

**AN ASSESSMENT OF THE PREVALENCE AND SOCIAL DETERMINANTS  
OF MATERNAL MENTAL DISORDERS IN KENYA: A CASE STUDY OF  
THREE COUNTIES.**

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**M10/8445/2017**

**A RESEARCH PROJECT REPORT SUBMITTED TO THE INSTITUTE OF  
AFRICAN WOMEN STUDIES CENTRE IN PARTIAL FULFILMENT OF THE  
REQUIREMENT FOR THE MASTER OF ARTS DEGREE IN WOMEN,  
LEADERSHIP AND GOVERNANCE IN AFRICA OF THE UNIVERSITY OF  
NAIROBI**

**2019**

## **DECLARATION**

I declare that the content of this research is the original work of the undersigned and as per the researcher's knowledge has never been submitted to any university for academic award nor has it been previously published.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

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## **DEDICATION**

For those who pay the price for the miracle of giving life: This is especially meant for all the women who suffer silently, a prisoner of their own mind. I hope this work paves way to your beautiful voices.

To my family, I would not have been me without you. I thank God every day that he chose this family for me to be born into.

## **ACKNOWLEDGEMENT**

To begin with, I acknowledge the presence of the Almighty for taking me to these heights and all the people we have taken this journey together at one point or the other.

To Prof. Wanjiku Mukabi Kabira, you have been the force behind each and every one of your students. I would have not gone this far had you not believed in me and pushed me to take risks and grab chances. It has been an honor to have been one of your students.

To my supervisor Dr. Grace Bosibori Nyamongo and Dr. Josephine Muthami, I thank you for your guidance and patience while providing supervision for this project.

I want to recognize the entire staff and classmates at The African Women Studies centre. You have been to me like a family to me.

And lastly, to my brother Abass Suleiman who consistently followed up on my progress with the project and reminded me of every deadline. Thank you.

## ACRONYMS

<b>ANC</b>	Antenatal Clinic
<b>CMD</b>	Common Mental Disorders
<b>CPMD</b>	Common Perinatal Mental Disorders
<b>DSM V</b>	Diagnostic and Statistical Manual of Mental Disorders (5 <sup>th</sup> Edition)
<b>GDP</b>	Gross Domestic Product
<b>HIC</b>	High income Countries
<b>HIS</b>	Health Information System
<b>KNBS</b>	Kenya National Bureau of Statistics.
<b>KDHS</b>	Kenya Demographic Health Survey
<b>LMIC</b>	Low Income Countries
<b>MHAP</b>	Mental Health Action Plan.
<b>MHIS</b>	Mental Health Information System
<b>MMD</b>	Maternal Mental Disorders
<b>MNS</b>	Mental, Neurological and Substance use Disorder.
<b>MoH</b>	Ministry of Health
<b>NCD</b>	Non-Communicable Disease
<b>PPD</b>	Postpartum Depression
<b>UHC</b>	Universal Health Care
<b>UN</b>	United Nations
<b>WHO</b>	World Health Organization

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## **ABSTRACT**

Mental illness is a common occurrence in the event of pregnancy and one year postpartum. In essence, all women can develop mental disorders in the course of pregnancy and in the year postpartum, however gender disparities in socio-economic and legal environment increases the risks significantly by constraining opportunities for women to control the social determinants of their health. The study sought to examine the social determinants of maternal mental health disorders and to assess the status of women in Kenya against the social risk factors of maternal mental disorders. Descriptive-research design was adopted for this study. The researcher collected data through desktop research. It mainly used data as captured by the KDHS (2014) and from other published materials. Findings from the studies in three counties in Kenya revealed that women who tested positive for common mental disorders were mostly having financial problems, did not get support in domestic work, experienced physical or verbal abuse. The analysis of the social risk factors of CPMD using KDHS data found that social inequalities including education, economic opportunities, gender relations and access to appropriate mental health services which increases the risks of developing mental health disorders. The study concluded that while majority of the pregnant and postpartum women have visited ANC at a health facility, the ANC does not cater for perinatal mental health care services. The study recommended integration of CPMD in MCH care services. It is also recommended for KNBS to provide relevant data on maternal mental health.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Mental illness is common in the course of pregnancy and the one year postpartum. Psychiatric disorder associated with pregnancy include: Postpartum depression, anxiety and postpartum psychosis. The most frequent mental disorder associated with perinatal period is postpartum depression followed by anxiety disorders (WHO, 2008).

Postpartum psychosis is a more severe type of maternal mental health disorder characterized by bizarre thought and behaviour patterns that are disconnected from reality. Postpartum psychosis is a medical emergency that requires hospitalization of the patient (Sinha et al, 2018) as they are likely to harm themselves or others (Santvana et al., 2005)

There are several risks related with untreated maternal mental health disorders including risk to the mother and the child (Santvana et al., 2005). Mental health risks to the mother includes suicide, self-injury, neglect of basic self-care routines such as hygiene and dietary requirements during the perinatal period, and poor adherence to prenatal care, lack of appetite in women with depression result to lower than the normal weight gain in pregnancy, features linked to unfavourable pregnancy outcomes (Pavy, 2008; Santvana et al., 2005). Women with suffering from depression (and anxiety) are more likely to use and abuse substance which will increase the risk to the foetus (Pavy, 2008)

Untreated maternal mental disorders are linked to negative outcome for infant including premature birth, infant who are underweight, insufficient maternal-infant attachment thereby affecting infant development (Santvana et al., 2005). Studies indicate that children whose mothers are suffering with mental health disorders have likelihood of exhibiting problematic behaviours and often their motor, cognitive and emotional development is disrupted (Santvana et al., 2005).

Studies have revealed that depression in pregnancy significantly increases a woman's risk of post-partum depression (Pavy, 2008; WHO, 2008; Santvana et al., 2005). Adverse effect of depression in Pregnancy may continue in the long run and

substantially affect the psychosocial functioning of the woman postpartum (Pavy, 2008). Prevalence of maternal mental illnesses among women of childbearing age is 10-15% in High income countries (HIC) with significantly elevated prevalence of 10-41% in Low- and middle-income countries (LMICs) (WHO, 2008). Maternal mental health to a large degree has been neglected in LMICs (WHO, 2008). More than 90% of HICs have been studied for perinatal mental health problems whereas only 10% data is available for LMICs (World Bank, 2007).

All women can develop mental disorders in the course of pregnancy and in the year postpartum, however gender disparities in socio-economic and legal environment increases the risks significantly by constraining opportunities for women to control the social determinants of their health. This includes; Education, availability of opportunities to generate income, access to health services, legal assistance, restrictive social roles, disproportionate load of unpaid work, domestic violence, low independence, poverty and unexpected calamity (WHO, 2008). Women's reproductive role puts women at great risk of developing mental health problem. Childbirth is a major change in life and as all changes in one's life, it has its own challenges which is often stressful and requires proper adjustment. Maternal mental health needs to be looked at holistically, putting into consideration women's position in the society and how gender inequalities impacts on the social determinants of health.

As per the world inequality statistics, Kenya was at position 103 of the 169 countries studied, placing it as the 66th most unequal country in the world (KNBS, 2017). Kenya's Inequality is embedded in its history and divisive politics from poor governance, unfavourable policies, non-functioning accountability mechanisms or lack of legislation in place that redress the problem of inequalities in the country. Social-economics factors aggravates the level of inequalities in the country by limiting access to resources and essential services while silencing one's voice, urgency and power over individual's life (KNBS, 2017). Social-cultural practices, behaviours and norms continue to be the drivers of inequality in Kenya. These historical, social-economic, political inequalities lead to development of social classes (of those that control productive asset and those that don't) and often discrimination of the disadvantaged social class. Discrimination impedes access to services at the local level and/ or at the larger societal level (KNBS, 2007). Services are often unavailable or in adequate for those who need them the most (KNBS, 2017). This therefore necessitates studies in the

area of maternal mental health of women. In that regard, the researcher conducted this study as an assessment of the maternal mental health in Kenya focusing on social determinant of health.

The selection of Bungoma county, Mombasa County and Nairobi County as case studies of this research was informed by the fact that, to my knowledge, these three counties are the only county that has conducted a study on CPMD and went further to find the correlation between the prevalence of CPMD and social determinants of health using variables that fit the theoretical framework of this study.

## **1.2 Problem Statement**

Maternal mental health to a large degree has been neglected in LMICs (WHO, 2008). WHO states that, infringement of the rights of Persons with psychiatric disorders is common with many facing stigma and discrimination because of their condition. Persons with mental disorder are denied their socio-economic and cultural rights to education, employment, reproductive rights and the rights to health. Additionally, many are neglected, subjected to inhumane and unsanitary living condition, they experience physical, emotional and sexual violence, as well maltreatment at health facilities (WHO, 2013).

More than 90% of HICs have been studied for perinatal mental health problems whereas only 10% data is available for LMICs. Kenya is characterized by numerous health policies and legal frameworks on sexual and reproductive health. However, recognition and prioritization of maternal mental health in the national health agendas has been insufficient. Maternal mental health remains both under-identified and under-treated (Honikman et. al 2012); thus, contributing extensively to maternal and infant morbidity and mortality while adding to the Global Burden of Diseases (GBD) (WHO, 2008).

With low awareness level and limited statistical data on maternal mental disorders, it is impossible to effectively sway policy makers to prioritize maternal mental health as a venue that needs intervention. This study will attempt to fill the gap by examining available data for prevalence of maternal mental health disorder and related risk factors in order to inform policy and programmes on maternal and child health as well as policies aimed at reducing social inequalities in the country.

## **1.3 Objectives**

### **1.3.1 General objectives**

To assess the prevalence and social determinant of maternal mental disorders in Kenya.

### **1.3.2 Specific objectives**

- i. To examine the Prevalence of CPMD in Kenya
- ii. To examine the social determinant of maternal mental disorders among women in Kenya.
- iii. To assess the status of women in Kenya against social risk factors of maternal mental health disorders among women in Kenya.

## **1.4 Research Questions**

- i. What is the prevalence of CPMD in Kenya?
- ii. What are the social risk factors of maternal mental disorders in Kenya?
- iii. What is the status of women in Kenya in relation to the risk factors associated with maternal mental health disorders?
- iv. What capacity do health care services have to address maternal mental health problems in Kenya?

## **1.5 Justification and Significance of the Study**

The Government of Kenya launched the Universal Health Coverage (UHC) pilot program aimed at enabling Kenyans to access affordable healthcare services. The program was launched in phases with the first phase being the pilot phase which saw four counties in Kenya selected (Business Daily, 2018). The four pilot counties; Kisumu, Nyeri, Isiolo and Machakos would be used to inform the progression of the program to the rest of the country. Kenyan residents with the UHC card from the selected counties will be able to access inpatient, outpatient and community health services from public facilities in those counties ranging from MCH Services, mental health services, emergency Services and management of other communicable and Non-communicable Diseases(NCD) (Business Daily, 2018).

For various health initiatives such as the UHC program to have effect to the citizens of Kenya, there must be enough information on the actual status of various health pillars of individuals such as mental health. For that reason, the researcher conducted this study

in order to provide information on the prevalence rates and socio-demographic risk factors of maternal mental disorders with focus on CPMDs and to identify gaps in delivery of maternal health care services in Kenya.

Recently more and more studies have appreciated the big roles that socio-cultural, economic, legal and environmental play on health outcomes. The Kenya Mental Health Policy for instance says that;

*“Determinants of mental health and mental disorders include not only individual attributes such as the ability to manage one’s thoughts, emotions, behaviours and interactions with others, but also social, cultural, economic, political and environmental factors such as national policies, social protection, living standards, working conditions, and community social supports. Exposure to adversity at a young age is an established preventable risk factor for mental disorders”* (MoH, 2015 pg. 2).

In this regard, this study will look at social determinants of maternal health and assess the effect of social inequities on maternal mental health. The study will further look at the status of women in Kenya against the risk factors of maternal mental health focusing more on gender concerns.

Findings from this study will inform county health on the need to integrate mental health in reproductive, maternal and child health programs and train community health workers in educating, screening, management, follow up and referral of maternal mental health disorder cases. The study will also add to the body of research on reproductive health which will be used by health care providers and policy makers to provide for services and legislation to enhance the lives of women by reducing social inequalities that determines maternal mental health status of women in Kenya.

### **1.6 Scope, Limitation and Delimitations of the Study**

This study is confined to non-psychotic maternal mental health disorders among women in Kenya. The risk factors studied in this research is limited to social factors and will not study biological or psychological factors that affect mental health such as hormones or personality of individual.

The study found limited information on prevalence of maternal mental health Kenya as in other LMICs. KDHS 2014 did not provide information on maternal nor women’s

mental health. The researcher used studies done in Bungoma, Nairobi and Mombasa as sources of data in absence of national data on CPMD. The respondents in these studies were recruited while attending antenatal or postnatal visits at health clinics. These respondents are considered as relatively advantaged in a country where access to health care is limited. The study in Bungoma County was able to sample subjects from village level but this was limited to those living within 2 kilometres of the clinic where the study was being conducted. The study reviewed literature from studies conducted in LMICs and the selected 3 counties in Kenya to come up with common risk factors of CPMD and used KDHS 2014 to analyse the variables identified to position the women in Kenya both in rural and urban settings against these risk factors.

### **1.7 Definition of Terms**

**Mental health** is defined as “a state of well-being whereby individuals recognize and realize their abilities, are able to cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities” (MoH, 2015 pg. 1). Mental health includes positive sentiments, good reasoning ability, social functioning and lucidity (MoH, 2015).

**Maternal health** refers to the physical, mental and emotional wellness of women in the course of pregnancy, child delivery and postpartum period (WHO definition)

**Post- natal/Postpartum-** are often used interchangeably, is the period after birth to six weeks. (WHO definition)

**Ante-natal** – pregnancy period or relating to the state of pregnancy.

**Social determinant-** For the purpose of this study, social determinant of mental disorder will cover socio-cultural, economic, legal and environmental aspect of the society. It will focus specifically on Education, economic status, domestic violence, occupation, access to health services and gender relations in form of spousal support with domestic work.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter will review literature on Common Perinatal Mental disorders (CPMD). It will look at previous research conducted in LMIC focusing on the objective of the study which is to examine prevalence and the social determinant of CPMD. The guiding framework and gaps identified in the study will be discussed and identify gaps in the proceeding chapter.

#### **2.2 Prevalence of Common Perinatal Mental Disorders**

This study will use the terms maternal mental disorders and common perinatal mental disorders (CPMD) interchangeably to refer to disorders associated with the state of pregnancy and postpartum period. Common mental disorders experienced during this period include depression, anxiety disorders and psychosis (manifested as bipolar disorder) (DSM V, 2013; Santvana et al., 2005; WHO, 2008).

Postpartum depression (PPD) is the most common a category of mood disorders associated with childbearing (Robertson et al., 2003; WHO, 2008). The symptoms of postpartum depression begin to set in between a week to a month after delivery. Symptoms include melancholy, exhaustion, nervousness, unexplained crying episodes, easily irritated, irregular eating patterns, insomnia and other sleep dysfunctions (Robertson et al., 2003; WHO, 2008). Another common disorder associated with pregnancy and the period after childbirth is anxiety disorders (WHO, 2008). Anxiety is often characterized by excessive fear and worrying about future events that individual finds difficult to control (DSM 5-2013). In a lot of instances, it is accompanied with physical symptoms of agitation, exhaustion, irritability, muscle tension and problems with sleep (DSM-5, 2013). Anxiety disorders vary depending on cause of the symptoms and are categorized into; generalized anxiety, panic disorder, separation anxiety, specific phobia, agoraphobia, selective mutism and social anxiety disorders (DSM-5, 2013). Postpartum psychosis is a more severe and rare psychiatric condition with an occurrence rate of 1-2 cases for every 1000 births that is characterized by hallucination, racing thoughts, loss of inhibition, high moods or depression, racing thoughts, confusion, insomnia, paranoia and delusion often before or after childbirth. This is an

emergency condition which often requires one to be hospitalized (DSM-5, 2013; Sinha et al., 2018; Robertson et al., 2003; Santvana et al., 2005). This study will focus on non-psychotic CPMD because causes of postpartum psychosis are often genetic/biological (Robertson et al., 2003; DSM-5) which is beyond the scope and objective of the study.

A study conducted on “Prevalence and determinants of common perinatal mental disorders in low-and lower-middle income countries” systematically reviewed 13 papers that covered 17 out of 112 LMIC which provided findings on women during the pregnancy, and 34 papers with on women one year post birth. The study was limited to non-psychotic CPMD on prevalence, determinants and risk factors (Fisher et al., 2012). Overall the meta-analysis estimates from clinical diagnostic (18.63%; 95% CI: 17.4–19.8) and self-reported assessment (18.59%; 95% CI: 17.9–19.2) found no major disparity on prevalence of CPMD (Fisher et al., 2012). The WHO reported on studies with finding on prevalence of maternal mental disorder within the ranges of 10% and 40% (WHO, 2008). It also found the first onset of perinatal mental health to be thrice higher than any other period in the life of a woman with symptoms of postpartum depression lasting up to a year (WHO, 2008).

### **2.3 Social Risk Factors of Common Perinatal Mental Disorders**

When assessing risk factors of CPMD Fisher et al., (2012) considered the following variables; social economic factors, age, intimate partner support, intimate partner violence, relationship with in-laws, marital status, sex of the child, availability of practical and emotional support and history of mental health problems. Protective factors included: Education level, employment status, coming from ethnic majority and supportive intimate partner (Fisher et al., 2012; WHO, 2008.)

The study found that almost all the participants of the study were recruited while attending antenatal clinic and the 5 out of 13 studies conducted were in urban tertiary teaching hospital (Fisher et al., 2012). This creates a potential bias in the study as access to health facilities is a challenge in LMICs thus leaving out rural and less advantaged women who cannot access ANC clinic or those making less visit than recommended visits (Fisher et al., 2012). The study also found that while there were more than 90% studies done on maternal mental health in HICs, 80% of 112 LMICs lack locally contextualized studies on CPMD (Fisher et al., 2012). The study moreover found higher prevalence of CPMD among younger women, unmarried women and those from ethnic

and religious minority. Women with difficult relationship with their intimate partners reported higher prevalence of mental disorder. These included unsupportive intimate partners, partners who rejected paternity of the pregnancy, those that showed little or no involvement, alcoholic partners, violent, controlling and overcritical partners (Fisher et al., 2012).

On the other hand, some studies did not find any significant correlation between CPMD and age, marital status, employment or difficult life events (Fisher et al., 2012). This is attributed to the numerous data sources reviewed that used different tools for data collection and analysis, cultural difference and the fact that very few studies considered the wide range of risk and protective factors reviewed in the study (Fisher et al., 2012).

Gender plays a crucial part in development of CPMD, women are more prone to develop depression than men with a ratio of 2:1 (Kuehner, 2003). Kuehner attributes this to gender disparities in access to resources, socioeconomic disparities and the multiple roles played by women in society (Kuehner, 2003). Overall, the study found that CPMD is more prevalent in women who are social economically constrained and especially those living in rural and overcrowded household (Fisher et al., 2012). Gender biases for instance preference for male babies, unpaid care work, lack of autonomy and decision-making powers and gender-based violence further exacerbates risks of developing CPMD (Fisher et al., 2012). This is more so the case women in LMIC where gender inequalities are greater due to poverty resulting to limited access to resources, limited decision making powers, forced marriage, limited access to education, unemployment and gender violence (Patel & Kleinman, 2003). Fisher adds that gender-based violence, both physical and emotional can have an adverse consequence on the mental health of the woman since the perinatal period is a vulnerable period when a woman is more dependent (Fisher et al., 2012).

#### **2.4 Social Determinants of CPMD in Kenya**

In a study carried out by Husain et al. (2016) the variables considered for the study included, marital status, education level, financial difficulties, life events including relationship problem, domestic violence, employment status/work and availability of social support. The results of the study showed that single, separated or divorced and participants with financial difficulties scored higher (a score of 8 and above) on the SRQ-20 test for CPMD (Husain et al., 2016). A study done on perinatal depression in

adolescent girls in Kenya showed association between age and prevalence depression among expectant teenagers (Osok et al., 2018). This contrasted with the finding of Husain et al. (2016) where no significant difference on the participant's age, education level and number of children on the SRQ scores for CPMD (Husain et al., 2016). High and low scorers of CPMD reported on financial difficulties, problems with language, neighborhood problem and troubled relationship (Husain et al., 2016). Similarly, results of the studies in Bungoma and Nairobi showed financial strain, difficulty in relationship, lack of social support and burden of housework increases the prevalence of symptoms of CPMDs (Ongeri et al., 2018; Green et al., 2016).

## **2.5 Maternal Mental Health Care**

Globally, mental and neurological disorders affect over 25% of the world's population in their lifetime (WHO, 2004). Of the total Disability-Adjusted Life Years (DALYs), it is anticipated that the burden of mental and neurological disorders will rise to 15% by the year 2020 from 12% in 2000 (WHO, 2004). Despite this, it is alarming that there are significant inequities in resource allocation towards mental health (WHO, 2008). For example, LMICs have a shortage of mental health care providers and specialist that includes the psychiatrists, psychiatric nurses, psychologists and social workers (WHO, 2008). This is the main barrier to providing treatment and care in such countries. An estimated 80% of persons with severe mental disorders in LMICs do not get the treatment they need at health facilities as a result of this shortage (WHO, 2004).

Financing on mental health is below US \$ 0.25 per person in LMICs annually (WHO, 2013). 67% of the allocated resources go to specialized mental hospitals despite these hospitals being associated with human rights violation and poor health outcomes (WHO, 2013). "*Global Mental Health Action Plan*" (GMHAP) suggest that funds for mental health are redirected to community-based services moreover, GMHAP saw the need to integrate mental health into general health care including, sexual and reproductive health, MCH, chronic and non-communicable disease and HIV/AIDS programmes which would be effective to increase access and cut on cost delivery of mental health services (WHO, 2013).

In a study conducted in South Africa on maternal mental health care, it was noted that while there are high incidences of CPMD in LMICs, screening and treatment of CPMD is not readily available in primary health centres (Honikman et al., 2012). The study

also found that ANC services focus mainly on physical aspects of maternal health and thereafter the focus shifts to child health (Honikman et al., 2012). This gap created by lack of integrating mental health into ANC creates scenarios of undetected CPMD that often go untreated resulting to higher rate of maternal and child morbidity and mortality (WHO, 2008; Honikman et al., 2012).

According to WHO, the current health systems have inadequately countered the problem of mental health disorders (WHO, 2013). In LMICs, 76-85% of persons with acute mental disorders do not receive treatment for the disorder (WHO, 2013). In addition, there is the problem of provision of substandard health care to psychiatric patients (WHO, 2013). There is gross inefficiency of mental health specialist and medical personnel in LMIC that deal with mental health (Ndetei et al., 2009). In primary health care, availability of basic medicine for psychiatric illness is low as compared to medicine available for infectious and non-communicable diseases (WHO, 2013). Restriction of use due to lack of authorized specialists to prescribe the drugs adds to the barrier to appropriate care of mental health problems (WHO, 2013).

In Kenya there are numerous diagnoses of CMDs made at general hospitals these include; depression, anxiety, stress and substance abuse disorders (MoH, 2015). Despite this being the case, there is shortage of data and information regarding the prevalence of mental disorders in Kenya (MoH, 2015) and even fewer studies have been conducted on CPMD in Kenya (Green et al., 2018; Husain et al., 2016). Shortage of statistical data and inadequate information on mental health poses a risk to delivery of mental health services to those that need them (MoH, 2015). It is however estimated that up to 25% and 40% of Kenyans in outpatients and in-patients (respectively) in general hospitals suffer from mental conditions (MoH, 2015).

It is against this backdrop that the Ministry of Health conceptualized the “*Mental Health Policy 2015-2030*”. This policy aims at addressing the negative impact on mental health service delivery that has persisted due to low prioritization by mainstreaming mental health in the country’s health agenda and development agenda. The policy called for involvement of everyone individual to achieve parity of mental health in public and private sectors and at all levels to attain adequate funding for service provision, mental health project and programmes (MOH, 2015). At its core, the

policy provides for the formation of a Mental Health Information System (MHIS) that is to use at national and county levels to inform policy and programmatic intervention.

The “*Kenya National Strategy for the Prevention and Control of Non-Communicable Diseases 2015-2020*” recognizes mental disorders as a cause of increased morbidity and its contribution to the global burden of non-communicable diseases. It provides for effective programming and equitable access to health care services to control the non-communicable diseases however, the implementation of this legislation has been slow to take root. This study attempts to find out whether the components of maternal health has been integrated into ANC services in Kenya and experiences of women in accessing health services.

## **2.6 Overview of Literature and Research Gap**

There is shortage of data and information regarding the prevalence of mental disorders in Kenya (MoH, 2015) and even fewer studies have been conducted on CPMD in Kenya (Green et al., 2018; Husain et al., 2016). This therefore presents a gap in literature on maternal mental health in the country. According to the “*Kenya Mental health policy 2015*” The KDHS 2014 does not contain data of mental health and CPMD in Kenya. Additionally, there is less information on challenges faced by women with CPMD in accessing maternal mental healthcare services in the country, as well as shortage of information on factors contributing to maternal health problems. With the numerous frameworks on screening and prevention and management of non-communicable diseases currently in place, this study will investigate available statistical data on maternal mental disorders. It will also examine social determinants of CPMD and ability of maternal health care services to respond to the issue of maternal mental disorders

## **2.7 Theoretical Framework**

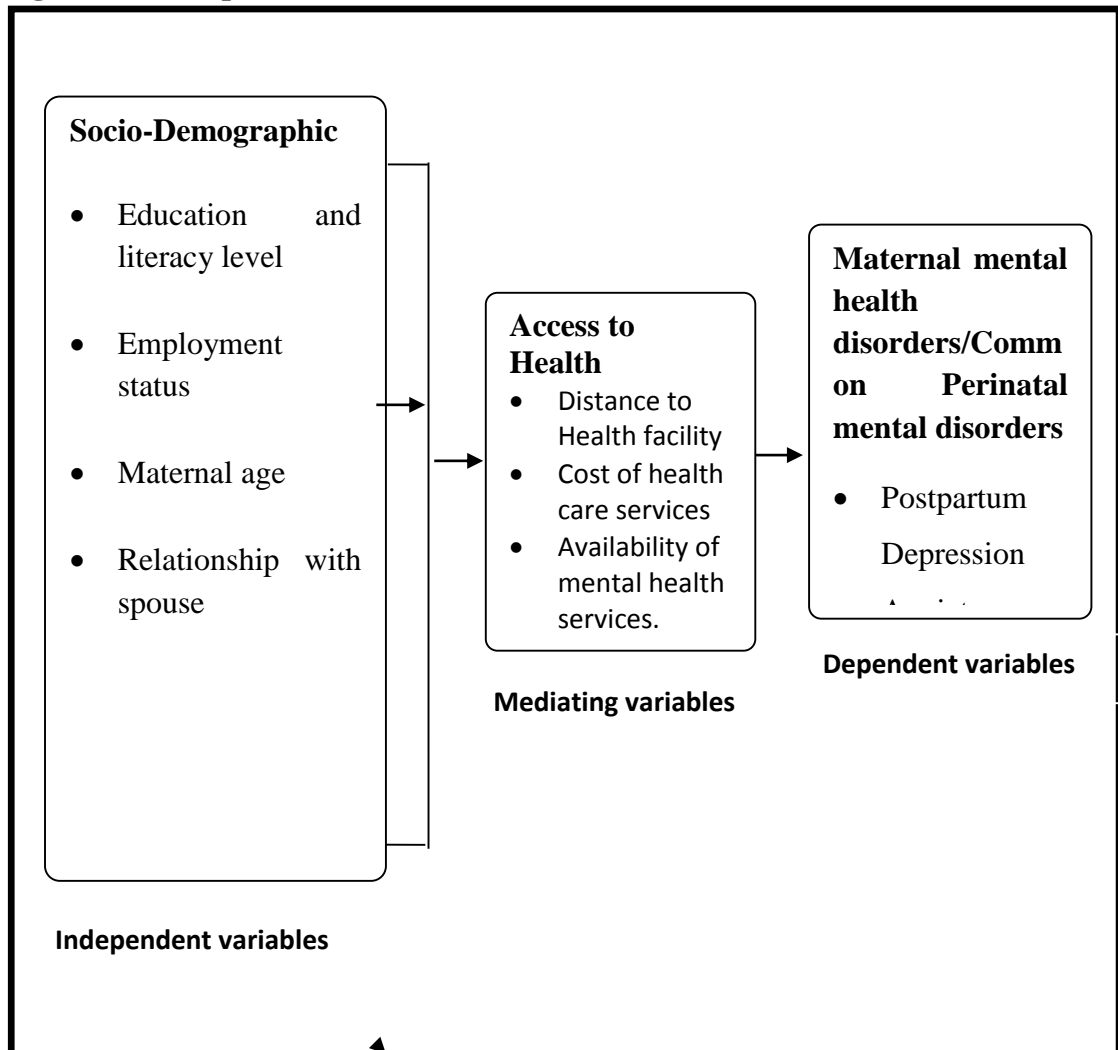
This study is based on Social Causational Theory of mental disorder (Bhattacharjee, 2011) which related social environment as a cause of psychiatric illness. The theory recognizes the people who are social-economically disadvantage are more vulnerable to life’s adversities resulting to stress and poor mental state. Marginalized communities face social adversities such as exclusion, discrimination and injustice that wear out their adaptive capabilities to everyday challenges; the challenging life experience result in

development of faulty cognitive beliefs that predisposing one to anxiety and depression (Bhattacharjee, 2011).

Constant exposure to negative stimuli results into maladaptive thinking and emotional incongruence hence negative self-image of oneself (Beck, 2008). Beck argues that constant exposure to risk aspects of stress will lead to an individual to develop anxiety and depression (Kendler et al, 2000). This theory is backed by biopsychosocial model of health that was developed on the premise that health, diseases and illnesses are an interaction between biology, psychology and social factors (Engel, 1977). Social variables measured in social causation theory include education, income and occupation as it is associated with increased prevalence of mental state of an individual (Johnson et al., 1999). The hypothesis of the theory is that social difficulties emanating from belonging to a low socio-economic status increases the risk of developing mental health problem and substance use and abuse (Johnson et al., 1999). The conceptual framework below explains the various relationships between the social-demographic and environmental factors and associations to common perinatal mental disorder. This study uses the premises of this theory to assess the social determinant of mental disorders and risk factors of maternal mental health using a gendered approach while looking at access to health care as an intermediary factor.

## 2.8 Conceptual Framework

Figure 1: Conceptual Framework





## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter addresses the different components of research methodology. They include the research design, target population, sources of data and description, data analysis and presentation as well as ethical considerations of the study.

#### **3.2 Research Design**

A research design is a strategy that allows the researcher to draw inferences about variables under investigation (Frankfort-Nachmias & Nachmias, 2006). A research design tries to respond to immediate questions about an existing problem (Matthews & Kostelis, 2011). Descriptive-research design permits for investigation of different variables at the same time (Mugenda & Mugenda, 2003). This study therefore adopted descriptive-research design to collect data on the prevalence of maternal mental disorders and the social determinants of CPMD while making references to the KDHS 2014 to gauge the status of women in Kenya in relation to the social determinants of CPMD.

Due to unavailability of national data on the prevalence of maternal mental disorders/ CPMD in the KDHS survey and limited availability of studies done on the topic, the study relied on three randomly sampled studies from three counties in Kenya namely Bungoma, Mombasa and Nairobi that fit the objectives of the study. A review of secondary data from three studies was used to determine prevalence and socio-demographic risk factors of CPMD in three counties in Kenya. Additionally, the study adopted survey data (KDHS 2014) from KNBS which described the status of Kenyan women with respect to social determinant of CPMD using variables derived from the three studies in Kenya. This is in line with Mugenda and Mugenda (1999) who depicted that a survey can be viewed as an attempt to collect data from a section of the population with the aim of determining the status of that population with respect to one or several variables. Variables in this study include; Education level, employment and work, maternal age and relationship with spouse.

### **3.3 Target Population**

This is the population that the researcher collects information from in order to draw deductions (Cooper & Shindler, 2005). The target group for this study are the women who are within the childbearing age of between 15 years to 49 and assumed to be at risk of maternal mental disorders in Kenya.

### **3.4 Sources of Data and Description**

The study collected data from four secondary sources which corresponded with the research objectives of the study which is determining the prevalence of CPMD; examining risk factors; and investigating the ability of medical services to address CPMD. The study derived data from research articles, journals, publications and national survey on demographic and health characteristics of Kenyans (KDHS, 2014). The research articles, journals and publication provided data on the prevalence and social factors associated with CPMD in Bungoma, Nairobi and Mombasa counties in Kenya (Husain et al., 2016; Green et al., 2018; Ongeru et al., 2018). The secondary cross-sectional data from KDHS 2014 was used to describe and provide insight into the study objectives and to assess the status of women in Kenya in relation to the social determinants of CPMD derived from analysing of the studies in Bungoma, Nairobi and Bungoma. The data sets are described in the succeeding sections below.

#### **3.4.1 Bungoma County dataset**

In the study conducted by Green et al., 2016 in Bungoma County, the researchers randomly selected 192 pregnant and new mothers from 27 villages recruited while attending Antenatal and postnatal Clinics and residing within 2-kilometre radius of the clinic (Green et al., 2018). Inclusion criteria included women who were 18 years and above, pregnant women in their 2<sup>nd</sup> or 3<sup>rd</sup> trimesters and new mothers of infant between one to six months (Green et al., 2018). The study excluded women who did not live within the 2 kilometres radius of the clinic, women who had miscarried, women who have had still births and women whose infant died before the recent pregnancy (Green et al., 2018). The process “involved developing and validating a perinatal depression screening tool in Kenya blending Western criteria with local idioms” (Green et al., 2018). It screened pregnant and new mothers for prevalence of perinatal depression in with a screening tool the researchers developed that was locally relevant to the rural context of Bungoma County. The study took socio-demographic information about the

participants including; wealth index, education level, maternal age, work and relationship status and tested it for its association with the prevalence of CPMD.

### **3.4.2 Mombasa County dataset**

The second source of data was cross-sectional study conducted by Husain et al., 2016 in Mombasa-Kenya. The study was investigating “Prevalence of Common Mental Disorders and its Association with Life Events and Social Support in Mothers Attending a Well-Child Clinic Kenya”. 426 women with children below the age of 5 attending Bomu Hospital child wellbeing clinic over a period of 6 months were screened for CMD using Self-Reporting Questionnaire-20 (SQR-20). SQR-20 is a set of 20 yes/no questions developed by WHO to screen for symptoms of CMD (Husain et al., 2016). The standardized screening instrument was used to detect symptoms of anxiety, psychosomatic symptoms and depression (Husain et al., 2016). SQR-20 is not a diagnostic tool but it is useful in detecting probable presence of CMD (Husain et al., 2016). Scoring high on the SRQ-20 (usually a cutoff score 7/8) is an indicator of presence of CMD (Husain, 2016). The study also tested three socio-demographic variables including; education levels, economic status, social support, problematic neighborhood, marital status and language difficulties and its association to CMD using both OSLO Social Support Scale and Life events checklist (LEC) assessment tools (Husain et al., 2016). Data analysis was done using version 12 of STATA for Windows.

### **3.4.3 Nairobi County dataset**

Lastly, the researcher analyzed a longitudinal study in Nairobi on “Demographic, psychosocial and clinical factors associated with postpartum depression in Kenyan women” which successfully recruited, followed up and screened 171 pregnant women in their 3<sup>rd</sup> trimester up to 6-10 week after child birth for symptoms of depression (Ongeri et al., 2018). The participants were from urban resource-constrained neighborhood recruited from Mbagathi Hospital and Mathari Teaching and Referral Hospital while attending MCH Clinic (Ongeri et al., 2018). The researcher used one-on-one interview and using a structured questionnaire to collect the history of the participants including; age of participant, marital status, religious affiliation, education level, economic status, and occupation, spousal conflict and partner’s support to carry out household chores. Data on correlation between socio-demographic factors and CPMD were analyzed using multivariate logistic regression. To measure the prevalence

of CPMD, the researchers used Edinburgh Postpartum Depression Scale (EPDS) translated into Kiswahili (Ongeri et al., 2018). EPDS is a tool used to screen for symptom of depression and other emotional distress during and after childbirth (Cox et al., 1987), like SQR-20, EDSP is not a diagnostic tool and it is recommended to be used alongside a clinical assessment tool (Cox et al., 1987). It consists of 10 items questionnaires, each question has four answers and each answer has a score ranging from 0-30 (Ongeri et al., 2018; Cox et al., 1987). The highest score from the test is 30, the study used an EDPS cutoff score of 10 to suggest symptoms of depression (Ongeri et al., 2018).

#### **3.4.4 Kenya Demographic and Health Survey dataset**

The study used the KDHS 2014 dataset from the KNBS; this data provided the social demographic characteristics and the risk factors of CPMD for women in Kenya. The data was collected from 40,300 households, which was clustered to 1,612 clusters spread across the country, with 995 clusters in rural areas and 617 in urban areas. The Samples were selected independently in each sampling stratum, using a two-stage sample design.

The KDHS (2014) full questionnaire covered topics relating to educational, marital status, media exposure characteristics; family planning methods and knowledge, antenatal and delivery care services; child mortality among other factors. The survey had an overall household response rate of 99 percent. The data collected was weighted to be representative at the national, regional, and county levels in Kenya.

#### **3.5 Data Analysis and Presentation**

The data was analysed using descriptive statistics mainly frequency distribution tables, percentages, measures of central tendencies, measures of dispersion and graphical representations. The study analysed data on counties in the case studies and on social determinants of health using the social causation of mental health theory to get appropriate indicators. The variables guided by the theory and analysed in the study includes; education level, economic and employment status, partner support, domestic violence, maternal age and maternal health services. The case studies provided the prevalence of CPMD in the three counties; Bungoma, Mombasa and Nairobi by pooling the data from the three studies and finding the mean. The data in the study provided

correlation between the CPMD and variables to be analysed. The KDHS 2014 was used to assess the status of women against the social determinants of mental health derived from the studies. Data was presented in percentages, tables and figures.

### **3.6 Ethical Consideration**

The researcher used secondary data for the study. The data collected does not contain identifiers of the study respondents and the information obtained was unlikely to cause any potential harm to an individual. All sources of data used in the study were acknowledged and referenced. The proceeding chapter focuses on data analysis, interpretation and presentation.

## **CHAPTER FOUR**

### **DATA ANALYSIS, INTERPRETATION AND PRESENTATION**

#### **4.1 Introduction**

This chapter presents the data analysis, presentation, interpretation and discussion of the findings. The study assessed the prevalence and socio-demographic risk factors of maternal mental health in Kenya. The chapter is divided into multiple sections namely; Prevalence of maternal mental health disorders in Kenya, Socio-demographic risk factors of maternal mental disorders in Kenya and maternal mental healthcare services in Kenya. The study reviewed previously conducted studies on maternal mental disorders in Kenya. Additionally, the study used the KDHS 2014 data obtained from the KNBS website to gain socio-demographic data that informs the objective of the study which is to assess the prevalence and social risk factors of maternal mental disorders in Kenya and to investigate the ability of health care services to address maternal mental health problems.

#### **4.2 Prevalence of Maternal Mental disorders/ CPMD in Kenya**

There is no available data on the prevalence of CPMD in Kenya. The researcher pooled the mean of the prevalence of CPMD in the three case studies and compared it to the studies on prevalence of CPMD in LMICs. The study conducted in Bungoma County showed prevalence of depression among pregnant and new mothers ranging from 5.2-14.5 percent. The difference in the percentage on prevalence of CPMD depended on the screening method used. The DSM-5, which provides the most stringent estimate, gave the lowest score of 5.2 percent. The prevalence rate was highest when the estimates were given by local counsellors on clinical judgment. This was estimated at 14.5 percent while, the agreement between the client and local counsellor on patient's functionality provided a prevalence estimate of 6.2 percent which is closer to the estimates from DSM 5. Table 1 summarises the estimates from the study.

**Table 1: Diagnostic results by maternal status**

Case Definition	Non-cases			Cases			All
	Pregnant	Postpartum	Both (%)	Pregnant	Postpartum	Both(%)	
DSM-5 diagnosis	57	125	182(94.8)	4	6	10(5.2)	192
Counselor-Client agreement	59	121	180(93.8)	2	10	12 (6.2)	192
Local counselor only			164(85.4)	10	18	28(14.6)	192
	51	113					

The study concluded by saying that the prevalence of perinatal depression is less than 10 percent (8.6% on average) which is lower than estimated prevalence in LMICs (Green et al., 2018). The study compares Fisher et al., (2012) estimates on prevalence of common perinatal mental disorders as close to the estimates given by local counselors in the study (18.6 % and 14.2 % respectfully); with the assumption that the local counselors considered broader aspects of perinatal mental disorders having not restricted themselves strictly to depression (Green et al., 2018).

Out of the 426 women screened while attending mother-child clinic in Mombasa, a total of 86, which translates to 20% of the participants scored 8 and above on the SRQ-20 score (Husain et al., 2016). According to the study, 80% of the 426 participants scored lower than 8 on the SQR-20 screening instrument (Husain et al., 2016) which is consistent with the results on prevalence rate of CPMD conducted in LMICs (Fisher et al., 2012). While the study conducted in Nairobi found that out of the 171 participant who successfully screened for symptoms of depression, 18.7% tested positive with a confidence interval of 95% (Ongeri et al., 2018). Table 2 gives a summary of the findings.

**Table 2: Data on the prevalence of CPMD in Kenya**

Source of Data	Percentage Mean	Sample Population	Study Location
Green et al., 2018	8.6	192	Rural
Ongeri Et al., 2018	18.7	426	Urban
Husain et.al., 2016	20	171	Urban
Total		789	

#### **4.2.1. Mean prevalence of CPMD in selected 3 Counties**

The study used the following formula:

$$\text{Pooled Mean} = (\text{Mean1} \times \text{Sample size1} + \text{Mean2} \times \text{Sample size2} + \text{Mean3} \times \text{Sample size3}) / (\text{Sample size1} + \text{Sample size 2} + \text{sample size 3})$$

$$\text{Pooled mean} = (8.6 \times 192 + 18.7 \times 426 + 20 \times 171) / (192 + 426 + 171)$$

$$\text{Pool mean} = \mathbf{16.52}$$

On average, the prevalence rate of CPMD in the counties used as case study does not differ much from the meta-analysis on prevalence of CPMD in LMICs conducted by Fisher et al., 2018 which gave a prevalence rate of 18.6%.

#### **4.3 Social Risk Factors of Maternal Mental Disorders**

Socio-economic and demographic variables associated with higher risks of CPMD considered for the study in the three counties include education level, occupation, maternal age, relationship status and maternal health care.

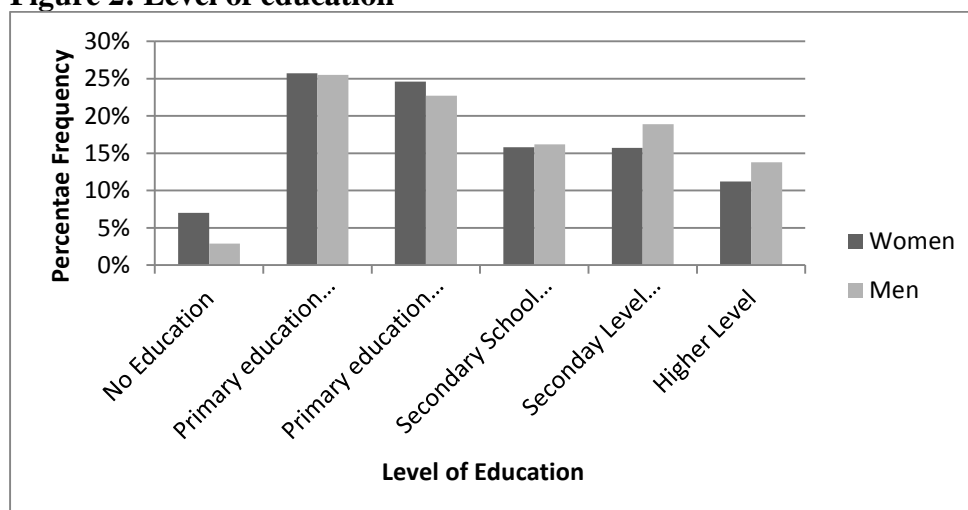
##### **4.3.1 Education and literacy level**

When level of education was tested against the prevalence of CPMD study conducted in the three counties in Kenya; there was no significant difference in the level of education of women who scored high on CPMD and of those that scored low (Husain et al., 2016; Green et al., 2018; Ongeri et al., 2016). In the Mombasa study for instance, 37.7% of women who scored low on symptoms of CMD had attained primary levels of education as compared to 35.5% of women who scored high on SRQ test for CMD. 46.3% of the low scorer on SRQ attained up to secondary level of education women as compared to 40% who high for symptoms of CMD. Moreover, 16% of the women who



scored low on presence of CPMD had attained higher level of education as compared to 24.7% who scored high for symptoms of CPMD. Similar trends are seen in the Study done in Bungoma and Nairobi County which shows no correlation between level of education and prevalence of CPMD (Green et al., 2018; Ongeru et al., 2016). The reasons why the studies in the three named counties did not find significant correlation between education and CPMD as explained by Hoffman is that, some studies have disputed education as a measure for socio-economic status, but rather a means to achieve social status (Hoffman et al., 2019). The benefits of education and its influence on health cannot be denied. Education is an important determinant of health, it increases understanding and processing of complex information which is essential in advancing health-promoting behaviour (Hoffmann et al, 2019). People who have high education level are more confident, have access to better jobs and job opportunities, higher income and lead healthier lifestyles (Hoffmann et al., 2019). Moreover, studies have linked women with better access to education as having lower risks of developing CPMD (WHO; 2008; Fisher et al., 2016). The study analysed the KDHS 2014 for data on education attainment levels of Kenyans. The KDHS data provided information on the distribution of a sample of 12,819 men and 31,079 women between the ages of 15-54 on their education attainment level ranging from no education to higher education which is university level and above. The data is presented in form of a graph below.

**Figure 2: Level of education**

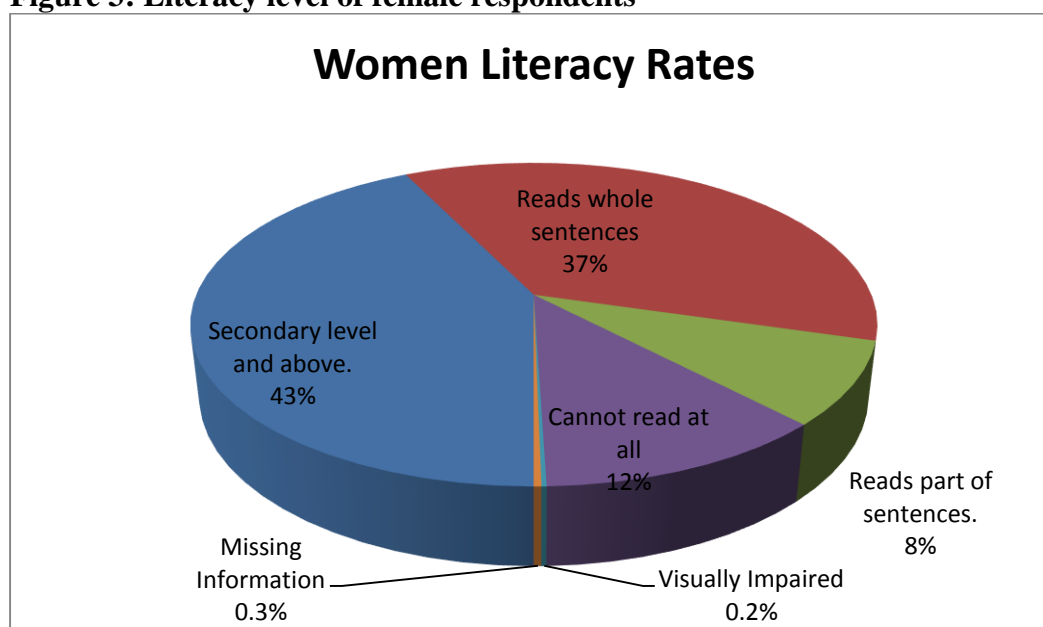


From the Figure 2, 7% of the women in the study have no education; this is more twice the number of men with no education. The number of men with no education stands at 2.9% from the data above. The gender disparity in education is clear with a greater

number of women than men having not completed primary level of education (26% and 25.5% respectively) interestingly, the study found that more women than men complete primary school level (25% and 22.7% respectively). The study also shows lower transition rates for both male and female from primary to secondary level in Kenya and eventually to higher levels. Figure 2 above also illustrates a skewed transition rate that is in favour of men from primary level, to secondary level and eventually university level. The Study also found that there is a higher dropout rate of men at secondary school level.

The study explored the literacy levels of women only as presented in the succeeding section below.

**Figure 3: Literacy level of female respondents**



The results from the survey found that 12% of the female respondents cannot read any part of a sentence, 8% are able to read sentences partially and 37% are able to read complete sentences. 43% of the female respondents had attained secondary and above level of education. The survey also included 0.2% of those females who were visually impaired and information on 0.3% of the responded was missing.

Studies show that women with low education and literacy levels are associated with poor health outcomes (Berkman et al., 2004) They are less likely access or understand health information and may not have knowledge on preventative health care and therefore more likely to visit a health facility for curative care which increases their cost of health care (Quick guide, n.d). Low literacy among women also exposes women to

stigma and vulnerabilities. Women who are illiterate are more likely to hide their illiteracy therefore risking misunderstanding health information and underuse health resources. Women who have lower literacy and education levels are have limited employment opportunities and those in employment hold low cadre jobs (Hoffmann et al., 2019). The employment and work status of women in Kenya is discussed in the proceeding section.

#### **4.3.2 Employment and financial status of women in Kenya**

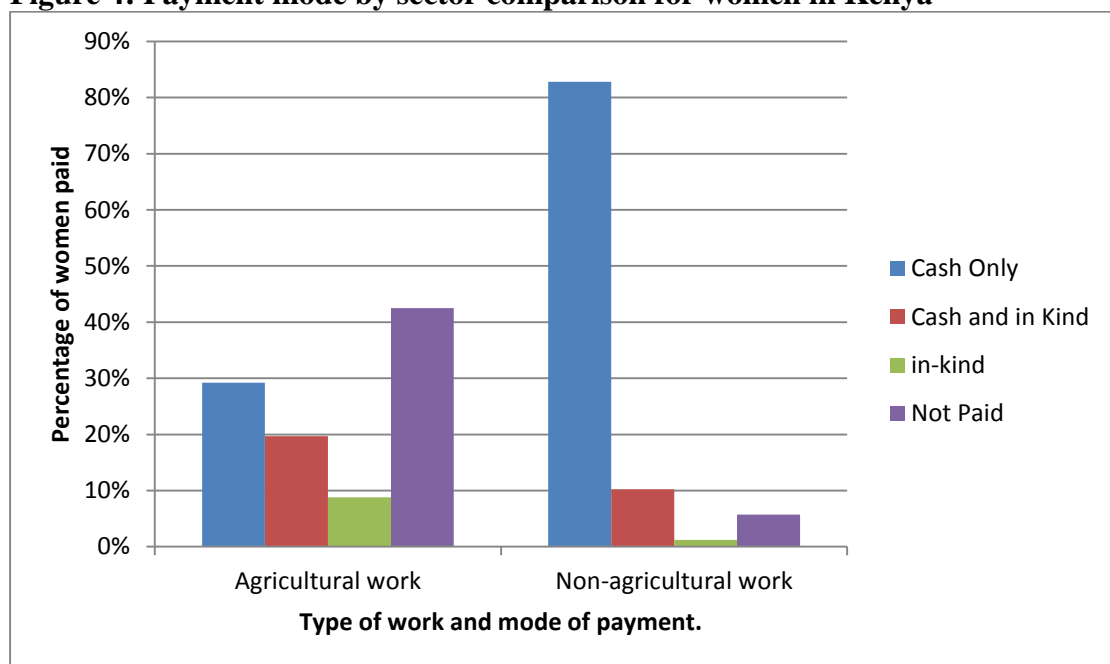
Analysis of data of the study on perinatal women in Bungoma-Kenya found inverse relationship between prevalence of PPD and financial status (Green et al., 2018). Out of the 5.2% cases of women who exhibited symptoms of depression using the DSM-5 diagnostic tool, 75% of pregnant women and 83% postpartum were in the lowest wealth quintile (Green et al., 2018). Counsellor-client agreement to diagnose PPD found a prevalence rate of 6.2% of which 100% of pregnant and 80% of postnatal/postpartum women were of the lowest/poorest wealth quintile. When only the judgement of local counsellor was used the prevalence rate of postpartum depression was 14.2%, the study found that 83% of pregnant and 75% of postpartum women with identified symptoms of postpartum depression were the lowest. Finding of the study in Mombasa suggests higher prevalence of PPD among women who work but did not enquire on the type of pay or the nature of work. Employment and work are often associated with prevalence of CPMD in that; women who are employed and paid for the work have lower risks of developing CPMDs (Fisher et al., 2012). Lack of paying work or unemployment means loss of income which has negative impact on mental health (Perry, 1996) such as increased stress levels, anxiety and depression.

In the study conducted in Mombasa, out of the 20% of women who scored high on SRQ test for depression, 52.3% were experiencing financial difficulties. While of 80% Women who reported scored low on SRQ only 21% reported financial difficulties while 54.7% of those who scored high for presence of CMD compared to 32.4% of low scorers on presence of CMD reported to having difficulties meeting the daily basic needs (Husain et al., 2018). According to Husain other measures other than education and income are better indicators of poverty such as housing, financial problems, food insecurity and social status (Husain et al., 2018).

The study in Nairobi County measured economic stress and household income an indicator of financial status, the study found that 56% of women who earned less than 24,000 Kenya shillings had symptoms of depression as compared to 36% who tested negative for symptoms of PPD. Moreover, 53% of women with symptoms of PDD had economic stressors as compared to 70% of women who not tested positive for symptoms of depression and economic stress (Ongeri et al., 2016).

According to KDHS findings on women’s employment status in the country, 61% of women were in employment at the time the study was conducted, 34% have not been employed for more than a year and 5% were unemployed for less than a year (KDHS, 2014).In regards to the type occupation, 56% of women in Kenya were employed in either agriculture or domestic services. The KDHS went ahead to study the type of earning in agricultural work. This is demonstrated in the figure 4:

**Figure 4: Payment mode by sector comparison for women in Kenya**



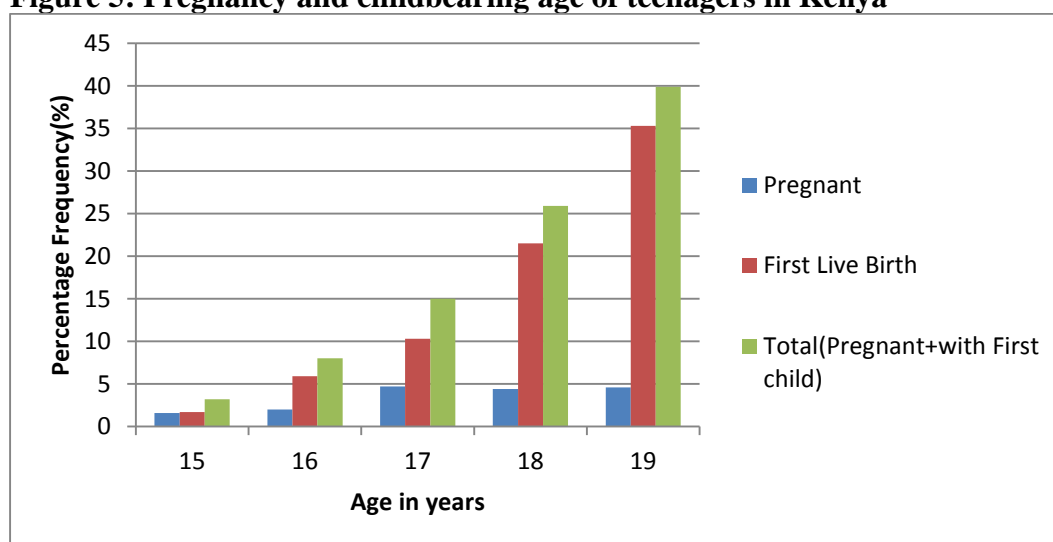
The Figure 4 shows analysis of payment for women in agricultural and non-agricultural work Mode of payment for work that was studied includes payment in cash, in-kind, cash and in-kind and no payment. The figure illustrates that majority (42.5%) of women in agriculture are not paid for the work done while in non-agricultural work, the majority (83%) are paid in cash. There are also more women paid in-kind in agriculture as compared to those in non-agricultural work (8.8% and 1.2% respectively). This finding implies that the women are more likely to be exposed to risk factors leading to

depression since they are expected to work in the farms for subsistence. Unemployment and unpaid or underpaid work is associated with both mental and emotional problems such as depression, use and abuse of substance (Perry, 1995). Pregnancy has also been used in many instances to terminate the employment of a woman and/or deny them maternity benefits. Job recruiters also are known to discriminate against pregnant women by denying them jobs no matter the level of competency.

### 4.3.3 Maternal age

While maternal age was not adequately captured in the case study of the three counties, the study used KDHS data on teenage pregnancy and motherhood to determine the prevalence and social risk factors of early pregnancy on the mental health of the mother. Figure 4 below shows the prevalence of teenage pregnancy and first live birth by age.

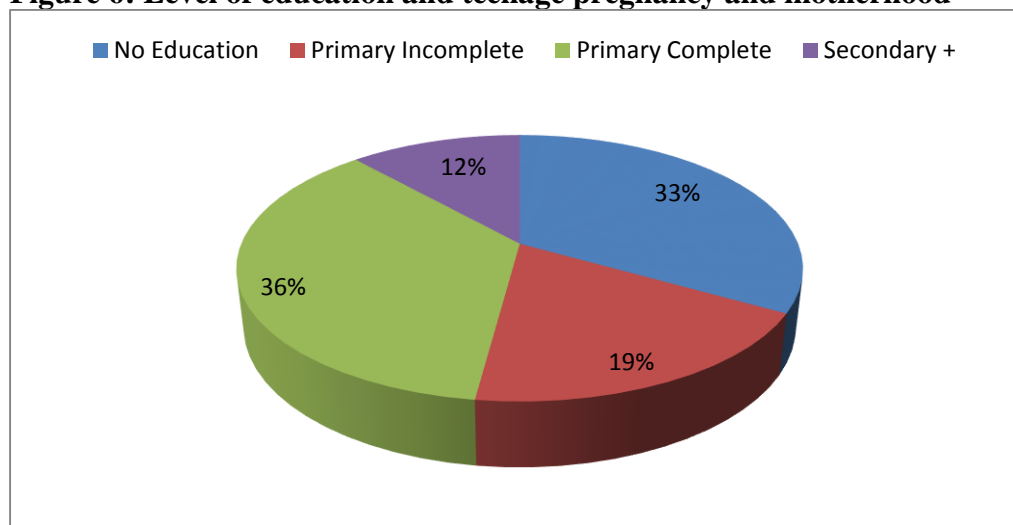
**Figure 5: Pregnancy and childbearing age of teenagers in Kenya**



Beginning child bearing role at a young age is associated with unintended pregnancies, birth complications, inadequate information on sexual and reproductive health, financial insecurity, lack of social support, increased school drop-out rates, exposure to GBV, HIV, stigma and a number of other adversities (Osok et al., 2018; KDHS, 2014), this affects the mental health of the teenage mother (WHO, 2008; Fisher et al., 2012; Osok et al., 2012). 40 percent (n=5,820) of women between the ages of 15-19 have begun childbearing in Kenya. At least 35% of women have had their first child by the age of 19. The study also found that women with low levels of education were more likely to start childbearing in their teenage years. Out of the 40% of women between ages 15-19 who have begun childbearing, a cumulative of 67% have at least primary

school level of education, while 33 % were found to have no education at all. The findings are illustrated in figure 6 below.

**Figure 6: Level of education and teenage pregnancy and motherhood**



Higher levels of education and wealth availability in a household are protective factors against the risks of developing mental disorders associated with pregnancy and child birth. In this regard, the KDHS survey did a background analysis of the wealth index of the women between the ages of 15 to 19 years. The findings are illustrated in table 4 below.

**Table 3: Wealth index and teenage pregnancy**

Wealth Quintile	Percentage
Lowest	26.2
Second	18.4
Middle	19.1
Fourth	16.8
Highest	10.2
<b>Total</b>	<b>100</b>

Teenage pregnancy is the most prevalent in the lowest wealth quintile and lowest among those in the highest quintile (26.2% and 10.2% respectively). There is no significant difference between the second and middle quintile (18.4 and 19.1% respectively).

Overall the study found that low education and having a background of financial difficulties is a risk factor to teenage pregnancy and motherhood. In a household where meeting basic needs is difficult, adding another child into the house means added expenses which further fuels household conflicts and poor support (Osok et al. 2018). A study conducted on 176 pregnant adolescents between the ages 15-18 visiting a community health centre in Nairobi found correlation between teenage pregnancy and prevalence of depression with 32.9% of the study subject suffering from depression (Osok et al. 2018).

#### **4.3.4 Relationship with spouse**

The studies have found correlation between CPMD and gender relations (Fisher et al., 2016; Husain et al., 2016; Ongeri et al., 2018, Green et al., 2018). The social Causation theory states that belonging to a low socio-economic status increases the risk of developing mental health problem (Johnson et al., 1999). Belonging to a certain ethnicity, race, minority ethnic group and gender can expose an individual to prejudice and limits their chances of self-fulfilment which increases stress and adversity leads to mental disorders (Bhattacharjee et al., 2011). Ongeri et al., 2018 study in Nairobi found out of the participants with symptoms of PPD; 56% experienced of physical or verbal violence, 53% do not get support from partner to carry out house chores including support in child care. Women without symptoms of PPD have more support from partners in carrying out household chores (71%) and have 80% of without PPD stated to have not experienced any violence. The results of this studies shows the direct relationship between violence and prevalence of PPD while there is inverse relationship between partner support and prevalence of CPMD.

The research used the following indicators for relationship status as it applies to risk factors of maternal mental health; domestic violence and attitude towards wife beating. The study analysed data from KDHS for physical spousal violence using a sample of 2,533 women of ages 15-49. 2,015 of the women respondents were married or had previously been married and 513 women had never been married. The study analysed data for physical spousal violence and presented it in table 4 below.

**Table 4: History of domestic violence**

Perpetrator of Violence	Ever Married	Never married
Current husband/partner	56.6%	Na
Former husband/partner	23.8%	Na
Boyfriend	0.5%	0.8%
Ex-Boyfriend	1.5%	2.5%

The study found out that there is a high prevalence levels of spousal violence. 57% of women who are currently married have experienced physical violence from their husband/partners while 24% have experienced violence from former partners. The prevalence of spousal violence is much lower for women who have never been married with less than 4% experiencing violence from their boyfriend or ex-boyfriends. Studies have found strong correlation between partner violence and prevalence of CPMD and maternal suicides (Fisher et al., 2013). The frequency of violence was directly proportional to severity of symptoms of CPMD (Fisher et al., 2013). Reducing partner violence would mean reduction of prevalence of CPMD (Fisher et al., 2013).

The KDHS (2014) conducted a study on the level of acceptance of violence against women by studying attitude towards wife beating. 14,625 women between the ages of 15-49 and 12,819 men of ages 15-54 responded to the survey. The participants were asked the condition under which they found wife beating justifiable. The conditions included going out without her husband's permission, child neglect, arguing with the husband, refusing to have sex with the husband and burning food. The findings are summarized in Table 5 below:



**Table 5: Attitude towards wife beating**

Variables	Responses	Female (%)	Male (%)
Beating justified if wife goes out without telling husband	Yes	21.8	18.5
	<b>No</b>	<b>78.2</b>	<b>81.5</b>
Beating justified if wife neglects the children	Yes	33.3	27.3
	<b>No</b>	<b>66.7</b>	<b>72.7</b>
Beating justified if wife argues with husband	Yes	21	20.4
	<b>No</b>	<b>79</b>	<b>79.6</b>
Beating justified if wife refuses to have sex with husband	Yes	15.1	9.8
	<b>No</b>	<b>84.9</b>	<b>90.2</b>
Beating justified if wife burns the food	Yes	7	4.5
	<b>No</b>	<b>93</b>	<b>95.5</b>
Agreed with at least one specified reason		<b>41.8</b>	<b>36.2</b>

The study found that 21.8% of women as compared to 18.5% of the male respondents felt that it was justifiable to beat wives if they went out without the permission of their husband. Wife beating is justified for 33.3% of women 27.3% under the condition that the wife is neglecting the children. There was no major difference between men and women who felt arguing with husband is grounds for wife beating (20.4% of men and 21% of female). 15.1% of women and 9.8% of men felt refusing sex with husband was a justifiable reason for wife beating. Burning food by wife was a justification for wife beating among 7% of women and 4.5% of male respondents. Overall more women than men felt wife beating was justified with 41.8% of women and 36.2% of men agreeing to at least one reasons given as justification for wife beating. This illustrates the unequal power relations between men and women in Kenya and the ingrained gender roles that perpetuate violence against women. The questions asked in the KDHS 2014 survey on reasons for violence were also gender biased and focused on gender roles and viewed household chores as preservation for women which is a simplistic way to view partner violence. Without gender equality and deconstruction of structures that give men more advantage than women, partner violence will continue to persist. Women who experience physical and emotional violence, those who do not receive partner support in care work and have their roles restricted are more at risk of developing symptoms of

CPMD (Fisher et al, 2012). The study further investigated mental health care for its ability to cater for women with CPMD at the ANC.

#### 4.4 Maternal Mental Health Care

When it comes to access of antenatal care, according to KDHS (2014), 95.5% of women between the ages of 15-49 receive antenatal care from skilled health care providers (Doctors, nurses and midwife). The study also established that not all women who attend antenatal care are able to complete the recommended four visits to enable detection of pregnancy related complication (KDHS, 2014). The table 6 shows the number of antenatal visits of women between the ages of 15-49 in percentage.

**Table 6: Number of antenatal visits**

No of visits	Frequency (%)
None	4.0
1	3.3
2-3	34.8
4+	57.6
Missing	0.3
<b>Total</b>	<b>100</b>

From the findings of the survey, 57.6% were able to meet the number of visits to antenatal clinic as recommended by WHO while 42% of the women in Kenya did not meet the recommended number of visits. 4% of the female respondent of the survey had not attended antenatal clinics at all. The researcher was interested to find out challenges that women find in accessing health services. The respondents were asked to state some of the challenges that they undergo when they need to seek medical services. Results are as presented in the table 7 below.

**Table 7: Challenges while seeking medical help**

Challenge	Problem	Percent
Getting partner's consent	No	<b>94</b>
	<b>Yes</b>	6
Cost of treatment	No	<b>63</b>
	<b>Yes</b>	37
Distance to health centre	No	<b>77</b>
	<b>Yes</b>	23
unwillingness to go alone	No	<b>89.0</b>
	<b>Yes</b>	11.0
At least one of the problems listed		<b>46%</b>

The study found that financial and distance from health centre being the biggest barrier in accessing health care facilities (37% and 23% respectively). Spousal permission to seek medical aid was not a problem for 94% of the participant of the survey while 4% had major challenges getting permission from their spouses. Some female respondents (11%) felt that going to a health facility alone was a bigger problem than a number of females (4%) who respondents to spousal permission as a problem when seeking medical aid.

The study further analysed the components of antenatal care services for mental health components. The findings of the antenatal care provided are summarized in table 8 below.

**Table 8: Components of antenatal care**

Physical Exams	Health Talk	Screening	Drugs and Supplements
Weight	Breast feeding	Urine test	Iron supplement
Height	Pregnancy complication	Blood Test	Deworming drugs
Blood Pressure			

According to the results presented in table 8 above, the study established that antenatal care lacked components of maternal mental health including screening test and information on maternal mental disorders/CPMD. The study found out that dominance of biomedical model of health in the services provided at the ANC. This finding is in line with a study conducted in South Africa on maternal mental health care that found a gap in screening, treatment and referral of CPMD at primary health facilities (Honikman et al., 2012).

#### **4.5 Conclusion of the Chapter**

This chapter presented the analysis, interpretation discussions in line with the objectives of the study. The succeeding chapter gives a summary of the findings, and recommendations.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This section presents the summary, conclusions and recommendations of the study from the results presented in chapter four.

#### 5.2 Summary of Findings

This section of the study presents the summary of findings of the study which set out of achieve study objectives which is to examine prevalence and social determinants of MMD/CPMD in Kenya, to assess the status of women in Kenya against social risk factors of maternal mental health disorders among women in Kenya and to investigate the ability of health care service to address maternal mental health problems.

The study found a high prevalence of CPMD in Kenya in the case study of Bungoma, Mombasa and Nairobi Counties. The study found that the rate of CPMD is at 16.5% which is within the estimated prevalence of CPMD in LMICs of 10%-20% (Fisher et al., 2012; Robertson et al., 2; Green et al 2016; Husain et al., 2016).

The study found association between CPMD with socio-economic environment within which a woman lives including, education level, employment, financial/economic status, maternal ages and relationship with spouse. Reducing these social and economic inequalities can decrease prevalence of CPMD which will in turn reduce maternal and child morbidity and mortality. The study also found that the component of mental health is missing in maternal health care services in Kenya. Maternal health care places more emphasis on biomedical approach to health with focusing mainly on biological screening of illnesses.

#### 5.3 Recommendations

The study gives the following recommendations:

- a) **KDHS to include Mental Health Indicators in their study**

Mental health and especially maternal mental health is a serious concern that requires both programmatic and policy intervention; however that will not be possible without

data from a reliable and trusted government institution. KNBS should collect data and provide data relevant to maternal mental health.

**b) Full implementation of The Kenya Health Policy and Kenya Mental Health Policy**

The Kenya Health Policy outlines a comprehensive framework to achieve its overarching goal of the policy is a population with highest standards of health and a health system that is responsive to the needs of the population. The government intends to reach the stated goal through supporting the provision of equitable, affordable and quality health and health services to all Kenya the highest attainable standards. In its policy objective on mental disorders is to promote ease access to interventions that promoted mental health while containing or reversing the burden of mental disorders in the country. It also calls for decentralization of screening for non-communicable and mental illnesses all health facility levels to ease access and ensure early detection, treatment or referral of mental health problems. The policy calls for a health information system that will provide information required effectively and efficiently this will ensure coordination and sustainability of health service and promote research in health and development (MoH, 2015).

The mental health policy the policy was developed in line with the GMHAP 2013-2020 after the adoption of resolution at the 66th World Health Assembly. WHA 66.8 called on all member states to develop a comprehensive coordinated response on the burden of mental disorders from the health and social sectors at country level (WHO, 2013).

In its priority action on Treatment of Mental disorders, the policy gives directions on a Comprehensive mental health services that is universally accessible and mental health services that adopts a lifespan approach. The policy also gives direction on the need to develop programmes for screening, identification and treatment of mental disorders as well as the development of norms and standards for mental health services. The policy lastly recommends clinical and social audits to be carried out for continuous quality improvement.

The Kenya mental health policy provides for the formation of a Mental Health Information System (MHIS) to be used at national and county levels. The aim of the MHIS is to integrate with the Health Information System (HIS) and identify mental health indicators that will be included in the general health information and reporting system. The policy also calls for annual report on status of health in the country that is to be published and put in use for coordination, planning and improvement of services (MOH, 2015). The policy also facilitates for mental health research and strengthening through funding of studies on mental health and building partnership for evidence-based information in mental health.

**c) Realization of Universal Health Coverage (UHC) in Kenya**

The Government of Kenya launched the UHC pilot program called Afya care aimed at enabling Kenyans to access affordable healthcare services. Based on the 1948 constitution of WHO, UHC commits to quality and attainable health declared in the WHO constitution is as a fundamental human right (WHO, 1948). WHO definition of primary health care is based on not only the component of addressing delivery of health services but to systematically address broader determinants of health including social, economic and environmental factors. This entails evidence-based public policies and actions across all sectors. It looks at empowering individuals, families, and communities to elevate their health, and advocates for policies that will promote and protect their health and wellbeing, through participation in developing health and social services (WHO, 2019). Under the UHC program, WHO recommend a fundamental shift in service delivery that is integrated and centres on the needs of individuals and communities. A comprehensive health care system that integrates traditional and complementary services that is organized around the needs and expectation of the community. This will empower the community to participate more and take on an active role in their health and health services (WHO, 2019) including integrating gender need and concerns in health care. This is in line with the WHO GMHAP 2013-2020 whose goal is to “promote mental well-being, prevent mental disorders, provide care, enhance recovery, promote human rights and reduce the mortality, morbidity and disability for persons with mental disorders” (WHO, 2013).

**d) Increased Awareness on Maternal Mental Health**

There is need for an increased awareness of the maternal mental health as a public health problem. Maternal mental health has significant effect on both the maternal and child morbidity and mortality rate. The mass Media can be utilized play a role in to create awareness and to positively advocate on issues of maternal mental health while normalizing and reducing stigma surrounding the topic of mental health.

**e) Incorporating Maternal Mental health in Sexual and reproductive Health (SRH) Programmes in the Kenya**

There is need to increase investment on maternal and Mental Health Care services. The government through interested parties such as county governments and community organizations should invest more in psychiatric units and professionals in the maternity wings of hospitals. The government should ensure there is adequate psychiatric medication available for and safety of the mother and child taken into consideration. Further, there should be increased investment on scientific mental health research and sharing of information to inform the policy and practice.

Community health organizations should set up counselling centres with trained community health workers that can detect and refer women experiencing maternal mental health issues to relevant specialist. Those community health centres can also offer support to those at risk of mental health problems through counselling services aimed at combating mental health disorders.

**f) Investment on Women Empowerment Programmes**

More programs aimed at socially and economically empowering women should be set up to assist them in overcoming social determinants of health e.g. financial difficulties, decision making and especially around their sexual and reproductive health, elimination of retrogressive cultural practices that impacts on their mental health and general wellbeing.

Insurance companies and government agencies offering health insurance covers should increase awareness on the importance of having health insurance covers, especially for women planning to start families.



## **5.4 Conclusion**

There is a high prevalence of CPMD in Kenya which often goes undetected and untreated due to gaps in the health care system even though it is possible integrate maternal mental health care successfully into maternal and childcare services (Honikman et al, 2012). The UHC for instance, if successfully implemented, provides a good platform to integrate mental health at all aspects level of health care. Equally, interventions aimed at reducing social inequalities especially gender equalities can reduce the prevalence of CPMD which will lower maternal and infant morbidity and mortality and achieving goals 3 and 5 of the SDG which is health for all and gender equality respectfully.

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