to buy the medicine somewhere else. Healthcare outputs have been found to be more expensive than they used to be (Government of Uganda – GoU, 2003).

A related issue on user demand for health services is costs involved. There is now a multitude of research findings on the impact of cost-recovery schemes on health service utilisation and revenue generation. However, there is lack of unanimity on the exact impact. For example, Meyer (l985 cited by Okuonzi, 2004) found that price increases had minimal effect on the decision to seek health care in Mali. Meanwhile, Waddington and Emjimayen (l990) demonstrate that the utilisation of health care in Ghana was severely affected by a substantial increase of health care prices in l985. Similarly, Mbugwa (l993) in a Kenyan study found that utilisation of all government health facilities fell sharply after the announcement of user charges, while attendance at dispensaries which continued to provide free services rose.

Okuonzi (2004) observed that inequity in the provisions of health services has increased in parallel with rising economic differentials. Income inequality has worsened from a Gini coefficient (a measure of equity where 0 is perfect equity and 1 is the perfect inequality) of 0.35 in 1992 to 0.45 in 2003. The National poverty level which had reduced from 51% to 35% between 1990 and 2000 has now climbed to 38% in 2005.

The demand for health services also seems to be affected by the quality of services. Both consumers assessed and technical quality of health care has fallen to 30% or less, (GoU, 2005). According to Lucas and Nuwagaba (1999) people felt that they did not get their money's worth. In participatory poverty assessments (studies commissioned by the World Bank to hear what poor people have to say about poverty) carried out in 1999, 2002, and 2004, most people expressed dissatisfaction with health care, asserting that it is getting worse. A recent survey of emergency obstetric facilities in Uganda which typifies the entire health sector, indicates that technical efficiency (extent to which medical inputs and procedures conform to minimum standards) among health facilities ranged from 3.9% to 41% (GoU, 2003).

In Lucas and Nuwagaba's study herbs and traditional healers were an important component of health care in the villages. Some households said that they would seek advice on the choice of treatment and healer from a community elder and believed in their effectiveness, though for others herbs were simply a last resort for those who could afford no other treatment.

All the above-delineated explanations on the use of health care services may be relevant in Uganda particularly the rural district of Butaleja. The main goal of this study was, therefore, to determine which of the above explanations determines people's propensity to access formal health care services in Butaleja district.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the research methodology. Specifically the chapter presents the area and population of the study, the research design, sample size and selection, data collection methods and instruments, data analysis and model specification and the encountered problems.

3.1 Scope of the study

The factors that determine the use of health care services delivery are multifaceted. This study takes both a demand perspective of the issues focusing on the factors that negatively influence people from accessing and using formal health care services, and also looks at the supply side by looking at service providers' perspective. In geographical coverage the study covered Butaleja Sub County in Butaleja district.

3.2 Area and Population of Study

The study was conducted in Butaleja Sub County in Butaleja District which is located in Eastern Uganda. Butaleja district was formerly Bunyole County which was formerly a county in Tororo district. Butaleja is bordered by Tororo district to the south, Pallisa district to the north, Mbale district to the East and Namutumba district to the west. For the survey, the study population were residents of Butaleja Sub County. The study covered approximately 50% males and 50% females in their respective households.

3.3 Research Design

A descriptive cross sectional survey research design was used in order to measure the characteristics and responses of the sampled participants on the specified variables of the study at the same time. The design allowed the collection of data at different points at almost the same time. This method allowed the study of different subjects at a time and it generated quickly self reports from selected participants. The quantitative method adopted helped to show particular results of the variables under consideration using frequencies, percentages, and bivariate and multivariate analysis.

3.4 Sample Size and Selection

Total samples of four hundred seventy three (473) respondents were randomly selected from 5 parishes in Butaleja sub-county. From each parish 3 villages were selected randomly and from each village respondents were selected proportional to the size of the village population in the sample. Respondents were selected from households, one from each household using the household registration lists available at the village level.

The sample size in the study was calculated using the Leslie Kish sample size formula (Kish, 1965):

$$n = \frac{z^2 pq}{d^2}$$

Where;

n = the required sample size

z = the standard normal value corresponding to the required level of confidence (95%) = 1.96

p = the proportion of people who are accessing health services in Butaleja district, 50%. (Since p is not known, 50% was used which gives a maximum sample size)

$q = (1 - p)$, the proportion of people who are not accessing health services in Butaleja Sub County

$d =$ The desired precision of the estimate 5% (0.05)

Therefore,

$$n = \frac{z^2 p(1-p)}{d^2}$$

$$n = \frac{1.96^2 * 0.5(1-0.5)}{0.05^2}$$

$$n = 384.16$$

Assuming that the design effect is 1.17, (UDHS 2001/2002)

Multiplying by the design effect, n becomes:

$$n = 384.16 * 1.17$$

$$n = 449.467$$

Planning for non-response of about 5% using the formula:

$$\frac{100}{(100 - \%loss)}$$

The loss factor multiplied by the previously calculated sample size gives:

$$n = 449.467 * \left(\frac{100}{100 - 5} \right)$$

$$n = 473$$

3.5 Data Source and Collection

This study used primary data. This was collected from respondents in the area of study. Data was collected using a pre-coded structured questionnaire for the survey.

Close-ended questions were used. The close-ended questions are questions in which all possible answers were pre-specified and the respondents made the choice from the answers provided.

Data collection was done by a face-to-face personal interview method. An informed interviewer visited each respondent. This is important because it helped the respondent to understand the questions by interpreting them to fit the respondents' understanding. This was done to ensure that the respondent answered the questions in the appropriate sequence.

3.6 Data Quality Control

The instrument was pre-tested to determine the reliability and validity of instruments. Pre-testing was done before the actual field study among 10 people who were requested to answer the questionnaires. Instrument validity was ascertained by discussing the questionnaire with the supervisor. Validity of the questionnaire was ascertained by checking the accuracy and completeness of responses. Reliability was ascertained by consistence in the responses.

3.7 Data analysis

Data was analyzed at three levels: the univariate, bi-variate and multivariate level. At univariate level of analysis, descriptive statistics were used to present socio-economic and demographic characteristics of respondents. At the bi-variate level of analysis, cross tabulations was employed. Chi-square statistic was used to determine the association between formal health care use and socio-economic and demographic factors. The level of significance, P, is the probability of rejecting the hypothesis one wants to test when it is true. If the P-value is found to be less than 0.05, then the statistical relationship between the variables is taken to be significant and this means that there exists a relationship between the variables.

The Chi-square statistics test is given by:

$$\chi^2 = \sum_i^r \sum_j^c \frac{(Oij - Eij)^2}{Eij}$$

Where χ^2 = Chi square

i = 1…r

j = 1…c

Oij = the Observed frequency

Eij = the expected frequency assuming independent variables

r= the number of categories of independent variables

c= the number of categories of dependent variables

At multivariate level, a logistic regression model was used to assess the influence of socio-economic and demographic characteristics of individuals on use of formal health care services.

3.7.1 Model estimation

The use of health care services is a discrete event; a person either uses or does not. Therefore there is a dichotomy of 'use' versus 'non-use'. Given this type of dependent variable, some type of logit or probit function may be the most appropriate technique of analysis. Because of the variety and number of predictors, logistic multiple regression was selected (Gujarati, 2003; Norusis, 1990). The logistic model considers the relationship between a binary dependent variable and a set of

independent variables (Gujarati, 2003). The logistic regression model estimates a model of the form:

$$\text{Logit } p_i = b_0 + \sum b_i x_i + \varepsilon$$

In linear form:

$$\ln(p_i/[1-p_i]) = b_0 + \sum b_i x_i + \varepsilon_i$$

Where i represents an individual, p_i is the estimated probability of a particular event occurring to an individual with a given set of characteristics, x_i, b_0 is a constant that defines the probability, p_0, for an individual with all x_i set to zero; and b_i are the estimated coefficients. The ratio $p_i/(1-p_i)$ is the odds of an individual with a given set of characteristics using versus not using a health care service, and ε_i is the error term

The model above was estimated by maximum likelihood method and the procedure does not require assumptions of normality or homoskedasticity of error values. To evaluate the goodness-of-fit of the model, correct and incorrect predictions were compared. Stata also allow computing summary statistics after logit which provide predictive power of the model.

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter deals with the results of the research. In the discussion of the findings descriptive statistics, correlations and regression analysis have been used. The chapter is organized in accordance with the objectives of the study.

4.1 Socio-economic background of respondents

Here the information covered socio-demographic and economic characteristics, and the use of health care services. The demographic information was about gender, age, marital status, household size, occupation, religion, and education level. A total of 473 respondents answered the questionnaires, representing response rate of 100 percent. The details of the socio-demographic and economic characteristics of respondents and use of health care services are presented in Table 4.1.

Table 4.1: General Characteristics of the respondents

Background information	Respondents	Percentages (%)
Sex		
Male	257	54.3
Female	216	45.7
Total	473	100.0
Age category		
11-30	122	25.8
31-50	114	24.1
50+	237	50.1
Total	473	100.0
Education Level		
No Education	116	24.5

Table 4.1 continued

Primary Education	258	54.6
Secondary Education	69	14.6
Post secondary education	30	6.3
Total	473	100.0
Main Occupation		
Farming	352	74.4
Self-Employed (other than farming)	52	11.0
Government Employed	27	5.7
Privately Employed	9	1.9
Others	33	7.0
Total	473	100.0
Monthly Income		
< 100,000	392	82.9
100,001-200,000	62	13.1
200,001-300,000	15	3.2
300,001-400,000	4	0.9
Total	473	100.0
Marital Status		
Married	346	73.2
Never Married	20	4.2
Divorced	12	2.5
Separated	35	7.4
Widowed	60	12.7
Total	473	100.0
Religion		
Catholic	78	16.5
Protestant	249	52.6
Moslem	122	25.8
Others	24	5.1
Total	473	100.0
Household Size		
1-3	408	86.3
4-7	65	13.7
Total	473	100.0

Source: Primary Data

The important trends from table 4.1 are summarized as follows: The majority of respondents were males between the age brackets of 21-30, 31-40 and 50-above. The majority of respondents had attained primary education, practiced farming; earn less than 100,000 in a month and Protestants. The majority of respondents belonged to household sizes which fall between 1-3 members.

4.2 The use of health care services

The majority (88.2%) of the respondents acknowledged that they do not use the health care services available in their villages compared to 11.8% of the respondents who said that they use health care services available in their village. This is represented in Table 4.2.

Table 4.2: The use of health care services

Use of health care services	frequency	Percent
Yes	56	11.8
No	417	88.2
Total	473	100.0

4.2.1. Relationship between socio-demographic and economic characteristics and use of health care services

This objective was ascertained by carrying out the chi-square test between the use of health care services and socio-demographic and economic characteristics of respondents. The Pearson's chi-square test is the best known of several chi square tests-statistical procedures whose results are evaluated by reference to the chi-square distribution. A chi-square probability of 0.05 or less was interpreted as a justification for rejecting the null hypothesis that the two variables under

consideration have no associated relationship at 5 percent level of significance. The alternative hypothesis is not rejected when the variables have an relationship.

4.3 Relationship between use of health care services and age

Use of health care services	Age category			Total
	11-30	31-50	Above 50	
Yes (no.) (%)	1 (0.8)	2 (1.8)	53 (22.4)	56 11.8
No (no.) (%)	121 (99.2)	112 (98.3)	184 (77.6)	417 (88.2)
Total (no.) (%)	122 (100.0)	114 (100.0)	237 (100.0)	473 (100.0)

Pearson χ^2 = 50.4481 Pr< 0.001

The results in Table 4.3 shows that among the respondents aged 11 to 30 years, 0.8% sought formal health care, 1.8% for respondents aged 31-50 and 22.4% for respondents aged above 50 years. The chi-square statistics suggests a significant relationship between seeking formal health care and age of the person (p<0.001). It should also be noted that the Pearson chi-square test is appropriate when all of the expected counts are greater than five. Since some of the expected counts were less than five, Fisher's exact test was performed to justify the above results of the chi-square test. The p-value of Fisher's test was also significant (<0.001) justifying that there is significant relationship between seeking formal health care services and age.

4.2.3 Relationship between use of health care services and sex of respondent

Among the males, 19.5% sought formal health care compared to 2.8% among the females. The results of the chi-square statistics indicate a significant relationship between sex of the person and seeking of formal health care services (p<0.001). The results are shown in Table 4.4 below.

Table 4.4: Relationship between use of health care and sex

Use of health care services	Sex		Total
	Male	Female	
Yes (no.) (%)	50 (19.5)	6 (2.8)	56 (11.8)
No (no.) (%)	207 (80.5)	210 (97.2)	417 (88.2)
Total (no.) (%)	257 (100.0)	216 (10.0)	473 (100.0)

Pearson χ^2 = 31.2741 P= 0.000

4.2.4 Relationship between use of health care services and education level of the respondent

It was established that 6.0% of those with no education at all sought formal health care services from health centres compared to 19.0% among those who had attained primary level of education. Among those who had attained secondary level of education and post secondary education, there was no one who sought formal health care services. This implies that people with no education sought formal health care than those who are educated. The results of the chi-square statistics indicate a significant relationship between education level of the person and seeking of formal health care services ($p<0.001$). Since some of the expected counts were less than 5, Fisher's exact test was also performed to justify the chi-square results. The p-value of Fisher's test was also significant (<0.001) confirming that there is a significant relationship between seeking formal health care services and education level. The results are shown in table 4.5.

Table 4.5: **The Relationship between the use of health care and education level**

Use of health care services	Educational level				Total
	No education	Primary	Secondary	Post secondary	
Yes (no.) (%)	7 (6.0)	49 (19.0)	0 0.0	0 0.0	56 (11.9)
No (no.) (%)	109 (94.0)	209 (81.0)	69 (100.0)	29 (100.0)	417 (88.1)
Total(no.) (%)	116 (100.0)	258 (100.0)	69 (100.0)	29 (100.0)	473 (100.0)

Pearson χ^2 = 29.4981 Pr= 0.000
Fisher's test = 0.000

4.2.5 The Relationship between use of health care services and income level

Among those earning one hundred thousand shillings and below, 13.5% sought formal health care services compared to 3.7% among those earning between (100,001 and 400,000). This would imply that higher income earners in Butaleja Sub County in Butaleja District do not use formal health care services like their counter parts in lower income brackets. This may be true partly because wealthy people often do not use rural health services but rather prefer those in urban areas. The results of the chi-square statistics indicate a statistically significant relationship between income level of the person and seeking of formal health care services (p=0.013) at 5% significance level. Since some of the expected counts were less than 5, Fisher's exact test was also performed to justify the chi-square results. The p-value of Fisher's test was also significant (0.006) at 5% significance level hence confirming that there is a significant relationship between seeking formal health care services and income level. The results are shown in Table

4.6.

Table 4.6: **The Relationship between the use of health care and income level**

Use of health care services	Income level		Total
	< 100,000	100,001-400,000	
Yes (no.) (%)	53 (13.5)	3 (3.7)	56 (11.9)
No (no.) (%)	339 (86.5)	78 (96.3)	417 (88.1)
Total (no.) (%)	392 (100.0)	81 (100.0)	473 (100.0)

Pearson χ^2 =6.1978 Pr= 0.013
Fisher's test = 0.006

4.2.6 Relationship between use of health care services and marital status

Among the married, 14.2% sought formal health care services from health centres compared to 5.5% among the unmarried. The results of the chi-square statistics indicate a significant relationship between marital status of the person and seeking of formal health care services (p=0.010) at 5% significance level. The results are shown in table 4.7 below.

Table 4.7: The Relationship between the use of health care and marital status

Use of health care services	Marital status		Total
	Married	Unmarried	
Yes (no.) (%)	49 (12.6)	7 (8.2)	56 (11.8)
No (no.) (%)	339 (87.4)	78 (91.8)	417 (88.2)
Total	388 (100.0)	85 (100.0)	473 (100.0)

Pearson χ^2 = 6.6597 P= 0.010

4.2.7 The Relationship between the use of health care services and religion

Among the Catholics 1.3% sought formal health care services from health care services compared to 19.3% among the Protestants and 5.7% among Moslems. Among other religions (born-again Christians), none sought formal health care services. The results of the chi-square statistics indicate a significant relationship between religion of the person and seeking of formal health care services ($p<0.001$) at 5% significance level. Since some of the expected counts were less than 5, Fisher's exact test was also performed to justify the chi-square results. The p-value of Fisher's test was also significant (<0.001) at 5% significance level hence confirming that there is a significant relationship between seeking formal health care services and religion. The results are shown in table 4.8.

Table 4.8: The Relationship between the use of health care and religion

Use of health care services	Religion				Total
	Catholic	Protestant	Moslem	Others	
Yes (no.) (%)	1 1.3	48 19.3	7 5.7	0 0.0	56 11.9
No (no.) (%)	77 98.7	201 80.7	115 94.3	24 100.0	417 88.1
Total (no.) (%)	78 100.0	249 100.0	122 100.0	24 100.0	473 100.0

Pearson χ^2 = 29.1010 Pr= 0.000, Fisher's test = 0.000

4.2.8 Relationship between use of health care services and household size

Among those with household size 1-3, 10.5% sought formal health care compared to 20.0% among those with household size above three. The results of the chi-square statistics indicate a significant relationship between household size and seeking of formal health care services ($p=0.028$) at 95% significance level. The results are shown in table 4.9

Table 4.9: The Relationship between the use of health care and household size

Use of health care services	Household size		Total
	1-3	Above 3	
Yes (no.) (%)	43 (10.5)	13 (20.0)	56 (11.8)
No (no.) (%)	365 (89.5)	52 (80.0)	417 (88.2)
Total (no.) (%)	408 (100.0)	65 (100.0)	473 (100.0)

Pearson χ^2 = 4.8080 Pr= 0.028

4.2.9: The Relationship between the use of health care services and occupation

The results in Table 4.2.9 shows that among the respondents who practice farming, 15.1% sought formal health care compared to 9.1% in other occupations other than self employed, government and privately employed occupations. The chi-square statistic test suggests a significant relationship between seeking formal health care and occupation (p=0.004) at 5% significance level. Since some of the expected counts were less than 5, Fisher's exact test was also performed to justify the chi-square results. The p-value of Fisher's test was also significant (0.001) at 5% significance level hence confirming that there is a significant relationship between seeking formal health care services and occupation. The results are shown in table 4.10.

Table 4.10: The Relationship between the use of health care and occupation

Use of health care services	Occupation					Total
	farming	Self employed	Government employed	Private employed	Others	
Yes (no.) (%)	53 15.1	0 0.0	0 0.0	0 0.0	3 9.1	56 11.8
No (no.) (%)	299 84.9	52 100.0	27 100.0	9 100.0	30 90.9	417 88.2
Total (no. (%)	352 100.0	52 100.0	27 100.0	9 100.0	33 100.0	473 100.0

Pearson Chi2 (4) = 15.5478 Pr= 0.004

Fisher's test = 0.001

4.3 Institutional Characteristics and the use of formal health care facilities

This section examined the state of institutional and health care facilities. The Respondents were asked to rate the status of health care services they used and the results showed that the majority of respondents indicate that they were fair (49.80%), followed by 44 percent who indicated that they were good. Less than 2 percent of respondents mentioned that the health care services were bad but 4.1 percent indicated that the services were excellent. These results are summarized in Table 4.11.

Table 4.11: Responses on the status of health care services

Response	Frequency	Percent
Excellent	17	4.10
Good	184	44.2
Fair	207	49.8
Bad	8	1.90
Total	416	100.0

Table 4.12: Responses on the status of health facilities

Response	Frequency	Percent
Very efficient	12	2.9
Efficient	139	33.4
Inefficient	260	62.5
Very inefficient	5	1.2
Total	416	100.0

The results in Table 4.12 showed that the majority of respondents were not satisfied with the status of health facilities (62.5%). However, 33.4 percent indicated that the health facilities were efficient. Very few respondents indicated that the health facilities were very efficient (2.9%) or very inefficient (1.2%).

Table 4.13: Responses on the quality of staff

Response	Frequency	Percent
Very adequate	197	47.4
Adequate	179	43.0
Inadequate	13	3.1
Very inadequate	27	6.5
Total	416	100.0

Moreover results in Table 4.13 showed that respondents were satisfied with the quality of staff.

Table 4.14: Responses on the distance to nearest health centre

Response	Frequency	Percent
1-2.5kms	217	52.2
2.5-5 kms	122	29.3
More than 5 kms	77	18.5
Total	416	100.0

The results in Table 4.14 showed that the majority of the respondents live between the distance of 1 and 2.5 kilometres from the nearest health centre (52.2%), followed by those who live between 3 and 5 kilometres (29.3%). The rest of the respondents lived in a distance of 5 and more kilometres (18.5%).

A chi-square statistic was performed to examine the relationship between formal health care use and distance to the nearest health centre. The results showed a significant relationship between distances to the nearest health centre and use of formal health care (P = 0.029).

4.4 Determinants of the use of formal health care services

This section presents the findings of the logistic regression model that was estimated to investigate the factors that influence the probability of seeking health care services. The odds ratios were used to interpret the logit coefficients which are obtained by getting the exponential of logit coefficients. The goodness of fit of the model was checked using the Hosmer-Lemeshow chi-square test. The results of the test showed that the model estimated fits the data well, that is the probability of the Hosmer-Lemeshow chi-square test was 0.000, rejecting the null hypothesis and accepting the alternative that the model fits the data well.

The logit regression estimates are presented in Table 4.3. Except for being unmarried, all the other variables included in the model were statistically different from zero at the 5 percent significance level.

Table 4.15: Correlates of Healthcare use

Health care use	Crude OR	Adjusted OR	P-value
<40 years	1	1	
40+ years	22.37	37.72	0.001
Females	1	1	
Males	8.45	55.76	0.002
Income:100,000+	1	1	
Income:<100,000	4.06	27.31	0.004
Unmarried	1	1	
Married	2.83	3.86	0.109
non-Christians	1	1	
Christians	3.50	2.42	0.197
1-3 H/H size	1	1	
4-7 H/H size	2.12	1050.35	0.001

Model Statistics
Number of observations 473
Adjusted for all other factors in the model

The confidence intervals for the odds ratios show that the explanatory variables of age, sex, religion and household size contribute significantly to the model. Occupation and education predicted perfect failure and were excluded from the model.

The crude odds ratio reflects the odds ratio without the influence of the other variables while the adjusted odds ratio reflects the influence of other variables in the model.

The odds ratio for age indicates that, for given levels of all other variables in the model, the odds of use of health care for people above 40 years were 22 times those in the less than 40 years age group. This could be so because such people are more susceptible to diseases because of old age.

With the values of other variables being fixed, males have a higher probability of accessing the health care services than the female respondents. The male odds for use of health services were 9 times the female odds.

Married respondents had higher odds for use of health services than the not married respondents (including those separated and divorced). The married odds of use of health care are 3 times the unmarried odds

Also, according to the model, Christians have odds of use of health care services of about 4 times the non-Christians odds. The Respondents, with household size of more than 3 have greater odds of use of health care services than households with less than 3 people.

The odds of respondents earning less than 100,000 Uganda Shillings for use of health care services are 4 times the odds of those earning more than 100,000 Uganda Shillings. This could be explained by the fact that the availability of government health centres in rural areas which always attract low income earners.

4.5 Model's Predictive Power

In order to assess the predictive power of the model, a classification table of correct and incorrect predictions was constructed, based on the predicted probability of using formal health care services. A probability equal or greater than 0.5 was interpreted as a prediction of respondent not using formal health care services. While a probability lower than 0.5 was interpreted as a prediction of a respondent using formal health care services. Table 4.4 shows the classification table for the model. In this table, "D" represents the number of respondents who do not use formal health care services in the sample while "~D" represents the number of respondents who use formal health care services in the sample. The symbol "+" represents the number of respondents predicted as not using formal health care services by the model while"-" represents the number of respondents who use formal health care services predicted by the model.

Table 4.16: Predictive power of the model

	True		
Classified	D	~D	Total
+	416	43	459
-	0	13	13
Total	416	56	472
Classified + if predicted Pr(D) >= .5 True D defined as poor06 != 0			
Sensitivity	Pr(+| D)		100.00%
Specificity	Pr(-|~D)		23.21%
Positive predictive value	Pr(D| +)		90.63%
Negative predictive value	Pr(~D| -)		100.00%
False + rate for true ~D	Pr(+|~D)		76.79%
False - rate for true D	Pr(-| D)		0.00%
False + rate for classified +	Pr(~D| +)		9.37%
False - rate for classified -	Pr(D| -)		0.00%
Correctly classified			91.0%

The results in the table above show that the model's sensitivity rate (percent of not using formal health care services cases correctly predicted by the model) is 100 percent while the model's specifity rate (percent of using formal health care services cases correctly predicted by the model) is 23.21 percent.

The false positive rate for respondents classified as not using the formal health care services by the model is 10 percent, which means that 10 percent of the number of respondents predicted as not using the formal health care services by the model is in fact using the services. The false negative rate for respondents classified as using the formal health care services by the model is zero percent, which means that none of respondents predicted as using the services by the model are in fact not using.

The positive predictive value rate of the model is 90.6 percent which means that 91 percent of the total number of predicted respondents not using the formal health care services is in fact using the services. Negative predictive rate is zero percent meaning that there is no one predicted as using formal health care services by the model that is in fact not using the services. However, as a whole, the model correctly predicts 91 percent of cases.

4.6 Discussion of the findings

The relationship between age and sex of respondents and use of formal health care services showed a significant relationship between seeking formal health care services and age, and sex of respondents. These results concur with a number of studies that have demonstrated that age and gender are key factors affecting differences in the use of health services (Hong, et al, 2003; Knutsen, 1994). Age positively influences health care utilization because old age is usually associated with greater confidence and experience/exposure and when combined with greater responsibilities within the household, it is not surprising that older people will seek health care more than young ones (Addai, 2000; Kwast and Liff, 1988).

Also there is a significant relationship between educational background of the respondents and the use of formal health care services. The results show that individuals with some education in Butaleja, when compared with those without education, do not use health care services.

This study shows ambivalent positions to the similar researches conducted by some scholars in the past. In the first instance, this finding does not support the research findings that education is a long-established determinant of the demand for health and health care. It was incorporated as a determinant of the production function of health in the early Grossman (1972, 2000) human capital model of health (Ensor and Cooper, 2004). In that model better education allows an individual to be

more effective in converting health care and other health-enhancing goods into health. A recent study, by the same author, of the empirical effects of schooling on health found it to be the most important correlate of good health (Grossman and Kaestner 1997). Other studies from low- and middle-income countries have echoed the need for a high education base as a prerequisite for high returns from health sector investment (Mehrotra, 2000; Ensor and Cooper, 2004).

The results on education further indicated that the use of formal health care in the study area was more pronounced among those who had attained primary level of education. This could be explained by the evidence in the literature that while better schooling or education may raise understanding, and appreciation of the benefits of health care, and hence demand for it, these effects are more linked when it comes to primary education. It has been documented that basic literacy enables students to read and understand health messages (e.g., antismoking) and also information on the appropriate use of health facilities (Ensor and Cooper, 2004).

The cross-tabulation and chi-square analysis of level of income of the respondents and the use of health care indicate significant relationship between income level of the person and seeking of formal health care services at 5% significance level. Since some of the expected counts were less than 5, Fisher's exact test was also performed to justify the chi-square results. The p-value of Fisher's test was also significant at 5% significance level indicating that there is a significant relationship between seeking formal health care services and income level. This implies that the level of income of the respondents influence health care utilization. This study further reveals that majority of those who highly utilize formal health care services are those with lower income such as, below 100,000 shillings per month.

It further revealed that very few individuals earning above 100,000 sought formal health care services in study area, implying that higher income earners in Butaleja Sub County in Butaleja District did not use formal health care services. This may be true partly because wealthy people often do not use rural health services but rather prefer those in urban areas. It has been argued that this category of individuals see their problems from natural causation, hence they consume more modern health care services than those with relatively lower incomes. Inspite of this, income has been shown as one of the factors which has influenced health care utilization. This, therefore, showed that people of lower socio-economic status are more likely to use formal health care services. This finding supports the research findings that those with lower income and low socio-economic status form the bulk of people utilizing rural health care services in solving their health problems. However, evidence indicated that income has a positive impact on the use of health care services. For example, income is reported to increase the likelihood of health service use in countries such as Burkina Faso (Develay, Sauerborn et al., 1996) and Thailand (Raghupathy, 1996). Income also has a positive impact on attendance at immunization clinics in Ghana (Bosu, Ahelegbe et al., 1997). Most of these studies, however, do not make clear precisely why income has an impact on demand.

The results also indicated that religion, household size and occupation had significant relationship with seeking formal health care services. It is expected that people from white-collar occupations and being gainfully employed seek formal health care services than those in lower occupations. The results on marital status show that married persons are more likely to seek formal health care than those who are single, separated or divorced. This finding is consistent with the result obtained by Harmon and Nolan, (2001) and Kirigia *et al*., (2005). Married couples may have a higher demand for formal health care services due to: (i) the need to protect their children (ii) higher

combined income; and (iii) being more averse to the risk of catastrophic health expenditures than those who are single, separated or divorced (Kirigia et al., 2005).

The household size variable had a statistically significant negative effect on the likelihood of seeking health care services. This finding is intuitively sensible since any increase in the household size, while holding the income constant, reduces the per capita income.

The Results on the status of institutional characteristics showed that respondents were satisfied with quality of health services and health staff and that the distance to nearest health centers was reasonably low, that is, the majority of respondents lived in between 1-2.5 kilometers from the nearest health centre. However, respondents were not satisfied with the status of health facilities.

Evidence indicates that location of facilities, status of health facilities and quality of staff are other important dimensions of the cost of care. For example, a study in Burkina Faso, suggested that transport costs accounted for 28 percent of the total cost of using hospital services (Ensor and Copper, 2004). Many studies reveal the unsurprising fact that household use of services tends to decline with distance. This is a key reason urban citizens use services more than their rural counterparts.

However, the impact of distance is not ambiguously negative. Some studies have found that people will travel long distances to obtain treatment. In Uganda the poor are more likely than the better-off to spend time travelling to facilities where the quality was higher, possibly because the opportunity cost of their time (wages foregone) is lower (Akin and Hutchinson, 1999).

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the conclusions derived from chapter four. It presents the conclusions and the recommendations derived from the findings.

5.2 Summary of findings

The determinants of utilisation of health care services are numerous and can be multifaceted. This study focused on the relationship between socio-demographic characteristics and the use of formal health care services; the relationship between economic characteristics and the use of formal health care services; and to examine the relative importance of institutional factors in influencing the use of formal health care services

The results of the study revealed that there were relationships of varying significances between the variables and seeking of formal health care services. There was a significant relationship between seeking formal health care and age of the person. Similarly, the results of the chi-square statistics indicated a significant relationship between sex of the person and seeking of formal health care services ($p<0.001$).

There was also a significant relationship between marital status and the use of health care services with the married people being more likely to seek the services. The other demographic indicator is household size. The bigger the household the more likely was the respondent to seek formal health care services. This could be because the welfare within the big home is limited due to a large

number of people which means that people (particularly the children) fall sick easily and more frequently than those in smaller households. Therefore the former seek healthcare more.

Interestingly, there was an inverse relationship between education and seeking of formal health care services. While 6% of those with no education sought formal health care services from health centres and 19% of those who had attained primary level of education sought services, among those who had attained secondary level of education and post secondary education, there was no one who sought formal health care services. The results of the chi-square statistics indicated a significant relationship between education level of the person and seeking of formal health care services ($p<0.001$). The implications of this requires more research; it could be that the more educated people may be could lead to doing more of preventive measures than curative measures that require regular visiting of health care facilities.

Nevertheless, the results also reveal an inverse relationship between income and seeking formal health care services in Butaleja sub-county. The lower the incomes of the respondent, the more likely they were to seek formal health care services. Again this requires further research. It could be that wealthy people do not use rural health services but rather prefer those in urban areas.

In relation to occupation and seeking healthcare services, the results show that farmers were more likely to seek formal health care services than those who are self employed, government or privately employed.

On the side of institutional factors that affect the use of formal health care services, the results revealed that health facilities are positively associated the use of health care. For example, over

70% respondents rated the health care services as fair and excellent. There was also a similar level of rating for the workers in their efficiency of service.

In terms of determinacy, the Logistical regression model results show that the most significant factor that influences decision-making in regard to whether one should seek formal health services was age.

5.3 Conclusions

This study attempts to establish the determinants influencing the use of formal health care services in Butaleja district. The majority (88.2%) of the respondents acknowledged that they do not use formal health care services available in their villages compared to 11.8% of the respondents who said that they use health care services available in their village.

The study reveals that there is significant relationship between age, sex, marital status, income level, religion, and household size of respondents and the use of formal health care services. The results on education revealed that, average and highly educated people in Butaleja keenly show no interest and do not highly accept the use of health care services than those with little or no educational attainment. However, the results on education further indicated that the use of formal health care in the study area was more pronounced among those who had attained primary level of education. This could imply that basic education increases more the likelihood of seeking formal health care services.

The results further revealed that respondents were satisfied with quality of health services and health staff and that the distance to nearest health centers was reasonably low, that is the majority

of respondents lived in between 1-2.5 kilometers from the nearest health centre. This implies that these factors are reasonably okay and have been instrumental in influencing health care use in the study area. However, respondents were not satisfied with the status of health facilities in particular.

5.4 Recommendations

In the course of this study, six factors (age, sex, marital status, religion, household size and occupation of respondents) had a significant influence on use of formal health care services in Butaleja district. The results suggest that decisions to use health care services take place within the constraints imposed by demand side barriers. These findings indicate the importance of demand-side barriers in accessing health care. This finding demonstrates the need to refocus on demand-side barriers in health care service provision.

Therefore, the challenge for health providers who include ministries of health, local governments, or civil society organizations is how to direct resources in a way that improves access through a combination of supply and demand measures. For example, while the government has endeavoured to improve access to health care services by setting up health centres in each sub-county of every district of Uganda, the demand side barriers have not been emphasized. This implies that while physical presence of health care services are important in improving access to health care services, individual barriers need to be addressed as well.

In light of the above findings, this study suggests concerted efforts and support to increase access to health service use particularly in rural areas. Programs that intensify accessibility of health services should be thought of by various stakeholders in health provision.

Because of the predisposing influence of education level, there is need to implement community health awareness and sensitization. Due to low levels of education some people may not know the precautions needed to avoid some illnesses and also the urgency of the different diseases. Therefore community health programmes can help to improve access to health services through awareness raising.

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