

**UTILISATION OF HEALTH SERVICES AT MAKERERE UNIVERSITY
HOSPITAL BY STUDENTS OF MAKERERE UNIVERSITY KAMPALA-
UGANDA**

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DEGREE OF BACHELORS OF ENVIRONMENTAL HEALTH SCIENCE
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
DECLARATION

DECLARATION

I **AHUMUZA MARTHA**, hereby declare that the work presented in this dissertation is my original work and that it has never been submitted to any institution of learning for any academic award. The related work from other individuals is quoted and appropriately referenced.

I, therefore, present it to **MAKERERE UNIVERSITY** in partial fulfillment of the requirement for the award of a Bachelor's Degree in Environmental Health Science of Makerere University.

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DATE: 11th November, 2019

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DATE: 11th November, 2019

DEDICATION

My utmost dedication goes to God for the gift of life and strength he has given to me to complete this work.

This dissertation is dedicated to my wonderful family for their unending support during the course of my study.

ACKNOWLEDGEMENT

I wish to thank the administration and academic staff of Makerere University School of Public Health for their support and efforts all through my study. I sincerely thank my dear supervisor Dr. Aggrey David Mukose for the tireless guidance and knowledgeable advice during the study. I wish to recognize my family members for their tireless struggle in bringing me this far. Last but not least I recognize all my classmates whose company and academic support through discussions has contributed to my academic performance.

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ABBREVIATIONS AND ACRONYMS

IOM	Institute of Medicine
MoES	Ministry of Education and Sports
MOH	Ministry of Health
NAMI	National Alliance on Mental Illness
NCHA	National College Health Assessment
SABER	Systems Approach for Better Education Results
UACE	Uganda Advanced Certificate of Education.
WBG	World Bank Group
WHO	World Health Organisation

OPERATIONAL DEFINITIONS

Social networks: This refers to the associations a Makerere University student has in relation to the people they surround themselves with.

Utilisation of health services: This refers to the use of health services provided by Makerere University hospital by the students for purposes of preventing or treating health conditions.

Youth: This refers to people who are between 18 and 35 years of age.

ABSTRACT

Introduction: Institutions of learning are in a unique position to promote the health and safety of young people and help them establish proper lifelong health behavior patterns. Since students spend most of their time in a year pursuing education, institutions of learning should avail health services to students through institution-based health service facilities. On the other hand, the students should utilize the health services so as to have good health that enables them to attain an excellent academic performance.

Objective: To assess the utilization of Makerere University hospital health care services by the University students so as to contribute to the knowledge required in the planning and operation of the University hospital.

Methodology: This was a descriptive cross-sectional study, where a self-administered questionnaire was used to collect data from a random sample of 384 students. Data was entered in EPI DATA version 3.0, checked and cleaned then transferred to STATA version 13 for univariate analysis.

Results: More than three quarters of the students 94.0% (361/384) know about the existence of the University hospital however less than half 41.9% (161/384) have used the services at the hospital during the time they have been at the University since admission. Majority 64.6% (104/161) of those that have utilised the services at the hospital have sought for general medical care. About 60.3% (97/161) of the students were satisfied with the hospital services. However, unavailability of drugs 56.5% (26/46), requirement of student registration with the hospital 36.3% (81/223), discouragement from friends 12.1% (27/223), medical staff/student relationships 6.5% (3/46) and long waiting time 54.4% (25/46) were some of the factors that affected health service utilisation at the hospital as perceived by students.

Conclusion: This study highlights the health service utilisation of students that will help to improve the health services offered at the University Hospital and promote health among the students.

CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1. Introduction

School health services offered in institutions of learning are meant to improve the health and well-being of students attending these schools. The health services are intended for early detection and care of students with health problems, aiding in development of healthy attitudes and behaviors by students and also to ensure a healthy environment for students at school thus boost their academic performance (IOM., 1997). An institution of learning brings together many people that is; students, teaching and non-teaching staff and thus requires a common point to handle medical emergencies, first aid and maintain good health among the students and staff (Allensworth et al., 1997).

According to World Health Organisation (WHO), health is the state of complete physical, social and mental wellbeing not merely the absence of disease or infirmity. This therefore means that the health services offered in institutions of learning should be aiming at keeping the students healthy through provision of services that cater for the physical, social and mental well-being. More so, presence of these health service centres is not enough to justify usage because various factors influence an individual's health care seeking behaviour.

Utilization of health services can be defined as the outcome of the interaction between health professionals and the patients, the measure of a population's use of the health care services available to them. Institutions of higher learning have large populations of young adults who tend to expect confidentiality and become more reserved about their health issues because young adulthood is a critical period of development with lasting implications of a person's health and well-being (Bonnie et al., 2014). This therefore influences the form of health care they could choose to use for example meeting the health service providers on their own terms and accessing youth clinics (Thomé et al., 2016).

Makerere University provides health services to her students through the University hospital. In addition, the Makerere University student leaders organize health weeks annually and other disease-oriented campaigns through which students receive health services.

1.2. Background

School health can be used as a determinant for the performance of an education system. Therefore, education systems can be strengthened through betterment of enabling environments that include health of the students. Four key policy goals are considered in promoting school health that is; establishing health related school policies, ensuring safe, supportive environments, delivering school-based health and nutrition services and skills-based health education. Because of this, countries have invested in strengthening their education systems through creation and implementation of school health policies that are geared to improving health of students within institutions of learning. The Systems Approach for Better Education Results (SABER) program funded by the world bank group aids countries on strengthening their education systems focusing on evaluating the enabling environments mostly health (WBG., 2014). According to the SABER country report, Uganda has a draft of the school health policy that includes the school health monitoring plan for school health programming developed in 2001 by the Ministry of Education and sports but has not been published (WBG., 2014).

In Uganda's education system, an individual takes 15-18 years to attain a bachelor's degree or an equivalent. This system involves different education levels that include primary, secondary both lower and upper, University or a college. A student ought to have obtained two principle passes in their Uganda Advanced Certificate of Education (UACE) to be considered fit to join any university. Currently, there are 32 universities in the country and as of 2009, Makerere University contributed 31% of the total tertiary institutions enrolment (MoES., 2010).

Uganda faces several health challenges with 60% deaths caused by communicable diseases and 27 % by non-communicable diseases. The prevalent communicable diseases in Uganda include malaria, tuberculosis, HIV/AIDS where 7.2% of the population between 15 and 49 were infected in 2012. According to the Ministry of Health (MOH) of Uganda, about 75% of the country's disease burden is preventable with communicable diseases topping the list of causes of high morbidity and mortality. The 5 leading causes of mortality are; Malaria, Diarrheal diseases, Road traffic Accidents and injuries, HIV/AIDS and nutritional related complications including anemia (MOH, 2016). Most of the disease burden if not prevented or well managed during the young age, results in irreversible health conditions during adult life (Jacob et al., 2015).

Makerere University has a large population of youth who are susceptible to all the leading causes of death in Uganda non-communicable diseases inclusive if they are not provided with proper and appropriate health services. For example, according to a cross sectional study conducted in Makerere University among students the cardiovascular risk factors with high prevalence were, alcohol consumption, excessive salt intake and elevated systolic blood pressure (Nyombi et al., 2016).

Students therefore require reliable sources of health care for both chronic and acute illnesses as they are always part or full time attending an institution of higher learning where these services are or can be attained from the school's student health service centres (McBride et al., 2010). According to The Universities and Other Tertiary Institutions Act 2001, there is no provision for health services for students in the higher learning institutions however, Makerere University offers health services to her students through the University hospital at no cost during the time of their stay at the University following a registration fee of 10,000shs paid once during the stay at University.

Makerere University hospital offers health services both curative and preventive in nature on a 24hour basis; it has both an outpatient and an inpatient department where various health services are received. The hospital has in addition to the general medical care clinic, a dental clinic, maternal child health and family planning clinic and an optometry clinic. Health services offered include laboratory services where communicable and non-communicable diseases are screened for example hepatitis B, HIV/AIDs, malaria, typhoid and brucellosis. Vaccination services for hepatitis B and yellow fever and safe male circumcision are other services offered at the hospital. The Maternal Child-Health and Family Planning Clinic deals with the immunization of children and students, dispenses vaccines and contraceptives.

More so, the hospital faces challenges that include untimely response to the requirement of student registration with the hospital thus causing difficulty in planning. Many services are offered to students at the hospital but there is limited knowledge about the utilisation of these services. This study therefore is to assess the utilisation of these services to inform the health service decision in planning.

CHAPTER TWO: LITERATURE REVIEW

2.1. Health services offered in higher institutions of learning.

WHO gives the following characteristics of good service delivery as; comprehensiveness to mean that a range of health services are provided appropriate to the needs of the target population, accessibility- services should be accessible without barriers like cost, language, culture and geographic reasons, coverage and continuity, quality to mean that the service should be safe, effective and centered on patient's needs (WHO, 2010). When the characteristics are observed for any service center, there is a high chance of utilization compared to when they are not observed.

Globally, institutions of learning offer various health services to their students for example according to a survey conducted on utilisation of health services among institutions of learning, the most common services offered by the institutions were medical services at 91%, counseling 33% and health promotion 70%. The same survey further showed that primary care, gynecology services and urgent care were the most provided medical services among these institutions (McBride et al., 2010). In Uganda, health services are offered to students through school health service centres and private centres for example Lisa medical centre offers health services ranging from adolescent medicine, adolescent psychiatry, dentistry, gynecology, radiology and dermatology to Universities like Muteesa I Royal University, Kampala University and Buganda Royal Institute (LMC., 2013).

2.2. Level of health service utilisation in higher institutions of learning

High utilization of health services improves the health status of a population, it is determined by the health seeking behaviour of a given population and availability of health facilities within an area. However, the availability of hospitals and other health service centres in an area is not enough to inform the health service utilisation levels for example a study conducted in Mozambique to investigate the effect of health care service availability on individuals decision to seek care showed that living close to a health facility only increases the probability of seeking care but a great availability of health service centre in an area has no significant effect on a decision to seek care thus utilisation (Anselmi et al., 2015).

Several studies that have been conducted have found out that utilisation of health services among young adults has been unsatisfactory. According to the National Alliance on Mental Illness (NAMI) college students speak survey showed that 55% of the students utilised the school health services offered on mental health. More so the same study showed that 65% of the survey participants presented that health centers within the campus are critical to their success academically (Crudo and Gruttadaro, 2012). A cross sectional study conducted in Nigeria shows that less than half of the students utilised the university health centre, the remaining percentage that did not utilise the university health centre sought for alternate means like self-medication and visiting private hospitals (Rotimi et al., 2015).

The unsatisfactory utilisation of health services doesn't only apply to students but as well cuts across the general population. For instance, a study conducted in Ethiopia among adolescents and the youth showed a utilisation level of 38.5% where the youth with good knowledge about the services were more likely to utilise the health services (Helamo et al., 2017). In Uganda, the introduction of health sector reforms followed subsequent decline in the utilisation of the prevailing health services. One of the studies conducted revealed the odds of not seeking care were 1.79 times higher in 2006 than in 2003 and the rural population had a 43% decrease in the risk of not seeking care mostly because of accessibility factors (Pariyo et al., 2009).

2.3. Common services used by University students

Categorically, health conditions affecting students are mental health issues, stressing factors, sexual health and drug use (BoynntonHealthService, 2015). According to the Georgetown university, students present with health conditions like stress, anxiety, depression, alcohol over use, colds, flus and sore throat (Georgetown, 2018).

In a study to assess utilisation of University health centre services, of the 42.5% of the students that had used the University health centre services at least once in the past 6 months, the most frequent health conditions for utilisation were influenza, headache and abdominal pain . In addition, according to the University of Michigan National College Health Assessment (NCHA) the students presented stress, anxiety, sleep difficulties, depression, cold and sore throat as the health impediments to academic success (UniversityofMichigan, 2018). Among various universities in the United States, 60% of the students used health services of which 13% was

mental health services, 9% vaccination and 31% miscellaneous services. The same study showed the most common diagnostic categories as respiratory illness, skin, hair and nail infectious non-sexually transmitted infection and mental health that would be prevented (Turner and Keller, 2015).

2.4. Factors that influence health service utilisation among University students

According to Andersen model of health service utilization of 1995, factors that influence utilization of health services can be categorised as predisposing, enabling and need factors. These factors influence health service utilisation and also influence each other to affect health service utilisation.

2.4.1. Predisposing factors

Predisposing factors are mostly socio-demographic characteristics such as age, gender, social networks and interactions, social psychological-expected benefit, attitude towards health care, personal preference and knowledge of the health services.

From studies conducted among general populations, age and utilisation of health services have a clear relationship but the narrow age range of University students makes it less likely to be a factor in student populations. Gender like any other predisposing factor influences utilisation as the females tend to utilise health services more than the males. A study conducted to determine gender differences in healthcare service use 12 months prior to suicide, a high proportion of girls were more likely to have used healthcare services in the year prior death, had been hospitalized or had received a mental related diagnosis (Guerra and Vasiliadis, 2016) .

Education status also influences health service utilisation as the students with higher education status tend to seek health care than those of lower education status. In a study conducted to assess factors influencing the utilisation of public and private health care services in Riyadh city, university students were most likely to attend public health centre thus utilize health services than students at lower levels of education (Al-Ghanim, 2004). Students' perception towards the health services is considered a great factor in influencing the utilisation of the health services, it varies depending on the organisation of health care system which is the main driver for health seeking behaviour among a population (Shaikh and Hatcher, 2004). Furthermore, a cross

sectional study carried out in Nigeria to assess the health behaviour of undergraduates and service utilisation of university health centre found out that a higher number of females utilised the University health services than the males (Rotimi et al., 2015).

Similarly like in student population, among the general populations age is known to influence health service utilisation as male and female health service preferences and seeking behaviour changes as they age. Younger populations utilise mental and social services at higher rates compared to the older populations (Keene and Li, 2005). Social networks and interactions include peer influence and guidance that influences individuals to utilise health services. Individuals are often influenced by their parents or spouse for selection of a particular health provider (Manzoor et al., 2009). According to a study conducted in Spain to assess the gender differences in Utilization of health-care services among the older adult population females had a higher percentage of health service utilisation compared to males (Redondo-Sendino et al., 2006). More so females are more likely to use health services because they report having poorer health than males according to a study conducted among the middle aged and older Australians to assess gender differences in factors affecting use of health services (Parslow et al., 2004). Males limited utilisation of health services has been attributed to both biological and social cultural factors of masculinity (Smith et al., 2006).

2.4.2. Enabling factors

Enabling factors are family or community level characteristics that facilitate (or inhibit) the ease in which health care is attained. Examples of enabling factors include availability of health care services, accessibility of the services, time constraints, health insurance and economic feasibility.

A cross sectional study to assess utilisation of University health centre services in the past 6 months and perceived barriers towards utilisation among University students in Jordan found that long waiting time for health services presented as a barrier to health service utilisation (Alkhaldeh, 2017). In addition, a study conducted in Nigeria to assess factors affecting utilisation of university health services in a tertiary institution found out that time spent waiting for treatment and availability of drugs were found to have influenced utilisation of University health services at a percentage of 67.2% and 54.8% respectively. The same study showed that

accessibility to the health facility was not considered as a factor by the study participants (Obiechina and Ekenedo, 2013).

Among the general populations, other enabling factors are well studied for example, a study conducted in Zimbabwe about the socio-economic status and health care utilisation showed that health services are most utilised by those of high and medium social economic status. Employment as a means of income earning played a role in influencing utilisation as the employed utilise health services and the unemployed utilised the traditional health services most (Kevany et al., 2012). Geographic accessibility as another enabling factor affects utilisation of health services. For example, a study conducted in Japan to reveal whether an income-dependent difference in the impact of geographic accessibility on the utilization of government-led annual health check-ups exists, travel time to the nearest health care facility and density of health care facilities were some of the indices used to find out that both low density and low income associated with decreased utilisation of health checkups. Contrary to these findings, other research has failed to find a link between utilization and other enabling factors, such as physical accessibility and time availability (Corney, 1990).

2.4.3. Need factors

According to the Andersen's model of health service utilisation 1995, need factors are categorised into two that is: perceived need and evaluated need. They include and are not limited to perceived health status, illness level or established diagnoses which are among the most important factors in determining whether a person seeks help or not.

Need factors have a major impact on influencing health service utilization than both the predisposing and enabling factors (Li et al., 2016). Health need as measured by perceived health status was found to be associated with increased health service utilisation. The relationship between need and service use differs for different groups of people as presence of an illness among males and females largely influences utilisation of health services, the presence of physical symptoms predicted more frequent health care consultation in both males and females but the presence of psychosocial problems or distress however predicted consultation behaviour in women but not in men (Corney, 1990). Various studies indicate varying barriers to health service utilisation but these barriers to access health services can result from both the consumers

and the service providers (Kiwanuka et al., 2008). Therefore, to improve utilisation of given health services, accessibility should be enhanced (Awoyemi et al., 2011).

CHAPTER THREE: PROBLEM STATEMENT AND JUSTIFICATION

3.1. Problem statement

Utilization of health services at Makerere University Hospital by Makerere University students is low. According to anecdotal data from the University Hospital Director (Dr. Margret Wandera), only about 1.9 – 2.5% of the student population receives health services at the hospital in an academic semester. More so, vaccination and general medical care that includes malaria and typhoid screening are the most utilised by the students. This has raised questions about the reasons for the low and non-utilization of health services provided at the hospital by students.

Health service utilization is influenced by various factors that include attitude, quality of services, peer influence, personal preference of health care and also accessibility of the hospital as some students stay far from the hospital. More so, the categories of services provided and the level of satisfaction of the previous seekers can also influence the utilization of the services (Macharia and Otieno, 2014).

Despite the use of sensitization by Makerere University management and the University Students' Guild to create awareness of the existing health services at the University Hospital, the number of students utilizing the services has remained low. This has been done through the annual health week where services like screening, vaccination, health education and massive sensitization on various health related conditions are done under the supervision of the student leadership.

Failure to utilize the health services at the Hospital results into inability to keep track of; the students' health, patterns of utilization of health services and consequently affects planning for the University Hospital by the Hospital and University management.

Therefore, this study assessed the utilization of healthcare services by University students at Makerere University Hospital Kampala Uganda in order to determine the most used services and factors that influence the utilisation of these services.

3.2. Justification

Institutions of learning are in a unique position to promote the health and safety of students helping them establish proper lifelong health behavior patterns. Since students spend most of their time in a year pursuing education in various institutions of learning, the institutions should enable a continuous flow of health service to students through school-based health service facilities.

Makerere University offers health services to her students through the University hospital and expects all the students to utilise these services to improve their health during their stay at the University. However, under-utilization or even no utilization of the services at the hospital results into wastage of resources, poor planning and management. This study therefore is intended to generate information about the utilization of the health services offered by the University to the students through the University hospital that shall be used by Makerere University Hospital, College of Health Sciences and Makerere University administration in the planning and running of the hospital and supervision of its operations.

Additionally, the information gathered shall be used by the Makerere University student leaders for guidance in decision making and budgeting for various ministries. The health ministry under the student guild will use this information to inform its plans and activities. This information shall be used by other institutions of learning in evaluation of utilization of school-based health care services by their students.

CHAPTER FOUR: CONCEPTUAL FRAMEWORK, RESEARCH QUESTIONS AND OBJECTIVES.

4.1. The Conceptual framework

Adapted from the Andersen's model of health service utilisation 1995

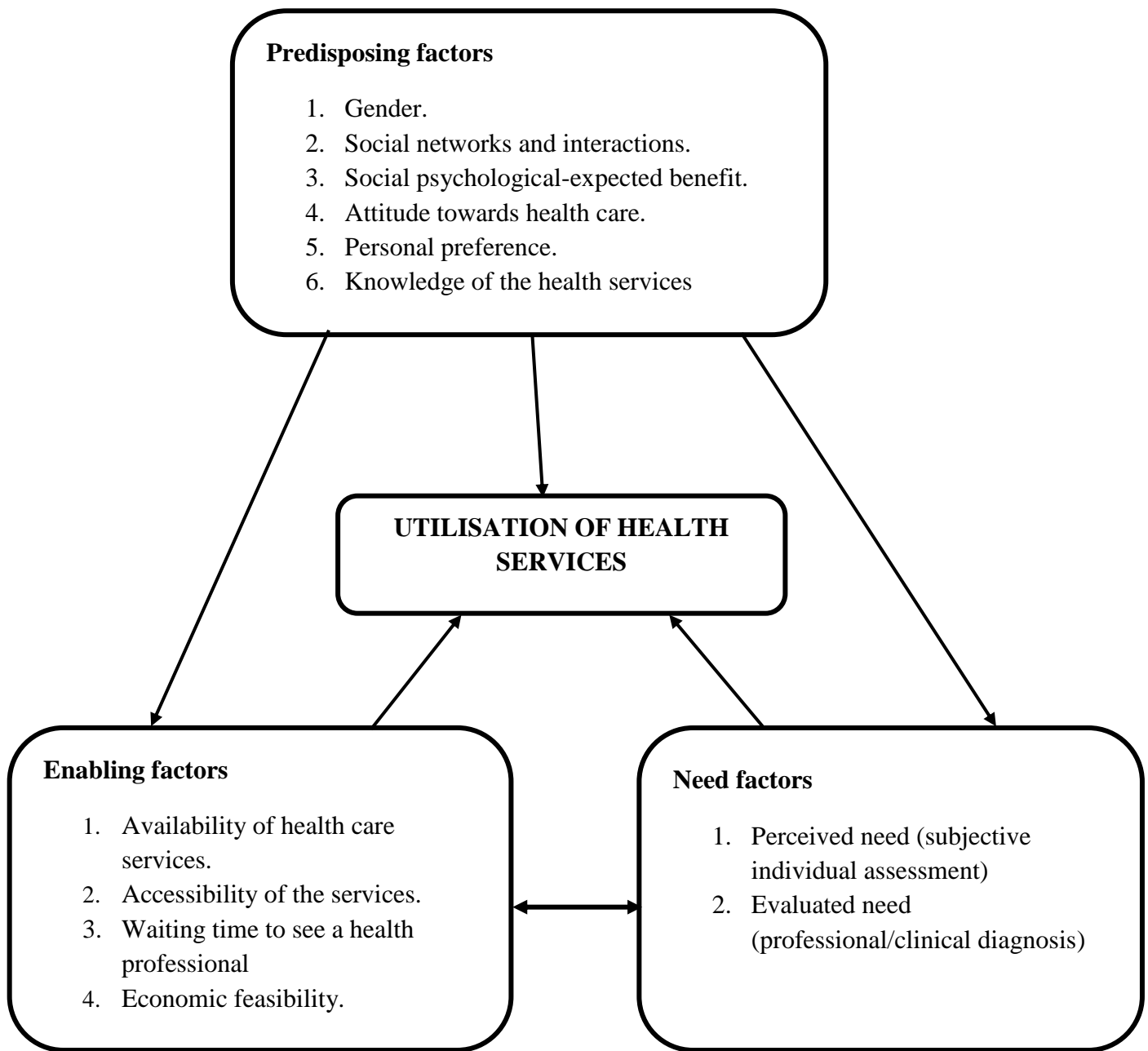


Figure 1. Showing a conceptual framework as adapted from the Andersen's model of health service utilisation 1995.

Narrative

Predisposing factors are based on the social-cultural characteristics of an individual prior illness and may include Social networks and interactions, social psychological-expected benefit, attitude towards health care, personal preference, knowledge of the health services. They influence the utilization of health services directly and indirectly. Indirectly through influencing some enabling factors for example personal preference influences utilisation directly and indirectly through enabling factors like availability of the service and need factors like evaluated need.

When a student prefers to have medication in form of tablets other than drugs, they can attain their medication if tablets are available at the hospital. More so, when a doctor diagnoses a student and provides a range of medication given tablets and injections, the student will opt to have the tablets thus utilisation. In addition, following a doctor's evaluation the student can only attain the preferred medication if it is available at the hospital.

Enabling factors and need factors influence each other to cause utilisation of health services for example, when a student has an emergency he/she will be willing to wait until they meet the doctor on the other hand, the economic feasibility of a student will enable her to consider the varying options given by a doctor following diagnosis.

4.2. Research Questions

1. What is the level of utilization of health services at Makerere University Hospital by University students?
2. What are the common health care services utilized by University students?
3. What are the factors influencing the utilization of the available health care services at Makerere University Hospital?

4.3. Study objectives

4.3.1. General objective

- To assess the utilization of health care services by Makerere University students so as to contribute to the knowledge required in the planning and operation of the University hospital.

4.3.2. Specific objective

1. To determine the level of utilization of health services by University students at Makerere University Hospital.
2. To determine the health care services commonly utilized by University students at the Makerere University hospital.
3. To establish the factors that influence utilization of the available health care services at the Makerere University Hospital.

CHAPTER FIVE: STUDY METHODOLOGY

5.1. Introduction

This chapter comprises of the study area, study design, sample size determination, data collection methods and analysis.

5.2. Study area

The study was conducted in Makerere University main campus located on Makerere hill, Kawempe division Kampala-Uganda. The main campus is about 5km to the north of the city centre covering an area of 300 acres. According to the Makerere University Annual report 2017, the University has a student population of over 35000 from which the University main campus contributes 85% of the total student population. 46% of the total population is female (Council, 2017). The University is Uganda's largest and third oldest institution of higher learning comprising of nine colleges and one school. The colleges include; college of health sciences, college of computing and information science, college of veterinary medicine, animal resources and biosecurity, college of natural sciences, college of humanities and social sciences, college of engineering, art and design, college of agriculture and environmental science, college of business and management sciences, college of education and external studies and the school of law.

Students at the University reside in the University halls of residence, hostels and rentals. The halls of residences include; Livingstone, Lumumba, Nkrumah, Mitchell, Nsibirwa and University halls for male students. Africa, Mary Stuart and Complex for female students. Hostels are privately owned and are located in areas around the University for example Kikumi Kikumi, Kikoni, Wandegeya and Katanga.

Makerere University offers health services through the University hospital which is accessible by all University students at no cost for the basic services but extended services are paid for. The hospital offers a range of services like general medication, laboratory, family planning, vaccination, x-ray and dental services from which the complicated cases are referred to other health centre including Mulago hospital.

5.3. Study design

This was a descriptive cross-sectional study utilizing quantitative data collection methods.

5.4. Study population

Female and male registered university students currently pursuing an undergraduate course for the academic year 2018/2019, the students were residing in University halls of residence or a hostel around the university.

5.5. Study unit and study participants

The study unit was a room in a sampled hostel or hall of residence. In these rooms, one of the occupants was selected as a study participant.

5.6. Sample size estimation

Using a sample size formula by Kish Leslie for cross sectional studies,

$$N = \frac{Z_{\alpha}^2 P (1 - P)}{\delta^2}$$

Where;

N = The sample size estimate of University students

P = 50%, 0.5 (P is 50% because I found no study that was carried out in the similar setting to determine prevalence of utilisation of health services)

(1-P) = The probability of not utilizing the health services.

Z_{α} = Standard normal deviation at 95% confidence interval corresponding to 1.96

δ = Absolute error between the estimated and the true population prevalence utilization of health services of 5%.

$$n = \frac{Z^2 p q}{d^2} = \frac{(1.96)^2 \times (0.5) \times (0.5)}{0.05^2} = 384$$

Therefore; N = 384 Students.

5.7. Sampling procedure.

A multistage and simple random sampling technique was used in the study to obtain the study participants. Lists of halls of residence and hostels were made basing on gender for the halls and location for hostels. Using a paper picking technique, one hall of female students and two halls of male students were chosen and that was Africa for females then Lumumba and Nkrumah for the males. This was because one hall of female students has high numbers of students approximately similar to two halls of male students. Similarly using a paper picking technique two hostels were chosen from each batch of the three batches of hostels. In Katanga, JB and Maimood hostels, Kikumi-kikumi. Messiah and Miriam hostels, In Kikoni, Olympia and Khan hostels giving a total of nine sampled halls and hostels.

Given a sample size of 384 students, each hostel/hall contributed at least 40 study participants, populations. In a given hostel/hall, study participants were selected from different rooms. The number of rooms to be sampled per floor was determined by obtaining an average of the required study participants and the number of floors a hall/ hostel has.

On a given floor, a skip pattern of one was applied to choose the rooms following a random starting room. Within a sampled room, if it was a single room the occupant was considered a study participant and if it was a double or more room, a paper picking technique was used to determine one study participant.

5.8. Study variables.

5.8.1. Independent variables

Independent variable	Measure.
Attitude towards the health services	Using structured questions where one expressed themselves in one of the five options; strongly agree, agree, not sure, disagree, strongly disagree following a statement on attitude made in the questionnaire.
Waiting time for health services	Study participants who had utilised the health services at the University hospital stated the duration in hours that was taken to receive a particular service

Satisfaction with the health services offered.	This was assessed through questions that target the student satisfaction with the services received while at the hospital.
Accessibility of the hospital.	Accessibility was measured basing on the study participants opinion following the factors favoring or hindering the health service utilisation.
College affiliated to	Each study participant was asked to state the College that they are attached to.
Number of years in university.	Each study participant was asked to state the number of years they have spent at Makerere University.

5.8.2. Dependent variables

Utilisation of the health services

Utilisation of health services was measured by asking each participant if they had used any service from the University hospital during the time of their stay since admission.

5.9. Data collection procedures and tools

Data was collected from a study respondent after seeking their verbal consent. A self-administered semi structured questionnaire was given to a study participant that consents.

5.10. Data management and data analysis

Data were collected using a pre-designed semi-structured questionnaire that contains three sections socio demographic characteristics, utilisation of health services at the University hospital and attitude towards health services at the University hospital. The collected questionnaires were checked for completeness of the questions to determine the response rate of which the number of fully filled questionnaires will be established. Using EPI DATA version 3.0 an entry screen identical to the questionnaire was designed to enable data entry, checks were put in place to prevent entry of wrong information and ensure consistency. When all the data was entered in to EPI DATA, it was then transferred to STATA version 13 where it was cleaned to correct inconsistencies and also match common variables in the dataset.

Data analysis was done using STATA version 13 to generate descriptive statistics of the study population with means (Standard Deviation), median (interquartile range) and frequency distributions where necessary.

Objective one: From the dataset, the total number of participants that said they had utilised the health services at the University hospital was determined and then expressed as a percentage of the total sample to answer objective one.

Objective two: Frequency distributions of the various health services utilised by University students as from the data set were generated and the health services with high frequencies was considered as commonly used.

Objective three: Factors influencing utilisation and non utilisation of the health services at the University hospital were attained from the dataset and furthermore frequency distributions were generated to answer objective three.

5.11. Selection criteria

5.11.1. Inclusion criteria

- ✓ Registered University student pursuing an undergraduate course at Makerere University and reside in either a hall of residence or a hostel.

5.11.2. Exclusion criteria

- ✓ Student too sick to participate
- ✓ A sampled student who refused to consent

5.12. Quality control

The questionnaires used were in English. English was used because it is the official, known and best understood by the study participants by the virtue that the study area is an institution of higher learning and its teaching is in English. The questionnaires were cross checked after the daily data collection for completeness.

5.13. Ethical considerations

Approval to carry out the study was sought from the Research Ethics Committee, School of Public Health from where I obtained an introductory letter. This letter was presented to the

sampled hall and hostel custodians to seek permission to carry out the study. Consent was verbally sought from each study participant..

5.14. Dissemination of results

The results from the study were submitted to Makerere University School of Public Health as a part of the requirements for the award of bachelor's degree of environmental health science. More so, the results were availed to the University hospital management, Makerere University College of Health Sciences and to the Dean of students, Makerere University.

CHAPTER SIX: RESULTS

6.0. Introduction

This chapter shows findings from the study aimed at assessing utilisation of health services at Makerere University hospital by the students of Makerere University Kampala Uganda. Results are presented below.

6.1. Socio-demographic characteristics of the study participants

A sample of 384 students was approached to take part in the study and none refused. Majority 93.0% (357/384) of the study participants were aged 15 -24 years and single 97.9% (376/384). More than half 54.2% (208/384) of the participants were female. Most of the participants resided in the university halls of residence 26.6% (102/384) affiliated to CHS 23.4% (90/384) and had spent two years at the university 38.8% (149/384).

Table 1: Socio-demographic characteristics of the study participants

Socio-demographics	Frequency (n=384)	Percentage (%)
Age in years		
15-24	357	93.0
25-34	25	6.5
35-44	2	0.5
Sex		
Female	208	54.2
Male	176	45.2
Marital status		
Single	376	97.9
Married	8	2.1
Place of residence		
Halls of residence	102	26.6
Katanga	99	25.8
Kikoni	82	21.4
Kikumi kikumi	101	26.3
College affiliated to		
CHS	90	23.4
COCIS	16	4.2
COVAB	17	4.4
CONAS	28	7.23
CHUSS	57	14.8
CEDAT	47	12.2
CAES	15	3.9
COBAMS	64	16.7
CEES	34	8.9
LAW	16	4.2
Year of study		
One	92	24.0
Two	149	38.8
Three	114	29.7
Four	17	4.4
Five	10	2.6
More than five	2	0.5
Registration status		
Registered	121	31.5
Not registered	263	68.5

6.2. Level of utilisation of health services among the study participants

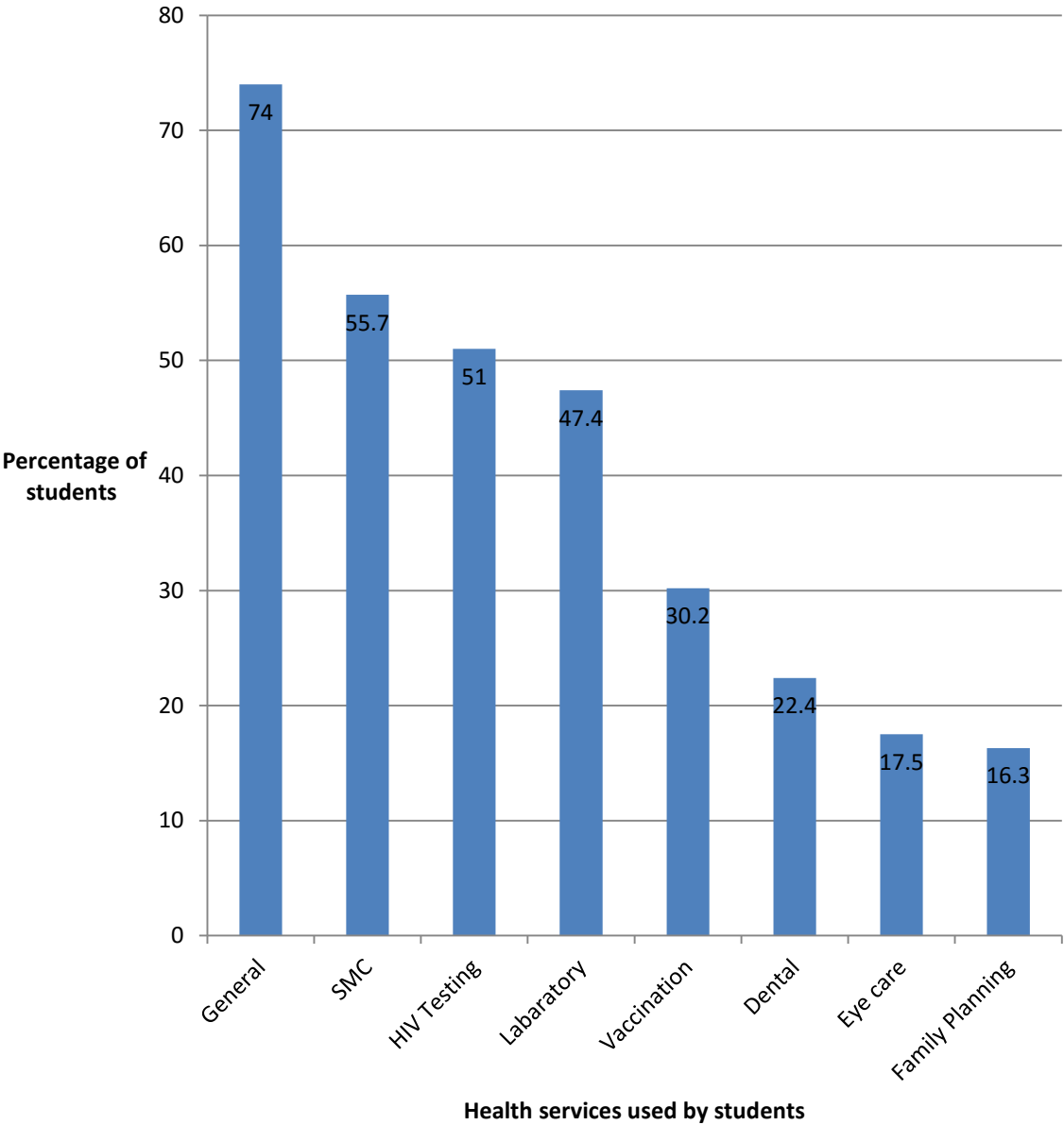
Less than half 41.9% (161/384) of the study participants had utilised the health services at the University hospital and the remaining percentage 58.1% (223/384) had not utilised the services during the time of their stay at the University since their admission. Given the percentage of those who have utilised the services at the hospital, majority 46.5% (75/161) have utilised the hospital services once, 27% (44/161) utilised the services twice and the least 26.1% (42/161) utilised the service three or more times. Of those that have utilised the services, most 64.6% (104/161) have utilised general medical care, laboratory services 31.1% (50/161), HIV testing 13.7% (22/161), dental services 6.2% (10/161), eye care services 5.0% (8/161) and the least utilised being family planning services 1.9% (3/161).

Awareness about the University hospital among the participants

Majority 94.0% (361/384) of the study participants were aware of the presence of the University hospital. Of the 361 participants, most 67.6% (244/361) heard about the hospital from fellow students, 32.4% (112/361) from the student leaders, 23.6% (85/361) from the University prospectus and 2.8% (10/361) from internet. More than two thirds 69.0% (249/361) of the students knew the location of the hospital and more than three quarters 79.7% (267/335) knew about the general medical care services offered at the University hospital. The least 12.8% (49/384) knew nothing about the University hospital.

Of those who knew nothing about the University hospital, majority utilised health services from other hospitals 75.5% (37/49) and the remaining 24.5% (12/49) opted for self-medication. Similarly like the participants who utilised services from the University hospital, the participants that opted for other hospital also sought mostly for general medical services 83.7% (41/49), laboratory 22.5% (11/49), eye care 16.3% (8/49), dental services 14.3% (7/49), HIV testing 8.2% (4/49) and family planning services 2.0% (1/49)

Figure 2: Frequency of the knowledge about health services offered at the hospital and known to students



6.3. Factors affecting the utilization of health services at the University Hospital

Approximately half 50.3% (81/161) of the participants who had utilised the hospital services said they used the hospital because it was accessible in terms of distance. Whereas 46.2% (103/223) of participants preferred other medical centers and hospital services to the University hospital services because of doubt of the services offered 14.4% (32/223) and not being registered with the Hospital 36.3% (81/223).

Table 2: Frequency and percentage distribution of the factors affecting utilisation and non utilisation of the health services at the University hospital

Utilization	Frequency	Percentage (%)
Reason for previous Utilisation* (n = 161)		
Accessible	81	50.3
Encouraged by a friend	40	24.8
Knew the services	52	32.3
Free services	15	9.3
Registration	9	5.6
Reason for previous non utilisation* (n=223)		
Not fallen sick	74	33.2
Not registered	81	36.3
No knowledge about hospital	36	16.1
Doubt service quality	32	14.4
Hospital is far	31	13.9
Discouraged by friends	27	12.1
Prefer other hospitals	103	46.2
Long waiting time	12	5.5
Insurance	10	4.5

*- Multi-response variable

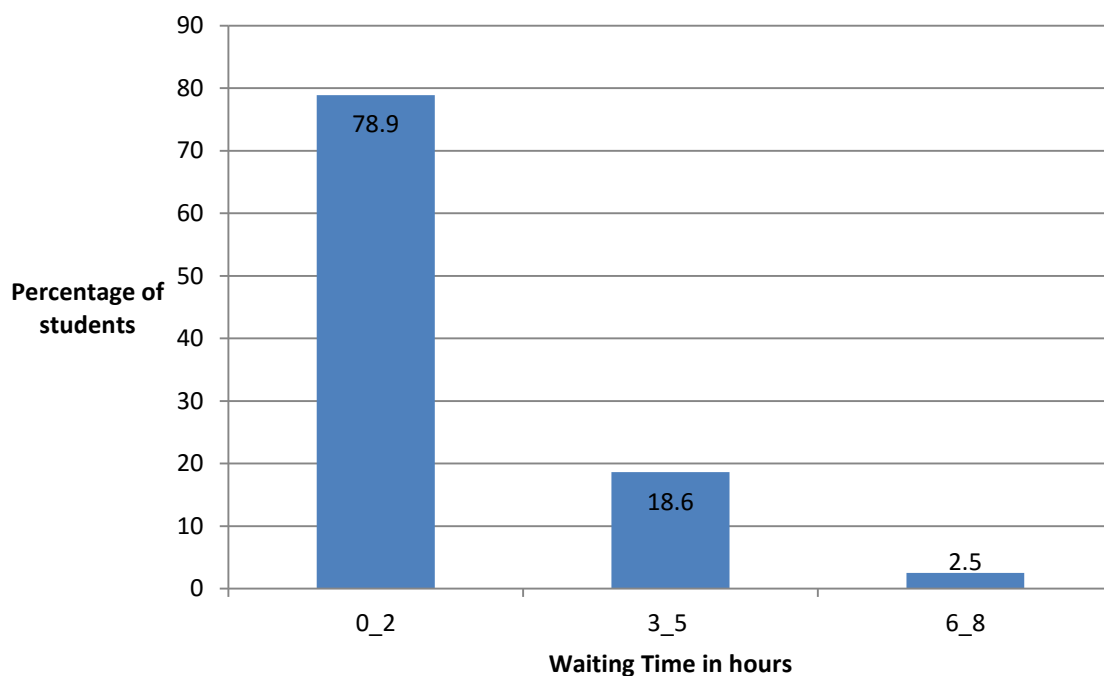
Of the students who utilized the services, more than half of the students 60.3% (97/161) said they were satisfied by the services at the University hospital and thus would consider going back in time of need. Most of the participants 71.4% (115/161) considered going back to the hospital because it offers free services to students 59.1% (68/115). However 56.5% (26/46) did not consider going back because the hospital at most times lacks appropriate medicines and drugs.

Table 3: Frequency and percentage distribution of the participant satisfaction with the health services received at the University hospital

Variables	Frequency	Percentage (%)
Satisfaction with the hospital services (n=161)		
Satisfied	97	60.3
Not satisfied	64	39.8
Future Utilisation		
Yes	115	71.4
No	46	28.6
Reasons for future utilisation* (n = 115)		
Hospital is near	46	40.0
Free services	68	59.1
Good service delivery	43	37.4
Good doctor patient relations	15	13.0
Short waiting time	1	0.9
Reason for non-future utilisation* (n = 46)		
Hospital is far	4	8.7
No drugs	26	56.5
Poor service delivery	16	34.8
Poor doctor patient relations	3	6.5
Long waiting time	25	54.4

*- Multi-response variable

Figure 3: A bar graph showing the frequency of the waiting time while at the University Hospital



More than three quarters of the students 87.0% (334/384) are not under insurance thus 88.6% (296/334) of the students' medical needs are covered by their parents. Of the insured students, 90.0% (45/50) were under the IAA insurance.

Table 4: Insurance cover among the study participants

Variable	Frequency	Percentage (%)
Insurance status	n=384	
Insured	50	13.0
Not insured	334	87.0
Insurance scheme	n=50	
IAA	45	90.0
AAR	1	2.0
UAP	1	2.0
Others	3	6.0

Attitude of the study participants towards the University hospital

Less than a third of the participants 31.3% (120/384) agreed to the hospital having satisfactory services and only 15.9% (61/384) participants agreed that there is short waiting time at the hospital. In addition, less than a third 22.4% (86/384) of the participants agreed that the hospital offers services necessary for the youth, 20.8% (80/384) agreed to the hospital being far from campus and only 13% (50/384) agreed to the availability of drugs at the hospital always. More than a third 40.6% (156/384) agreed that the hospital is in good state of hygiene, 39.3% (151/384) agreed that the hospital is necessary to the students and 41.4% (159/384) agreed that the hospital contributes to student wellbeing. Less than a third 32.3% (120/384) agreed that other hospitals are better than the University hospital.

Table 5: Attitudes of the study participants towards the University hospital

Variable	Frequency (n=384)	Percentage (%)
Hospital services are satisfactory		
Strongly agree	24	6.3
Agree	120	31.3
Not sure	166	43.2
Disagree	53	13.8
Strongly disagree	21	5.5
There is short waiting time while at the hospital.		
Strongly agree	15	3.9
Agree	61	15.9
Not sure	158	41.6
Disagree	100	26.0
Strongly disagree	50	13.0
The hospital offers services necessary for young adults		
Strongly agree	25	6.5
Agree	86	22.4
Not sure	225	58.6
Disagree	33	8.6
Strongly disagree	15	3.9
The hospital is far from campus		
Strongly agree	39	10.2

Agree	80	20.8
Not sure	63	16.4
Disagree	138	35.9
Strongly disagree	64	16.7

Drugs are available at the hospital always

Strongly agree	12	3.1
Agree	50	13.0
Not sure	222	57.8
Disagree	59	15.4
Strongly disagree	41	10.7

The hospital is in a good state of hygiene

Strongly agree	31	8.1
Agree	156	40.6
Not sure	168	43.8
Disagree	22	5.7
Strongly disagree	7	1.8

Other hospitals are better than university hospital

Strongly agree	108	28.1
Agree	120	32.3
Not sure	127	33.1
Disagree	24	6.3
Strongly disagree	5	1.3

University hospital is necessary to students

Strongly agree	169	44.0
Agree	151	39.3
Not sure	52	13.5
Disagree	10	2.6
Strongly disagree	2	0.5

University hospital contributes to student wellbeing

Strongly agree	127	33.1
Agree	159	41.4
Not sure	75	19.5
Disagree	18	4.7
Strongly disagree	5	1.3

CHAPTER SEVEN: DISCUSSION

This study assessed the utilisation of health services at the University Hospital by the Makerere university students.

7.1. Socio-demographic characteristics of the study participants

This study showed that majority of the study participants were female and were in their second or third year of study at the University. In addition, most of the study participants were day students and were aged 15-24 years. This could be as result of the fact that institutions of higher learning have high populations of youth especially for the undergraduate courses compared to post graduate courses. Most of the study participants were not registered with the University hospital which could be as a result of the low enforcement of the policy about the requirement to register with the University hospital.

7.2. Level of Utilisation of health services at University Hospital

Less than half of the study participants had utilised the health services at the University Hospital despite being aware of the existence of the hospital and the biggest percentage utilised private hospitals around the University or resorted to self-medication. This can be attributed to barriers like doubt of the quality of health services provided at the University hospital, perception of illness by students and preference of other hospitals. This is similar to findings of a cross sectional study conducted in a University in Nigeria (Rotimi et al., 2015) but differs from that carried out in the United States, where utilisation of health facilities by students was greater than half (Wade et al., 2008). This could be a result of the difference in the health seeking behaviour of the students, insurance policy coverage and the difference in quality of health services between the Africa and the United States.

7.3. Health care services commonly utilised by the University students

According to this study, general medical care and laboratory services were the most commonly used services by the University students. General medical care to cover influenza, malaria treatment, typhoid treatment, abdominal pains and headaches, was significantly utilised more than the other services. This result can be attributed to poor practices among students that include

not sleeping under mosquito nets, poor ventilations of the rooms, failure to open and close windows in time, reckless sexual behaviors, and poor health literacy among the students not being able to realize other disorders that may require medical attention. This is similar to the reports of (Alkhaldeh, 2017) and (Turner and Keller, 2015) that showed the most frequent health conditions among university students were headache and respiratory illness like influenza.

7.4. Factors that influence utilisation of health services

In this study, the requirement to register with the University hospital was the most significant barrier to utilisation of health services by the students similar to the findings of a past study (Rotimi et al., 2015) The low registration by students could be due to the cost attached that may not be afforded and also the location of some residences of students. Although some students had utilised the university hospital health services without being registered, a big number has failed to utilise the services for the fear of not being registered thus thinking that they could not easily receive the services from the hospital. This results into opting for other hospitals or self-medication in time of need.

Perception of illness influences utilisation of health care services (Andersen and Newman, 2005) most students perceive they are sick to need medical care only when they are bed ridden and sometimes require another person's help, when they experience intense general body weakness or high body temperature that normally presents as a fever. These conditions could occur when a disease has matured to its late stages or even when a disease has not been properly treated for a long time. Students therefore often opt for self-medication for conditions like headaches, dizziness, running stomachs which could on the other hand be symptoms of serious illnesses. A small percentage of the students consider these conditions to require medical attention. This further can explain the low utilisation of the health services. Furthermore, a large percentage of the student prefers other private hospitals and thus cannot utilise services offered at the University hospital. Preferences result from perception of the quality of services offered at all centres. An individual's perception affects Utilisation of services; this perception could be as a result of discouragement from friends who have utilised the services at the University hospital before.

To a smaller extent, insurance acts as a barrier to utilisation because most insuring companies have memorandum of understanding with other private hospitals other than the university hospital therefore all students under such insurance through scholarships ought to attain their medical care from the given private hospitals.

On the positive side, students utilised the University hospital because it was accessible both geographically and economically. Geographically because it is not far from the campus premises and has road access. Economically because of provision of free services which promotes equity in service access (Harris et al., 2011) for all students and improves access to health care. Free services at the University hospital also encouraged some students to go back to the hospital more times whenever in need.

According to this study, approximately two thirds of the students that visited the University hospital were satisfied with the services received however, majority would not consider going back to the same hospital in time of need. These students identified barriers like unavailability of drugs and long waiting time (Afolabi and Erhun, 2003) as the reasons for the choice of not opting for the University hospital in their next need for medical care. These factors would influence an individual to opt for other hospitals or self-medication due to access to readily available drugs and impromptu attention given to the patient because they encourage loss of trust and non utilisation of services. Unavailability of drugs leads to inequitable service provision as some students would not afford to purchase the drugs as prescribed by the University Hospital doctors. This also could culminate into purchasing insufficient drugs or drugs of low efficacy which could result into adverse effects like Anti- microbial resistance. Long waiting time on the other hand is the main cause of patient dissatisfaction (Afolabi and Erhun, 2003) and results into use of alternative options.

7.5. Study limitations

- Utilisation of University hospital health services was self-reported thus may result into recall bias. Furthermore self-administered questionnaires were used thus objectivity of the information.

CHAPTER EIGHT: CONCLUSIONS AND RECOMMENDATIONS.

8.1. Conclusion

- Majority of the study participants had not used the health services offered by the University hospital during the time at University since admission despite being aware of the existence of the hospital.
- Most utilised services by the students were general medical care, laboratory services and HIV testing and the least utilised was family planning services.
- Unavailability of drugs, long waiting time and discouragement from friends were some of the main reasons for non utilisation of the services at the University Hospital.
- More so, preference of other hospitals and not being registered at the University hospital as a student hindered utilisation of the services offered

8.2. Recommendations

I recommend that further research should be carried out to assess the quality of health services offered at the University hospital, to determine the association between the factors that influence utilisation of health services among students and to determine the health seeking behaviour of the Makerere University students.

8.2.1. To Makerere University

- The Makerere University management should devote more funds from the University budget to the University hospital to ensure supplies like drugs are in stock at all times
- It should encourage the scholarship boards that offer student scholarships within the university to utilise the University hospital as one of the health service provision centres for the students on the scholarships.
- Should strictly enforce the requirement to register with the University hospital in the first semester of study after admission through policy changes for example using the AIMS system, proof of registration with the University hospital should be part of the requirements for a student to create an AIMS account.

- Should create a link for the Makerere University hospital on the main Makerere University website to ease access to the information about the hospital.

8.2.2. To the University hospital management

- The University hospital management should ensure all duties are covered as by the duty rota so as to address long waiting time at the Hospital.
- Should ensure that the hospital supplies funded by the Makerere University management are in place for example vehicles like ambulances, doctors and other health practitioners to manage the large number of students and reduce the waiting time

8.2.2. The University Student Guild

- In addition to the already existing first year orientation programs and semester health weeks, the Student Guild should carry out continuous sensitization and creation of awareness about the University hospital among the students for example using school guild representatives for each school.
- More so, should utilise these health weeks to promote knowledge on presence of disease even what is considered small illness to address poor health literacy among students not only focusing on the large diseases like cancer and sickle cell anemia

8.2.3. The University students

- The students should always ensure registration with the University hospital in their first year at the university as part of the registration process to avoid future inconveniences.

REFERENCES

- AFOLABI, M. O. & ERHUN, W. O. 2003. Patients' response to waiting time in an out-patient pharmacy in Nigeria. *Tropical Journal of Pharmaceutical Research*, 2, 207-214.
- AL-GHANIM, S. A. 2004. Factors Influencing the Utilisation of Public and Private Primary Health Care Services in Riyadh City.
- ALKHAWALDEH, A. 2017. Factors associated with utilisation of university health centre services by students. *International Journal Of Community Medicine And Public Health*, 4, 1858-1862.
- ALLENSWORTH, D., LAWSON, E., NICHOLSON, L. & WYCHE, J. 1997. School Health Services.
- ANDERSEN, R. & NEWMAN, J. F. 2005. Societal and individual determinants of medical care utilization in the United States. *The Milbank Quarterly*, 83, Online-only-Online-only.
- ANSEMI, L., LAGARDE, M. & HANSON, K. 2015. Health service availability and health seeking behaviour in resource poor settings: evidence from Mozambique. *Health economics review*, 5, 62-62.
- AWOYEMI, T., OBAYELU, O. & OPALUWA, H. 2011. Effect of distance on utilization of health care services in rural Kogi State, Nigeria. *Journal of human Ecology*, 35, 1-9.
- BONNIE, R. J., STROUD, C. E. & BREINER, H. E. 2014. *Investing in the health and well-being of young adults*, National Academies Press.
- BOYNTONHEALTHSERVICE 2015. College Student Health Survey. Minnesota: University of Minnesota Twin Cities.
- CORNEY, R. H. 1990. Sex differences in general practice attendance and help seeking for minor illness. *Journal of Psychosomatic Research*, 34, 525-534.
- COUNCIL, M. U. 2017. Makerere University Annual Report. Kampala.
- CRUDO, D. & GRUTTADARO, D. 2012. College Students Speak: A Survey report on mental health. Arlington: National Alliance on Mental illness.
- GEORGETOWN 2018. School health services.
- GUERRA, S. G. & VASILADIS, H.-M. 2016. Gender differences in youth suicide and healthcare service use. *Crisis*.

- HARRIS, B., GOUDGE, J., ATAGUBA, J. E., MCINTYRE, D., NXUMALO, N., JIKWANA, S. & CHERSICH, M. 2011. Inequities in access to health care in South Africa. *Journal of public health policy*, 32, S102-S123.
- HELAMO, D., KUSHETA, S., BANCHA, B., HABTU, Y. & YOHANNES, S. 2017. Utilization and Factors Affecting Adolescents and Youth Friendly Reproductive Health Services among Secondary School Students in Hadiya Zone, Southern Nations, Nationalities and Peoples Region, Ethiopia. *Int J Pub Health Safe*, 2, 2.
- IOM. 1997. School Health Services. *Schools and Health: Our Nation's Investment*. Washington DC: Institute of Medicine.
- JACOB, C. M., BAIRD, J., BARKER, M., COOPER, C. & HANSON, M. 2015. The importance of a life course approach to health: chronic disease risk from preconception through adolescence and adulthood. *Southampton: University of Southampton*.
- KEENE, J. & LI, X. 2005. Age and gender differences in health service utilization. *J Public Health (Oxf)*, 27, 74-9.
- KEVANY, S., MURIMA, O., SINGH, B., HLUBINKA, D., KULICH, M., MORIN, S. F. & SWEAT, M. 2012. Socio-economic status and health care utilization in rural Zimbabwe: findings from Project Accept (HPTN 043). *Journal of public health in Africa*, 3, 46-51.
- KIWANUKA, S., EKIRAPA, E., PETERSON, S., OKUI, O., RAHMAN, M. H., PETERS, D. & PARIYO, G. 2008. Access to and utilisation of health services for the poor in Uganda: a systematic review of available evidence. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 102, 1067-1074.
- LI, Y.-N., NONG, D.-X., WEI, B., FENG, Q.-M. & LUO, H.-Y. 2016. The impact of predisposing, enabling, and need factors in utilization of health services among rural residents in Guangxi, China. *BMC health services research*, 16, 592.
- LMC. 2013. health services.
- MACHARIA, D. & OTIENO, S. O. 2014. Factors Influencing Utilization of Health Services in Kenya: the Case of Homa Bay County. *International Journal of Public Health Science*, 3.
- MANZOOR, I., HASHMI, N. R. & MUKHTAR, F. 2009. Determinants and pattern of health care services utilisation in post graduate students. *Journal of Ayub Medical College Abbottabad*, 21, 100-105.

- MCBRIDE, D., VAN ORMAN, S., WERA, C. & LEINO, V. 2010. ACHA Benchmarking Committee Report: 2010 survey on the utilization of student health services. *Hanover, MD: American College Health Association.*
- MOES. 2010. Education sector profile. Kampala: Ministry of Education and Sports.
- MOH 2016. *Strategy for improving health service delivery 2016 - 2021*, Kampala, Ministry of health.
- NYOMBI, K. V., KIZITO, S., MUKUNYA, D., NABUKALU, A., BUKAMA, M., LUNYERA, J., ASIIMWE, M., KIMULI, I. & KALYESUBULA, R. 2016. High prevalence of hypertension and cardiovascular disease risk factors among medical students at Makerere University College of Health Sciences, Kampala, Uganda. *BMC research notes*, 9, 110.
- OBIECHINA, G. & EKENEDO, G. 2013. Factors affecting utilization of University health services in a tertiary institution in South-West Nigeria. *Nigerian journal of clinical practice*, 16.
- PARIYO, G. W., EKIRAPA-KIRACHO, E., OKUI, O., RAHMAN, M. H., PETERSON, S., BISHAI, D. M., LUCAS, H. & PETERS, D. H. 2009. Changes in utilization of health services among poor and rural residents in Uganda: are reforms benefitting the poor? *International journal for equity in health*, 8, 39-39.
- PARSLOW, R., JORM, A., CHRISTENSEN, H., JACOMB, P. & RODGERS, B. 2004. Gender differences in factors affecting use of health services: an analysis of a community study of middle-aged and older Australians. *Social science & medicine*, 59, 2121-2129.
- REDONDO-SENDINO, Á., GUALLAR-CASTILLÓN, P., BANEGAS, J. R. & RODRÍGUEZ-ARTALEJO, F. 2006. Gender differences in the utilization of health-care services among the older adult population of Spain. *BMC public health*, 6, 155.
- ROTIMI, O., AKINLEYECALLISTUS, A., OLUBUKOLA, O., BABATUNDEOLUWOLE, A. & FAJEWONYOMI, B. 2015. Health Behaviour of Undergraduates and Service Utilization of University Health Centre. *JDM S*, 14, 72-8.
- SHAIKH, B. T. & HATCHER, J. 2004. Health seeking behaviour and health service utilization in Pakistan: challenging the policy makers. *Journal of public health*, 27, 49-54.
- SMITH, J., BRAUNACK-MAYER, A. & WITTERT, G. 2006. What do we know about men's help-seeking and health service use?

- THOMÉE, S., MALM, D., CHRISTIANSON, M., HURTIG, A.-K., WIKLUND, M., WAENERLUND, A.-K. & GOICOLEA, I. 2016. Challenges and strategies for sustaining youth-friendly health services — a qualitative study from the perspective of professionals at youth clinics in northern Sweden. *Reproductive Health*, 13, 147.
- TURNER, J. C. & KELLER, A. 2015. College health surveillance network: Epidemiology and health care utilization of college students at US 4-year universities. *Journal of American College Health*, 63, 530-538.
- UNIVERSITYOFMICHIGAN 2018. National College Health Assessment. Michigan: University Health Service, University of Michigan.
- WADE, T. J., MANSOUR, M. E., GUO, J. J., HUENTELMAN, T., LINE, K. & KELLER, K. N. 2008. Access and utilization patterns of school-based health centers at urban and rural elementary and middle schools. *Public health reports*, 123, 739-750.
- WBG. 2014. Uganda School Health, SABER country report. World Bank Group.
- WHO 2010. Health Service Delivery.

APPENDICES

CONSENT FORM

My name is **AHUMUZA MARTHA** a student from Makerere University School of Public Health, Kampala. I am carrying out a study on the utilisation of health services at Makerere University hospital by students, Kampala- Uganda

Reason for the study: The study will provide an opportunity to obtain information about the levels of health service utilisation at the University hospital and the factors influencing it.

Benefits of the study: The information gathered in this study will help to inform the health service decision in the planning of the University.

Risks of the study: The study will not cause any physical, social, economic, legal harm to you and there is no risk associated with it. Please be assured that this discussion is strictly confidential and names will not be recorded. The findings will be generalized and not linked to an individual.

Participation: Participation in this study is voluntary, if you do not want to answer a particular question, that is ok. There is no wrong answer to the questions that I will ask. Please feel free to answer the questions exactly how you feel. You are free to withdraw from the interview at any point you want without need to justify your decision

For more information on the study contact my Research supervisor: Dr. Aggrey David Mukose on +256 772 427800.

I would like to seek for your consent before I proceed. Are you willing to allow me to continue with the interview?

1. Yes 2. No

Interviewee signature: **Date**.....

12. If no, where do you normally attain medical care from? (circle the appropriate choice)

- (a) University hospital
- (b) Other private and public hospitals
- (c) Self-medication
- (d) Others (specify)

13. What health services do you often utilize? (circle all the appropriate choices)

- (a) General medical care (malaria, typhoid and brucellosis)
- (b) Dental services
- (c) Eye care/ treatment
- (d) Laboratory services.
- (e) HIV/ AIDs testing and counselling.
- (f) Family planning services
- (g) Others specify.....

14. Are you registered with the University hospital? (please tick the appropriate choice)

yes No

15. Have you received any health service from the university hospital? please tick the appropriate choice (**IF NO, go to Qn. 17**)

Yes No

16. For what service (s) did you visit the University hospital? Fill in the space provided.

.....
.....

17. Why haven't you received any health service from the University hospital? (circle all that applies)

- (a) I haven't fallen sick
- (b) I don't know about the university hospital
- (c) I prefer other medical centres.

Other specify

.....

SECTION C: Factors affecting the Utilisation of health services at Makerere University hospital.

18. How many times have you visited the University hospital to receive health services since joining Makerere University? Circle your answer (**If never, go to 26**)

- (a) Once
- (b) Twice
- (c) Three or more times
- (d) Never

19. Why did you choose to use the University Hospital? (Circle the appropriate choice)

- (a) It is accessible
- (b) I was encouraged by a friend
- (c) I knew about the health services offered
- (d) Others specify.....

20. Would you consider going back to the University hospital? (Please tick the appropriate choice)

yes No

21. Give reasons for your answer. (fill in the provided space below)

.....
.....
.....

22. If you have visited the hospital more than once, why did you consider to go back to the University hospital? (circle all that applies)

- (a) Accessible
- (b) High level of comfort
- (c) High level of privacy and confidentiality
- (d) Good doctor- patient relation
- (e) Good patient care

23. While at the University hospital, for how long did you wait to see the doctor/ laboratory technician? (write the time in hours)

.....

24. Were you satisfied with the service offered at the University hospital? (please tick the appropriate choice)

Yes No

25. How would you rate the following, basing on your stay at the University hospital? (please tick the appropriate box)

Factor	1	2	3	4	5
State of sanitation and hygiene.					
Inter personal relations i.e. doctor- patient					
Patient care offered.					
Patient space					

26. Give reasons why you have never utilised the University hospital. (fill in the space below)

.....

27. When do you consider yourself sick to need medical care? (circle the appropriate choice)

- (a) When I have a headache
- (b) When I feel dizzy
- (c) When I have a high body temperature
- (d) When I am totally down
- (e) Others specify.

28. Are you under any health insurance scheme? (tick the appropriate box) **(IF NO, go to 30)**

Yes No

29. If yes, what insurance scheme are you under? (please circle the appropriate).

- (a) Scholarship medical cover
- (b) IAA
- (c) AAR Health
- (d) UAP health
- (e) Other specify.....

30. Who provides for your medical cover? (circle the appropriate choice)

- (a) Myself
- (b) My parents
- (c) My spouse
- (d) Others specify.

.....

Attitudes towards health services at the Makerere University hospital. (please tick the appropriate box)

Statement	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
31. Services offered at the University hospital are satisfactory.					
32. While at the University hospital, waiting time is very short.					

33. University hospital offers all services necessary for young adults.					
34. University hospital is far from the campus premises.					
35. There are drugs at the University hospital always.					
36. University hospital is in a good state of sanitation and hygiene.					
37. Other private hospitals offer better health services.					
38. University hospital is useful and necessary to students.					
39. University hospital contributes to students' wellbeing.					