EXPLORING BARRIERS TO THE UTILIZATION OF MENTAL HEALTH SERVICES AT PUBLIC AND PRIVATE HEALTHCARE FACILITIES IN VIHIGA SUB-COUNTY, WESTERN KENYA: A CASE STUDY OF HEALTHCARE PROVIDERS

BY

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DECLARATION

This thesis is my original work and has not been presented to any other University for a degree or any other award.

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DEDICATION

I dedicate this work to the Almighty God for what he has done for me, and my family, friends and the University fraternity for making this research a success.

ABSTRACT

Vihiga Sub-County, a rural area in Western Kenya has shown a rise in the number of mental health cases. They are currently admitting over 120 patients per month with cases of mental illnesses. In order to scale up mental health care, barriers to health services utilization need to be identified and addressed. The objective of this study was to explore barriers to mental health services utilization in public and private healthcare facilities from the perspectives of the healthcare providers in Vihiga Sub-County, Western Kenya. Mixed methods research was used in this descriptive, hospital-based cross sectional study. Data for objectives one and two were quantitative in nature and collected using the WHO-AIMS tool, while objective three which was qualitative in nature was collected using a Key informant interview guide. Data for objectives one and two were entered into Excel and analyzed using STATA 12. Analysis for objective three was done using N-Vivo 8 software. For objective four, Chi-square tests were conducted to measure the association between the availability of resources and the services offered at the health care facilities in Vihiga Sub-County, western Kenya. Statistical significance was assessed at $P \leq 0.05$. There were only, two psychiatric nurses in the entire Sub-County and only two of the eleven health facilities reported having government health expenditure directed towards mental health. Despite the need for hospitalization for individuals with acute or chronic serious mental illness, only one of these health facilities had beds specifically dedicated for people with mental illness and the accommodations were made in the general wards of these facilities. Besides, out of the eleven health facilities, nine had at least one psychotropic medicine of each therapeutic category available in the facility all year long. Three health facilities offered social support services while only one offered psychotherapy and rehabilitation services. None of the health facilities offered interpersonal and social skills training and psycho-educational treatment. In addition to these barriers, the key informants identified inadequate staff, lack of information, funding, infrastructure, and availability of psychotropic medications, as barriers to the utilization of mental health services. There was a significant association between the availability of resources and the services offered at the health care facilities in Vihiga Sub-County, western Kenya. The findings of this study indicate that the mental health services in Vihiga Sub-County are provided under extremely resource-restricted conditions, in terms of infrastructure, manpower, psychotropic medication and finances. Staffing numbers are woefully inadequate and personnel in the sector are overworked. There is also weak integration of mental health services into primary care and none of the primary health care facilities have beds specifically dedicated for people with mental illness.The current study has added knowledge that will be utilized in the improvement of mental health services in Vihiga Sub-County. The findings will help inform stakeholders on the need to study, mobilize and recognize potential resources to deal with mental health problems in Western Kenya.

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LIST OF ABBREVIATIONS AND ACROYNMS

DALYs	-	Disability-Adjusted Life Years
DANIDA	-	Danish International Development Agency
GBD	-	Global Burden of Disease
GDP	-	Gross Domestic Product
GNP	-	Gross National Product
KEMSA	-	Kenya Medical Supplies Agency
KII	-	Key Informant Interview
KNBS	-	Kenya National Bureau of Statistics
KNCHR	-	Kenya National Commission on Human Rights
LMIC	-	Low and Middle Income Countries
MOH	-	Ministry of Health
NGO	-	Non Governmental Organization
OCD	-	Obsessive Compulsive Disorder
USD	-	US Dollar
WHO	-	World Health Organization
WHO-AIMS	-	World Health Organization Assessment Instrument for Mental Health Systems
YLD	-	Years Lived with Disability

OPERATIONAL DEFINITIONS

Accessibility: Refers to the state of being easy to reach.

Availability: Refers to the state of being easy to use.

Challenge: Refers to difficulty/ barriers to healthcare service provision.

Community: A unified body of individuals that share a common geographical area, a common social, religious, or cultural background, or a common defining characteristic (interest, aim, occupation, geographic location).

Health: a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity that enables people to lead socially and economically productive lives.

Health financing- a function of a health system concerned with the mobilization, accumulation, and allocation of money to cover the health needs of the people, individually and collectively, in the health system.

Intervention/intervene/intervening: any effort that attempts to change a current situation with an individual, group, subpopulation, or population.

Mental health: a state of well-being in which the individual realizes his or her own abilities, can cope with the common stresses of life, can have fulfilling relationships with other people, can work productively and fruitfully, and is able to make a contribution to his or her community.

Mental health problems: the spectrum of mental problems ranging from serious mental illness to problematic behavior that has been shown to indicate later mental disorders

Mental health services: Refers to any interventions including assessment, diagnosis, treatment, or counseling offered in private, public, inpatient, or outpatient settings for the maintenance or enhancement of mental health or the treatment of mental or behavioral disorders in individual and group contexts.

Outcome: Refers to the result or consequence of an action or intervention.

Out-Of-Pocket payments-direct outlays of cash that may or may not is later reimbursed.

Provider: A person who is licensed, certified, registered, or otherwise authorized by the law of this state to provide health care in the ordinary course of business or practice of a profession.

Public Hospital: A hospital owned by the government and receives government funding. It is also known a Government hospital.

Private Hospital: This is a hospital owned by a profit company or a non-profit organization and it is privately funded through payment for medical services by patients themselves, insurers, government through national health insurance schemes or by foreign embassies

Resources: The means available for the operation of health systems, including human resources, facilities, equipment and supplies, financial funds, and knowledge.

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CHAPTER ONE
INTRODUCTION

1.1 Background of Study

The World Health Organization (WHO) defines mental health as a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community(WHO, 2001b).In this positive sense, mental health is the foundation for individual well-being and the effective functioning of a community.

Mental disorders are classified through the International Classification of Diseases (ICD-10) produced by the World Health Organization(WHO, 2013) and the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) produced by the American Psychiatric Association (APA)(American Psychiatric Association, 2013). Classification and diagnosis usually follow clinical interviewing to determine diagnosis. Assessment can be psychological (clinical interviews and reports), interactional style (empathy and situational factors), biological (scanning brain function {Positron emission tomography (PET) scan, Computed tomography (CT) scan, Magnetic resonance imaging (MRI), Functional Magnetic Resonance Imaging (FMRI), Neurochemical}) and through psycho-physiological measures (Silverman et al., 2015).

Mental disorders are a major public health concern. World mental health surveys by the WHO on the burden of mental illnesses shows an increasing burden around the world. These disorders occur commonly and often impair in many parts of the world seriously. Estimates show that mental illness account for up to 14% of the global burden of disease with approximately 450 million people worldwide having some kind of a mental disorder. In Africa, 5% of the population suffers from mental illnesses and the number is expected to rise to 15% by the year 2030(WHO, 2008).

The burden of mental health in Kenya is high. Jenkins et al. reported a 10.8% point prevalence of common mental disorders among the adult population in Maseno, a rural town in Nyanza region of Kenya (Jenkins et al., 2012). Moreover, Kiima et al. reported that one in four patients presenting to a primary health facility suffers from a mental illness (Kiima et al., 2004). Vihiga Sub-County is one of the five administrative sub-counties in Vihiga County in Kenya. Here, youth unemployment has increased with the diminishing opportunities for formal employment

leading to high dependency ratio and inability of the few employed to save and invest. Cases of insecurity associated with youth unemployment are also on the rise. Also, there is an increased population of elderly people in the society, who have never been employed and also lack means of making a living. In addition, there are people with disabilities with little or no care and attention been given to them. There is also increased indulgence of the youth in drugs and substance abuse which has rendered many unproductive and increased cases of violence against women and children. This is characterized by physical, sexual or psychological harm or threats which affect their socio-economic and mental status (Vihiga County Government, 2018). Consequently, a number of adverse mental health consequences including Post Traumatic Stress Disorder (PTSD), substance use disorder and other psychological symptoms is experienced which continue to exacerbate the mental health burden in this setting.

The Kenya Mental Health Policy 2015-2030 provides for a framework on interventions for securing mental health systems reforms in Kenya and identifies five key barriers to increased access to effective mental health services including the absence of mental health from the public health agenda and the implications for funding; current organization of mental health services; lack of integration within primary care; inadequate human resources for mental health and lack of public mental health leadership(MOH, 2015).

Health care financing remains a critical element of the social and economic development of a country. An appropriate health financing mechanism will enable the health sector to achieve one of the critical health sector goals of ensuring access to quality and affordable health care. The health sector recognizes the provisions under the Constitution of Kenya 2010, among which is the right to the highest attainable standard of health (Kenya law, 2013). Levels of public expenditures on mental health are very low in LMICs (less than US$ 2 per capita)(WHO, 2014a). Funding for mental health services is totally non-existent in developing countries; as the WHO estimates that governments around the world allocate less than 1% of their health budget to mental health services (Bird et al., 2011). In most LMICs, government spending on mental health is insufficient proportionate to the burden of mental disorders. In Kenya, as is the practice in most LMICs, mental health services are severely short of resources. Less than 6% of the country's GDP is allocated to health, against the 15% agreed in the Abuja declaration. Even less funding is available for mental health promotion; which means that there is very poor awareness

of the mental health issue in the country. Cost-effective and affordable interventions for mental illnesses are unavailable. The Kenya Mental Health Policy 2015-2030 focuses the following priority actions: increasing the budgetary allocation to mental health services to a minimum of the recommended WHO standards both at national and county health sector budgets and ensuring that the health insurance system does not discriminate against persons with Mental, Neurological and Substance use (MNS) disorders in accessing insurance policies(MOH, 2015).Unfortunately, devolved units like county governments have comparatively limited resources and greater difficulty in accessing to funding sources, low income sources from the taxes they levy at county level, limited innovation in sourcing for more funds, inefficient budget control system and lack of economies of scale in their operations. Collective action to effectively implement mental health financing reforms has been hindered by the lack of systematic information from devolved settings like Vihiga Sub-County. There is a dearth of data on availability of funds for mental health and whether there is a specific allocation for mental health in the county health budgets following the devolution of health in Kenya. In hard-hit areas like Vihiga Sub-County, investments in improving the mental well-being of its populous is critical. Whether or not, there a specific budget for mental health in Vihiga Sub-County remains unclear.

Mental health service relies on the competence and motivation of its personnel to promote mental health, prevent mental disorders and provide care for people with mental disorders. Different mental health professionals play different roles and functions which is defined by their level of competence. These include

- **Psychiatris**t - A medical doctor who specializes in mental health and mental illnesses. This includes diagnosis and prescribing and monitoring medications.
- **Psychiatric Nurse**– A registered nurse practitioner with specialized training in the diagnosis and treatment of mental disorders.
- **Psychologist** - Will work with you to develop skills and strategies to manage thoughts, emotions and behaviors that impact on your mental health.
- **Nurse**- Ensures treatment and/or medication prescribed by a psychiatrist and/or medical Doctor is administered and that progress in monitored and recorded.
- **Social Worker-** In a hospital, a social worker may coordinate the discharge planning process. Once a patient leaves the hospital, other community social workers may coordinate your recovery support to ensure the patient gets the resources needed.

- **Occupational Therapist** -Assists in the enhancement of community living skills, including employment skills, social skills and appropriate behavior. They work to enable individuals pursue occupations and activities that they want or need to do.
- **Clinic Officer-** Ensures treatment and/or medication prescribed by a psychiatrist and/or Medical Doctor is administered and that progress in monitored and recorded.

Globally, there is a shortage of mental-health professionals, fairly low capacity and low motivation of non-specialist health workers to provide quality mental-health services (Patel et al., 2007). Globally, there is only one psychiatrist and one psychiatric nurse per 100 000 population in 53% and 46% of countries, respectively. The median numbers for psychologists and social workers in mental health is 0.4 and 0.3 per 100 000 population, respectively for these professionals among all countries (WHO, 2001a). This means that personnel in the sector are over-worked and this consequently results in a major setback in the provision of quality services. The Kenya Mental Health Policy 2015-2030 highlights the following action areas for efficient management of human resources for mental health care provision: continuous education and professional development, equitable deployment and motivation to retain service providers at all levels, supportive supervision and coordination(MOH, 2015).

The availability of qualified staff is an important determinant of the utilization of mental health services, alongside other factors such as staff motivation, staffing levels, skill mix, and good human resources management practices. The health and equity implications of shortages and maldistribution of mental health professionals in Kenya have not been well documented. Little reliable information exists on the numbers of mental health professionals and its implications for access to, and quality of, mental health care. The number of mental health professionals in rural, poor locations, and in primary health care facilities like those in Vihiga Sub-County has not been documented. They are usually staffed by nurses and clinical officers, who provide basic care and referrals to higher-level facilities. Whether or not Vihiga Sub-County has adequate personnel to handle mental disorders and implement the three action points from the Kenya Mental health policy 2015-2030 is unclear.

Essential medicines serve the priority health care needs of the population and should be available within the context of functioning health systems at all times in adequate amounts, in the appropriate dosage forms, with assured quality and adequate information, and at a price, the

individual and the community can afford (WHO, 2019). Availability of psychotropic drugs in primary care is not consistent in majority of countries. About 20% of countries do not even have the three most commonly prescribed drugs to treat disorders like depression, schizophrenia and epilepsy. Some of the contributing factors to the shortage of medicines include manufacturing and quality problems, production delays, lack of manufacturing capacity, shortage of raw materials, political instability, and profitability issues(Acosta et al., 2019)(Bochenek et al., 2018)(Walker et al., 2017). Besides, the lack of a well-functioning supply chain that move drugs from the manufacturer through to end user is often the cause of this poor availability in the entire health system (Vledder et al., 2019). Other factors include long lead times, delays in awarding tenders, absence of national contracts on the regional code lists of medicines, the failure of suppliers to meet demand, and the failure to pay suppliers (Heiskanen et al., 2017).Where these drugs are available, high prices are often a barrier to care. Though low income countries have lower median prices, the difference in prices between low and high income countries is only 2 to 5 times while the difference in their income level is more than ten times, making these drugs relatively less affordable in low income countries(WHO, 2001a). The gap in economic access to essential psychotropic medicines and effective supplies is huge thereby posing a problem in the management of mental illnesses at all levels of care.

Drug shortages may force providers to prescribe other therapeutic alternatives which can be more logistically difficult to use than standard therapies. The shortage of psychotropic medicines in public health facilities also diverts mental health patients hoping for cheaper and subsidized rates to private pharmacies where costs are quite high (Fredrick & Muturi, 2016).The patient flow consequently diminishes since most of the medicines prescribed are not available in health facilities thereby leaving the patients predisposed. From the Kenya Mental Health Policy 2015-2030 document, the Kenya Essential Drug List should include essential psychotropic drugs in adequate quantities and varieties. The procurement, storage and distribution processes should ensure the availability of the drugs at all levels of the health system including the community level (MOH, 2015). With growing emphasis on health systems strengthening for mental health, no studies have systematically assessed the availability of psychotropic medicines in Kenya and rural underserved populations like those in Vihiga Sub-County. As such, we undertook this study to assess the availability of psychotropic medicines in the government and private healthcare facilities in Vihiga Sub-County, western Kenya.

Health infrastructure refers to all the physical infrastructure, non-medical equipment, transport, and technology infrastructure (including ICT) required for effective delivery of services. The global median number of facilities per 100,000 population are; 0.61 outpatient facilities, 0.05 day treatment facilities, 0.01 community residential facilities, and 0.04 mental hospitals. There are 7.04 psychiatric beds per 100,000 population in mental hospitals in comparison to 1.4 psychiatric beds per 100,000 population in general hospitals. With the prevalence of probable psychosis running at over 1%(Kiima & Jenkins, 2010), this shortage in infrastructure presents a huge gap in the number of facilities for brief admissions to assess and stabilize complex cases at all levels of care. The Kenya Mental Health Policy 2015-2030 highlights the following action areas with regards to infrastructure:

- All health facilities should have adequate and appropriate infrastructure for outpatient and inpatient mental health services.
- Establish special separate child and adolescent outpatient and inpatient facilities.
- Both national and county governments shall invest in health infrastructure to ensure a progressive increase in access to mental health services.

Poor infrastructural development is the main contributor to the poor utilization of mental health services. Besides, the treatment capacity for mental depends largely on the availability of infrastructure. Although the relevance of health facility infrastructure for mental health care quality is obvious, the literature on the availability of mental health infrastructure in high burden and underserved settings like Vihiga Sub-County is limited. There is a need to assess the Vihiga Sub-County healthcare system's capacity to absorb and accommodate the varying mental healthcare demands.

The integration of mental health into primary care has been a policy objective in Kenya for two to three decades(MOH, 1994). Around the world, the proportion of people who require mental health care services but do not receive them remains very high. The treatment gap is estimated to be between 75%-85% for low and middle income countries. Given the percentage of the population likely to suffer from mental illness in the course of their lifetime is estimated at 25%, this equates approximately to 8.5 million people in Kenya that are not receiving the care they need(Kohn et al., 2004).

Since independence in 1963, medical services have been expanded to meet the needs of the people. Unfortunately, mental health care services have not been prioritized at health centers and dispensaries which make the primary level of care. These services are provided at the county and national referral levels which are not easily accessible to people in the community. Psychiatric services have been expanding rather slowly mainly due to lack of trained staff and funding but the medical schools are endeavoring to train students to meet the national needs and the manpower requirements. However, the concentration of these services at high level facilities has left a huge gap in mental health service provision in lower levels denying user the benefits of community strategy for delivery of health services(KNHCR, 2011). A situation appraisal in Kenya of mental health service delivery in primary care found that the general nurses and clinical officers who work in health centers (Level 3) and dispensaries (Level 2) have received a small amount of basic training on mental health. They had not received detailed training in multiaxial assessment, diagnosis and treatment, nor any in-service training or supervision for mental health(Jenkins et al., 2010).

The inadequate skills and inefficiencies in the management of mental health accentuate the need for refresher training and supportive supervision as part of the interventions required for integration of mental health services in primary care. Policymakers are obliged to ensure that the refresher courses on mental health and supportive supervision are defined, appropriate and supported to be effective. There is a paucity of data that explores the existence and conduct of refresher courses, supportive supervision, and other innovative approaches that impact on integration and quality of integrated mental health services in rural hard burden areas like Vihiga Sub-County. Whether or not the primary healthcare workers in Vihiga Sub-County have an understanding of the mental health service delivery and provide integrated mental health services remains unclear. In this regard, we make a case for a stronger focus on integration of mental health in primary care.

1.2 Problem statement

The burden of mental disorders continues to grow with significant impacts on health and major social, human rights and economic consequences in all countries of the world. In the Kenya Mental Health Policy 2015-2030, the National Government estimates that the burden of mental

illness is 25% among outpatients and 40% among inpatients in different health facilities, with an estimated prevalence of psychosis stated as 1% of the general population. Given the Kenya population of 47,564,296 as per the 2019 census, this means that 475,633 Kenyans are suffering from severe mental illnesses. The most common mental conditions in Kenya are depression, substance use disorder, bipolar mood disorder, schizophrenia and anxiety. The mental health taskforce was constituted in 2019 to look at the issues bedeviling Mental Health and they developed a report that spells out the road map for mental health interventions in the County. Vihiga County, a rural area in Western Kenya has shown a rise in the number of mental health cases reported in the DHIS. A total of 897 cases were reported between July 2013 to June 2014. The number of cases reported between July 2014 to June 2015 increased to 1242. In contrast the cases reported between July 2015 to June 2016 reduced to 1148. Between July 2016 to June 2017, 1192 cases were reported. According to the Vihiga County mental health coordinator they are currently admitting over 120 patients per month with cases of mental illnesses. From the health records office at Vihiga Sub-County hospital, the reported cases of mental disorders from the facilities in the year 2012 were 549 adults and 24 children. From January 2013 to June 2013, the reported cases were 375 adults and 4 children.

The typical history of mental health patients is that those patients first seek care from traditional healers. Patients may stay with traditional healers for several months. Research demonstrates that people with mental illnesses are greatly helped when they are properly diagnosed, counseled or treated, and prescribed for any necessary accompanying medications. Proper treatment and medication are associated with reduced recidivism(Dailey et al., 2005), reduced psychiatric hospital readmission (Semble & Dadson, 2011) and reduced occurrence of psychiatric symptoms(Hong et al., 2011).

The Universal Health Coverage requires resource allocation that promotes equity in access to and quality of services among all population groups. It also requires an appropriate balance between various health service streams following evidence-based impact. Several studies suggest the existence of barriers to access and the utilization of mental health services especially in low and middle income countries. The low numbers of providers who are trained and supervised in mental health care; and the frequent scarcity in mental health funding, infrastructure and psychotropic medicines are significant barriers that need to be addressed by national

governments. There is a paucity of published work on barriers to the utilization of mental health services at facility levels in Vihiga Sub-County, western Kenya. To the best of our knowledge, no study in Kenya has examined the barriers to the utilization of mental health services in Vihiga Sub-County from the perspectives of providers and this study seeks to address this gap in the literature. Given this background, this study aims to explore the barriers to mental health care utilization in health facilities from health care providers' perspective in Vihiga Sub-County, western Kenya.

1.3 Justification of the study

Kenya faces an enormous economic burden associated with mental health including healthcare costs and productivity losses. Moreover, the health system in Kenya is overwhelmed by competing healthcare needs. This highlights the lack of preparedness, structural shortcomings and the importance of strengthening health systems by building their resilience against shock. Likewise, Universal Health Coverage requires resource allocation that promotes equity in access to and quality of services among all population groups. It also requires an appropriate balance between various health service streams following evidence-based impact and relative service costs. Exploring barriers to mental healthcare utilization is essential for health systems strengthening and in agenda setting by informing equitable and efficient allocation of resources. They findings of this study can be used to plan, advocate and fundraise for better mental health service delivery.

1.4 Objectives

1.4.1 General objective

To explore the barriers to mental health care utilization in health facilities from health care providers' perspective in Vihiga Sub-County, western Kenya.

1.4.2 Specific objectives

i) To identify the available resources for mental health in healthcare facilities in Vihiga Sub-County, western Kenya.

ii) To assess the current mental health services offered in the health care facilities in Vihiga Sub-County, western Kenya.

iii) To establish the challenges experienced in the delivery of mental health care services in health care facilities in Vihiga Sub-County, western Kenya.

iv) To measure associations between the availability of resources and the services offered at the health care facilities in Vihiga Sub-County, western Kenya.

1.4.3 Research Questions

i) What are the resources available for mental health in healthcare facilities in Vihiga Sub-County, western Kenya?

ii) What are the current services for mental health offered in the health care facilities in Vihiga Sub-County, western Kenya?

iii) What are the challenges experienced in the delivery of mental health care services in health care facilities in Vihiga Sub-County, western Kenya?

1.4.4 Research Hypothesis

H_0: Availability of resources for mental health has no significant effect on the mental health services offered at the health care facilities in Vihiga Sub-County, western Kenya.

H_1: Availability of resources for mental health has a significant effect on the mental health services offered at the health care facilities in Vihiga Sub-County, western Kenya.

1.5 Significance of the study

The study is significant to the county and Sub-County governments, especially to decision makers involved in mental health service delivery for their Counties as the findings forms the bases upon which to review and improve utilization of mental health services.

The regulators and the policy makers can use the findings as reference for policy guidelines on improving the utilization of mental health services at all levels of care, to formulate viable policy documents that effectively will cope with the barriers to mental health utilization in the country and draw recommendations that would be useful in improving utilization of metal health services thereby reducing the treatment gap and overall disease burden for mental health.

The study also provides additional information into the already existing body of literature regarding the barriers to metal health service utilization. The findings of this study enrich existing knowledge and hence are of interest to both researchers and academicians who seek to explore and carry out further investigations.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical and empirical literature behind thebarriers to the utilization of mental health services at facility level.

2.2 Theoretical Literature

The theoretical framework provides information about the theories and concepts that relate to the broader perspective of the study topic. This study was based on the Neo-materialist Hypothesis.

2.2.1 Neo-materialist Hypothesis

The Neo-materialist hypothesis was advanced by Lynch, Smith, Kaplan, and House in the year 2000 (Lynch et al., 2000). It contends that differences in health among nations, regions, cities and individuals are as a result of the level and distribution of material resources within the population. The proponents of the hypothesis argued that how a society decides to distribute resources among its citizens is an important contributor to the quality of various social determinants of health. This hypothesis suggests that poor utilization of mental health services is a result of under-investment in human, physical, health and social infrastructure. This argument asserts that bad health could be due to increased income inequalities that reduces state spending on health care, goods and services (Drabo, 2011). The hypothesis brings out an understanding on how income and resource distribution may affect health of individuals. It shows the importance of the government in the provision of social services such as health care and how government's actions may affect health of her citizens. Ultimately, improvements in health outcomes result from adoption of beneficial innovations. This is an important policy issue, which can be of much help to policy makers in deciding on how to allocate resources if they need to influence the mental health status of the population. However, the hypothesis does not inform the amount of resources that can influence health positively.

2.3 Empirical Literature

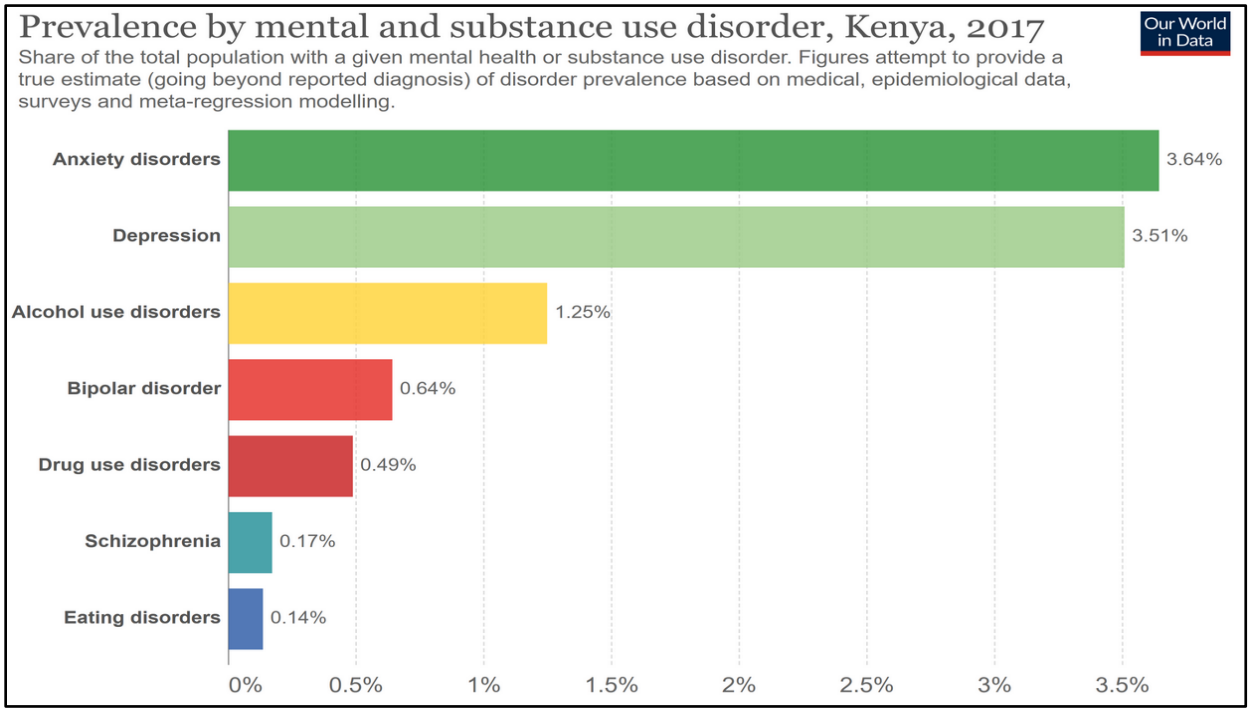
2.3.1 Burden of Mental Health problems

Mental health problems refer to the spectrum of mental problems ranging from serious mental illness to problematic behavior that has been shown to indicate later mental disorders(Stiffman et al., 2010). Serious mental illness is generally defined as a diagnosable condition that

substantially interferes with or limits one or more major life activities – including basic living skills as well as functioning in social, family, educational and vocational settings (Hogan, 2003). Mental illnesses vary in their severity, with an estimated 21 million adults having a serious mental illness in 2004. Neuropsychiatric disorders are estimated to contribute to 13% of the global burden of disease(Morris et al., 2012). In contrast, the global burden of disease due to mental health disorders is in LMIC is 80%(WHO, 2001b). A study conducted by WHO internationally, showed that about 25% of all attendees in primary health care setting were suffering from mental disorders mainly depression and anxiety (WHO, 2000). Likewise, it is estimated that 25% of outpatients and up to 40% of inpatients in health facilities will suffer some form of mental health condition(Morris et al., 2012). Similarly (Jenkins et al., 2010) and (Ndetei et al., 2009)have reported prevalence rates of 25% forneuropsychiatric conditions in Kenya. However, (Ndetei & Muhangi, 1979) and (Dhadphale, 1984)reported levels that exceed the 20 to 25% prevalence rates in general outpatient facilities in Kenya. Overall, these estimates demonstrate that mental health disorders are common everywhere. Improving awareness, recognition, support and treatment for this range of disorders should therefore be an essential focus for global health.

Mental disorders are also highly disabling with the estimated prevalence of 37% of all healthy life years lost (Mojtabai et al., 2011). This finding is consistent with the that of (Whiteford et al., 2013)who reported that the burden of mental and substance use disorders increased by 37.6% between 1990 and 2010. The 2010 Global Burden of Disease (GDB) estimates showed that mental and substance use disorders accounted for 7.4 % of disease burden (in terms of DALYs) worldwide, more than HIV/AIDS, tuberculosis, diabetes, or transport injuries(Murray et al., 2012). The most prevalent disorders in GBD 2013, in terms of both rates and number of global cases, were anxiety disorders (266 million cases globally) and major depressive disorder (253 million cases). The least prevalent disorders were those that primarily affected children and adolescents, including eating disorders, attention deficit hyperactivity disorder, Asperger's syndrome, autism, and the relatively less prevalent drug use disorders such as cocaine dependence (Murray et al., 2015). Similarly, the most prevalent diagnoses of mental illnesses in Kenya in 2017 were anxiety and depression, while the least prevalent disorders were schizophrenia and eating disorders. See figure 2.1 below.

Figure 2.1: Burden of Mental disorders in Kenya



Source: IHME Global burden of Disease

This trend is consistent with that of(Kwobah et al., 2017) who conducted a study in Western Kenya and reported that anxiety, depression and alcohol use disorders had the highest prevalence rates. Only 1.7% (7/420) had ever had an eating disorder. Moreover, psychotic episodes and suicidal attempts which are not standalone diagnosis on DSM-5, had high prevalence rates of 7.6% and 16.4%,respectively. See table 2.1 below.

Table 2.1: Prevalence of psychiatric morbidity in a community sample in Western Kenya

Disorder	**Actual Number**	**(%)**
Any mental disorder	191	45.5
Anxiety disorders	66	15.7
Major Depressive Disorder	53	12.6
Alcohol/substance use disorders	49	11.7
Suicide behavior disorder	28	6.7
Bipolar mood disorder	22	5.2
PTSD	19	4.5
Psychotic Disorder	4	1.0
Antisocial Personality Disorder	13	3.1
Eating disorders	7	1.7
Other significant conditions		
Suicidal attempt	64	16.4
Psychotic episodes	32	7.6

The magnitude of this burden also results from the fact that only a minority of individuals with these disorders ever receive treatment in the specialized mental health care system or in the general health care system, a pointer that initial treatment is frequently delayed for many years. If disability is to be reduced, a bridging of the "treatment gap" must occur. The treatment gap represents the absolute difference between the true prevalence of a disorder and the treated proportion of individuals affected by the disorder(Russell, 2010). However, there is severe shortage of mental health resources and services especially in the developing countries and particularly in Sub-Saharan Africa(Atilola, 2016).

2.3.2Availability of resources for mental health in primary healthcare facilities

Resources for mental health in LMICs are severely constrained. A global scoping review of the availability of resources for mental health found that across LMICs, not only are resources limited for mental health service provision, but they are inequitably distributed and inefficiently used (Saxena et al., 2007). Consequently, the proportion of Africans who receive treatment for mental health problems is extremely low. While the global annual rate of visits to mental health outpatient facilities is 1051 per 100 000 populations, in Africa the rate is 14 per 100 000 (WHO, 2014b).

The global median spending on mental health stands at around 2% of total government health spending. Low-income countries spend around 0·5% of their health budget on mental health services, lower-middle-income countries around 1·9%, upper-middle-income countries 2·4%,

and high-income countries 5·1%(WHO, 2014b). Taken together, these findings indicate that funds for mental health remain extremely limited. Lack of funding is of particular importance given that there is a strong body of evidence in high-income countries, and a small but growing body of evidence in low- and middle-income countries, that effective mental health interventions are available which can help maintain or reintegrate individuals back into society, and may be highly cost-effective compared with taking no action(Shelton, 2003). Overcoming resource insufficiency requires countries to generate additional revenue through the development of financing systems.

Health insurance is based on the principle of pooling of funds and entrusting the management of such funds to a third party that pays for healthcare costs of members who contribute to the pool. It secures financial access to health care for individuals and evens the costs of services, protecting against potentially devastating economic shocks incurred while seeking health care (El-Sayed et al., 2018). The National Hospital Insurance Fund (NHIF) is the main type of health insurance in Kenya. It was established by an act of parliament in 1966 as a department under the ministry of health (MOH), and has undergone a series of restructuring over the years. For example, it was initially set to offer health insurance coverage to formal sector employees only, but in 1972, the Act was amended to incorporate voluntary membership, although in practice voluntary membership was only implemented in 2005.Unfortunately only about 10% of Kenyans have health insurance(Chuma & Okungu, 2011). This is consistent with the findings from a report by the Health Policy Project that indicated that the National Hospital Insurance Fund (NHIF) currently covers 4.5 million Kenyans (11% of the population)(Health Policy Project, 2016). Moreover, the coverage is higher among the urban population (19.7%), compared to the rural population (7.4%), and among the richest (26.4%) compared to the poorest population (1.9%) (Wamai, 2009).

Despite greater awareness of the case for investment in mental health, the reliance by mental health services on out-of-pocket payments in low- and middle-income countries remains high. Out-of-pocket payments make up a significant proportion of the total expenditure on mental health care in most low-income countries(Dixon et al., 2006). They are used as the primary method of financing mental health in 35.9% of countries in the African Region and 30% of countries in the South-East Asia Region. No countries in the European Region use this method

as the primary means of expenditure for mental health. It is the primary method of financing in 39.6% of low income countries. One limitation of out-of-pocket expenditure is leads to catastrophic health expenditure and impoverishment. A "financial catastrophe" for a household is experienced when the out-of-pocket expenditure health expenditure is greater than or equal to 40 % of its non-subsistence income(Xu et al., 2003). Consequently, households have to cut down on basic necessities such as education, food, and clothing (Van Minh et al., 2013)**;**(Xu et al., 2007). In LMIC catastrophic out-of-pocket expenditure for health pushes around 100 million people into poverty annually. It is indeed a paradox that though substantial information is available on options for financing for mental health and the government expenditure directed towards mental health, hardly any information is available on the methods of financing and the budgetary financial allocation for mental health. This can be attributed to the weak systems to generate record and report data on the availability of finances for mental health. This dearth of data underscores the relevance of investigating whether or not Vihiga Sub-County has adequate financing for mental disorders.

Psychotropic medications are an important component of holistic care that provides treatment options for those suffering from mental illnesses(Iseselo & Ambikile, 2017). Essential psychotropic medicines allow for the treatment of symptoms of mental disorders, shorten the course of many mental disorders, reduce disability and prevent relapse. One of the biggest challenges to provision of services to the people with mental illness in low and middle income countries is that of ensuring regular and adequate supply of appropriate, safe, and affordable medications. Unavailability of essential medicines constrains mental health treatment. About a quarter of low-income countries do not provide even basic anti-depressant medicines in primary-care settings despite the fact that effective pharmacological treatment for many disorders depends on continuous access to medication for extended periods(Saxena et al., 2007). Almost 20% of countries globally do not have at least one common anti-depressant (amitriptyline), one anti-psychotic(chlorpromazine) and one anti-epileptic (phenytoin) in primary care. This is even worse in the African Region where 29% of countries do not have all these three drugs. Where these drugs are available, high prices are often a barrier to care(WHO, 2001a). This finding is consistent with that of the 2009 WHO Assessment Instrument for Mental Health System (WHO-AIMS) study of mental health systems in 42 LMICs which found that, across a sample of African countries, only 14% had at least one psychotropic medicine in each of five categories

(antipsychotics, anxiolytics, antidepressants, mood stabilizers, and antiepileptic drugs) available in all public health facilities(McBain et al., 2012). (Saraceno et al., 2007) also demonstrated that the majority of public health facilities in Nigeria did not have routine availability of essential psychotropic medications even after a 15-year program focused on the scale-up of mental healthcare treatment in primary care settings. Likewise, in 2011, a study using the WHO-AIMS framework in Mozambique found that over 90% of facilities providing outpatient psychiatric care had stock-outs of essential psychotropic medicines in the last year (Santos, 2011).

Inadequate access to psychotropic medicines in developing countries is aggravated by problems in the pharmaceutical procurement and distribution systems. The Kenya Medical Supplies Agency (KEMSA) is the procurement and distribution agency for pharmaceutical and non-pharmaceutical items for ministry of health facilities. Historically, it has supplied the dispensaries and health centers with drug kits according to the essential medicine list (the "push" system), but the psychotropic drugs supplied have not been adequate in numbers and variety(Kiima & Jenkins, 2010). The KEMSA Customer Satisfaction Report of 2011 cited stock-outs as one of the factors influencing the availability of essential medicines (Nkrumah & Mensah, 2014). In addition, late deliveries and stock-outs by KEMSA were common complaints cited in a qualitative study aimed to identify the extent to which improved supply of medicines and other essential supplies and equipment from local manufacturers into the health sector in Kenya could improve health system performance. While respondents from the facilities sampled acknowledged that they get exactly what they order for through the "pull" system, the deliveries sometimes are incomplete and don't include the everything in the list of commodities ordered (Kariuki et al., 2015). Similarly, (Ongarora et al., 2019) reported low availability of Fluoxetine and amitriptyline (antidepressants) in Nairobi County, Kenya. It is evident that there is frequent stock-outs of medicines and a lack of availability of medicines for mental healthcare which may contribute to attitudes that medications for mental health conditions are ineffective, decrease biomedical care-seeking for mental health conditions, and increase stigma regarding those suffering from mental disorders. The above state of affairs warrants a need to further investigate the availability of essential psychotropic medicines at health facilities in Vihiga Sub-County especially with the devolution of healthcare.

A variety of infrastructure for treatment and management of mental disorders are recommended depending on the setting. An outpatient facility is a facility that specifically focuses on the management of mental disorders and the clinical problems related to it on an outpatient basis in a community setting. They play a crucial role in service delivery, providing a primary point of care in community settings. As a gatekeeper to community based access to mental health care, the continued expansion of outpatient facilities is vital to the improvement of accessibility and to reduce the treatment gaps for mental disorders. Globally, there are 0.61 outpatient facilities per 100,000 populations. A day treatment facility provides care for mental service users during the day. The global median rate of day treatment facilities per 100,000 populations is 0.05. In 26% of countries, day treatment facilities do not exist—particularly in low and lower-middle income countries. A community residential facility is a non-hospital, community-based mental health facility that provides overnight residence for people with mental disorders. Community residential facilities are present only in one half (54%) of countries globally—mainly high income countries. This fact is reflected in the median rate of beds and patients treated at such facilities: These rates are markedly greater in high income countries (respectively 10.15 per 100,000 and 5.8 per100, 000) as compared with low, lower middle and upper-middle income countries, all of which have a median rate of zero beds and residents per 100,000 population. Overall, mental hospitals still represent the primary mode of inpatient service: they are present in 80% of countries. A mental hospital is a specialized hospital-based facility that provides inpatient care and long-stay residential services for people with mental disorders. Usually these facilities are independent and standalone, although they may have some links with the rest of the health care system(Morris et al., 2012).

Psychiatric hospitalization is the treatment option of last resort for individuals with acute or chronic serious mental illness who need intensive, inpatient care. Most countries in Africa and Asia have too few beds, and a large proportion of these beds are in mental hospitals; a median of0.34 beds are available per 100000 population in Africa and 0.33 in South-East Asia Regions, with 73% and 83% in mental hospitals, respectively. By contrast, the European region has a median of eight beds per 100000 population, although in the low-income and middle-income countries of central and eastern Europe more than 80% of these are in mental hospitals(Morris et al., 2012). Similarly, in Kenya, most provinces have only 22 beds per 4 million i.e. 1 bed per 200,000 population(KNHCR, 2011). Equally (Jenkins et al., 2010) reported that the total

number of mental health hospital beds for the whole population in Kenya was 1,114 in 2009, with a bed-to-population ratio of approximately 1:200,000. Despite availability of literature in this field, information on the availability an out-patient facility, day treatment facility, community residential facility and mental hospitals and the availability of beds in primary care settings for the mentally ill in Vihiga Sub-County was unclear thus raised questions on the availability of the required infrastructure for treatment and management of mental disorders in Vihiga Sub-County.

Mental health personnel are the most valuable resource within the mental health systemand it relies on the competence and motivation of its personnel to promote mental health, prevent disorders and provide care for people with mental disorders(Bruckner et al., 2011).Unfortunately, there are widespread shortages of mental health professionals globally, especially for the care of adults with serious mental illnesses. Such shortages are aggravated by maldistribution of mental health professionals and attractive practice opportunities treating adults with less severe conditions. The mean number of psychiatrists in the world per 100 000 population is 3.96 (SD, 5.94, Median 1.0). About 52.7% of countries covering 69.2% of the world's population have access to less than one psychiatrist per 100 000 population. All countries in the South-East Asia Region and almost 96% of countries in the African Region accounting for 89% of the population have less than one psychiatrist per 100 000 population. The distribution of psychiatrists across regions is irregular. The median number of psychiatrists per 100 000 population varies from 0.05 in the African to 9.0 in the European Region. There are 1195 psychiatrists in the African Region for 626 million people compared to 77 242 psychiatrists for 841 million people in the European Region. The median distribution per 100 000 population is 0.06 in the low income countries and 9.0 in the high income countries. Even among high income countries about 26% have less than 5 psychiatrists per 100 000 population(WHO, 2014b). All low-income countries and about two thirds of middle-income countries have far fewer mental health workers to deliver a core set of mental health interventions than needed(Kakuma et al., 2011). The serious shortage of psychiatrists in low-income countries is illustrated by Chad, Eritrea, and Liberia (with populations of 9, 4·2, and 3·5 million, respectively), which have only one psychiatrist in each country, and by Afghanistan, Rwanda, and Togo (with populations of 25, 8·5, and 5 million, respectively), which have just two psychiatrists each(WHO, 2000).

Kenya has 75 psychiatrists, of whom 21 are in the university system and 28 in private practice. It has around 500 psychiatric nurses, of whom only 250 work in mental health, deployed at the national, provincial and district levels, so that each district of around 150,000 will have only one or rarely two psychiatric nurses(Kiima & Jenkins, 2010). Over-centralization is also an issue with personnel. Majority of the psychiatrists in Kenya are in Nairobi, and that the effective psychiatrist population ratio outside Nairobi being 1 psychiatrist per province of 3-5 million people. North Eastern Province, an extremely challenging environment adjoining Somalia, currently has no psychiatrist or psychiatric nurse. At the current rate of production it will take about 100 years to produce enough psychiatrists to have one in each district, taking account of retirement, and assuming no further brain drain(KNHCR, 2011). From these findings, it is clear that the distribution of mental health personnel within countries is very uneven with majority concentrated in urban areas.To address this gap, Lancet Global Mental Health Group and World Health Organization have recommended harnessing and fostering local human resources and creating collaborative, task-sharing models(Patel et al., 2018). Moreover, the Kenya Mental Health Policy 2015-2030 recommends efficient management of human resources for mental health care provision through continuous education and professional development, equitable deployment and motivation to retain service providers at all levels, supportive supervision and coordination(Bukusi, 2015).

However, these recommendations are not backed up by rigorous scientific evidence of the implementation on the ground. The paucity of data underscores the relevance of investigating whether or not Vihiga Sub-County has adequate personnel in primary care to handle mental disorders.It is also relevant to investigate whether or not Vihiga Sub-County has invested in continuous education and professional development, equitable deployment and motivation to retain service providers at all levels, and supportive supervision and coordination.

2.4 Mental health service delivery

Mental health problems are a major public health concern. These conditions include unipolar depressive disorders, bipolar affective disorder, schizophrenia, epilepsy, alcohol and selected drug use disorders, Alzheimer's and other dementias, post-traumatic stress disorder, obsessive and compulsive disorder, panic disorder, and primary insomnia(WHO, 2001a). When compared with 1990, the contribution of neuropsychiatric disorders is expected to increase to almost 15%

by the year 2020. Among individuals age 15–44, unipolar depression is the second leading contributor of DALYs, with alcohol-related disorders, schizophrenia, and bipolar disorder among the top 10 disorders. Of the 10 leading causes of YLD in the world among individuals of all ages, four are psychiatric conditions, with unipolar depression being the leading cause. Among individuals between the ages of 15 and 44, panic disorder, drug use disorders, and obsessive–compulsive disorder (OCD) were included in the top 20 disorders(Saxena et al., 2007).These statistics point towards the need for an effective and robust service delivery for the mentally ill.

Mental health in primary care is the provision of basic preventive and curative mental health care at the first point of entry into the health care system. Primary care non-specialist services are delivered through health centers (level 3) (average catchment population 10,000) and dispensaries (level 2) which are staffed by general nurses and clinical officers who have received a small amount of basic training about mental health but have not until now received detailed training in multi-axial assessment, diagnosis and treatment, and have not hitherto received any in-service training or supervision for mental health(WHO, 2011).

Globally, 87% of countries covering 97% population report having mental health care as an identified activity at the primary health care level. Treatment facilities for severe mental disorders are however present in only 59% of countries accounting for 51% population. The availability of treatment facilities at primary care level for severe mental disorders varies from 44.4% of countries in the South-East Asia Region to more than 65% of countries in the Americas and the European Region. Regular training facilities for primary level mental health personnel are present in 59% of countries(WHO, 2011).A descriptive cross sectional survey conducted in Eritrea found out that there was weak integration of mental health services within the primary health care services(Ghebrat et al., 2008). In Kenya, mental health care services have not been prioritized at health centers and dispensaries which make the primary level of care. These services are provided at the provincial and national referral levels which are not easily accessible to people in the community(Kiima & Jenkins, 2010).

Though a large number of countries have reported mental health to be an identified activity at primary care level, the actual implementation of this at ground level is highly variable. Often the facilities are restricted to specific areas where specific projects are in place and do not extend to the whole country especially in rural areas like Vihiga Sub-County. Training also varies across

countries while some have regular and more comprehensive programs for different types of personnel, others do not. This gap raises questions on the level of integration for mental health in primary care and the quality and coverage of training activities.

The management of severe mental illness should not only involve medication, but psychosocial interventions. Only 44% of countries have a majority of facilities which provide psychosocial interventions, a figure which also varies by income classification; 14% of low income, 34% of lower-middle income, 61% of upper-middle income, and 59% of high income countries provide psychosocial care at a majority of facilities. In the Americas and Europe Region, 64% and 59% of countries have a majority of facilities providing psychosocial interventions, respectively. In contrast, 24% of countries in Africa and 25% of countries in East Mediterranean Region and South-East Asia have a majority of facilities providing such care(Morris et al., 2012). Though many countries have reported having specific services, information on the available services offered for the mentally ill in healthcare facilities in Vihiga Sub-County was unclear. As such, this study determined the services offered for mental health in healthcare facilities in Vihiga Sub-County, western Kenya.

2.5 Challenges experienced in the delivery of mental health care services

Not only are resources for mental health scarce, they are also distributed inequitably between countries, between regions, and within local communities. Need and access tend to vary inversely—those with highest need have least access to care(Saxena et al., 2007).

Globally, the key challenges to addressing mental-health needs include the shortage of mental-health professionals, the fairly low capacity and motivation of non-specialist health workers to provide quality mental-health services to young people, inadequate supply of psychotropic medicines and limited funding(Patel et al., 2007). There is also limited research done on mental health(Ghebrat et al., 2008). According to an audit done by KNHCR in 2011, there are limited opportunities for broad stakeholder engagement in the development of policies and programs in the mental health sector(KNHCR, 2011).

Despite availability of literature in this field, what is known about challenges experienced in mental health pertains only to a few developed countries and mental health facilities in urban set up. There is almost no information on the challenges experienced in the delivery of services for mental health in healthcare facilities in rural areas like Vihiga Sub-County. Due to these

differing set-ups, the information that is available is not comparable. As such, this study established the challenges experienced in the delivery of mental health care services in healthcare facilities in Vihiga Sub-County, western Kenya.

2.6 Conceptual Framework

This conceptual framework was based on different potential factors that affect mental health services utilization. Moreover, any possible relationship or contribution of the existing health system on utilization of mental health services was identified. At the facility level, we listed availability of resources for mental health (funding, specialist staff, psychotropic medicines and infrastructure for management of mental illnesses), availability of services as well as the challenges experienced in the delivery of mental health care services as some of the factors related to utilization of mental health services. Unavailability of resources and services for mental health coupled with the foreseen challenges constrains mental health treatment thus the mental healthcare services at the health facilities will be non-existent and non-functional leading to poor or no utilization of the mental health services. This conceptual framework is useful in shedding some light on the status of mental health services, and in providing recommendations to improve services so that mental health needs are adequately met. Moreover, the results can be applied in other settings with similar context within and outside the country. From the foregoing literature review, the conceptual framework was represented in the diagram below (See figure 2.2).

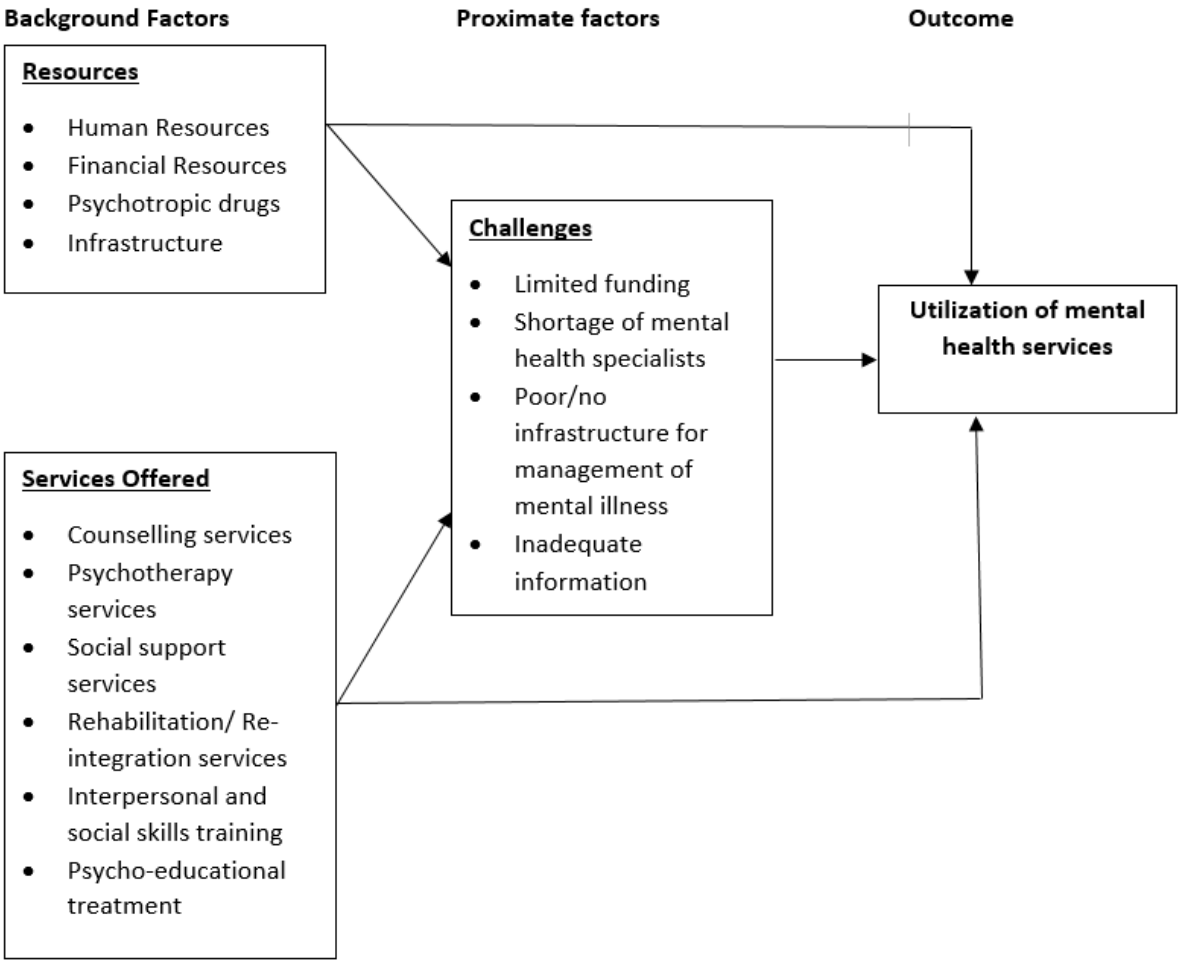


Figure 2.2: Conceptual Framework

CHAPTER THREE
METHODOLOGY

3.1 Study area

This study was done in Vihiga Sub-County, western Kenya. The population of Vihiga Sub-County according to the 2009 census was 221,294 with 48,221 households. Vihiga Sub County is an administrative region in the former Western Province of Kenya whose main County is Vihiga County. It has five Sub-counties; Luanda, Emuhaya, Hamisi, Sabatia and Vihiga. Drug abuse has been termed as the main cause of mental illness among residents in Vihiga County and more so in Vihiga Sub-County(Oyundi, 2015). Moreover, data from the DHIS shows a rise in the total new outpatients with mental health conditions between 2013 to 2017 (table 3.1 below).

Table 3.1: Total new Outpatients with mental health conditions (<5 and >5 Yrs)

Organisation unit / Period	Jul 2013 to Jun 2014	Jul 2014 to Jun 2015	Jul 2015 to Jun 2016	Jul 2016 to Jun 2017
Vihiga County	897	1,242	1,148	1,192

Besides, Vihiga County Referral Hospital receives more than 100 mental illness patients per month due to drug abuse, a number that could increase in the near future if not well taken care of. Failure to solve this problem not only threatens the life of individuals, but also the economic and social development of the country as a whole. This study area was chosen because the large number of reported mental health cases in this area points towards poor utilization and a need for efficient and quality provision of mental health services. The study area had a total of 11 health facilities. See table 3.2 below.

Table 3.2: Health Facilities

	Government/Public	**Private**
1	Vihiga Sub-County hospital	Mbale wayside clinic
2	Mbale rural health training centre	Jasho medical clinic
3	Vihiga health centre	Jamii medical clinic
4	Enzaro health centre	Rejoice medical clinic
5	Mulele dispensary	
6	Bugamangi dispensary	
7	Iduku dispensary	

3.2 Study Design

A descriptive, hospital based cross-sectional study design was done in Vihiga Sub-County between August and September 2015 to explore the barriers to the utilization of mental health services at facility levels in Vihiga Sub-County, western Kenya. Descriptive study designs are used in preliminary and exploratory studies to allow researchers to gather information and summarize, present and interpret data for the purpose of clarification (Orodho, 2009). This study adopted mixed method involving both qualitative and quantitative data collection.

3.3 Target Population

A population refers to an entire group of individuals, events or objects having a common observable characteristic (Mugenda & Mugenda, 2003). The target population were healthcare providers working at the health care facilities in Vihiga Sub-County, Western Kenya. A health care provider was defined as a health professional licensed to provide health care diagnosis and treatment services such as medication, surgery and medical devices in primary health care facilities in Vihiga Sub-County, Western Kenya.

3.3.1 Inclusion criteria

i. Licensed healthcare providers of all cadres involved in mental health service delivery per site.
ii. Willingness to give an informed written consent to participate in the study.

3.3.2 Exclusion criteria

i. Students, interns, casual employees of less than one month in service
ii. Unwillingness to give informed consent to participate in the study

3.4 Sample Size and Sampling Procedure

This study adopted total population sampling of all health facilities and all healthcare providers in Vihiga Sub-County. This is a type of purposive sampling where the whole population of interest is studied. Since the sampling frame was small, we chose this method to capture every unique characteristic of this population. Moreover, although most studies are performed using samples, census-based estimates should be preferred whenever possible(Martínez-Mesa et al., 2016). In summary, all health facilities in Vihiga Sub-County were included in this study. Likewise, all healthcare providers (15) were interviewed using the WHO-AIMS questionnaire.

Some facilities had more than one healthcare provider hence the number 15. Finally, all the 11 facility-in charges, took part in the key informant interviews. Thus one facility-in charge was interviewed in each of the eleven health facilities.

3.5 Research Instruments

Primary data was gathered using two tools, the revised World Health Organization Assessment Instrument for Mental Health Systems (WHO-AIMS) questionnaire (Appendix 2) and Key Informant interview guide (Appendix 3). The WHO-AIMS was used to collect data for objectives one and two. It is a new WHO tool for collecting essential information on the mental health system of a country or region. The goal of collecting this information is to improve mental health systems. For the purpose of WHO-AIMS, a mental health system is defined as all the activities whose primary purpose is to promote, restore or maintain mental health. The mental health system includes all organizations and resources focused on improving mental health. A total of 15 health care providers within the health facilities were interviewed using the WHO AIMs questionnaire to provide data on the availability of resources for mental health and the mental health services offered at the health care facilities in Vihiga Sub-County, Western Kenya.

The Key Informant interview guides were used to collect data for objective threei.e. data on the challenges experienced in the delivery of mental health care services in health care facilities in Vihiga Sub-County. Key informant interviews were selected as a data collection method since it efficient in exploring a topic and fact-checking claims or assumptions about a situation, project or program(Gilchrist, 1992).A total of 11 Key Informant Interviews guides were used to interview the key informants who were facility in-charges working at the health care facilities. Data collection was conducted in English since all the providers preferred English.

3.6 Pilot Study

Pre-testing of the tools was carried out at Lyanaginga Health Centre. A sample of 5 providers was selected to participate in the pre-testing exercise. The completed surveys were entered into an Excel spreadsheet then the analysis done to see if the results answered the research questions. The finding of this exercise showed that the WHO-AIMs questionnaire was too long considering the fact that it has 6 domains some of which did not answer the research questions. The WHO-AIMs questionnaire was then modified by selecting the relevant questions based on the study

objectives, reordering them into more logical sequences and redesigning the layout. Many questions that were found irrelevant were left out. The draft data collection instruments were finalized after field pre-testing which lasted one day to ensure that the data collected was reliable. The interviewers were supervised during fieldwork including checking reports and keeping field notes. Interview notes were transferred to a report as soon as possible after the sessions.

3.7 Data collection procedure

A research permit was obtained from the Maseno University Ethics Review Committee to aid collect data from the study area. After informed written consent was obtained (See Appendix 4), those who agreed to participate were taken through the questions. The study used trained and qualified research assistants to assist with the WHO-AIMs questionnaire distribution. The WHO-AIMs questionnaires were administered through drop and pick method. It was intended to be self-administered. A total of 15 interviews were conducted for providers using the WHO-AIMs questionnaire to identify the availability of resources for mental health and assess the mental health services offered in the 11 facilities in Vihiga Sub-County, western Kenya.

Key informant interviews were then conducted with the facility in-charges. The research assistants began with an explanation of the purpose of the interview, the intended uses of the information and assured the respondents of confidentiality. The research assistants phrased questions carefully to elicit detailed information. Probing was done to encourage informants to detail the basis for their conclusions and recommendations. A total of 11 Key informant interviews were conducted to determine the challenges experienced in the delivery of mental health services.

3.8 Data processing and analysis

Data collected was checked and cleaned daily to ensure completeness, consistency, credibility and eligibility. This was done to correct errors or to fill in missing information before another day of data collection. For objectives one and two, the data was then appropriately coded and entered into WHO-AIMS Excel entry program and exported to STATA 12 for cleaning and analysis. Simple frequencies and percentages were used to analyze data on the availability of resources and the mental health services offered. Analysis for objective three was done using N-Vivo 8 software. Being qualitative research in nature, we analyzed the data using the thematic

analysis method. The thematic analysis included reading, re-reading, theme development, data coding, analysis and summary of the themes. Data coding was inductive at the beginning to get a variety of options from the facility in-charge perceptive, and then a deductive approach was used later to narrow the scope and ensure the research question was answered. Tape-recorded interviews were listened to several times and transcribed verbatim and detailed descriptions of observations and notes were written out to reflect the interview settings. Observational notes were juxtaposed to corresponding sentences on the transcripts. To ensure familiarization with data, transcripts were read several times and compared with research notes intermittently. Repetitive words and phrases were noted and coded; these codes were grouped into similar categories bearing in mind the other factors that were noted in the researcher's notes that may have affected the responses. Quotes were sorted by similarities and grouped into categories that reflected the similarity of information and themes. Non-thematic items were also identified. For objective four, chi-square tests were conducted to measure the association between the availability of resources and the services offered at the health care facilities in Vihiga Sub-County, western Kenya. See Table 3.3 below.

Table 3.3: Summary of methods

Specific objectives	Data Collection tool	Data analysis tool	Data Analysis technique
To identify the available resources for mental health in healthcare facilities in Vihiga Sub-County, western Kenya.	WHO-AIMS	STATA 12	Frequencies and percentages
To assess the current mental health services offered in the health care facilities in Vihiga Sub-County, western Kenya.	WHO-AIMS	STATA 12	Frequencies and percentages
To establish the challenges experienced in the delivery of mental health care services in health care facilities in Vihiga Sub-County, western Kenya	Key Informant interview guides	N-Vivo 8 software	Thematic analysis method
To measure associations between the availability of resources and the services offered at the health care facilities in Vihiga Sub-County, western Kenya	N/A	STATA 12	Chi-Square Test for Association

3.9 Ethical considerations/Approvals

Scientific approval was initially obtained from the School of Graduate Studies (See Appendix 5). Ethical approval was obtained from Maseno University Ethical Review Committee (See Appendix 6). Permission was sought from the relevant health facilities management (See Appendix 7 and Appendix 8). All stakeholders were also informed about the study. Participation in this study was voluntary. The respondents were briefed in detail on the research objectives. A written informed consent form was provided and explained to all participants before they signed. Confidentiality of information was guaranteed for all respondents by using unique identifiers and safely filing and locking up all research materials. The respondents had the liberty to withdraw at any time if they no longer wanted to be part of the study. The study did not cause any harm to the participants or the community. Data was stored in a lockable cabinet, and the researcher had sole custody of the key. Moreover, the computer with electronic data was password protected. The respondents were not given any monetary reimbursement or incentives for taking part in this study.

3.10 Research Variables

Table 3.4: Research Variables

	Variable	Measurement
Dependent	Utilization of mental health services	1. Accessed mental health service 2. Did not access
Independent	Resources for mental health	1. Human resources, 2. Infrastructure, 3. Psychotropic medication 4. Financing for mental health
	Mental health services	1. Counselling, 2. Psychotherapy, 3. Social support, 4. Rehabilitation, 5. Reintegration, 6. Interpersonal and social training service
	Challenges	1. Limited funding 2. Shortage of mental health personnel. 3. Poor or no infrastructure for mental health 4. Information asymmetry.

CHAPTER FOUR

RESULTS

4.1 Availability of resources for mental health in Vihiga Sub-County

This section presents the findings on availability of the human resources, funding, psychotropic medication and infrastructure for management of mental disorders.

4.1.1 Human resources in mental health

Human resources available for mental health care in Vihiga Sub-County were extremely limited. Typically, the first closest providers were generalists, with very little specialized care. The total number of human resources working in the health facilities in Vihiga Sub-County was 161. There were 0 psychiatrists, 2 psychiatric nurses, 9 other medical doctors (not specialized in psychiatry); 103 nurses, 0 psychologists, 13 social workers and 4 occupational therapists. Doctors not specialized in medical psychiatry provided primary mental health care through the outpatient departments of the facilities. A total10out of the 11 healthcare facilities did not employ doctors, but were staffed by clinical officers and/or nurses, or by personnel with lower levels of training such as social workers or occupational therapists. In addition, none of the primary health care doctors, nurses and non-doctor/non-nurse primary health care workers had received at least two days of refresher training in mental health in the past one year. All 161 of the primary health care workers interviewed stated that they had had no training in psychiatry since they completed their initial clinical training (Figure 4.1).

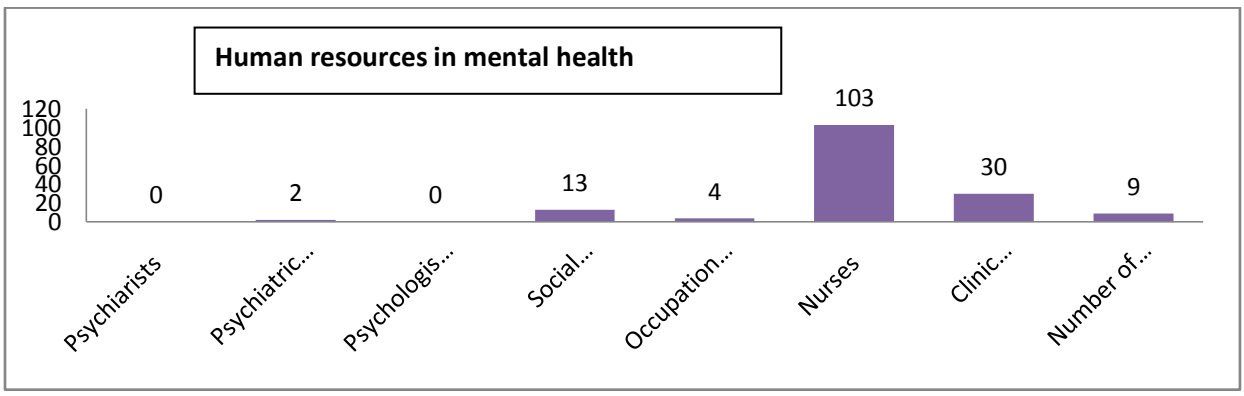


Figure 4.1: Human resources in mental health

4.1.2 Financing of mental health services

The findings of this study also indicate that domestic funding for mental health by county governments is low and suggest a lack of consideration for mental health. County health budgets guide the counties on key health sector priorities that form part of the Medium Term Expenditure Framework (MTEF) discussions for the following financial year. These priorities are set by the county and Sub-County health management teams and included in the county fiscal strategy paper that outlines the county's priorities and financial allocations. Unfortunately, only two of the eleven health facilities reported having government health expenditure directed towards mental health. See table 4.1 below.

Table 4.1: Government health expenditure directed towards mental health

Government health expenditure directed towards mental health		
	Number of facilities	%
None (0%)	9	81.8%
A few (1-20%)	2	18.2%

The National Hospital Insurance Fund (NHIF) covered mental health services at the seven government hospitals.However, patients who were not covered by NHIF, accessed mental health services privately and purchased psychotropic medicines without recourse to a refund. Out-of-pocket payments made up a significant proportion of the total expenditure on mental health care in Vihiga sub county.For those that had to pay for their medicines out-of-pocket, the cost of the cheapest anti-psychotic medication (Chlorpromazine) was Ksh.2 per day, while the cost of the cheapest anti-depressant medication (Amitriptyline) was Ksh.2 per day.

4.1.3 Infrastructure

Infrastructure for mental health is limited in Vihiga Sub-County and undermines the success of mental health integration. There was 1 district hospital, 1 rural health training centre, 6 health centres and 3 dispensaries available in Vihiga Sub-County. From these facilities, 7 were government/public facilities while 4 were private. In the entire Sub-County, there was no mental health outpatient facility, day treatment facility, community residential facility or mental hospital. Despite the need for hospitalization for individuals with acute or chronic serious mental illness,only one of these health facilities had beds specifically dedicated for people with mental

illness and the accommodations were made in the general wards of these facilities. Consequently, there was a marked increase in the number of facilities making referrals out of their local area for treatment, which can lead to poor treatment acquisition due to loss to follow up. See table 4.2 below.

Table 4.2: Referrals in the past one year

Referrals in the past one year	Number of facilities	Percentage
No	2	18.2 %
Yes	9	81.8 %
Total	11	100.0 %

4.1.4 Availability of psychotropic medicines

The availability of psychotropic medications, such as antidepressant and antipsychotics, is essential for the initiation and continuity of patient care. Out of the 11 health facilities, 9 had at least one psychotropic medicine of each therapeutic category (anti-psychotic, antidepressant, mood stabilizer, anxiolytic, and antiepileptic) available in the facility all year long. However, it is unclear whether the psychotropic medicines that are available are in the appropriate dosage forms, with assured quality, and adequate information.

4.2 Mental health service delivery

The users treated in above health facilities were primarily diagnosed with schizophrenia (291), followed by substance abuse 238. Those diagnosed with mood disorders were 132, neurotic disorders were 106 while personality disorders were 26 (Figure 4.2). In all the health facilities, people with mental illness sought mental health care services at the advanced stage.

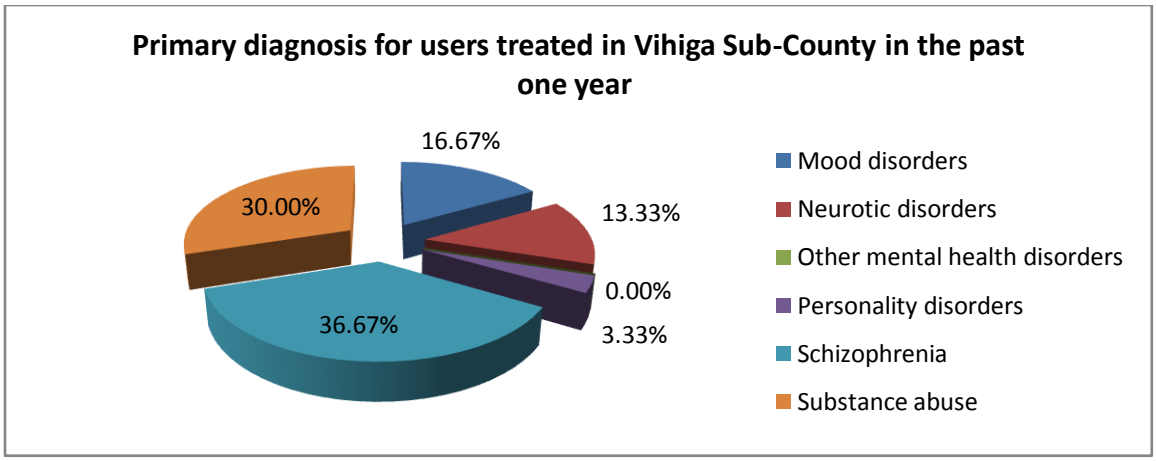


Figure 4.2: Primary diagnosis for users treated in Vihiga Sub-County in the past one year

Mental health services were provided as part of the routine general services integrated with the health services but not in a specialized mental health unit within the health facilities. All of the health facilities in Vihiga Sub-County offered counselling services. Only 3 of the 11 health facilities offered social support services while only 1 offered psychotherapy and rehabilitation services. None of the health facilities offered interpersonal and social skills training and psycho-educational treatment (Figure 4.3).

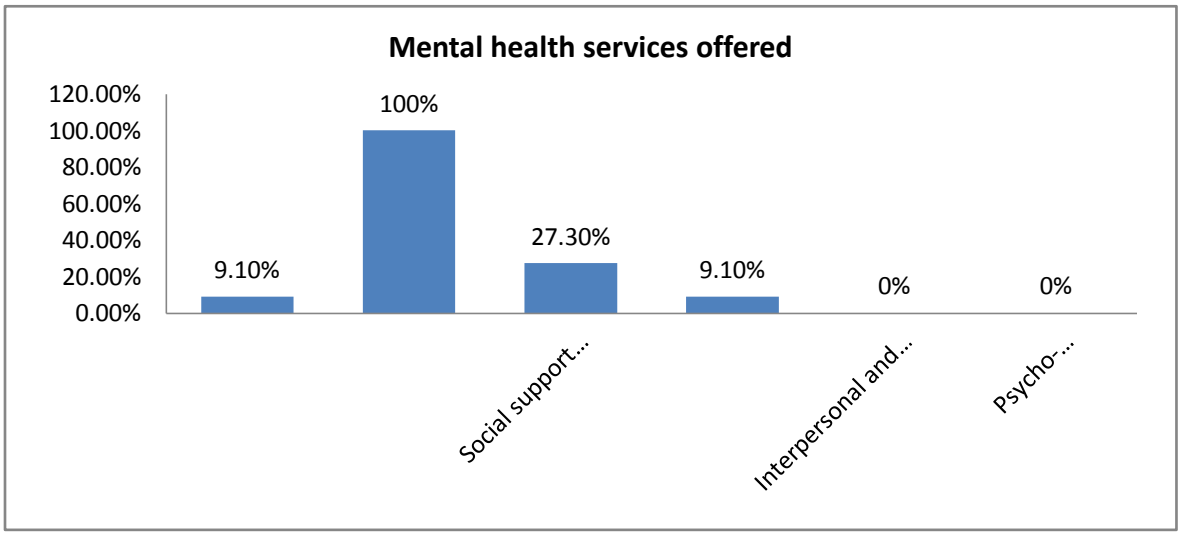


Figure 4.3: Mental health services offered

In spite of the limited number of physicians in primary health care clinics, there were assessment and treatment protocols in all of these health facilities which included guidance on the treatment of the major mental health illnesses. As for prescription of psychotropic medication in primary

care, non-doctor/non-nurse primary health care workers were not allowed to prescribe psychotropic medications. Primary care nurses formed the largest part of human resources in Vihiga Sub-County yet they were allowed to prescribe in emergencies only. In contrast, primary health care doctors who were the fewest were allowed to prescribe without restriction.

4.3 Challenges experienced in the delivery of mental health care services

A total of eleven interviews were conducted with key informants from all the eleven health facilities in Vihiga Sub-County. The responses conveyed an overwhelming sense of systemic shock in mental health service delivery. Resource challenges are a major theme that emerged. Inadequate human resource for mental health was reported. In the entire Vihiga Sub-County, there were no psychiatrists and psychologists while the only available psychiatric nurses were found at the district hospital. A common narrative among the respondents was;

"We only have two psychiatrist nurses in an entire Sub-County but the number of patients we are receiving, has increased. Consequently, the psychiatric nurses are overworked. That's more like a voluntary job."-PK5

Another sub-theme under human resource challenges that emerged was inadequate mental health training for primary healthcare workers. Some of the responses included;

"We have not had on-job or capacity building training on mental health issues since I joined this facility. I have been here for 5 years. This limits my ability to make important decisions during the provision of mental health care services. Most times, I am forced to refer cases that I would have otherwise handled."-PK11

"There is no supportive supervision as far as mental health is concerned. Emphasis is placed on HIV and Malaria. Nobody talks about mental health/illness."-PK2

Inadequate infrastructure also meant that staff was not always able to perform a holistic assessment. The respondents expressed their concern and feelings of helplessness about delays in treatment due to lack of psychiatric wards, limited space for service provision, and inadequate diagnostic and treatment equipment.

"We experience challenges when handling those who need inpatient management, psychotherapy, and occupational therapy since we do not have special infrastructure for managing these conditions. Consequently, we only provide diagnosis and the management needed in a resource-constrained outpatient set-up".PK-4

"We do not have diagnostic equipment for mentally ill patients like electroencephalography (EEG) for diagnosing epilepsy and other brain diseases. The only equipment we only have is a BP machine, thermometer, and that stethoscope, that's all."PK-1

The respondents also highlighted problems with the availability of psychotropic medicines. Some of the responses include;
"Frequent stock-outs of psychotropic medicines is a major challenge experienced in this facility." PK-3

"*There is no logistics management information system to document the cases that are being seen and to forecast psychotropic medicines needed. This makes it difficult to do that type of quantification and order enough psychotropic medicines."PK-7*

"Some medicines are not available due to supplier challenges. For instance, delayed deliveries from the suppliers contribute to inadequate medicine availability at the primary health care level."PK-9

The shortage of psychotropic medicines consequently diminishes patient flow since most of the medicines prescribed are not available in health facilities thereby leaving the patients predisposed.
These issues highlight several challenges experienced in the delivery of mental health services, and the integration of mental health into primary care, especially concerning the human resource, medicine supply, infrastructure, the health management information system and support supervision.

4.4 Association between the availability of resources and the services offered

This section outlines the relationship between the availability of resources for mental health and the type of mental health services provided. Accessing mental health resources is a crucial step in the recovery from mental or psychological distress thus investments should be made to avert the morbidity and mortality attributed to mental illnesses. The study findings showed a significant relationship between the availability of government allocated funds for mental health and the availability of psychotherapy and rehabilitation services. A chi-square test with a statistically significant **p=0.026** confirmed that government funding is critical in determining the availability of psychotherapy and rehabilitation services. Prescription drugs, residential and outpatient treatment are major costs drivers for mental health treatment, thus justifying the need for government funding. In contrast, there was no significant relationship between the availability of government allocated funds for mental health and the availability of social support services. This is attributed to the fact that social support is not resource intensive and it comes in different forms that do not necessarily need funding such as, giving advice to a patient when they are facing a difficult situation, providing caring, empathy, and concern for loved ones in need. See Table 4.3 below.

Table 4.3: Association between the availability of government allocated funds for mental health and the mental health services provided

Government health expenditure directed towards mental health			
	Fisher's exact	likelihood-ratio	Pearson Chi-Square
Psychotherapy services	0.182	0.047	0.026
Social support services	1.000	0.231	0.338
Rehabilitation services	0.182	0.047	0.026

Likewise, a there was a significant relationship between the availability of accommodation at the general wards for mental health services and the availability of psychotherapy and rehabilitation services. A chi-square test with a statistically significant **p=0.001** confirmed that availability of infrastructure for accommodation at general wards for mental health influences the availability of mental health services provided including psychotherapy and rehabilitation services. Conversely, the lack of infrastructure remains to be a significant barrier to improving mental health services. In contrast, there was no significant relationship between the availability of accommodation at the general wards for mental health services and the availability of social support services. This

is attributed to the fact that social support does not require hospitalization but rather getting connected with healthcare providers who help manage everyday challenges, make difficult decisions, or even during a crisis situation. See Table 4.4 below.

Table 4.4: Association between the availability of accommodation at the general wards for mental health services and the mental health services provided

Accommodation at the general wards for mental health services			
	Fisher's exact	likelihood-ratio	Pearson Chi-Square
Psychotherapy services	0.091	0.010	0.001
Social support services	1.000	0.412	0.521
Rehabilitation services	0.091	0.010	0.001

A Chi-square test of association between the availability of accommodation in general wards and the number of beds allocated for mental health cases yielded a significant relationship with **p=0.004**. This shortage in infrastructure presents a huge gap in the number of facilities for brief admissions to assess and stabilize complex cases at all levels of care. See Table 4.5 below.

Table 4.5: Association between the availability of accommodation at the general wards for mental health services and the number of beds allocated for mental health

Accommodation at the general wards for mental health services			
	Fisher's exact	likelihood-ratio	Pearson Chi-Square
Number of beds allocated for mental health cases	0.182	0.035	0.004

A Chi-square test of association between the availability of mental health personnel and mental health services including psychotherapy and rehabilitation services showed a statistically significant relationship across six cadres. This implies that the availability of mental health personnel influences the services provided in these facilities. However, the lack of mental health personnel affects the ability to support patient care delivery leading to poor or no utilization of mental health services such as psychotherapy and rehabilitation services. See Table 4.6 below.

Table 4.6: Association between the availability of mental health personnel and the type of mental health services provided.

	Availability of mental health personnel					
	Psychiatric Nurses	Nurses	Clinical officers	Medical officer	Social workers	Occupational therapist
Psychotherapy & rehabilitation services	0.001	0.051	0.027	0.001	0.004	0.001

CHAPTER FIVE
DISCUSSION

5.1 Availability of resources for mental health in Vihiga Sub-County

The findings of this study showed that mental health is underfunded, with only a two health facilities having expenditures by the government directed towards mental health. This mirrors the total mental health expenditure estimated at 0.01% of government health expenditure, or less than 0.001% of total government expenditure in Kenya (Jaeschke et al., 2021). Consequently, most of the costs attributed to mental health expenditure is typically borne by patients or their families. Out of pocket payments have a negative impact on the demand for healthcare services among households. When patients are required to pay for healthcare services, the demand among poor and rural households decline. In particular, one study(Hailemichael et al., 2019) reported that drop-out from care was mainly due to poverty in people with severe mental disorder. Depression and higher disability increased the risk of interrupting medical visits leading to non-adherence to prescribed medications and loss to follow-up which is common in the treatment of depression. Another study (Gotsadze et al., 2009) estimated the Fairness in Financial Contribution (FFC) index and evaluated the prevalence of catastrophic health expenditure. They concluded that around 40% of the population, when sick with chronic or acute conditions, did not seek care from a medical provider. While pre-payment financing mechanisms such as National Hospital Insurance Fund covered mental health, the benefits were restricted to those who contribute. Unfortunately, even for those who are covered, NHIF cover is not comprehensive. These points to the urgent need of reducing out of pocket payment for mental health services by increasing government funding for mental health under Universal Health Care. Moreover, general government revenue should closely match the international median health financing of KES 250 per capita per year. Besides, the Insurance healthcare financing by NHIF should provide comprehensive coverage of outpatient and inpatient mental health care package.

The findings of this study indicated a shortage of mental health personnel. A similar study demonstrated the overwhelming worldwide shortage of human resources for mental health, particularly in low- and middle-income countries(Kakuma et al., 2011). From the findings, it was also evident that the distribution of mental health specialists was disproportionate. In a Sub-County of 221,294 people, there were only 2 psychiatric nurses. These findings are consistent with that of a study conducted by WHO which showed that globally, there is only one

psychiatrist and one psychiatric nurse per 100 000 population(WHO, 2001a). Likewise, (Bitta et al., 2017)reported that Kilifi County in Kenya relied on two psychiatric nurses who serve at the only two public psychiatric outpatient facilities. The low staff patient ratio for mental health poses a risk of poor quality of mental health services, especially diagnosis and management of common mental illnesses. Moreover, primary health care workers in Vihiga Sub-County require additional training for optimal mental health service provision, including assessment, diagnosis and treatment of people with mental illness. The primary healthcare workers had not received sufficient supervision and support by mental health specialists for the effects of general training received during their formal education to be sustainable. These findings are consistent with other studies on the primary health care workforce undertaken in other LMICs such as India (Kermode et al., 2010), Pakistan (Suhail, 2005), South Africa (Lund et al., 2010)and Uganda (Petersen et al., 2011); these studies have reported low levels of formal mental health education, and/or continuing professional development among primary health care workers. Moreover, (Saraceno et al., 2007)also highlights that the mental health training received by general health workers during their formal education is too often short, theoretical, and without sufficient follow-up. These points to a large information gap that ultimately hinders steps towards integration of mental health care into the primary levels of care. Mental health services can be advanced through improved mental health literacy which can strengthen demand for services. This can act as a catalyst and advocacy opportunity for increasing the public health priority afforded to mental health by governments in LMICs and donor agencies.

Availability of psychotropic medicines was operationally defined within the WHO-AIMS instrument as "the percentage of mental health facilities in which there is at least one psychotropic medication of each therapeutic category (anti-psychotic, anti-depressant, mood stabilizer, anxiolytic medicines, and anti-epileptic medicines) available all year long." A total of 9 of the 11 health facilities had at least one psychotropic medicine of each therapeutic category (anti-psychotic, anti-depressant, mood stabilizer, anxiolytic, and anti-epileptic) were available in the facility all year long. While it is laudable to have at least one psychotropic medicine of each therapeutic category, the information gap and lack of support supervision presents a challenge in prescription of these medicines. Similarly, (Murphy et al., 2015) confirmed that obtaining prescription for medicines was challenging due to lack of qualified mental health specialists who

prescribe appropriate medication. Consequently, many primary health centers do not dispense psychotropic medicines, thereby forcing patients to travel to Sub-County hospitals. These points to the need of continuous support supervision and training to ensure primary healthcare workers can prescribe while adhering to the standards of care and evidence-based guidelines. The findings from the key informant interviews however showed that the providers experienced frequent stock-outs, and challenges with logistics management and supplies. These findings are consistent with that of(Musyimi et al., 2017) who reported limited supply of psychotropic medicines and frequent stock-outs which are partly attributable to deficiencies in drug ordering and distribution. As such, there is need to ensure regular inventory control by the staff. Training is also necessary to equip the staff with knowledge and skills on use and management of the various registers and forms for proper quantification when ordering the psychotropic medicines from suppliers.

The study findings highlight the poor state of infrastructure and severe shortages of basic resources required for diagnosis and care in Vihiga Sub-County. There is one Sub-County hospital, one rural health training centre, six health centres and three dispensaries available in Vihiga Sub-County. In the entire Sub-County, there is no mental health outpatient facility, day treatment facility; community residential facility or mental hospital. Also, none of these facilities had beds specifically dedicated for people with mental illness and the accommodations were made in the general wards of these facilities. A similar challenge was cited by (Hanlon et al., 2017) who explored the barriers, facilitators and potential strategies to promote good health system governance in relation to scale-up of mental health care in Ethiopia. Failing to invest in mental health infrastructure is a costly mistake as the mentally ill deteriorate further, spend disproportionate time in solitary confinement, and have prolonged hospital stays and unnecessary re-admissions. Given these gaps in the mental health care infrastructure, it is crucial to invest in appropriate infrastructure for integrated and comprehensive primary care.

5.2 Mental health service delivery

The users treated in above health facilities were primarily diagnosed with schizophrenia. The relatively high frequency of schizophrenia and substance abuse is inconsistent to the findings in other low- and middle-income countries where mood disorders are the single leading neuropsychiatric cause of disease burden and substance abuse account for nearly 4% of the

disease burden(Ghebrat et al., 2008).Moreover, there was evidence of integration of mental health into primary healthcare**.** All of the 11 health facilities in Vihiga Sub-County offered counselling services. Only 3 health facilities offered social support services while only 1 of the health facilities offered psychotherapy and rehabilitation services. None of the health facilities offered interpersonal and social skills training and psycho-educational treatment. This finding is consistent with that of (Gureje et al., 2015) who proved that it is feasible to scale up mental health services in primary care settings in Nigeria.

However, there is still a gap between need and available services for mental health care. While primary care is expected to offer first contact, and provide comprehensive, continuous, and coordinated service for persons with mental health conditions, inadequate training of primary care providers remains a challenge. Besides, the lack of skills in the primary health workers to provide mental health care and a critical shortage of mental health professionals to manage the expanded mental health units was also experienced in Uganda (Kigozi, 2007). Also, the absence of support and supervision for their work, uncoordinated referral pathway through the various tiers of the health service affect mental health service delivery. Similar health system challenges to integration of mental health delivery in primary care in Kenya were cited by (Jenkins et al., 2013).

The gross inadequacy of mental health specialist services also affects health service delivery in Vihiga Sub-County. Primary care nurses who are the majority among the human resources in Vihiga Sub-County are allowed to prescribe in emergencies only. In contrast, primary health care doctors who were the fewest were allowed to prescribe without restriction. This suggests that prescription in primary care settings is limited since the clinic officers and/nurses can only prescribe in emergencies. In order to successfully implement the integration, action must be taken to enact new health-policy legislation and educate primary-care health workers to address mental health concerns. Kenya can borrow from the successful integration has been implemented in the Ehlanzeni District of the South African province Mpumalanga. It has a thorough model of care that treats mental health problems the same way as any other health problems; the same practitioners see patients with mental illnesses and those with physical ailments, and nurses are

trained to evaluate both mental and physical maladies. This systemic method allows for holistic, effective healthcare (Chen, 2013).

5.3 Challenges experienced in the delivery of mental health care services

The current study also assessed the challenges experienced in the delivery of mental healthcare services through a key informant interview with the providers. The challenges cited included, shortage of mental health specialists, inadequate funds by the government dedicated to mental health, inadequate information and skills and no beds allocated for mental health patients at the facilities. Similar challenges was cited by (Jenkins et al., 2013) who noted that physical investigations were difficult to carry out, aggravated by lack of resource in the clinics. These issues highlight a number of generic organizational implications for primary care functioning in Kenya, and for the integration of mental health into primary care.

Adequate and sustained funding is critical in creating a viable mental health system. Inadequate funding for mental health was a barrier to receiving mental healthcare and consequently posed a problem in expanding services so as to adequately meet demand. This suggests the lack of prioritization given to mental disorders and their prevention or treatment, leading to low levels of resource allocation and consequently large gaps in service availability and effective service coverage(Chisholm et al., 2019). Likewise, reports from national stakeholders in Kenya indicate that neither county departments of health nor county health facilities have mental health budgets (MoH, 2020). Moreover, the findings from a study in Uganda revealed that challenges in mental health funding was attributed to the fact that mental health care is considered a specialized service, with the greatest share of mental health budget funds allocated to the national referral mental hospital(Ssebunnya et al., 2018). This points to a weak financial risk protection as people in other settings pay mostly or entirely out of pocket for mental health services. Out-of-pocket expenditure is known to be prohibitive for many patients.

Another challenge experienced was lack of beds allocated for mental illnesses in the health facilities suggesting a high number of unmet needs among the mentally ill who require inpatient services. Consequently, this exacerbates waiting times for treatment for mental illnesses (Candiago et al., 2011). Moreover, inadequate beds reduces hospital length of stay that leading to readmission which is of great concern both in terms of implications for the quality of care provided to hospitalized patients and for the healthcare costs associated with readmission

(Upadhyay et al., 2019). Besides, hospital admissions and readmissions are not pleasant for most patients. People do not want to re-experience the pain and disruption to their lives and that of their
families.

The findings of this study also indicated that lack of information on managing mental health cases for non-specialists was a challenge. This may be a reflection of inadequate investments in refresher training as well as lack of sustained specialist support supervision for continuous hands-on training, support and guidance to the primary care workers. Similarly, (Gureje et al., 2015)cited inadequate training of primary care providers and absence of support and supervision for their work as challenges experienced in the integration of mental health services into primary care in Nigeria. There is evidence that supportive supervision achieves a high level of collegiality and collaboration among healthcare providers(Marshall & Fehringer, 2014).Moreover, periodic refresher trainings can reinforce concepts learned, and assist those trained in managing complicated clinical situations and maintaining motivation to provide good quality care for persons with mental, neurological and substance use disorders. These refresher sessions can be offered face-to-face or virtually, which may prove more convenient for busy health care providers(PAHO, 2017).

Human resources for mental health were extremely limited leaving mental health service delivery in Vihiga Sub-County hanging on by a shoestring. Likewise, shortages of psychiatrists, psychiatric nurses, psychologists and social workers were cited as the main barriers to providing treatment and care in low- and middle-income countries (MOH, 2015). Similar concerns over staff numbers were revealed by (Bruckner et al., 2011) who indicated that 58 LMICs would need to increase their total mental health workforce by 239 000 full-time equivalent professionals to address the current shortage. The great shortage, and inequitable distribution, of psychiatrists in Vihiga Sub-County widens treatment gap for people with mental disorders. Moreover, the ability to scale-up evidence-based treatment strategies for mental health in Vihiga Sub-County is limited by the lack of skilled mental health manpower. There is need for the Ministry of Health to invest substantially and implement effective human resources for mental health strategies.

CHAPTER SIX
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary of Findings

This study points out numerous barriers to utilization of mental health services in Vihiga Sub-County. Mental health services are insufficient, and what is available is poorly integrated into the primary care system. There is a lack of trained social workers and other mental health professionals which ends up limiting the potential for providing services. Psychosocial rehabilitation is underrepresented in hospitals. There are no day treatment facilities or even inpatient care. Moreover, continuous medical education for mental health professionals is lacking. None of the mental health care staff received at least two days of refresher training in the rational use of drugs, psychosocial interventions during past last year. Besides, the mental health system in Vihiga Sub-County is still lacking resources including, personnel, funding, infrastructure and psychotropic medicines. Promoting equitable resource allocation and comprehensive integration of mental health services in primary care are positive reforms that should be incorporated to improve mental health service provision.

6.2 Conclusion

Significant gaps remain in mental health service delivery, particularly in rural communities and among disadvantaged and vulnerable population groups like those in Vihiga Sub-County. These gaps, including lack or poor availability of funding, human resource, infrastructure and psychotropic medicines affect the access and affordability of mental health services. Policymakers need to strengthen these areas to address barriers to utilization, and plan for effective scale-up of cost-effective preventive and clinical interventions for mental health conditions in Vihiga Sub-County and Kenya.

6.3 Recommendations from the Current Study

1. There is need to prioritize in investing on human resource, psychotropic medicines, infrastructure and increasing funding for mental health to address the unmet needs in mental health. Also, limited resources should be better used by redirecting them from mental health institutions to primary care.

2. Greater integration of mental health into primary care is needed with a focus on equipping primary healthcare workers with skills for providing comprehensive prevention, promotion and treatment services for mental health.

6.4 Recommendations for Future Studies

1. There is need to facilitate research on mental health at the community level that would give the perspective of the community on the availability of resources and services offered.

6.5 Study Limitations

While the barriers to mental health utilization are driven by both demand and supply side factors, this study only explored barriers on the supply side by looking at the provider perspective. It does not explore the demand side factors such as discrimination and stigmatization from the society.

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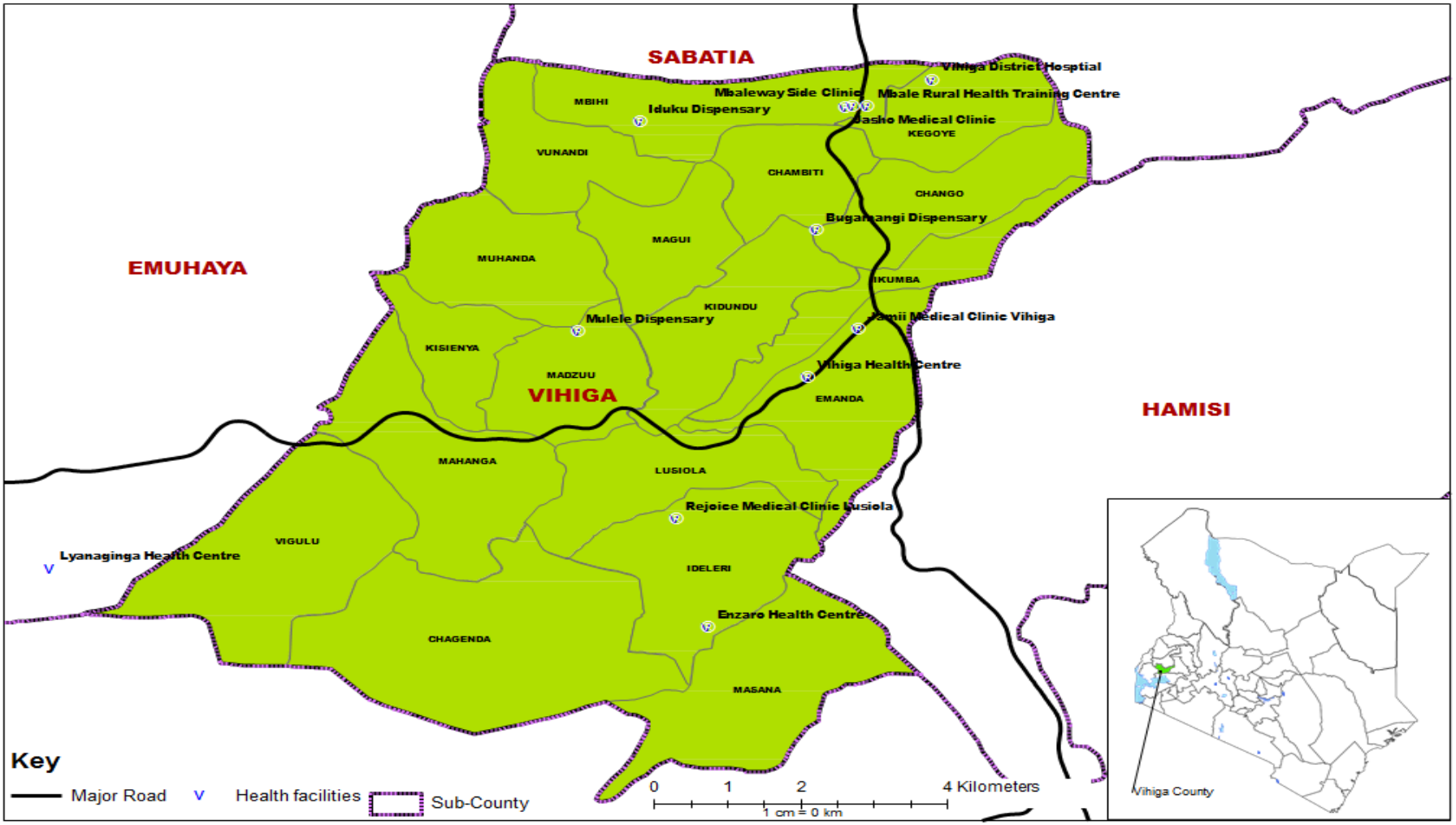
APPENDICES

APPENDIX 1: MAP OF STUDY SITE



APPENDIX 2: REVISED WHO AIMS

MASENO UNIVERSITY

SCHOOL OF PUBLIC HEALTH ANC COMMUNITY DEVELOPMENT

ASSESSMENT OF THE EXISTENCE, FUNCTIONALITY AND CHALLENGES EXPERIENCED IN THE DELIVERY OF MENTAL HEALTH CARE SERVICES IN VIHIGA SUB-COUNTY, WESTERN KENYA.

BY

OLWANDA EASTER ELIZABETH

PG/MPH/0154/2011

INTRODUCTION

My name is …… I am a postgraduate student undertaking a Masters in Public Health at Maseno University. I am carrying out a study whose objective is to assess existence, functionality and challenges experienced in the delivery of mental health services in Vihiga Sub-County, Western Kenya. My findings will be critical in informing stakeholders on resource allocation to address mental health problems in Vihiga Sub-County. You participation will be purely voluntary. You will need approximately 20 minutes to respond to the questions. The information will be treated with confidentiality. Your sincere and true response will contribute to the achievement of the aim of this study.

NAME OF FACILITY

……

SIGNATURE OF RESPONDENT

……

DATE OF THE INTERVIEW

……

Financing of mental health

1. Is there a part of the health care expenditures by the government health department directed towards mental health?

   1=Yes

   2=No

   3=don't know

2. Does the National Hospital Insurance Fund (NHIF) cover mental health services at this health facility?

   1=Yes

   2=No

   3=don't know

3. What options are available for those who cannot access the NHIF?

4. For those that have to pay for their medicines out of pocket, what is the cost of the cheapest antipsychotic medication per day?

5. For those that have to pay for their medicines out of pocket, what is the cost of the cheapest antidepressant medication per day?

Human resource

1. What is the total number of staff working in this health facility?

Staff Category	Number Available
Psychiatrists	
Psychiatric nurses	
Medical doctors (not specialized in psychiatry)	
Nurses	
Psychologists	
Social workers	
Clinic officers	
Occupational therapists	
Other health or mental health workers	

2. Indicate whether any of the staff in the above mentioned categories have received at least two days of refresher training in mental health in the past one year (Tick Appropriately).

Psychiatrists	Yes	No	Don't know	Not Applicable
Psychiatric nurses				
Medical doctors (not specialized in psychiatry)				
Nurses				
Psychologists				
Social workers				
Clinic officers				
Occupational therapists				
Other health or mental health workers				

3. Indicate whether any of the staff in the above mentioned categories have received any training in psychiatry since they completed their initial clinical training (Tick appropriately).

Psychiatrists	Yes	No	Don't know	Not Applicable
Psychiatric nurses				
Medical doctors (not specialized in psychiatry)				
Nurses				
Psychologists				
Social workers				
Clinic officers				
Occupational therapists				
Other health or mental health workers				

Mental health Infrastructure

1. Which category does this facility belong to (Tick appropriately)
   i) Mental health outpatient facility
   ii) Day treatment facility
   iii) Community residential facility
   iv) Mental hospital
   v) District hospital
   vi) Rural health training centre
   vii) Health centre
   viii) Dispensary

2. What is the number of beds allocated for the mentally ill patients in this facility?

Availability of Psychotropic medicines

1. Does this health facility have psychotropic medicine of each therapeutic class (anti-psychotic, antidepressant, mood stabilizer, anxiolytic, and antiepileptic) is available in the health facility all year long.

   1=Yes

   2=No

   3=don't know

Mental Health Services

1. How many users treated in above health facilities were primarily diagnosed with the following disorders in the past one year
   a. Schizophrenia-
   b. Substance abuse-
   c. Mood disorders-
   d. Neurotic disorders-
   e. Personality disorders-
   f. Other Mental Health Disorders
2. At what stage did the people diagnosed with the above mental illness seek mental health care services?
   i) Advanced
   ii) Early
3. Indicate which of the following services that are provided at this health facility?
   (Tick appropriately)
   a) Counselling services
   b) Social support services
   c) Psychotherapy
   d) Rehabilitation services
   e) Interpersonal and social skills training
   f) Psycho-educational treatment

4. In terms of physician-based primary health care, does this health facility have assessment and treatment protocols for key mental health conditions?

1=Yes

2=No

3=Unknown

4=Not Applicable

5. Are Non-doctor/non-nurse primary health care workers allowed to prescribe psychotropic medications?

    1=Yes

    2=No

    3=Unknown

    4=Not Applicable

6. If yes, are there restrictions?
7. Are primary health care nurses allowed to prescribe psychotropic medications?

    1=Yes

    2=No

    3=Unknown

    4=Not Applicable

8. If yes, are there restrictions?
9. Are Clinic Officers allowed to prescribe psychotropic medications?

    1=Yes

    2=No

    3=Unknown

    4=Not Applicable

10. If yes, are there restrictions?
11. Are primary health care doctors allowed to prescribe psychotropic medications?

    1=Yes

    2=No

    3=Unknown

    4=Not Applicable

12. If yes, are there restrictions?

APPENDIX 3: KEY INFORMANT INTERVIEW GUIDE

ASSESSMENT OF THE EXISTENCE, FUNCTIONALITY AND CHALLENGES EXPERIENCED IN THE DELIVERY OF MENTAL HEALTH CARE SERVICES IN VIHIGA SUB-COUNTY, WESTERN KENYA.

Introduction

My name is ……..... I am a postgraduate student undertaking Masters in Public Health at Maseno University. I am carrying out a study whose objective is to assess the existence, functionality and challenges experienced in the delivery of mental health services in health facilities in Vihiga district, western Kenya. My findings will be critical in informing stakeholders on resource allocation to address mental health problems in the district. Your participation will purely be voluntary. You will need approximately 20 minutes to respond to the questions. The information given to the will be treated with confidentiality. Your sincere and true response will contribute to the achievement of the aim of this study.

Respondents to be interviewed

Category of respondent		**Tick where it applies**
Specialist workers	Psychiatrists	
	Neurologists	
	Psychiatric Nurses	
	Psychologists	
	Mental Health Social Workers	
	Occupational Therapists	
Non-specialist health workers	Doctors	
	Nurses	
	Community-Level Workers.	

Date of Interview_____ Interview Number_____

Name of health facility _____

1. Age of respondent _____

2. Sex _____

3. Position _____

4. Level of education _____

How long have you served in your current profession_____

Section B.

5 a) Which health care services do you offer to the mentally ill at this health facility?

6. At what stages do most people with mental illness seek the mental health care services? Why?

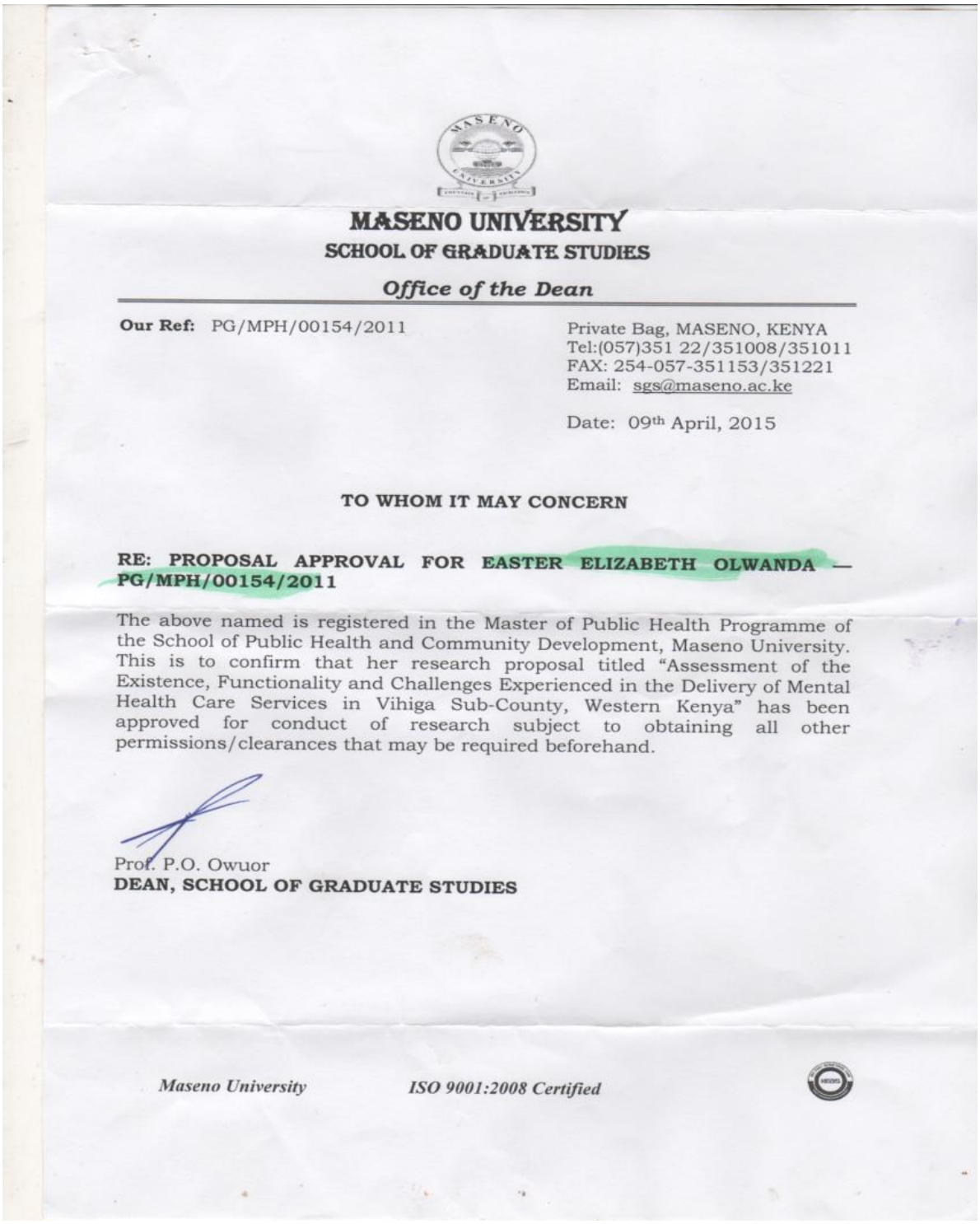
7 a) What challenges do the staff in this facility face when delivering mental health services?

b) How do they deal with these challenges?

8. Any other questions or comments

Thank you for your participation

APPENDIX 4: MASENO UNIVERSITY SCHOOL OF GRADUATE STUDIES APPROVAL



MASENO UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Office of the Dean

Our Ref: PG/MPH/00154/2011

Private Bag, MASENO, KENYA
Tel:(057)351 22/351008/351011
FAX: 254-057-351153/351221
Email: sgs@maseno.ac.ke

Date: 09th April, 2015

TO WHOM IT MAY CONCERN

RE: PROPOSAL APPROVAL FOR EASTER ELIZABETH OLWANDA — PG/MPH/00154/2011

The above named is registered in the Master of Public Health Programme of the School of Public Health and Community Development, Maseno University. This is to confirm that her research proposal titled "Assessment of the Existence, Functionality and Challenges Experienced in the Delivery of Mental Health Care Services in Vihiga Sub-County, Western Kenya" has been approved for conduct of research subject to obtaining all other permissions/clearances that may be required beforehand.

Prof. P.O. Owuor
DEAN, SCHOOL OF GRADUATE STUDIES

Maseno University *ISO 9001:2008 Certified*

APPENDIX 5: MASENO UNIVERSITY ETHICS REVIEW COMMITTEE APPROVAL

MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

Tel: +254 057 351 622 Ext. 3050
Fax: +254 057 351 221
Private Bag – 40105, Maseno, Kenya
Email: muerc-secretariate@maseno.ac.ke

FROM: Secretary - MUERC

DATE: 12th August, 2015

REF: MSU/DRPI/MUERC/00165/15

TO: Easter Elizabeth Olwanda
PG/MPH/00154/2011
School of Public Health and Community Development
P. O. Box, Private Bag, Maseno, Kenya

RE: Assessment of the Existence, Functionality and Challenges Experienced in the Delivery of Mental Health Care Services in Vihiga Sub-County, Western Kenya. Proposal Reference Number MSU/DRPI/MUERC/00165/15

This is to inform you that the Maseno University Ethics Review Committee (MUERC) determined that the ethics issues raised at the initial review were adequately addressed in the revised proposal. Consequently, the study is granted approval for implementation effective this 12th day of August, 2015 for a period of one (1) year.

Please note that authorization to conduct this study will automatically expire on 11th August, 2016. If you plan to continue with the study beyond this date, please submit an application for continuation approval to the MUERC Secretariat by 14th July, 2016.

Approval for continuation of the study will be subject to successful submission of an annual progress report that is to reach the MUERC Secretariat by 14th July, 2016.

Please note that any unanticipated problems resulting from the conduct of this study must be reported to MUERC. You are required to submit any proposed changes to this study to MUERC for review and approval prior to initiation. Please advice MUERC when the study is completed or discontinued.

Thank you.

Yours faithfully,

Dr. Boruke Anyona.
Secretary.
Maseno University Ethics Review Committee.

Cc: Chairman,
Maseno University Ethics Review Committee.

APPENDIX 6: INFORMED CONSENT FORM-ENGLISH

PROJECT TITLE: ASSESSMENT OF THE EXISTENCE, FUNCTIONALITY AND CHALLENGES EXPERIENCED IN THE DELIVERY OF MENTAL HEALTH CARE SERVICES IN VIHIGA SUB-COUNTY, WESTERN KENYA.

SITE OF RESEARCH: VIHIGA SUB-COUNTY, WESTERN KENYA.

You are being asked to participate in this survey because you are a healthcare worker who provides mental health care services to the mentally ill in one of the 13 healthcare facilities in Vihiga Sub-County, Western Kenya. This study is being done to assess the availability of resources for mental health in healthcare facilities, to describe the current services offered in the health care facilities and to determine the challenges experienced in the delivery of mental health care services in health care facilities in Vihiga Sub-County, Western Kenya.

This is an informed consent form. Feel free to ask for clarification where necessary. After this informed consent form has been read out, and your questions answered, you will be asked if you wish to participate in this study. If you agree, we will request you to append your signature on this form. You will also get your own copy of the informed consent form.

PROCEDURES

After signing the consent form, the research assistant will ask you questions about the mental healthcare system including questions on the following topics:

- Resources available for mental health
- Mental health services
- Challenges experienced in the delivery of mental health care services in health care facilities

This survey will take one hour.

CONFIDENTIALITY

We will do our best to protect the information we collect from you. Your name will not be recorded anywhere in the files for this study where your results will be kept. You will not be identified in any publication or report. You do not have to reveal any personal information if you do not want to, but if you are willing to share your experiences; it will be very helpful to us in further understanding the mental health system in Vihiga district, Western Kenya.

RISKS

There are no risks involved in this study. It has been approved by the Maseno University Ethical Review Committee and Maseno University School of Graduate Studies.

BENEFITS

There are no direct benefits to you but the results of this study will be used inform stakeholders on the need to study, mobilize and reorganize potential resources to deal with mental health problems. It will also inform the study population on the need to adopt and promote services that support and meet the needs of people with mental disorders.

PARTICIPATION

Participation in this study is voluntary and you may withdraw from it at any time and without any adverse consequences

CONTACTS

For more information contact

Prof. Collins Ouma, (PhD)
School of Public Health and Community Development, Maseno University
Mobile number: +254722381214

Dr. Harrysone Atieli, (PhD)
School of Public Health and Commuinity Development, Maseno University
Mobile number: +254721347437

WHAT YOUR SIGNATURE OR THUMBPRINT MEANS

PARTICIPATION IN RESEARCH IS VOLUNTARY. You have the right to say 'no' to participation in this study. A copy of this consent from will be given to you. Your signature or thumbprint below means that everything pertaining to this has study explained to you. It also means that you have had the opportunity to ask questions and get answers. If you wish to participate in this study, you should sign or place your thumbprint below.

Name of Study Participant

Study Participant's signature Date

Name of Research Assistant Designation

Research Assistant's signature Date

Name of Translator

Translator's signature Date

(If the participant is unable to read and/or write, an impartial witness must be present during the screening consent discussion. After the screening consent form is read and explained to the participant, and after he/she has orally consented and his thumbprint taken, the witness must sign and personally date the consent form. By signing the form, the witness attests that he/she has accurately explained the information on the consent form to the participant; the participant has understood the information and freely given consent).

Name of Witness

Witness's signature Date

APPENDIX 7: IKARADASI YA GWEKWIGIZANA NENDE KWIYAMA (INFORMED CONSENT FORM)-MARAGOLI

KOHENZERIZA, KHUVAHO, KUTUMIKA NO VUDINYU VWUKUHANA VOHONYI KU VULWALE VYO VWONGO MU I SUB-COUNTY YI VIHIGA, WESTERN KANYA.

VIGWENYI VWO VUHENZERIZI: VIHIGA SUB-COUNTY, WESTERN KENYA.

Otevangwa kuhambana mu vuhenzerizi yivu chigira yivi ni musirichi wa vulwale vwu vwongo ku valwaye vene yava mu isivitari indara mu zisivitari rikomi na zivaka mu I kaunti unguzuzu yi I Vihiga neveye kuhenzeriza kuri zisendi zinyara konyoreka kokonya valwaye vuvyongo mu zisivitari yizi nu kuhenza vudinyu vu kunyoranga nokokonyanga avalwaye vimitwi mu zisivitari ziene yizi mu I Sub-County yi Vihiga, Western Kenya.

Yigu ni mukungano gwekwigizana. Utatia koteva ritevo riosi lyoveye nario kukwivale. Nivakamala kosoma ikaradasi yiyi kandi matevo gogo gagajibwa, kulakoteva niva urenya kwiyunga mumasomo gano. Niwiyama, kurakusaya uviki kidete ku ifomu iyi. Na, kurakuha ikopi yi fomu yene iyi.

INZIRA (PROCEDURES)

Niwakamara kuvika kedete mukonyi wo kohenzeriza arakoteva matevo korondekana nu vulwaye vyu vyongo no komeda kokoteva ku:

- Vindu viveho kokonya zisivitari ziu vulwaye vwuvwongo
- Vokonyi vwo vulwaye vwuvwongo
- Vudinyu vunyoreka nuyinzira ko valwaye vuvwongo mu sivitari ya vavemu

Matevo yaga garavugura isa indara.

ISIIRI (CONFIDENTIALITY)

Kurakora chukunyara kukunga mangana kosi gukhuvukura kutura ku yivi. Lyita lilio sirirahandikwa ku havundu hosi muzifaili kurondekana ku masomo yaga mwamativuli gogo nigavikwi. Si uravulika ku mumangoda gosi dave. Si unyara kuvura isiri yoyo nutenya dave. Na vutswa nuwenyaa kovoraku swuwamanya korondekana kovulwaye yivu, ilakokonya komanya vulwaye vumutwi mu Vihiga District, Western Kenya.

MINYANGANO (RISKS)

Koveye ku ne minyangano jiosi mu vuhenzerizi yuvu dave. Gavititswa nende Maseno University Ethical Review Committee nende Maseno University School of Graduate Studies.

VUKARA (BENEFITS)

Vuhenzerizi yivu sivurakokonya wenyine dave lakini vuratumiga kwivaarira abandi vurahi vwa masomo yaga, kuvungiza no kubanga sikunyala kukonya vulwaye vwo vwongo. Irivala kandi vosi vaza vave nivazi kosoma siavanyara kokonyana kuziririza vukonyi vwa vandu vaveye novurwaye vwuvwongo

KUSANGANA (PARTICIPATION)

Sivarakulazimisha kusangana mumasoma yaga dave. Nutenya kusangana mumasomo gene yaga, unyala koreka vujira kusumbulwa dave.

ISIMU (CONTACTS)

Nuwenya manyingi teva:

Prof. Collins Ouma, (PhD)
School of Public Health and Community Development, Maseno University
Mobile number: +254722381214

IMAANA YE KEDETE NOHO ISAINI YOYO

KUSANGANA MUMASOMA YAGA NI KUYANZA KUKWO. Unyara kusura kuhambana mumasomo yaga. Urahevwa ekopi yikaradasi iyi. Isaini yoyo anoho kedete chuvika hasi hikaradasi iyi iramanya ndi kindu chosi chavivaye kurondokana nimasomo yaga gaveye vurahi na wakwivalwa. Kandi garamanya ndi wari nuvwiyangu vwokoteva mateva nivakujiba. Niwenya kuva murara kuvandu venya kwiyunga nimasomo yaga, unyara kusaina naho umini kedete hasi hikaradasi iyi.

Lita lwa musanji (Name of Study Participant)

Isaini yo musanji (Study Participant's signature) Mweri (Date)

Lita lwa Muhenzerizi (Name of Research Assistant) Designation

Isaini yo Muhenzerizi (Research Assistant's signature) Mweri (Date)

Lita lwo mugirunganyi (Name of Translator)

Isaini yo mugirunganyi (Translator's signature) Mweri (Date)

(If the participant is unable to read and/or write, an impartial witness must be present during the screening consent discussion. After the screening consent form is read and explained to the participant, and after he/she has orally consented and his thumbprint taken, the witness must sign and personally date the consent form. By signing the form, the witness attests that he/she has accurately explained the information on the consent form to the participant, the participant has understood the information and freely given consent).

Name of Witness

Witness's signature Date