

**STIGMA RELATED TO MENTAL ILLNESS AMONG HEALTHCARE
PROVIDERS AT MOI TEACHING AND REFERRAL HOSPITAL,
ELDORET, KENYA**

BY

JOHN WAMWAKI NJOROGE

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DECLARATION

Declaration by Candidate

I declare that this thesis is my original work. It has not been presented to any other university or learning institution for consideration for any certification. Any text, data, graphics, or tables that were borrowed from other sources have been acknowledged and referenced using the current APA format guidelines.

Signature: _____ Date: _____

Name: John Wamwaki Njoroge

Registration number: SM/PGPSY/02/17

Department: Mental Health and Behavioural Sciences

Supervisor's declaration

This thesis has been submitted for appraisal with our approval as the university's supervisors.

1) **Prof. Violet Naanyu, PhD**

Associate Professor, Department of Sociology, Psychology and Anthropology, School of Arts and Social Sciences, Moi University

Signature: _____ Date: _____

2) **Dr. Rogers Songole, PhD**

Senior Lecturer, Department of Mental Health and Behavioral Sciences, School of Medicine, Moi University

Signature: _____ Date: _____

DEDICATION

This thesis is dedicated to my mother, **Mrs. Grace Wangari** and my wife **Dr Maureen Bikoro** for their love, dedication and continuous support.

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ABSTRACT

Background: Mental illness related stigma is the negative stereotype towards people with mental illness. The manifestation of stigma in healthcare can range from denial of care, long waiting times, provision of sub-standard care, and physical or verbal abuse. 10.7% of the world's population suffers from a form of mental illness and 45% of the individuals in Western Kenya were diagnosed with mental illness at a point in their lives. Low health seeking behavior observed in Makueni among people with mental illness was a consequence of high stigmatizing attitudes found in nurses and community health volunteers.

Objectives: To determine the level of stigma, attitudes and perceptions towards people with mental illness and to determine how demographic variables correlated with stigma among healthcare providers (HCPs) at Moi Teaching and Referral Hospital, Eldoret.

Methods: The study utilized a cross-sectional study design with 407 HCPs. Stratification of the study population was done proportionate to cadre size. Random sampling was done to achieve the desired sample size within each cadre. Structured questionnaire was used to obtain socio-demographic data. Data on attitudes was collected using the Mental Illness: Clinicians' Attitudes Scale version 4 (MICA-4). Reported and Intended Behavior (RIBS) questionnaire was used to evaluate HCP's intended behavior towards people with mental illness. These tools have been validated and used globally, regionally and locally by other studies. Analysis was done using STATA version 16. T-test, analysis of variance (ANOVA) and post-hoc analysis methods were used for data analysis.

Results: Out of the 407 participants, 53.32% were female with a MICA-4 mean score of 41.95 (SD = 9.96) and a RIBS mean score of 16.1 (SD=3.5). Findings show a significant association between level of education and stigmatizing attitudes ($p = 0.004$). Results from the t-tests and ANOVA tests revealed a significant relationship between cadre and HCP's stigmatizing attitudes towards people with mental illness ($p = 0.004$). On further post-hoc analysis, nurses ($M = 44.4$, $SD = 9.8$) had higher stigmatizing attitudes towards people with mental illness compared to medical officers ($M = 37.7$, $SD = 7.7$), consultants ($M = 37.6$, $SD = 8.9$), and occupational therapists ($M = 38.9$, $SD = 12.9$). MICA scores were negatively correlated with RIBS scores ($r = - 0.0340$, $p < 0.001$). This showed that higher MICA-4 score were associated with lower RIBS score.

Conclusions: A significant proportion of HCPs at MTRH had low stigma levels towards PWMI. HCPs with previous interactions with PWMI had lower negative stereotypes as compared to those without. Nurses and certificate holders were more likely to have high levels of stigma.

Recommendations: Stigma reduction campaigns are recommended through continuous medical education and HCP-PWMI care rotations and case management. Kenya's ministry of education should expand its mental health nursing curricula on mental illness in tertiary institutions to reduce stigma.

LIST OF ABBREVIATIONS/ ACRONYMS

HCP	Healthcare Providers
MAKS	Mental Health Knowledge Schedule
MICA-4	Mental Illness: Clinicians' Attitudes Scale
MHD	Mental Health Disorders
MIRS	Mental Illness Related Stigma
MOH	Ministry of Health
MTRH	Moi Teaching and Referral Hospital
RIBS	Reported and Intended Behaviour Scale
PWMI	People/Persons with Mental Illness
SPSS	Statistical Package for the Social Sciences
WHO	World Health Organization

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Stigma can be described as a negative stereotype, when one is viewed negatively based on a distinguishing personal trait or characteristic because that characteristic is viewed as, or is indeed, a disability or a disadvantage. Mental illness related stigma is, therefore, the negative stereotype towards people with mental illness (PWMI) (Stangl et al., 2019). The manifestation of stigma in healthcare facilities can range from denial of care, long waiting times, provision of sub-standard care and physical or verbal abuse (Stangl et al., 2019).

Mental illnesses are widespread. It has been estimated, that 10.7 percent of the world's population suffers from a form of mental illness (Ritchie & Roser, 2018), while regional studies found that, 45% of individuals had been diagnosed with mental illness at one point in their life (Kwobah et al., 2017). PWMI not only endure the complications of their disorders but also face stigmatization in all spheres of their lives including healthcare. According to Arboleda-Flórez and Stuart (2012), stigmatization is characterized by labelling, stereotyping, and discrimination of individuals on the basis of actual or perceived status, group membership, or medical condition (Arboleda-Flórez & Stuart, 2012)

1.1.1 Types of Stigma

There are different types of stigma that bar PWMI from accessing healthcare. They include self-stigma which is the negative belief about self, structural stigma which refers to the system-wide and cultural practices that constrain the stigmatized population's well-being, resources, and opportunities. Other types are public stigma, label stigma, and courtesy stigma (Corrigan, et al., 2002). These barriers can be categorized into two major groups: personal level stigma and system level stigma.

1.1.2 Personal Level stigma

Our society, from which healthcare providers (HCPs) originate, harbors stereotypes about mental illness that are often difficult to eradicate. These societies often determine “normal” or “acceptable” behaviours. Individuals who fail to conform to these “acceptable” norms are often perceived as deviants and are subject to negative stereotypes and discrimination. People with mental illness (PWMI) are examples of individuals that are perceived by societies as “abnormal”, “tainted”, or “discounted” (Goffman, 1963).

Some African societies believe that mental illness is not treatable, while others believe that the disorders serve as a punishment from god(s) for varied wrongdoings. Other individuals have also associated mental illness with witchcraft (Binitie & Bagley, 1970). A number of healthcare providers (HCPs) often holds these stereotypes. Available literature has shown that HCPs’ and the general public’s level of stigmatizing attitudes towards PWMI is similar (Nordt et al., 2006).

Available studies have also shown that most HCPs are afraid of associating and working with PWMI. In their opinion, PWMI are dangerous (Foster et al., 2008). Foster et al.’s (2008) findings were supported by Aghanwa (2004). The authors found that 38 percent of the respondents felt that PWMI should not interact with ‘normal’ people. The study also found that only 14.5 percent of the respondents were willing to employ a person with a history of mental illness (Aghanwa, 2004).

When stigma towards PWMI is held by HCPs, it acts as a major barrier to help seeking.

Self-stigma is the negative belief about self. Today's society is filled with stereotypic images that brand PWMI as 'crazy', 'psychos' or 'dangerous' (Ungar et al., 2016). PWMI often internalize these beliefs, which leads to the conviction that they have less value to the society (et al., 2002). Such degrading beliefs, in turn, lower individuals' self-esteem and reduces the patients' likelihood of seeking help in hospitals.

Stigma against PWMI is widespread in the mental health units and the physical health care settings. Surprisingly, in a study conducted in the United States, discrimination tendencies were reported by 16 to 40 percent of the respondents in mental health care and 17 to 31 percent of the respondents in physical health care settings (Henderson et al., 2014). A Nordic research found a life expectancy gap between PWMI and the general population (Wahlbeck et al., 2011a). The gap was attributed to stigmatizing attitudes that discouraged PWMI from seeking help for mental and physical illnesses.

Negative stereotypes towards PWMI has discouraged HCPs from pursuing careers in mental health (Harris et al., 2016). This has contributed to a significant decrease in the number of psychiatric healthcare workers, leading to staff shortages, long working hours, and burnout and consequently long waiting hours for PWMI seeking care.

An anonymous study was conducted to evaluate the impact of HCPs' stigmatizing attitudes on mental health-seeking behaviors of soldiers who had returned from the Afghan War. The researchers found that while a majority of the soldiers had severe post-traumatic stress disorders, most (60-77%) of them did not seek help due to the fear of being stigmatized, labeled, or treated differently (Hoge et al., 2010).

It was noted that psychiatrists preferred to use pharmaceuticals on PWMI even in situations where psychological treatment would be beneficial in a bid to spend less time with these patients (Rawlins & Culyer., 2004). A further study found that

medical personnel preferred specific types of patients and discriminated against those with mental illness. This was observed when medical students showed discriminatory perceptions against patients with eating disorders and those with mental illness (Fleming & Szmukler, 1992).

1.1.3 System Level stigma

Structural stigma refers to the system-wide and cultural practices that constrain the stigmatized population's well-being, resources, and opportunities (Corrigan, 2014). This stigma and health-seeking barriers hinder the development of structures that cater for people with mental illness (PWMI) by making policies that innately discriminate and undermine the importance of mental health (Corrigan et al., 2004).

Over the years, people with mental illness have been referred using varied derogatory terms. In the film industry, terms such as 'psychos', 'crazy people', and 'maniacs' have been used to describe PWMI and individuals who care for PWMI. Such films have also trivialized mental illness and displayed PWMI as 'weak', 'dangerous', 'homicidal', and 'suicidal' (Myrick & Pavelko, 2017). The negative depiction of PWMI has discouraged children from aspiring to become healthcare workers specializing in caring for those with mental illness (Jenkins & Carpenter-song, 2008a). It has also increased self-stigmatizing attitudes among PWMI who consider themselves to be undesirable (Jenkins & Carpenter-song, 2008).

Data has also shown that patients with a history of mental illness and a serious physical illness were not adequately treated as those without a history of mental illness. Either their stay was cut short in the general ward as they were moved to the psychiatric units, or they were discharged prematurely to take their medications from home a set-up. According to Corrigan et al. (2014), PWMI were moved from the

general wards to the psychiatric units because they were perceived to be dangerous to the healthcare workers and other patients.

Additionally, the mortality rate for patients with severe mental illness that warranted admission was two to three times higher than people admitted for serious physical illness (Wahlbeck et al., 2011). PWMI's higher mortality rates were attributed to the diminished funding by the government that prioritized physical illness over mental illnesses. The low prioritization of mental illness has been confirmed by the gradual decrease in the number of beds in psychiatric hospitals per 100,000 people from 1987 to 2007 in all three Nordic states (Wahlbeck et al., 2011).

Despite an increase in Kenya's population size and psychiatric disease burden, there has not been any increase in funding for mental health. The lack of funding has been attributed to structural stigma, which prioritizes infectious diseases like HIV and Malaria over mental disorders (KNCHR, 2011).

Over the years, insurance companies have evolved to cover most chronic health conditions, which reduce individuals' medical expenditures. However, such strides have not been made in mental health. Most insurance companies do not allow premiums for mental illness. Companies that allow such covers charge high premiums (Thornicroft et al., 2007). Lack of insurance has prevented PWMI from accessing medication and essential procedures such as electroconvulsive therapy (ECT).

Lack of clear policy for mental health and lack of reforms in the mental health agenda have worsened the conditions and state of mental health in Kenya (Marangu et al., 2014). The trend can be attributed to structural stigma that has not prioritized the importance of mental health and, thus, those in leadership positions do not see the need or the urgency of making policies about mental health.

A study conducted in 2016 indicated that Kenya is short-staffed, especially in the number of psychiatrists and other mental health professionals as well as specialised mental hospitals. The study showed that there are only 75 psychiatrists at the time for the projected population of 48 million people, most of whom are in the Capital Nairobi (Bitta et al., 2017). Further, Kenya has only one hospital, Mathari Teaching and Referral Hospital that is specialized in treating mental illness (Bitta et al., 2017).

1.1.4 Consequences of Mental Illness-Related Stigma

Mental illness related stigma (MIRS) can have a significant negative impact on the lives of PWMI. Available literature has linked MIRS to delays in help-seeking and discontinuation of treatment (Clement et al., 2015). According to Corrigan, Druss, and Perlick (2014), only approximately 59.6 percent of people with mental illness (PWMI) seek health care. Others fail to seek care due to fear of stigma and discrimination from healthcare providers (HCPs), which delays recovery (Sartorius, 2002) and hampers the successful integration of PWMI into the society (Hansson et al., 2016).

Other studies have also found that stigmatization increases victims' psychological distress, lowers self-esteem, reduces patients' self-efficacy, increases hopelessness, disrupts family relationships, and affects PWMI's capacity to cope, socialize, and acquire housing or employment (Rüsch et al., 2009). In another study that evaluated the impact of MIRS, the authors found that it worsens existing symptoms and contributes to mood instability, increased hospitalization, and low psychological functioning (Gyamfi et al., 2018)

Mental illness related stigma MIRS also affects the well-being of HCPs who have mental disorders. HCPs often conceal their mental illnesses from their colleagues to

avoid stigma, discrimination, and ostracization. In Tay, Alcock, and Scior's (2018) study, 55.5 percent of healthcare professionals did not disclose their mental illnesses to their employers or colleagues and preferred to share their diagnosis with their friends and family. The factors that prevented the HCPs from disclosing their mental illnesses included the fear of humiliation, negative self-image and judgement, and being perceived to be incompetent in their careers. Fear of disclosure among HCPs often results in delays in help-seeking and over-reliance on self-treatment, which can worsen the outcomes of mental illnesses (Tay et al., 2018)

While these consequences have been recorded globally, they are more pronounced in developing countries such as Kenya that not only have more traditional societal views towards mental illness but also have low budgetary allocations to mental health services. An understanding of the factors that contribute to mental health-related stigma is needed in order to devise and implement effective preventive measures, which will be fundamental in delivering quality mental healthcare healthcare.

1.1.5 Causes of Mental Illness-Related Stigma

There are many different causes of mental illness-related stigma (MIRS). Among them, includes the fear of people with mental illness. Some studies have found that a significant number of healthcare providers (HCPs) fear people with mental illness (PWMI). In such individuals' opinion, PWMI are dangerous people as illustrated by Brockington (2000) and Knaak (2017), (Brockington et al., 2000) (Knaak et al., 2017). In another study that was conducted by Pranckevičienė et al. (2020), the authors found that most of the participants were afraid of PWMI. The participants believed that PWMI were dangerous, aggressive or violent, and unpredictable. The

fear of PWMI increased participants' desire for social distance and reduced their optimism towards the recovery of PWMI (Pranckeviciene et al., 2020).

Besides fear, cultural beliefs and lack of mental health awareness and education has contributed to MIRS. Available literature has shown that most people hold distorted ideas about mental illness. In Mazur's (2017) study, a majority of the participants believed that mental illnesses such as eating disorders, anxiety and depression were caused by patients' choices. According to the participants, PWMI should change their habits, "calm down", or "pull themselves together" to recover from eating disorders, anxiety, and depression (Naeem et al., 2017).

Another study was conducted in Nigeria by Okpalauwaekwe, Mela, and Oji (2017) to assess individuals' knowledge and attitudes towards mental illness. The study found that many Nigerians held misconceptions about mental illness. A majority of the respondents believed that mental disorders were caused by supernatural factors such as witchcraft, sorcery, and divine retribution. Such beliefs promoted stigmatizing attitudes towards PWMI (Okpalauwaekwe et al., 2017).

Igberase and Okogbenin (2017) also found that 72 percent of respondents thought the mental illnesses were caused by supernatural causes. In fact, only 28 percent of the participants believed that mental disorders were as a result of natural causes (Igberase & Okogbenin, 2017).

Another study was conducted by Chilale et al. (2017) to investigate individuals' perceptions towards PWMI in Malawi. Like in the studies by Okpalauwaekwe, Mela, and Oji (2017) and Igberase and Okogbenin (2017), a majority of participants in Chilale et al.'s (2017) study attributed mental illness to socio-cultural factors such as witchcraft, spirit possession, and curses (Chilale et al., 2017).

A similar study found that most individuals in South Africa believed that adjustment disorders, depression, and mental disorders were caused by ancestral calling, bewitchment, and breaking of taboos (Ngobe et al., 2021). Other studies have also found that supernatural, religious, and paranormal approaches to mental illness are prevalent in Asia (Lauber & Rössler, 2007).

While mental health education predicts individuals' attitudes towards PWMI, available studies have found that people who are educated in health including nurses and medical practitioners are equally likely to show prejudice, negative stereotypes, or distance themselves from PWMI. One study was conducted by Loch et al. (2013) to assess psychiatrists' attitudes towards patients with schizophrenia. The study evaluated 1,414 Brazilian psychiatrists and found that 42.9 percent had stigmatizing attitudes towards PWMI. Additionally, in the studies by Adewuya and Oguntade (2007) and Campbell et al. (2017), the authors found that 53.8 percent and 72.5 percent of HCPs believed that mental illnesses were caused by evil spirits, witchcraft, and sorcery, respectively (Adewuya & Oguntade, 2007). Spitte, Maier, and Kraus (2019) also found that most HCPs in Sub-Saharan Africa believed that mental illnesses were caused by supernatural factors such as witchcraft (Spitte et al., 2019).

Lack of contact or experience with mental illness is another significant factor that predicts people's attitudes towards PWMI. Previous studies have found that contact or experience with mental illness is negatively correlated with MIRS. In one study that investigated the effects of contact-based educational programs, the authors found that increased contact with PWMI reduced participants' MIRS (Wong et al., 2018). Another similar study found that increased contact with PWMI reduced MIRS and increased positive attitudes and feelings of compassion towards PWMI (Ahuja et al.,

2017). In another study, the authors found that increased interaction with PWMI resulted in a decrease in fear and feelings of danger and avoidance (Martínez-Martínez et al., 2019). Like in Ahuja et al.'s (2017) study, Martínez-Martínez et al. (2019) found that increased contact increased feelings of compassion towards PWMI and the desires to assist the individuals.

1.2 Statement of the Problem

Mental illness treatment gap in Kenya and other low-income countries is estimated to be 75% (World Health Organization, 2008) and this can be attributed to among other things, mental illness related stigma (MIRS).

Stigmatization and discrimination in healthcare settings is a significant problem that contributes to delays in help-seeking, discontinuation of treatment (Naanyu, 2009), and poor-quality care among people with mental illness. According to Corrigan, Druss, and Perlick (2014), approximately 59.6 percent of people with mental illness seek mental care. Corrigan et al. (2014) found that some individuals either discontinue treatment or are reluctant to seek mental health care due to fear of stigma and discrimination from healthcare providers. Another similar study that was conducted in Kenya also revealed that a majority of PWMI are reluctant to seek for mental treatment due to discriminatory behaviours and stigmatizing attitudes among healthcare providers (HCPs) (Mutiso et al., 2017). Delays in help-seeking or discontinuation of mental illness treatment could inhibit recovery or worsen patient outcomes.

While the actual prevalence of mental illness related stigma (MIRS) among Kenya's HCPs remains unknown, estimates from other studies that have been conducted across Africa have shown that more than half of HCPs hold negative attitudes towards

people with mental illness (PWMI). Based on the findings, HCPs associate mental illness with perceived dangerousness, unpredictability, and unfriendliness (Naeem, M., J. Iqbal and M.A.A. Bakhsh, 2006); (Adewuya & Oguntade, 2007) ; (Ewhrudjakpor, 2009). Left unaddressed, stigma and discrimination against PWMI present a major barrier to timely health-seeking tendencies of these patients (Sartorius, 2002). An improved understanding of the level of MIRS and the factors that contribute to mental health-related stigma in MTRH is needed in order to identify gaps and areas for investment in stigma reduction, which will be fundamental in delivering quality healthcare and optimizing PWMI's outcomes.

1.3 Justification

The 2010 Kenya constitution's article 43 1(a), indicates that every citizen is entitled to the highest achievable standard of health (Kenya constitution, 2010). Despite the prerogative, most citizens, including people with mental illness (PWMI), do not receive high-quality healthcare. The PWMI's lack of access to care has been attributed to stigma and discrimination particularly by the healthcare providers (HCPs) (Mutiso et al., 2017; Corrigan et al., 2002)

Few studies locally on mental illness related stigma, except prominently, the Makueni study comparing nurses' and community health volunteers' stigmatizing attitudes towards people with mental illness (Mutiso et al., 2017). Lack of a study focusing on all cadres of HCPs in Kenya and the region necessitates this study.

This research could present new and useful data on perception and attitudes of HCPs at MTRH, which will address the literature gap on stigma in Kenya and other low income countries and consequently focus on areas for improvement. Such data can be used in identifying interventions to encourage better and timely health-seeking

behaviours among PWMI, which will decrease morbidity, increase productivity, and, ultimately, improve economic growth. Mental health care is central to the health and well-being of individuals and their families and consequently the nation.

Reported and Intended behaviour of HCPs', perceptions and attitudes towards PWMI is currently under-researched in Kenya. Findings from such a study could enhance our understanding of the attitudes and perception that HCPs hold and how these affect the quality of care that PWMI receive. By understanding what perceptions and attitudes the workforce hold towards PWMI, we could adopt relevant methods to investigate the factors that contribute to specific attitudes while implementing strategies to minimize stigma thereby mitigating barriers to help-seeking.

1.4 Objectives

1.4.1 Main Objective

To assess the stigma related to mental illness among healthcare providers (HCPs) at the Moi Teaching and Referral Hospital (MTRH) in Eldoret, Kenya

1.4.2 Specific Objectives

1. To determine the level of stigma that HCP's at MTRH have towards people with mental illness (PWMI).
2. To determine the perceptions and attitudes that HCP's at MTRH have towards PWMI.
3. To determine how demographic variables such as sex, age, marital status, religion, cadre and level of education correlate with HCPs' stigmatizing attitudes towards PWMI.

1.5 Research Questions

1. Is there stigma related to mental illness among HCPs at MTRH?
2. What is the level of stigma related to mental illness among HCPs at MTRH?
3. What perceptions and attitudes do HCPs have towards PWMI at MTRH?
4. How do demographic variables such as gender, age, cadre and level of education correlate with HCPs' stigmatizing attitudes towards PWMI at MTRH?

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

A growing body of research has investigated the public's opinion and attitudes towards people with mental illness. This chapter summarizes the results from such studies. It is categorized into five main subsections, which include consequences of mental illness related stigma (MIRS), healthcare providers' (HCPs') stigma towards people with mental illness (PWMI), HCPs' attitudes and perceptions towards PWMI, correlation between demographic variables and HCPs' MIRS, and interventions to reduce MIRS.

2.2 Overview of the Consequences of MIRS

Much work in literature is available concerning the stigmatization in mental illness. A review of this literature reveals a worrying trend of stigmatization of PWMI in society and institutions that offer healthcare services. Such stigmatizing attitudes often result in a decrease in help-seeking behaviours among people with mental illness (PWMI).

Over the years, scientific developments have led to evidence-based treatment modules that have reduced the suffering and morbidity related to mental illness. Despite the efforts, impact of stigma is observed in non-adherence (Naanyu, 2009) while many patients who would otherwise benefit from the treatment do not seek treatment or drop out after one or two visits due to the fear of experiencing stigma (CDC, 2002).

In their 2002 study titled "understanding the impact of stigma on people with mental illness", Corrigan et al. observed that PWMI did not only struggle with the disabilities that come about with the illness but also with the stereotype and prejudice that comes with the misconception surrounding mental illness in many societies (et al., 2002).

2.3 Healthcare Providers' Stigma towards People with Mental Illness

Foster et al. (2008) conducted a survey to assess HCPs' stigmatizing attitudes towards PWMI. The authors utilized a sample of 23 registered nurses and 48 orderlies who were recruited from random hospitals in Fiji. The validated Attitude Towards Acute Mental Health Scale (ATAMHS 33) was used to gather data. The authors found that more orderlies than registered nurses held positive attitudes towards PWMI, leading to the conclusion that positive attitudes towards PWMI was inversely proportional to individuals' level of education (Foster et al., 2008b). Foster et al.'s (2008) findings contradicted Munro and Baker's (2007) results that established that qualified HCPs held less prejudicial views towards PWMI as compared to their peers with lower qualifications.

An identical study was conducted by Li, Li, Thornicroft, and Huang (2014) in China's Guangzhou province. The authors evaluated 214 community mental health staff. The Mental Health Knowledge Schedule (MAKS), the Reported and Intended Behavior Scale (RIBS), and the Mental Illness: Clinicians' Attitudes Scale (MICA) were used to evaluate respondents' knowledge, attitudes, and behavior towards PWMI. The study found that the respondents' average RIBS, MAKS, and MICA scores were 11.97 ($SD = 3.41$), 16.80 ($SD = 5.39$), and 51.69 ($SD = 6.94$), respectively. The study also found that more females than males demonstrated higher levels of knowledge and willingness to have contact with PWMI. The authors recommended anti-stigma campaigns to stem healthcare providers (HCPs') behaviours that hindered service delivery and discouraged help-seeking tendencies among PWMI.

Mutiso et al. (2016) conducted a study in Kenya's Makueni County to evaluate primary health workers' and community health volunteers' knowledge and attitudes towards PWMI. The authors employed a cross-sectional research design and recruited 104 participants from 20 primary health facilities. Of the 104 respondents, 44 were primary healthcare workers, and 60 were community health volunteers. The authors used the Mental Health Knowledge Schedule (MAKS) and the Reported and Intended Behaviour Scale (RIBS) to gather data. The results from the study found that the respondents' average MAKS and RIBS scores were 23.9 ($SD = 3.0$) and 16.2 ($SD = 3.1$), respectively. The study also found an inverse relationship between education level and positive attitudes towards PWMI. The authors concluded that knowledge of mental illness reduced HCPs' stigmatizing attitudes. They recommended the need to raise HCPs' levels of knowledge on mental illnesses. The authors also recommended the need to identify effective interventions that can be used to reduce HCPs' stigmatizing attitudes towards PWMI (Musyimi et al., 2016).

2.4 Attitude and Perception of Healthcare Providers towards People with Mental Illness

In 2015, Yuan et al. conducted a study to compare mental health professionals' and the general population's attitudes towards people with mental illness (PWMI). This study was requested by Singapore's Ministry of Health in its effort to boost help-seeking behaviour among PWMI. The authors employed a cross-sectional research design and used the modified and adapted 26-item Attitudes to Mental Illness questionnaire (AMI) to collect data. The investigators invited participants from Singapore's Institute of Mental Health. Three hundred and seventy-nine participants completed the study's questionnaire between February and April of 2015. The study found that more HCPs than members of the general population had positive attitudes

towards PWMI. However, HCPs and members of the general population had similar scores in regard to the desire to distance themselves from PWMI (Yuan et al., 2017).

Despite a high level of education, professional experience and qualification, social-cultural and societal impediments form barriers to proper service delivery. Previous literature has found that HCPs' and the general population's stigmatizing attitudes towards PWMI are comparable (Nordt et al., 2006). One study was conducted in Nigeria to investigate people's perceptions towards PWMI. The authors utilized a sample of 483 HCPs in their research. The sample comprised physicians, nurses, social welfare officers, health assistants, and pharmacists. Of the 483 participants, 133 were males while 350 were female. The authors found that 87 percent of the respondents believed that mental illness was incurable. Additionally, 34 percent prayed for PWMI, while 41.82 percent chose to shun family members who developed mental illness. Further, 62.5 percent believed that mental illness was caused by the consumption of illicit drugs, and 73 percent believed that the disorders were caused by evil deeds. All the respondents thought that mental illness was not an ordinary disease and a further 39 percent and 12 percent associated mental illness with untidiness and violence, respectively.

Findings from the survey highlighted socio-cultural beliefs in the health workforce that reinforced negative stereotypes and prejudice against PWMI. The authors recommended workforce re-education, destigmatisation campaigns, and continuous medical health education to reduce stigma (Ewhrudjakpor, 2009).

Another identical study was conducted in Nigeria to investigate medical doctors' attitudes towards PWMI. The study utilized a sample of 312 medical doctors who were recruited from eight healthcare institutions in Nigeria. The study reported high

levels of MIRS among healthcare providers. It found that 10.3 percent of the respondents would be embarrassed if people knew that a member of their household had mental illness. The study also found that 80.8 percent and 77.9 percent would not marry a PWMI and would not permit fully recovered mental patients to teach young children in public schools, respectively. Additionally, 92 percent would not hire nannies that had a history of mental illness (Adewuya & Oguntade, 2007).

Monteiro et al. (2014) conducted a study in rural South-Eastern Senegal to explore policy stakeholders' and health care workers' knowledge and attitudes towards PWMI. The authors used interviews to gather data. They invited eight key informants who not only held leadership positions but were also authorized to develop policies. The authors found that the mainstay treatment of PWMI in rural areas was mainly traditional. It was also noted that healthcare workers primarily focused on physical health despite the fact that they encountered many 'emotional' or PWMI. The investigators also discovered that the government was improving the situation by creating a manual for the treatment of PWMI, opening more nursing schools to train nurses with mental illness knowledge, and developing a data collection centre to record the prevalence of mental illness in the area. The authors concluded that while several factors impeded the treatment of PWMI, HCPs' stigmatizing attitudes had the highest impact (Monteiro, 2014).

2.5 Demographic Correlates to Mental Illness Related Stigma

Many factors determine individuals' tendency to discriminate against people with mental illness. Among these factors include demographics such as age, education level, and sex. In one study that surveyed Singapore's general population, the authors found that demographic variables were strongly correlated with individuals' attitudes

and discriminatory behaviour towards PWMI. The study's subjects included 3,006 Singaporeans who were selected through stratified sampling techniques. The authors utilized the 26-item Attitudes to Mental Illness (AMI) questionnaire to assess subjects' perceptions towards PWMI. The instrument gathered respondents' socio-demographic data such as age, sex, race, marital status, education level, employment status, and individual monthly income. Results from various analytical tests revealed that older people with low socioeconomic status had statistically more negative attitudes towards PWMI. The survey also found that statistically, more males than females held more stigmatizing attitudes towards PWMI.

Additionally, there were statistically significant differences in stigmatizing attitudes among individuals from different ethnic groups. It was observed, that when compared to Malays and Indians, the Chinese showed more negative attitudes towards PWMI. This study showed that there is a need for culture-specific interventions (Yuan et al., 2016). Yuan et al.'s (2016) findings were consistent with Angermeyer and Dietrich's (2006) results that found a positive relationship between age and negative attitudes towards PWMI (Angermeyer, 2006).

Another study conducted by Vistorte et al. (2018) investigated primary care professionals' stigmatizing attitudes towards PWMI. The authors reviewed 11 articles that investigated healthcare professionals' attitudes towards PWMI. The authors found that more primary care physicians exhibited negative attitudes towards patients with schizophrenia than towards individuals with depression. The study also found that compared to younger and less experienced physicians, older and more experienced physicians held more stigmatizing attitudes towards PWMI (Vistorte et al., 2018).

In another study, Naeem et al. (2006) investigated medical students' and doctors' attitudes towards PWMI. The authors utilized a sample of 294 students and doctors who were recruited from three medical colleges in Lahore, Pakistan. They found that more than half of the respondents held negative attitudes towards PWMI. A majority of the respondents believed that people with schizophrenia, depression, panic disorder, and substance addiction were not only a danger to others but they were also unpredictable, dangerous, and difficult to talk to. Additionally, most respondents believed that PWMI never recover, never improve after treatment, and needed to "calm down" or "pull themselves together". A comparison of attitudes between the two participating groups revealed that more doctors than medical students held less stigmatizing attitudes towards PWMI. The impact of prior contact or acquaintance with PWMI on HCPs' attitudes was also assessed. The authors found that HCPs who knew a PWMI were more likely to demonstrate negative attitudes towards the patients as compared to those with no prior interactions (Naeem et al., 2006).

Like Naeem et al. (2006), Chang et al. (2017) compared medical and nursing students' stigmatizing attitudes towards PWMI. The study's participants included 1,002 medical and nursing students in Singapore. The participants' attitudes towards PWMI were evaluated using the Opening Minds Stigma Scale for Health Care Providers (OMS-HC). The authors found that cadre and household income predicted the students' attitudes towards PWMI. It found, that as compared to nursing students, medical students demonstrated less negative attitudes towards PWMI. Additionally, students whose household monthly income was lower than \$4,000 had more stigmatizing attitudes towards PWMI as compared to those whose monthly household income exceeded \$10,000. The authors also investigated the effect of clinical placement on students' attitudes and found that students who had attended clinical

placement had higher stigmatizing attitudes when compared to those who had not attended such placement. Chang et al.'s (2017) findings contradict a growing number of studies that have found that clinical placement improves HCPs' attitudes towards PWMI. Chang et al.'s (2017) findings were justified by the presumption that increased contact with patients who had severe or chronic mental symptoms during the placement could have contributed to the participants' negative attitudes (Chang et al., 2017).

Sandhu, Arora, Brasch, and Streiner (2019) also investigated the factors that influence HCP's attitudes towards PWMI. The study's subjects included 382 undergraduate students, 118 medical students, and 38 psychiatrists. The authors used the Opening Minds Scale for Healthcare Providers (OMS-HC) and the Implicit Association Test (IAT) instruments to evaluate respondents' attitudes towards PWMI. The authors also investigated the impact of physicians' level of education, history of mental illness, and prior acquaintance with individuals who had been diagnosed with mental illness on HCP's attitudes towards PWMI. In regard to education, the authors found that when compared to undergraduate students and other medical students, psychiatrists had significantly lower stigmatizing attitudes towards PWMI. The study also found that participants who had been diagnosed with mental illness and those who had relationships with PWMI had lower levels of stigmatizing attitudes. Sandhu, Arora, Brasch, and Streiner's (2019) findings supported the premise that increased education and experience with mental illness reduce stigma towards PWMI(Sandhu et al., 2019).

In another study, Arbanas, Rožman, and Bagarić (2019) compared medical doctors', nurses', and laypeople's attitudes towards individuals with schizophrenia, depression, and posttraumatic stress disorder (PTSD). The study's participants included 270 nurses, 30 medical doctors, and 87 laypeople. The subjects' perceptions were evaluated using a 15-item questionnaire that was developed by the authors. The study found that the participants exhibited higher stigmatizing attitudes towards individuals with schizophrenia as compared to those with depression and PTSD. According to the authors, schizophrenia was associated with greater danger. The authors also found that medical doctors held the lowest stigmatizing attitudes towards PWMI. Laypeople and nurses, however, attached the highest stigmatizing attitudes towards PWMI. The authors attributed the differences between nurses and doctors' attitudes to doctors' higher knowledge of mental disorders. The authors believed that increased knowledge of mental disorders reduces stigma. The study also investigated the effect of demographic variables on participants' stigmatizing attitudes towards PWMI. The study did not find any correlation between stigmatizing attitudes and age or gender (Arbanas et al., 2019).

A similar study compared healthcare providers' (HCPs), medical students' and the general public's attitudes towards mental and physical illnesses. The study's participants included 1,470 individuals who were recruited from Karachi, Pakistan. The Bogardus Social Distance Scale (SDS) was used to measure participants' level of stigma. The study found that the participants reported higher levels of stigma towards mental illness as compared to physical disorders. It also found that SDS scores for mental illness were significantly higher among the general public than in medical students and HCPs, which supported the assertion that education, training, and experience with mental illness reduced people's stigmatizing attitudes towards

PWMI. The study also found that gender and age predicted people's attitudes towards PWMI. It found, that as compared to males, females had lower stigma scores. Additionally, compared to younger adults, individuals aged over 30 years had higher stigmatizing attitudes towards PWMI (Husain et al., 2020).

Another study compared medical students' and medical doctors' stigmatizing attitudes towards PWMI. The authors utilized a sample of 574 medical students and 74 medical doctors who were recruited from a teaching hospital in Colombo, Sri Lanka. A self-report questionnaire was used in gathering data. The tool assessed participants' attitudes towards individuals with schizophrenia, depression, panic disorders, dementia, and substance addiction. The authors found that participants had higher levels of stigma towards patients with depression, alcohol and drug addiction than those with schizophrenia, panic disorders, and dementia. It also found that cadre and education played a significant role in predicting participants' attitudes towards PWMI. It found that more medical students than medical doctors displayed negative attitudes towards PWMI. The authors recommended the need to increase medical students' contact with recovered patients in the community to decrease stigmatizing attitudes (Fernando et al., 2010).

Another study compared healthcare professionals' and the general public's attitudes towards PWMI. The study utilized a sample of 1,810 regular adults and 1,200 medical doctors who were living in the Czech Republic at the time of the study. The authors used the Community Attitudes towards Mentally Ill (CAMI) scale to assess participants' attitudes towards PWMI. They found that when compared to the general adult population, medical doctors exhibited less stigmatizing attitudes towards PWMI (Winkler et al., 2016).

In a similar study, Noblett, Lawrence, and Smith (2015) investigated general hospital doctors' attitudes towards patients with comorbid mental illness. The authors utilized a sample of 52 medical doctors who were recruited from three general hospitals in South West London. The questionnaire that was adopted in the study included items that assessed participants' attitudes towards patients with a history of depression, personality disorders, schizophrenia, diabetes, and criminal behaviour. The authors found that most medical doctors held positive attitudes towards individuals who did not have a diagnosis of mental illness as opposed to those with mental illness. The study also found that the doctors had the highest stigmatizing attitudes towards patients with schizophrenia, personality disorders, and a criminal record than towards those with depression and diabetes. It also found that more female doctors than male doctors held positive attitudes towards PWMI. The study also investigated the impact of age and level of training on doctors' attitudes towards PWMI. However, it did not find any statistically significant relationship between the variables (Noblett et al., 2015).

In another study, Janoušková et al. (2017) compared medical students' and consultants' stigmatizing attitudes towards PWMI. The authors utilized a sample of 457 individuals in their study. The participants were recruited from a medical faculty in the Czech Republic. The study found that as compared to medical students, consultants had higher levels of stigmatizing attitudes. It also found that more male than female students and consultants possessed stigmatizing attitudes towards PWMI. Additionally, age was a significant predictor of stigmatizing attitudes among consultants. The authors found that as compared to young professionals, older consultants exhibited higher levels of stigmatizing attitudes towards PWMI (Janoušková et al., 2017).

A similar study was conducted in Finland by Ihalainen-Tamlander et al. (2016) to investigate nurses' attitudes towards PWMI. The study's subjects included 264 nurses that were selected from 15 primary care health centres. The authors used the 27-item Attribution Questionnaire to measure participants' stigma towards PWMI. The study found that nurses' attitudes towards PWMI were generally positive. A majority of the study's subjects empathized with PWMI. Despite the positive attitudes, younger nurses and those without supplementary mental health education mentioned that they feared PWMI (Ihalainen-Tamlander et al., 2016).

Ihalainen-Tamlander et al.'s (2016) findings were supported by Nóbrega et al. (2020) who analysed the experiences and attitudes of Brazilian and Portuguese nurses towards PWMI. Nóbrega et al.'s (2020) respondents included 500 nurses who were selected randomly from primary health care centres in Brazil and Portugal. The authors used the Opinions about Mental Illness (OMI) scale questionnaire to evaluate nurses' attitudes towards PWMI. The study found that most Brazilian and Portuguese nurses held positive attitudes towards PWMI (Nóbrega et al., 2020).

Sahile, Yitayih, Yeshanew, Ayelegne, and Mihiretu (2019) conducted a study in Addis Ababa, Ethiopia, to assess primary care nurses' attitudes towards people with severe mental illnesses. The study's participants included 610 nurses. The authors used the Mental Illness Clinicians Attitudes scale (MICA-4) to assess nurses' attitudes towards PWMI. Nurses were perceived to have negative attitudes if they had MICA-4 scores that were greater than 57. The study found that 48.2 percent of the respondents had MICA-4 scores that were greater than 58, which implied that nearly half of the nurses exhibited negative attitudes towards PWMI. The subjects' negative attitudes

were attributed to minimal work experience, poor experience with mental illness, and lack of mental health training(Sahile et al., 2019).

A similar study was conducted in selected hospitals in Rwanda to assess nurses' perceptions towards PWMI. The authors utilized a sample of 126 nurses in their study. The authors used Community Attitudes towards Mental Illness (CAMI) and Level of Contact (LOC) instruments to assess the nurses' attitudes towards PWMI. The study found that a significant proportion of nurses exhibited negative attitudes towards PWMI. The study also found that age, qualifications, and experience predicted nurses' attitudes towards individuals with mental disorders. It found, that younger, highly qualified, and less experienced nurses reported less stigmatizing attitudes towards PWMI as compared to older, lowly qualified, and highly experienced nurses (Baziga, 2017).

Another study measured individuals' level of stigmatizing attitudes towards people who engaged in self-harming behaviours. The study's participants included 384 first-year university students who were recruited from local universities in Australia. The authors found that most of the respondents believed that people who engaged in self-harming behaviours were not only dangerous but also manipulative. A comparison of MIRS among the two gender groups revealed that as compared to females, male participants reported significantly higher levels of stigmatizing attitudes towards individuals who engage in self-injury (Lloyd et al., 2018).

The impact of other socio-demographic variables such as religion on people's stigmatizing attitudes towards PWMI has also been investigated. In one such study, Abuhammad and Al-Natour (2021) evaluated the correlation between religiousness and MIRS among Jordanian students. The authors utilized a sample of 357 students in

their survey. The study found that higher religiousness scores were associated with lower stigmatizing attitudes towards PWMI. The authors proposed the need to apply religious principles to decrease stigma and enforce positive attitudes towards mental illness. They also noted that including mental health training in schools' curricula would allow students to gain an accurate understanding of mental disorders (Al-Natour et al., 2021).

Another study was conducted by Hartini et al. (2018) to investigate socio-demographic factors that influence people's attitudes towards PWMI. The authors used a sample of 1,269 respondents who were recruited from East Java in Indonesia. The questionnaires that were used to assess respondents' attitudes include the Community Attitudes towards Mental Illness (CAMI) and the Mental Health Knowledge Schedule (MAKS) scale. The study found that older age and higher knowledge about mental illness was associated with lower stigmatizing attitudes towards PWMI. The study also found that as compared to married respondents, single individuals had higher stigmatizing attitudes towards PWMI. Low-income earners also had higher stigmatizing attitudes towards PWMI as compared to high income earners (Hartini et al., 2018).

2.6 Interventions to Reduce Mental Health-Related Stigma

Several strategies to reduce mental health-related stigma have been proposed. Key among them includes mental health related education. In one study, Prathaptharyan et al. (2001) investigated the effectiveness of psychiatry education on medical students' attitudes towards people with mental illness (PWMI) and their interest in psychiatry as a career choice. The study's sample included 247 medical students and interns. The authors found that a greater proportion of medical students who were exposed to

psychiatric training exhibited positive attitudes towards PWMI as opposed to those who had not received psychiatric training (Tharyan et al., 2001).

A similar study examined the changes in attitudes towards PWMI among medical students before and after their psychiatry clerkship training. The study's participants included 325 fourth-year Chinese medical students. The Attitudes Towards Mental Illness (AMI) and the Attitudes Towards Psychiatry-30 (ATP-30) scales were used to measure participants' attitudes towards PWMI. The authors found that after the psychiatry clerkship training, there was a significant improvement in attitudes towards psychiatry and PWMI. It found, that the total AMI (64.1 vs. 58.9) and ATP-30 (111.8 vs. 103.4) scores were higher before the psychiatry clerkship training than after the training. The authors recommended the need for mental health training to improve HCPs' attitudes towards PWMI (Shen et al., 2014).

Prathaptharyan et al.'s (2001) and Shen et al.'s (2014) findings were corroborated by Happell et al. (2015) who conducted a literature review to investigate the usefulness of clinical placements in mental health. The authors reviewed a total of 41 studies and found that an overwhelming number of studies have established that clinical placement improves students' skills, knowledge, and attitudes towards PWMI. The review also found that clinical placement reduced students' fears and anxieties about working with PWMI (Happell et al., 2015).

Other interventions that have been proposed include skills-building activities such as clinical placements and rotations that equip HCPs with relevant skills that will allow them to work directly with PWMI. One study reviewed 22 existing studies in an effort to assess the effectiveness of mental health-related education and clinical placement in reducing MIRS. The study found that videos, lectures, and presentations that were

delivered by PWMI were effective in reducing HCPs' stigmatizing attitudes. The authors also found that clinical placement was more effective when combined with mental health related education. They recommended the need to include mental health training and clinical placement in medical students' curricula to reduce stigmatizing attitudes (Abd Malik et al., 2012).

Another study evaluated the impact of an eight-week psychiatry clerkship on students' knowledge and interest in psychiatry and attitudes towards PWMI. The study's participants comprised medical students recruited from the University of Western Australia. The Balon Attitudes Towards Psychiatry and the Mental Illness Clinicians Attitudes (MICA) tools were used to measure participants' attitudes. The authors found a significant decrease in negative and stigmatizing attitudes after the clerkship training. Knowledge on mental illness also improved significantly. The number of students who were considering pursuing psychiatry as a career also increased from 4.6 percent before clerkship to 10.5 percent after clerkship training (Lyons & Janca, 2015). Evidence from the research has shown that teaching participants about mental illness and its associated stigma, its manifestation, and its impact on health could reduce stigmatizing attitudes among HCPs.

A similar study investigated the effectiveness of educational interventions in decreasing stigmatizing attitudes of medical students towards PWMI. Corrigan's Attribution Questionnaire was used to assess students' attitudes before and after a mental health apprenticeship program. The study found that the intervention resulted in a decrease in stigmatizing beliefs towards PWMI. The authors recommended the need to incorporate effective mental health training programs in undergraduate nursing programs (Bingham & O'Brien, 2018).

Besides mental health education, contact with PWMI has proven effective in reducing stigmatizing attitudes among HCPs. In one study, Alexander and Link (2009) investigated the impact of contact on stigmatizing attitudes towards PWMI. The authors utilized a sample of 640 respondents. The study's questionnaire measured respondents' perceptions towards the dangerousness of PWMI. The study found that increased contact decreased participants' perceived dangerousness of PWMI. Increased contact also decreased desires of social distance from PWMI (Alexander & Link, 2003).

Another identical study investigated the effect of education and contact on medical students' attitudes towards PWMI. The authors utilized a sample of 245 participants in their survey. Embodied conversational agents were used to educate and arrange for contact with individuals who suffered from mental illnesses such as anorexia nervosa. Contact approaches involved exposing HCPs to PWMI, either in person, through videos, or through non-clinical interactions. The study found that involving members of the stigmatized group in educating medical students was effective in increasing participants' empathy, breaking down stereotypes, and reducing negative attitudes towards PWMI (Sebastian & Richards, 2017).

Martínez-Martínez et al. (2019) also investigated the effectiveness of direct contact intervention with PWMI in reducing HCPs' stigmatizing attitudes. The study's participants attended a ninety-minute session that featured a mental health professional, a PWMI, and a family member of a PWMI. During the session, PWMI described their experiences with mental illness and their journey to recovery. The differences in the scores obtained in the AQ-27-E questionnaire that was administered before and after the intervention found a decrease in fear and desires to avoid PWMI.

It also found an increase in participants' positive attitudes towards PWMI. Positive attitudes included feelings of empathy and compassion towards PWMI. The authors recommended the need to increase HCPs' contact with PWMI to reduce stigmatizing attitudes (Martínez-Martínez et al., 2019).

Ng, Rashid, and O'Brien (2017) also investigated the effectiveness of a video-based contact intervention (VBCI) in improving primary care nurses' attitudes towards PWMI. The authors utilized a sample of 206 primary care nurses who were selected randomly from healthcare facilities in Penang, Malaysia. The Opening Minds Stigma Scale for HCPs (OMS-HC-15-M) questionnaire item was used to measure the nurses' attitudes before and after the participants watched a 5-minute VBCI post. The video educated participants about mental health and highlighted interviews in which PWMI discussed their experiences and recovery from diverse mental illnesses. Comparisons of before and after VBCI scores revealed statistically significant differences. The authors found that 30 percent of the nurses had lower stigmatizing attitudes after the video-based contact intervention (Ng et al., 2017).

Another study was conducted by Morgan et al. (2018) to investigate the interventions that can be employed to reduce people's negative attitudes towards people with severe mental illnesses such as schizophrenia, bipolar, and other psychotic disorders. The authors tested the effectiveness of contact, education, family psycho-education, and hallucination programs in reducing stigmatizing attitudes. The study found that contact and education interventions resulted in small to medium reductions in participants' stigmatizing attitudes and desire for social distance from PWMI (Morgan et al., 2018).

Structural or policy changes have also proven effective in eradicating discrimination and stigmatizing attitudes towards PWMI. Arboleda-Flórez and Stuart (2012) investigated the effectiveness of diverse approaches in reducing MIRS in healthcare facilities. The authors found that mental health training, protests, contact-based education, policy reforms, and advocacy were among the most effective strategies that healthcare institutions can implement to reduce stigmatizing attitudes among HCPs (Arboleda-Flórez & Stuart, 2012).

2.7 Theories of Stigma

Many sociologists and anthropologists investigating stigma related to mental illness have applied diverse theories on stigma. These theories emanated from observations on interaction with PWMI as well as how PWMI behaved in the society. Depending on the stigmatized condition, and if it was disclosed or not, stigma towards PWMI mostly moved through different categories of stigma which include self-stigma, public stigma, label stigma, system level stigma and courtesy stigma. PWMI were seen as tainted discounted ones in the society (Goffman et al., 1963)

Lemart et al., 2000 discussed stigma in the concept of deviance. It was observed that, PWMI generally behaved outside the set rules of the society and were consequently labelled deviants attracting stigma. This was known as primary deviance. It was further opined that, PWMI developed deviant characteristics, acting outside a society's expected norms as their reaction to experiences of primary stigmatization exerted on them. This was known as the secondary stigma (Lemart et al., 2000).

Anthropology further theorizes that stigma stems from a perception of threat from the stigmatized group. PWMI are thought to be dangerous and this creates an us versus them scenario. An in-group versus out group where those considered deviants or out-group are stigmatized. This is the case with PWMI (Yang et al., 2007).

It is worth noting that, healthcare providers (HCPs) emanate from societies and the beliefs harboured in those societies are the same harboured by the HCPs. In a society that labels PWMI as deviants, such beliefs will be the beliefs of the healthcare providers. As such, stigma observed in that particular community, will be likewise observed in the health workforce emanating from those societies.

HCPs working with people with severe mental illnesses can develop apathy and burnout from these interactions and end up developing stigma towards these patients and PWMI in general (Acker & Lawrence, 2009). This has been observed in different set-ups where different cadres of healthcare providers who care for patients with severe mental illness develop negative stereotypes towards these patients. This occurs due to the HCPs having unpleasant experiences with these patients for instance rudeness or violence. It was observed that, nurses caring for patients with schizophrenia, developed negative stereotypes unlike those caring for patients with depression or other less severe mental illness (Arbanas et al., 2019).

In this study, the HCP's burnout and apathy theory is applied. This theory was suggested by Arbanas et al., 2019. He postulated that healthcare providers develop apathy and burn out from caring for people with mental illness. This theory resonates with the HCPs at MTRH who interact with people with mental illness and due to the HCPs understaffing experienced in the Sub-Saharan Africa, can develop burnout and

consequently apathy which can lead to more negative stereotype (Arbanas et al., 2019).



Figure 1: Theory of Stigma

2.8 Conceptual Framework

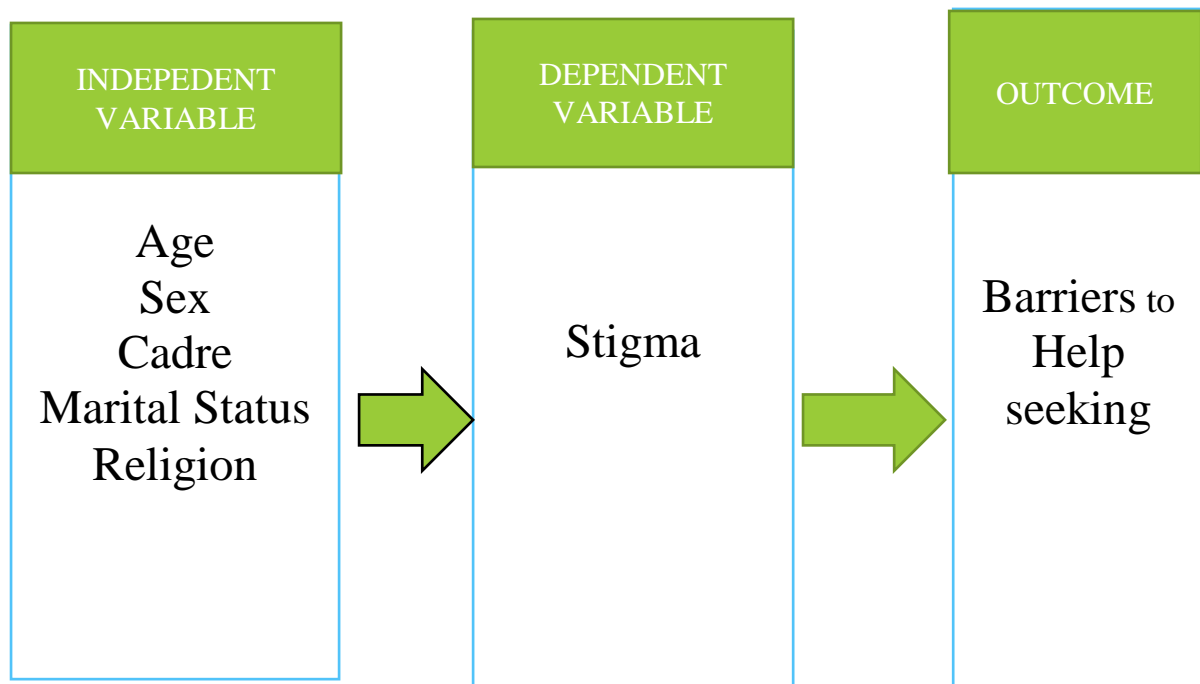


Figure 2: Conceptual Framework

The independent variables were age, sex, level of education, marital status and religion. The dependent variable was the stigma and the willingness to interact with PWMI. The outcome variables are barriers to help-seeking.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter highlights the research methods that were utilized in this study. The chapter discusses the study area, design, population, sample size, sampling procedures, inclusion and exclusion criteria, and methods of data collection and analysis.

3.1 Study Site

The study was conducted at the Moi Teaching and Referral Hospital (MTRH). The hospital is the second-largest referral facility in Kenya after the Kenyatta National Hospital. The facility is located in Eldoret town in Kenya. However, it serves residents in Western Kenya, parts of Eastern Uganda, South Sudan, Northern Tanzania, and the Eastern Democratic Republic of Congo. It has been estimated that MTRH serves a population of approximately 24 million people (“About Us”, n.d.). MTRH was preferred for this study because of its diverse cosmopolitan sourced workforce, which would make the study more inclusive and representative.

3.2 Study Design

The study adopted a cross-sectional research design. Cross-sectional studies are observational studies that gather information at one specific point in time. The data on stigma against PWMI and its related factors were collected at the same point in time. The data was gathered to assess MTRH’s HCPs’ level of stigma towards PWMI. The design was chosen because it allowed for many different variables to be assessed at the same time, in a faster and an inexpensive manner.

3.3 Study Population

The study's target population comprised of all the health care providers at MTRH. The 2017 Kenya Health Act defines HCPs as individuals who are educated, trained, and licensed to provide services in health facilities (Health Act, 2017). According to the United States' federal regulations, HCPs include medical doctors, dentists, nurses, clinical psychologists, and chiropractors. In this study, the HCPs who were targeted included, nurses, medical officers, pharmacists, clinical officers, registrars, consultants, social workers, nutritionists, psychological counsellors, and occupational therapists.

3.4 Sample Size

The sample size for this study was computed using Fisher's formula, which is illustrated below.

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

Where;

n represented the minimum sample size.

z represented the standard normal deviation. A z value for the 95% confidence interval was considered ($z = 1.96$).

p was the estimated proportion of HCPs with stigmatizing attitudes towards PWMI. In this study, a proportion of 42.9% was considered. The proportion was adopted from a study by Loch et al. (2013). The study was preferred because it evaluated HCPs' attitudes towards PWMI. Other local and regional studies could have been considered. However, most local studies investigated negative stereotypes among specific healthcare provider groups. In a study conducted by Mutiso et al. (2017), the authors compared nurses and community healthcare volunteers' attitudes towards PWMI.

Similarly, Deribew et al. (2010) evaluated female nurses' willingness to marry a PWMI.

q was $1 - p$. $1 - 0.43 = 0.57$.

d represented the margin of error. For this study, a margin of error of 5% was considered.

Substituting the values in the formula:

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

$$n = \frac{1.96^2(0.43 * 0.57)}{0.05^2}$$

$$n = \frac{3.8416(0.2451)}{0.0025}$$

$$n = \frac{0.941576}{0.0025}$$

$$n = 376.6305 = 377$$

As illustrated in the calculations, the estimated sample size was 377. However, I assumed a non-response rate of 10 percent and distributed questionnaires to a total of 414 HCPs. Of the 414 surveys, seven were excluded due to incompleteness. Accordingly, the study's findings are based on 407 responses.

3.5 Sampling Procedure

Stratified proportionate random sampling was employed. This began by dividing the study population into cadre proportionate to the actual size of the participants at MTRH using the data provided by the Dean school of Medicine, Moi University, and the Human Resource department at MTRH. Simple random sampling techniques was then employed to recruit the study's participants within each cadre until calculated minimum sample size per cadre was attained. Simple random sampling is a sampling technique in which each participant in a population has an equal probability of being

included in the sample. These sampling methods were preferred because they offered every individual an equal chance of being included in the survey. The first respondent was selected after balloting between the eight departments and between the cadres. The department included the outpatient, medicine, surgery, reproductive health, mental health, pharmacy, radiology, and child health and paediatrics departments.

3.6 Eligibility Criteria

3.6.1 Inclusion Criteria

HCPs were included in the study if they were trained and licensed nurses, medical officers, clinical officers, pharmacists, registrars, consultants, social workers, nutritionists, psychological counsellors, and occupational therapists working at Moi Teaching and Referral Hospital (MTRH).

3.6.2 Exclusion criteria

Individuals were excluded from the study if they self-reported as not being physically fit or unavailable to complete the survey.

HCPs who were on leave, sick off, or attending offsite training sessions at the time of data collection were also excluded from the survey.

3.7 Data Collection Tools

A self-administered questionnaire was used to gather data for the study. The questionnaire consisted of three sections. The first section was the social demographic questionnaire, which collected participants' socio-demographic data such as age, sex, religion, marital status, highest education level, and cadre. The social demographic questionnaire was researcher designed base on the literature review.

The second section consisted of the Mental Illness: Clinicians' Attitudes (MICA-4) scale. MICA-4 is a standardized questionnaire that evaluates individuals' attitudes towards PWMI (Kassam et al., 2010). Previous assessments found that the MICA-4 scale has a good internal consistency (Cronbach's $\alpha = 0.72$). The MICA-4 tool consists of 16 questions that are rated on a six-point Likert scale, where one represented "strongly agree" while six indicated "strongly disagree" for questionnaire items 3, 9, 10, 11, 12, and 16. Additionally, the value one illustrated "strongly disagree" while six indicated "strongly agree" for questionnaire items 1, 2, 4, 5, 6, 7, 8, 13, 14, and 15. The scores from each of the sixteen items were summed to obtain an overall MICA-4 score that ranged from 16 to 96. While large MICA-4 scores depict high stigmatizing attitudes, small overall scores indicate low stigmatizing attitudes towards PWMI. It has been used and validated in different contexts, most recently by Sahille et al in Ethiopia. MICA-4 has internal consistency score of 0.79 on Chronbach's alpha and a test-retest reliability was good (Lin's concordance 0.80).

The third section comprised of the Reported and Intended Behavior Scale (RIBS). The tool consists of eight questions that assess and track discriminatory behaviours against PWMI (Evans-lacko et al., 2010). Like the MICA-4 scale, the RIBS questionnaire has a good internal consistency (Cronbach's $\alpha = 0.85$). The first four items of the RIBS scale evaluate whether participants are currently or have ever lived with, lived nearby, worked with, or formed close friendships with PWMI. There were three answer choices for the first four items. They included "yes", "no", and "don't know".

The fifth, sixth, seventh, and eighth items, on the other hand, investigated participants' willingness to live with, work with, live nearby, and continue forming close relationships with PWMI. The items were rated using a five-point Likert scale, and the values 1, 2, 3, 4, and 5 were allocated to “disagree strongly”, “disagree slightly”, “neither agree nor disagree” and “don't know”, “agree slightly”, and “agree strongly” responses respectively. The overall RIBS score was computed by adding the response values for questionnaire items 5, 6, 7, and 8. The scores were expected to range from 4 to 20. Large RIBS scores indicated a greater willingness to interact with PWMI. Internal consistency was high (Cronbach's $\alpha = .85$) and test-retest reliability was good (Lin's concordance statistic = .75) in the sample in which the scale was developed (Evans-lacko et al., 2010). RIBS questionnaire was validated and translated into a Swahili version in Kilifi, Kenya (Bitta et al.,2022).

3.8 Study Procedures

After recruiting the study's participants, the respondents were briefed about the purpose and objectives of the research project. I then asked the respondents to sign or initial the consent form to confirm their willingness to participate in the survey. They were then asked the respondents to complete the socio-demographic questionnaire and later directed them to complete the second and third sections of the questionnaire that contained the MICA-4 and RIBS scales. In some instances, the questionnaires were collected the following day.

3.9 Data Storage and Analysis Methods

After completing the survey, I entered the data into the Microsoft Access database to check for errors and clean the data. After cleaning, I exported the database to the STATA version 16 for data analysis. The key outcomes that were measured included HCPs' attitudes and intended behaviors towards PWMI.

Discrete variables were summarized as frequencies and percentages and displayed in tables or figures. The means and standard deviations were computed for continuous variables that were normally distributed. In cases where the data was skewed, the medians and interquartile ranges were computed.

Additionally, one sample t-tests, one-way analysis of variance (ANOVA), and Pearson's correlation analysis were performed to assess the relationships between study variables.

A level of statistical significance of $p < 0.05$ was considered. Additionally, it assumed that all tests were two-sided.

3.10 Ethical Considerations

Before commencing the survey, I sought approval from the MTRH/Moi University Institutional Research and Ethics Committee (IREC) and from MTRH's chief executive officer. The IREC approval number was 0003266. Written informed consent was also sought from respondents before the questionnaires were filled.

The questionnaires were stored in a secure cabinet, and computer data was encrypted and password-protected to ensure confidentiality of data. No personal identifiers were collected or stored in the data files.

3.11 Dissemination of Research Findings

The study's findings will be shared with various stakeholders through seminar presentations and publication in international peer-reviewed journals, continuous medical education forums, press releases, and the university website and library. Some of the key stakeholders include Moi University, MTRH administration, and fellow HCPs. This broad dissemination process will enable the translation of the research findings into actionable knowledge that can be used to influence current policy and practice for better service delivery and elimination of barriers to health-seeking.

CHAPTER FOUR: FINDINGS

4.1 Introduction

This chapter presents the study's results, organized by sub-topics such as sample characteristics and HCPs' perceptions, attitudes, and level of stigma towards PWMI. It also highlights the results from diverse tests that were conducted to assess the correlation between different demographic variables and HCPs' stigmatizing attitudes towards PWMI.

4.2 Sample Characteristics

414 questionnaires were distributed among HCPs who were working at MTRH at the time of the study. Out of the 414 questionnaires that were received, seven were eliminated due to incompleteness. Accordingly, the study's results are based on 407 participants.

Out of the 407 respondents, 53.32 percent were female. Also investigated were participants' ages and it was found that most (79.5%) of the respondents were aged between 25 and 44 years. Additionally, only 5.19 percent, 13.58 percent, and 1.73 percent of the respondents were aged between 18 and 24, 45 and 54, and over 54 years, respectively (see Table 1).

Besides gender and age, participants' education, cadre, marital status, and religion were recorded. The study found that slightly more than half (52.59%) of the participants were bachelor's degree holders. Only a few were certificate (2.47%), diploma (19.26%), higher diploma (13.09%), and postgraduate degree (12.60%) holders. Regarding cadre, a majority were nurses (29.88%), while a few were clinical officers (11.11%), medical offices (7.16%), residents (11.36%), consultants (6.17%), nutritionists (7.9%), psychological counsellors (4.2%), social workers (7.41%), and

occupational therapists (5.43%). Concerning marital status, a majority of the HCPs were married (67.73%), while a few were either single (27.09%), widowed (2.46%), or separated (2.71%). Lastly, with respect to religion, a majority of the respondents were Christians (89.9%), while only a few were either Muslims (3.94%), Hindus (3.69%), or unaffiliated (2.46%) (see Table 1).

Table 1: Participants' Socio-Demographic Data

Variable	Category	Frequency	Percentage
Sex	Female	217	53.32
	Male	190	46.68
Age	18 – 24	21	5.19
	25 – 34	141	34.81
	35 – 44	181	44.69
	45 – 54	55	13.58
	>54	7	1.73
Education	Certificate	10	2.47
	Diploma	78	19.26
	Higher diploma	53	13.09
	Bachelor's degree	213	52.59
	Postgraduate degree	52	12.60
Cadre	Clinical officer	45	11.11
	Nurse	121	29.88
	Medical officer	29	7.16
	Resident	46	11.36
	Consultant	25	6.17
	Nutritionist	32	7.90
	Psychological counselor	17	4.20
	Social worker	30	7.41
	Occupational therapist	22	5.43
	Others	38	9.39
Marital status	Married	275	67.73
	Single	110	27.09
	Widowed	10	2.46
	Separated	11	2.71
Religion	Christianity	365	89.90
	Islam	16	3.94
	Hindu	15	3.69
	Unaffiliated	10	2.46

4.3 HCPs' Level of Stigma towards PWMI

Also assessed were respondents' level of stigma towards PWMI. As illustrated in Figure 1, the distribution of the respondents' MICA-4 scores formed a bell-shaped curve, which depicts a normal distribution. It shows that the respondents' MICA-4 scores ranged from 16 to 70 with a mean of 41.95 ($SD = 9.96$) and a median of 41. It also shows that a majority of the respondents had a MICA-4 score of 43 (see Figure 1).

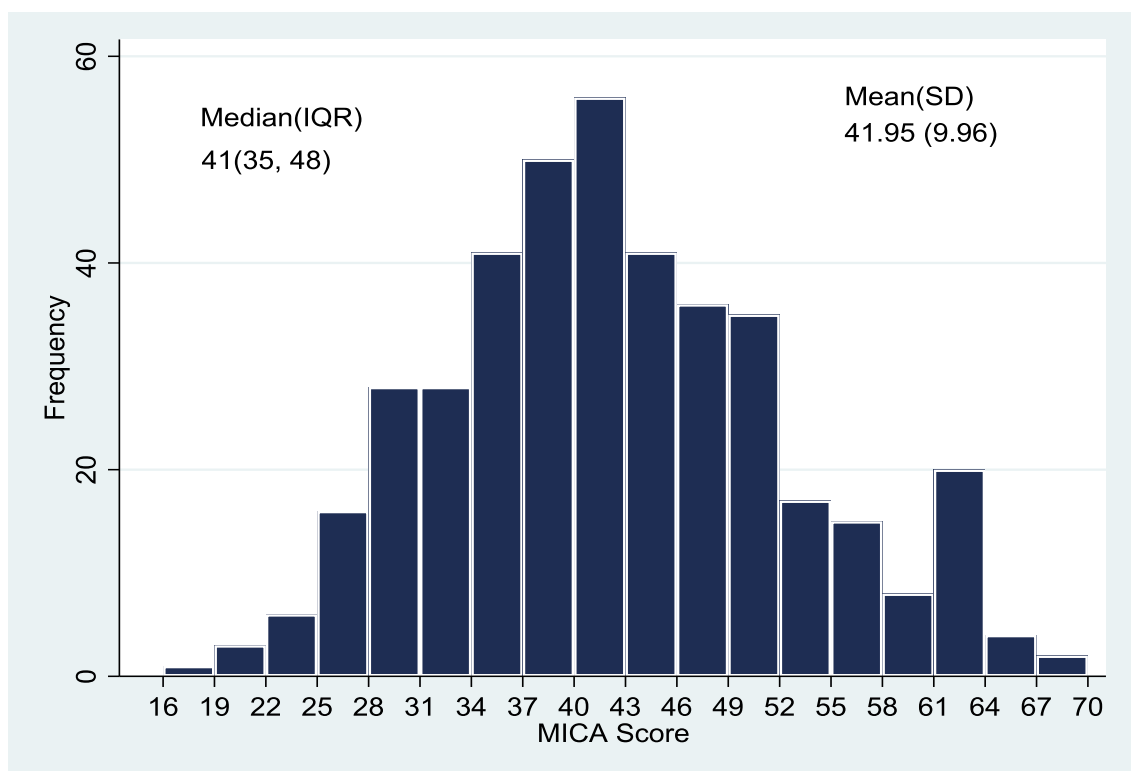


Figure 1: HCPs' level of stigma towards PWMI

4.4 HCPs' Perceptions and Attitudes towards PWMI

The study found that a majority (66.5%) of the respondents had a neighbor who had been diagnosed with mental illness. It also found that more than half (57%) of the respondents had a close friend or were working or had ever worked (58%) with a PWMI. However, less than half (40.5%) admitted to living with or having ever lived with a PWMI (see Table 2). The overall percentage of respondents who had interacted with a PWMI was 89.9 percent ($n = 366$). The overall proportion was computed by adding the number of respondents who answered at least one “yes” to any of the four domains or questions depicted in Table 2.

Table 2: Response Frequencies for RIBS

		Yes n (%)	No n (%)	Don't know n (%)
1	Are you currently living with, or have you ever lived with, someone with a mental health problem?	165 (40.5)	216 (53.1)	26 (6.4)
2	Are you currently working with, or have you ever worked with, someone with a mental health problem?	236 (58.0)	137 (33.7)	34 (8.3)
3	Do you currently have, or have you ever had, a neighbour with a mental health problem?	270 (66.5)	105 (25.9)	31 (7.6)
4	Do you currently have, or have you ever had, a close friend with a mental health problem?	232 (57.1)	148 (36.5)	26 (6.4)

Also investigated were the respondents' willingness to interact with people who had been diagnosed with mental illness. The research found that a majority of HCPs were willing to live with (66.8%), work with (75.7%), live nearby (67.1%), and maintain relationships (72.9%) with PWMI (see Table 3).

Table 3: Respondents' Willingness to Interact with PWMI

		Agree strongly (%)	n	Agree slightly (%)	n	Neither agree or disagree (%)	n	Disagree slightly (%)	n	Disagree strongly (%)	n	Don't know (%)	n
5	In the future, I would be willing to live with someone with a mental health illness	157(38.7)		114(28.1)		78(19.2)		12(3)		19(4.7)		26(6.4)	
6	In the future, I would be willing to work with someone with a mental health illness	182(44.7)		126(31)		59(14.5)		7(1.7)		16(3.9)		17(4.2)	
7	In the future, I would be willing to live nearby to someone with a mental health illness	171(42)		102(25.1)		74(18.2)		19(4.7)		23(5.6)		18(4.4)	
8	In the future, I would be willing to continue a relationship with a friend who developed a mental health illness	207(51)		89(21.9)		52(12.8)		12(3)		30(7.4)		16(3.9)	

Also examined was the association between respondents' social behaviors and willingness to interact with PWMI. The boxplot depicted in Figure 2 shows that HCPs who had never interacted with PWMI had significantly ($p < 0.001$) lower scores ($M = 13.6$, $SD = 3.6$) on intentions to mingle with PWMI as compared to those who had interacted with the individuals ($M = 16.4$, $SD = 3.4$) (see Figure 2).

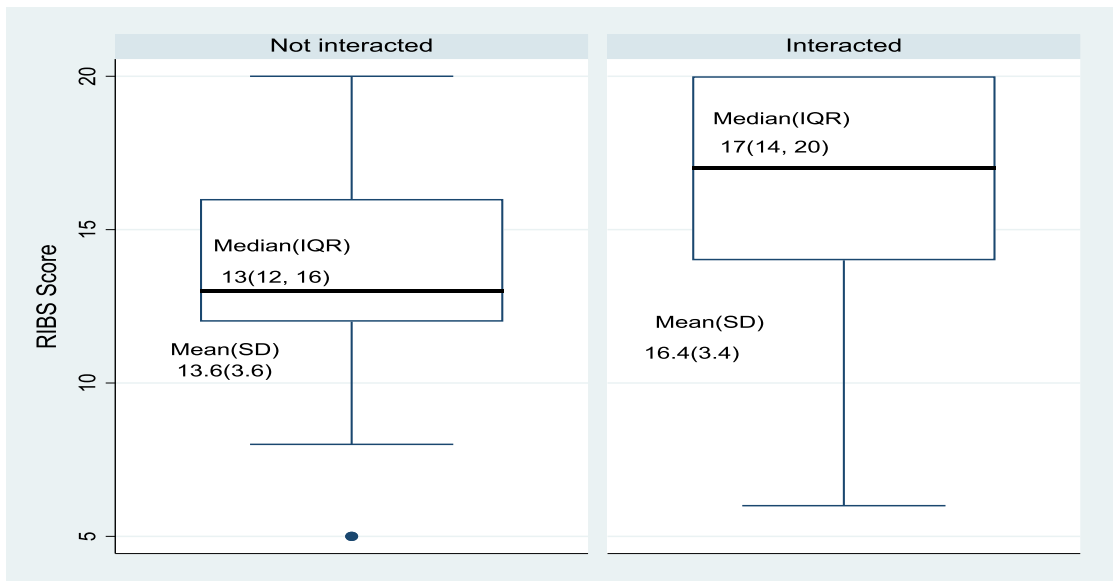


Figure 3: Box plot showing healthcare providers' RIBS scores by social behaviour

4.5 Correlation between Demographic Variables and HCPs' Stigmatizing Attitudes towards PWMI

Conducted were one-sample t-tests and one-way analysis of variance (ANOVA) tests to evaluate the associations between HCPs' stigmatizing attitudes towards PWMI and diverse demographic factors such as gender, age, cadre, education level, marital status, and religion.

A one-sample t-test that was performed to assess the association between HCPs' stigmatizing attitudes and gender was not significant ($p = 0.528$). The results showed that, on average, there were no statistically significant ($p > 0.05$) differences in stigmatizing attitudes towards PWMI between male ($M = 42.3$, $SD = 9.8$) and female ($M = 41.7$, $SD = 10.1$) healthcare providers (see Table 4).

A one-way ANOVA test was conducted to examine the relationship between HCPs' ages and their stigmatizing attitudes towards PWMI. The results from the ANOVA test were not statistically significant ($p = 0.361$), which implied that there were no

statistically significant differences in stigmatizing attitudes between the 18 to 24, 25 to 34, 35 to 44, 45 to 54, and over 54 years age groups. Despite the insignificant results, the researcher observed that HCPs who were older than 54 years ($M = 44.1$, $SD = 10.7$) had relatively higher stigmatizing attitudes as compared to HCPs who were aged between 18 and 24 years ($M = 39.0$, $SD = 8.7$) (see Table 4).

Another one-way ANOVA analysis was conducted to investigate the association between HCPs' level of education and their stigmatizing attitudes towards PWMI. The results from the ANOVA test were statistically significant ($p = 0.004$). Post-Hoc tests showed that, on average, certificate ($M = 46.1$, $SD = 7.9$) holders had significantly higher stigmatizing attitudes as compared to bachelor's degree ($M = 41.7$, $SD = 10.2$) and postgraduate degree ($M = 38.1$, $SD = 9.5$) holders (see Table 4).

A different one-way ANOVA test was also performed to assess the relationship between HCPs' cadre and their stigmatizing attitudes towards PWMI. The results from the analysis found statistically significant ($p = 0.004$) differences in stigmatizing attitudes across the ten cadre groups. Post-Hoc tests showed that, on average, nurses ($M = 44.4$, $SD = 9.8$) had significantly higher stigmatizing attitudes as compared to nutritionists ($M = 40.0$, $SD = 8.3$), psychological counsellors ($M = 40.5$, $SD = 7.5$), medical officers ($M = 37.7$, $SD = 7.7$), and consultants ($M = 37.6$, $SD = 8.9$) (see Table 4).

Other one-way ANOVA tests that were conducted to examine the association between marital status, religion, and HCPs' stigmatizing attitudes towards PWMI found statistically insignificant results. They found, that there were no statistically significant ($p = 0.428$) differences in stigmatizing attitudes between married ($M = 42.5$, $SD = 10.1$), single ($M = 41.2$, $SD = 8.8$), separated ($M = 40.0$, $SD = 13.2$), and

widowed ($M = 38.9$, $SD = 13.8$) healthcare providers. Similarly, there were no statistically significant ($p = 0.393$) differences in stigmatizing attitudes between Christian ($M = 42.1$, $SD = 9.9$), Muslim ($M = 43.1$, $SD = 10.2$), Hindu ($M = 38.3$, $SD = 11.2$), and unaffiliated ($M = 39.4$, $SD = 11.4$) healthcare providers (see Table 4).

Table 4: Associations between healthcare providers' Stigmatizing Attitudes and Demographic Characteristics

Variable	Category	Range	Mean (SD)	p-value
Sex	Female	16 – 67	41.7 (10.1)	0.528 ¹
	Male	21 – 70	42.3 (9.8)	
Age	18 – 24	25 – 57	39.0 (8.7)	0.361 ²
	25 – 34	21 – 66	42.5 (9.3)	
	35 – 44	16 – 70	41.4 (10.2)	
	45 – 54	23 – 67	43.5 (11.2)	
	>54	32 – 61	44.1 (10.7)	
Education	Certificate	37 – 63	46.1 (7.9)	0.004²
	Diploma	21 – 61	42.3 (8.3)	
	Higher diploma	26 – 67	45.2 (11.1)	
	Bachelor's degree	21 – 70	41.7 (10.2)	
Cadre	Postgraduate degree	16 – 61	38.1 (9.5)	0.004²
	Clinical officer	21 – 63	42.8 (10.8)	
	Nurse	24 – 67	44.4 (9.8)	
	Medical officer	25 – 64	37.7 (7.7)	
	Resident	24 – 64	40.7 (9.4)	
	Consultant	16 – 57	37.6 (8.9)	
	Nutritionist	25 – 60	40.0 (8.3)	
	Psychological counselor	29 – 57	40.5 (7.5)	
	Social worker	27 – 70	43.0 (11.9)	
	Occupational therapist	21 – 63	38.9 (12.9)	
Marital status	Others	29 – 63	43.7 (8.6)	0.428 ²
	Married	16 – 70	42.5 (10.1)	
	Single	25 – 63	41.2 (8.8)	
	Widowed	26 – 64	38.9 (13.8)	
Religion	Separated	21 – 62	40.0 (13.2)	0.393 ²
	Christianity	16 – 70	42.1 (9.9)	
	Islam	29 – 63	43.1 (10.2)	
	Hindu	26 – 63	38.3 (11.2)	
	Unaffiliated	25 – 62	39.4 (11.4)	

¹ *t*-test, ² One-way ANOVA

Also evaluated was the correlation between HCPs' MICA-4 and RIBS scores. As depicted in Figure 3, MICA scores were negatively correlated with RIBS scores ($r = -0.0340$, $p < 0.001$). The chart shows that higher stigmatizing attitudes were associated

with lower intentions to interact with PWMI. Additionally, lower stigmatizing attitudes were associated with higher intentions to interact with PWMI.

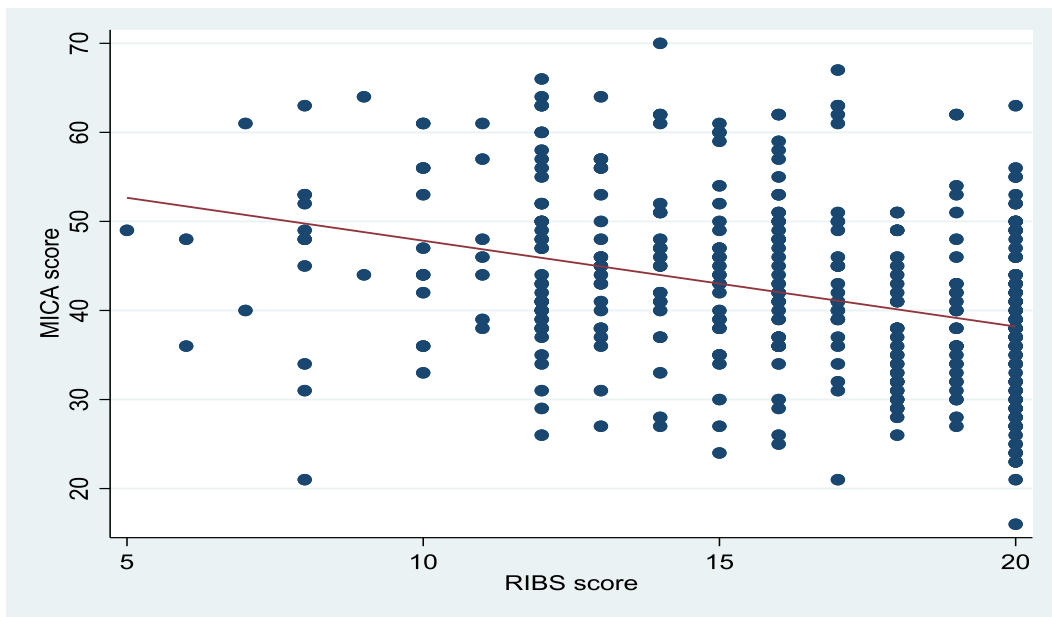


Figure 4: Scatter plot of stigmatizing attitudes and healthcare providers' willingness to interact with people with mental illness

CHAPTER FIVE: DISCUSSION, CONCLUSION, AND RECOMMENDATION

5.1 Discussion

This study investigated health care providers' attitudes and perceptions towards people with mental illness (PWMI). The study found that a significant proportion of healthcare providers (HCPs) reported positive attitudes towards PWMI. It found, that most HCPs were willing to live with (66.8%), live nearby (67.1%), work with (75.7%), and maintain relationships (72.9%) with individuals who had been diagnosed with mental illness. The study's findings were consistent with other results that were reported in Finland, Brazil, and Portugal. Nóbrega et al. (2020), found that a majority of Brazilian and Portuguese nurses held positive attitudes towards people with mental illness (Nóbrega et al., 2020). Similarly, most nurses in Ihalainen-Tamlander et al.'s (2016) study expressed compassionate feelings towards PWMI (Ihalainen-Tamlander et al., 2016).

However, this study's results contradicted the findings by Adewuya and Oguntade (2007), Naeem et al. (2006), Ewhrudjakpor (2009), and Mutiso et al.'s (2016). In Adewuya and Oguntade's (2007) study, the authors found that a majority of HCPs held negative attitudes towards PWMI. They found that a majority of the respondents would not only be embarrassed if people knew they had a relative who had mental illness but they would also not marry or hire PWMI (Adewuya & Oguntade, 2007). Similarly, in Naeem et al.'s (2006) study, the authors found that more than half of the respondents held negative attitudes towards PWMI. The authors reported that most respondents thought that PWMI were dangerous, unpredictable, and unfriendly. The participants also believed that PWMI would never improve or recover after treatment and need to calm down or pull themselves together to manage their symptoms (Naeem, M., J. Iqbal and M.A.A. Bakhsh, 2006). Additionally, Ewhrudjakpor (2009)

found that most HCPs held pessimistic views towards PWMI. Some believed that mental illness was incurable and others shunned family members who developed mental illness (Ewhrudjakpor, 2009). Mutiso et al. (2016) also found that a majority of the healthcare providers in Kenya's Makueni County exhibited negative attitudes towards people with mental illness. The possible reasons for the contradiction could be based on the fact that most of the participants in Mutiso et al.'s (2016) study included nurses and community health volunteers who lacked formal healthcare training. The varied findings in this study could also be attributed to the fact that individuals from diverse cadres were surveyed. Higher education and more cosmopolitan HCPs could explain the contradicting findings.

This study used the Mental Illness: Clinicians Attitudes scale (MICA-4) instrument to measure healthcare providers' perceptions towards people with mental illness. The study found the respondents' average MICA-4 score was 41.95 ($SD = 9.96$). The study's average MICA-4 scores were lower than those reported in Sahile et al.'s (2019) and Li et al.'s (2014) research. In Sahile et al.'s (2019) study, the average MICA-4 score was 58 (Sahile et al., 2019). Similarly, in Li et al.'s (2014) study, the average MICA-4 score was 51.69 ($SD = 6.94$) (Li et al., 2014). Li et al.'s (2014) average MICA-4 scores were higher in spite of the fact that, unlike in this study, Li et al.'s healthcare providers received training in mental illness treatment. The results show that MTRH's healthcare providers had lower stigma levels than their counterparts in Guangzhou province, China.

The Reported and Intended Behavior Scale (RIBS) was also used in this study to assess respondents' willingness to socialize with people with mental illness. The study found that the participants' RIBS scores ranged from 5 to 20, with an overall average

of 16.1 ($SD = 3.5$). This study's RIBS scores were comparable to those reported in Mutiso et al.'s (2016) research. In Mutiso et al.'s (2017) study, the respondents' average RIBS score was 16.2 ($SD = 3.1$) (Mutiso et al., 2017a). However, this study's average RIBS score was higher than an average of 11.97 ($SD = 3.41$) that was reported by Li et al. (2014) (Li et al., 2014). The findings show that despite the mental health awareness training, Li et al.'s (2014) subjects were less willing to socialize with PWMI. Similar findings were noted in a Singaporean study on the demographic characteristics of stigma. The researchers found that compared to the Malays and Indians, the Chinese living in Singapore showed more negative attitudes towards people with mental illness and this could explain the disparity in finding between this study and that done in Guangzhou, China (Yuan et al., 2016).

This study also investigated the factors that affect healthcare providers' (HCPs) feelings towards people with mental illness. It found that previous interactions with people with mental illness predicts HCPs' attitudes. It found that as compared to HCPs with prior interaction, those who had never interacted with a PWMI had significantly lower intentions to associate with them. This study's results contradicted the conclusions that were made by Naeem et al. (2006). In their study, Naeem et al. (2006) found that as compared to HCPs with no previous interactions, those who were acquainted with PWMI demonstrated higher levels of stigmatizing attitudes towards individuals with mental illness. Some of the reasons why Naeem et al. 2016 found that was due to the fact the students who had contact with severely ill patients for the first time developed negative attitude as compared to the practising HCPs in this study. This study's results, however, were consistent with the conclusions by Sandhu, Arora, Brasch, and Streiner (2019). Like in this study, Sandhu, Arora, Brasch, and Streiner (2019) found that physicians acquainted with people with mental illness had lower

stigmatizing attitudes towards the patients. Most HCPs who had prior interaction with people with mental illness demonstrated positive attitudes. The HCPs' positive attitudes were attributed to the empathy drawn from the time spent with people with mental illness and the realization that mental illness is not different from other physical illnesses. Further, available research has linked lack of contact to higher stigmatizing attitudes. It has been presumed that lack of contact increases feelings of discomfort, mistrust, and fear towards PWMI.

Besides prior acquaintance, the type of mental illness has also been implicated in healthcare providers' stigmatizing attitudes towards people with mental illness. While this study did not assess HCPs' attitudes towards different types of mental disorders, prior studies have found that more HCPs exhibit negative attitudes towards patients with schizophrenia than towards individuals with depression (Rojas Vistorte et al., 2018). Like Vistorte et al. (2018), Arbanas, Rožman, and Bagarić (2019) also found that healthcare providers had higher stigmatizing attitudes towards individuals who had been diagnosed with schizophrenia as compared to those with depression and posttraumatic stress disorder. Arbanas, Rožman, and Bagarić's (2019) participants associated schizophrenia with greater danger (Arbanas et al., 2019). Like Vistorte et al. (2018) and Arbanas, Rožman, and Bagarić (2019), Noblett, Lawrence, and Smith (2015) found that medical doctors had higher stigmatizing attitudes towards patients who had mental illness than those with no history of mental illness. The study also found that mental illness related stigma (MIRS) was higher towards patients with schizophrenia and personality disorders than towards those with depression. The fear accorded to schizophrenia can be attributed to its symptomatology. Schizophrenia generally presents with cognitive disturbances, which can result in undesirable behaviours such as agitation, untidiness, and occasional aggression and violence.

Studies that have compared HCPs' level of stigmatizing attitudes towards diverse diseases have also reported that individuals exhibit higher levels of stigma towards mental illness as compared to physical disorders (Husain et al., 2020). Vistorte et al.'s (2018), Arbanas et al.'s (2019), Noblett et al.'s (2015), and Husain et al.'s (2020) findings, however, were inconsistent with Fernando, Deane, and McLeod's (2010) results (Fernando et al., 2010). In Fernando et al.'s (2010) study, the authors found that HCPs had higher stigmatizing attitudes towards patients with depression and drug and alcohol addiction than towards those with schizophrenia, dementia, and panic disorders. This could be attributed to the notion that addiction is a personal choice and that one should pull themselves together from depression as to opposed conditions like schizophrenia.

This study also evaluated the effect of diverse socio-demographic factors on healthcare providers' perceptions towards people with mental illness. It found that age was not statistically significantly correlated ($p = 0.361$) with healthcare providers' stigma level. This study's findings were consistent with those reported in Noblett, Lawrence, and Smith's (2015) and Arbanas et al.'s (2019) research (Noblett et al., 2015); (Arbanas et al., 2019). The two studies did not find statistically significant differences in stigmatizing attitudes towards PWMI among participants' diverse age groups. The findings, however, contradicted Angermeyer and Dietrich's (2006), Yuan et al.'s (2016), Janoušková et al.'s (2017), Vistorte et al.'s (2018), and Husain et al.'s (2020) results that found that more older people than young people held negative attitudes towards people with mental illness. In Husain et al.'s study, participants who were older than 30 years demonstrated higher levels of MIRS as compared to individuals whose ages were lower than 30 years (Husain et al., 2020). According to

the authors, younger people portrayed tolerant attitudes towards people with mental illness (Angermeyer, 2006); (Yuan et al., 2016).

Angermeyer and Dietrich's (2006), Yuan et al.'s (2016), and Vistorte et al.'s (2018) findings, however, contradicted Hartini et al.'s (2018) and Ihalainen-Tamlander et al.'s (2016) findings. In Hartini et al.'s (2018) study, the authors found that older age was associated with lower stigmatizing attitudes towards PWMI (Hartini et al., 2018). Similarly, Ihalainen-Tamlander et al. (2016) established that more young than old nurses exhibited negative perceptions towards people with mental illness. This could be attributed to the fewer number of young people below 24 ($n = 21$) and older people above 54 ($n = 7$) that were recruited for this study. This was because of the country's retirement age of 55 years (now 60 years) and when the healthcare providers join the workforce from institutions of higher learning.

Besides age, this study found that gender was not significantly correlated ($p = 0.528$) with HCPs' stigmatizing attitudes towards PWMI. The results were consistent with Arbanas et al.'s (2019) study that did not find any correlation between gender and level of stigmatizing attitudes (Arbanas et al., 2019). The findings, however, contradicted Yuan et al.'s (2016), Angermeyer and Dietrich's (2006), Noblett, Lawrence, and Smith's (2015), Li, Li, Thornicroft, and Huang's (2014), Husain et al.'s (2020), and Janoušková et al.'s (2017) studies that established that more males than females held negative attitudes towards people with mental illness. In Li, Li, Thornicroft, and Huang's (2014) study, the authors found that more females than males were willing to interact with people with mental illness. Li, Li, Thornicroft, and Huang's (2014) findings, however, can be attributed to a lower proportion of women who participated in their study as compared to this study where women accounted for 52 percent of all the respondents.

Unlike age and gender, this study found a significant correlation ($p = 0.004$) between education and HCPs' stigmatizing attitudes towards PWMI. It found that certificate holders ($M = 46.1$, $SD = 7.9$) had significantly higher MICA scores as compared to diploma ($M = 42.3$, $SD = 8.3$), bachelor's degree ($M = 41.7$, $SD = 10.2$), and postgraduate degree ($M = 38.1$, $SD = 9.5$) holders. The study's findings were consistent with Sandhu, Arora, Brasch, and Streiner's (2019), and Mutiso et al.'s (2016) conclusions that established that highly educated individuals held less stigmatizing attitudes towards people with mental illness. In Sandhu, Arora, Brasch, and Streiner's (2019) study, the authors found that as compared to undergraduate and medical students, qualified psychiatrists had significantly lower stigmatizing attitudes towards people with mental illness. Similarly, in Mutiso et al.'s (2016) study, the authors found that increased knowledge about mental illness reduced HCPs' stigmatizing attitudes. The results were also consistent with Fernando, Deane, and McLeod's (2010) and Naeem et al.'s (2006) studies that found that more medical students than medical doctors displayed negative attitudes towards PWMI. This study's findings were also supported by Chang et al. (2017) and Husain et al. (2020). Chang et al. (2017) study found that as compared to nursing students, medical students exhibited less stigmatizing attitudes towards PWMI. Similarly, Husain et al. (2020) found that medical students exhibited higher MIRS as compared to HCPs.

Sandhu, Arora, Brasch, and Streiner's (2019), Fernando, Deane, and McLeod's (2010), and this study's results, however, contradicted Munro and Baker's (2007), Foster et al.'s (2008), and Janoušková et al.'s (2017) studies that found an inverse relationship between education and stigmatizing attitudes. In Foster et al.'s (2008) study, the authors found that more nursing assistants than nurses held positive attitudes towards people with mental illness. Similarly, Munro and Baker (2007)

found that more qualified HCPs than less qualified HCPs held negative attitudes towards PWMI. Like Munro and Baker (2007), Janoušková et al. (2017) found that more consultants than medical students reported high levels of MIRS. This study's results also contradicted those reported in Noblett, Lawrence, and Smith's (2015) research. In Noblett et al.'s (2015) study, the authors did not find a statistically significant relationship between level of training and stigmatizing attitudes. Despite the contrasting results, this study's conclusions support the theory that increased education reduces stigma. One can conclude that higher education increases individuals' knowledge and experiences with psychiatric disorders, which improves people's support and attitudes towards PWMI.

The study also found a significant correlation ($p = 0.004$) between participants' cadre and stigmatizing attitudes towards PWMI. It found that on average, nurses ($M = 44.4$, $SD = 9.8$) and clinical officers ($M = 42.8$, $SD = 10.8$) had significantly higher MICA scores as compared to medical officers ($M = 37.7$, $SD = 7.7$) and consultants ($M = 37.6$, $SD = 8.9$). The study's results were supported by Arbanas, Rožman, and Bagarić's (2019) research that found that as compared to medical doctors, nurses had higher stigmatizing attitudes towards patients with schizophrenia and depression. The difference between nurses and medical doctors' stigmatizing attitudes can be attributed to medical doctors' higher knowledge and experience with mental illnesses. Arbanas, Rožman, and Bagarić's (2019) and this study's findings, however, contradicted Vistorte et al.'s (2018) results that established that as compared to less experienced physicians, a higher number of experienced physicians exhibited negative attitudes towards PWMI.

Studies that have compared the general public's MIRS have also yielded comparable results. In Yuan et al.'s (2017) study, the authors found that as compared to members of the general population, HCPs held positive attitudes towards PWMI. Similarly, Winkler et al. (2016) found that unlike the general public, medical doctors held less stigmatizing attitudes towards PWMI. Additionally, in Husain et al.'s (2020) study, MIRS scores were higher among the members of the general public than among medical students and HCPs. Winkler et al. (2016), Yuan et al.'s (2017), and Husain et al.'s (2020) and this study findings affirmed the belief that education, training, experience and contact with mental illness reduces participants' stigmatizing attitudes towards PWMI.

This study also investigated the impact of marital status on HCPs' stigmatizing attitudes towards PWMI. The study found that marital status ($p = 0.428$) was not significantly correlated with HCPs' stigmatizing attitudes. These findings contradicted those reported in Hartini et al.'s (2018) study. The authors found that as compared to married HCPs, single HCPs had higher stigmatizing attitudes towards PWMI (Hartini et al., 2018).

The association between religion and MIRS was also evaluated. The study found that religion ($p = 0.393$) was not significantly correlated with HCPs' stigmatizing attitudes. The findings from this study were inconsistent with Abuhammad and Al-Natour's (2021) study that found a significant correlation between religiousness and HCPs' stigmatizing attitudes towards PWMI. The authors found that higher religiousness scores were associated with lower stigmatizing attitudes towards PWMI. The positive attitudes can be attributed to religious groups' belief that good and bad

outcomes are a gift from God, with bad being a test of one's faith in God (Al-Natour et al., 2021).

5.2 Limitations and Strengths of the Study

This study was limited by its scope. The study focused on health care providers who were working at the Moi Teaching and Referral Hospital at the time of the survey. Since the study was limited to one of Kenya's health care facilities, its findings cannot be generalized to the whole population of health care providers in the country. However, MTRH has a diverse and cosmopolitan representation of HCPs and also a wide catchment area or pool from where samples can be drawn and, as such, findings from this study can be replicated elsewhere in the country.

Self-report bias due to the self-administered nature of the questionnaire. The respondents may have responded in a way that was socially acceptable as stigma is not socially accepted. Desirability bias was mitigated by allowing for anonymity where some questionnaires were collected together with others, the following day.

The study also focused on cadre and not area of specialisation and, as such, stigma was not measured between different specialists. It did not compare MIRS between psychiatrists and surgeons or nurses working in the outpatient department against those working in labour ward.

The level of stigma was for all mental illnesses and not specific psychiatric disorders. This study however forms a basis for future studies on stigma towards specific psychiatric disorders.

5.3 Conclusion

Mental illness related stigma (MIRS) is a key barrier to people with mental illness' (PWMI's) access to treatment. It discourages patients from seeking help due to the fear of being humiliated and labelled. It also reduces individuals' self-esteem, leading to social isolation and premature discontinuation of treatment. Stigmatizing attitudes can also affect family relationships and individuals' work lives.

This study sought to investigate healthcare providers' perceptions, attitudes, and stigmatizing attitudes towards PWMI at Kenya's Moi Teaching and Referral Hospital. Findings from the study would inform policy changes to reduce healthcare providers' (HCPs') stigmatizing attitudes and, ultimately, improve individuals' mental health outcomes.

The findings from this study showed that a significant proportion of health care providers in MTRH hold positive attitudes towards PWMI. It found that a majority of HCPs were willing to live with, live nearby, work with, and form lasting relationships with PWMI. The survey also found a negative correlation between MICA-4 and RIBS scores, which showed that higher stigmatizing attitudes were associated with lower intentions to interact with PWMI.

The study also investigated the factors that influence HCPs' attitudes towards PWMI. It found that interaction with PWMI plays a significant role in predicting HCPs' attitudes. It found that as opposed to those with no prior contact with PWMI, HCPs who had interacted with PWMI had higher intentions to interact with the individuals and consequently fewer negative attitudes.

The study also found that education and cadre predicted HCPs' attitudes towards PWMI. It found that as compared to certificate and diploma holders, HCPs with bachelor's degrees and postgraduate degrees had lower stigmatizing attitudes towards PWMI. It was also found that highly qualified HCPs such as medical officers and consultants reported lower stigmatizing attitudes towards PWMI than clinical officers and nurses.

The association between stigmatizing attitudes and RIBS scores indicated that, HCPs with previous interactions with PWMI had lower negative stereotypes. Higher stigmatizing attitudes were associated with lower intentions to interact with PWMI. Additionally, lower stigmatizing attitudes were associated with higher intentions to interact with PWMI

It was also found that age, gender, marital status, and religion were not significant predictors of HCPs' attitudes towards PWMI. Other socio-demographic variables such as education level and cadre, however, were significant predictors. The findings from the study suggest the need for mental health training to reduce HCPs' stigmatizing attitudes.

5.4 Recommendation

This study found that a few healthcare providers (HCPs) held stigmatizing attitudes towards people with mental illness (PWMI). The study found that a few HCPs were not willing to live with (7.7%), work with (5.6%), live nearby (10.3%), or maintain social relationships (10.4%) with PWMI. If not addressed, such stigmatizing attitudes will reduce PWMI's likelihood of seeking treatment. MTRH should consider implementing several interventions to reduce HCP's stigmatizing attitudes towards PWMI.

One of such interventions includes mental health training programs and the provision of educational materials. A growing body of research has investigated the effectiveness of mental health training in reducing MIRS. In one such study, the authors found that when compared to those who had not received mental health training, a greater proportion of medical students who received psychiatry training exhibited positive attitudes towards PWMI (Tharyan et al., 2001). Other similar studies recorded significant reduction in stigmatizing attitudes towards PWMI after a psychiatry clerkship training (Shen et al., 2014); (Lyons & Janca, 2015); (Bingham & O'Brien, 2018). In another study that investigated the effectiveness of mental health training, the authors found that the education programs such as Mental Health First Aid, a standardized, psychoeducational programme increased participants' knowledge of mental illnesses, decreased negative attitudes, modified myths and stereotypes, and increased supportive behaviors towards PWMI (Hadlaczky et al., 2014). Due to its success in other settings, MTRH's management should consider introducing regular mental health training sessions for its healthcare providers.

Besides education, MTRH could consider implementing skills-building activities such as clinical placements and rotations. The effectiveness of clinical placement and rotations in reducing MIRS has been widely reported in literature. In some of such studies, the authors found that clinical placements were associated with an improvement in HCPs' skills, knowledge, reduced fear, anxieties, and stigmatizing attitudes towards PWMI (Abd Malik et al., 2012); (Happell et al., 2015). These clinical placements will equip HCPs with adequate skills that will be useful during their interactions with PWMI.

Another key intervention involves contact. This study found that as compared to those with prior social interactions, HCPs who had never interacted with PWMI had higher stigmatizing attitudes and lower willingness to interact with PWMI. The findings highlight a positive relationship between HCP-PWMI care rotations and case management and positive attitudes towards PWMI. Based on the available literature, HCP-PWMI care rotations and case management is helpful in changing stereotypes, diminishing anxiety, heightening empathy and compassion, increasing personal connections, improving individuals' understanding of mental illness, reducing desires for social distance from PWMI, and reducing consequently MIRS (Fernando et al., 2010); (Knaak et al., 2017); (Sebastian & Richards, 2017); (Ng et al., 2017); (Martínez-Martínez et al., 2019). In Ng, Rashid, and O'Brien's (2017) study, the authors found that 30 percent of nurses reported lower stigmatizing attitudes towards PWMI after a video-based contact intervention. Another study (Alexander & Link, 2003) found that increased contact decreased participants' perceived dangerousness of PWMI. It also decreased desires of social distance from PWMI. Accordingly, MTRH's management should consider introducing sessions that allow HCPs to hear testimonies from PWMI who are qualified to share their experiences with mental illness. Contact approaches could include in-person or video conferencing. Such sessions will increase HCPs' understanding of mental illness and, ultimately, increase their support for PWMI. Increasing HCPs' contact with psychiatric patients will effectively reduce discomfort, distrust, and fear and facilitate positive interaction and connection between the two groups.

This study also found that nurses had higher stigmatizing attitudes toward PWMI than nutritionists, psychological counsellors, medical officers, and consultants. Kenya's ministry of education should consider expanding its mental health nursing curricula particularly towards mental illness in colleges and universities to enhance nurses' understanding and counter inaccurate stereotypes and myths about mental illnesses.

5.5 Opportunities for Future Research

It would be interesting to measure healthcare providers (HCPs') attitudes towards different types of mental illnesses. Results from such a study would inform targeted efforts aimed at educating HCPs about individual mental illnesses, hence dispelling existing myths and stereotypes.

Future studies can also measure the success of different intervention programs that have been recommended and/or implemented to reduce HCPs' stigmatizing attitudes towards people with mental illness (PWMI). Such studies should also measure the impact of stigma reduction initiatives on patient experiences and outcomes. The results from such studies could help in developing global strategies geared towards improving not only equity in healthcare but also the quality of life of PWMI.

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APPENDICES

Appendix I: Informed Consent Form

Study's Title: Mental illness related stigma among healthcare providers in MTRH, Eldoret, Kenya

Name of the Principal Researcher: John Wamwaki

Name of the Organization: Moi University and Moi Teaching and Referral Hospital

Name of the Sponsor: Self

This informed consent form is composed of two sections. The first section contains the information sheet, which summarizes the research project and its objectives. On the other hand, the second section contains a certificate of consent that collects signatures from individuals who agree to participate in the survey. Respondents will be issued with copies of their signed informed consent forms.

Part I: Information Sheet

Introduction

You are being requested to take part in a research study. This information is provided to tell you about the study. Please read this form carefully. You will be given a chance to ask questions. If you decide to be in the study, you will be given a copy of this consent form for your records.

Taking part in this research study is voluntary. You may choose not to take part in the study. Saying no will not affect your rights as an employee of Moi Teaching and Referral Hospital. You are also free to withdraw from this study at any time. If after data collection you choose to quit, you can request that the information provided by you be destroyed under supervision- and thus not used in the research study. You will be notified if new information becomes available about the risks or benefits of this research. Then you can decide if you want to stay in the study.

Purpose of the study:

The purpose of this study is to assess stigma related to mental illness among healthcare providers in Moi Teaching and Referral Hospital

Type of Research Project/Intervention:

The study will involve a questionnaire in order to answer the study questions.

Commonly asked questions

? Why have I been identified to Participate in this study?

414 healthcare workers at MTRH and who meet the eligibility criteria for the study are being invited to participate.

? How long will I be involved in the study?

You will be involved in the study only during the interview which is one day.

? What will happen to me during the study?

We are asking you to help us learn more about the perception you have towards the mentally ill. This will help us understand the impact of stigma towards the mentally ill among healthcare workers in MTRH. If you accept, you will be asked to answer a number of questions concerning the subject

You will be required to answer personal questions about yourself about your attitudes and associations with people with mental illness.

? **What side effects or risks I can expect from being in the study?**

We shall not be applying any interventions or giving any medication, therefore we don't anticipate any risks nor side effects from the study.

? **Are there benefits to taking part in the study?**

The possible benefits of this study to society may include, a better understanding of the level of stigma towards the mentally ill by the healthcare workers in MTRH. This will help us formulate ways to reduce the same to better help our patients in the future.

? **Reimbursements:**

There shall be no reimbursements to those who volunteer to participate in the study

? **Who do I call if I have questions about the study?**

For questions about the study, call John Wamwaki on Tel No: 0700201641

For questions about your rights as a research subject: You may contact Institutional Review Ethics Committee (IREC) 053 33471 Ext.3008. (IREC is a group of people that reviews studies for safety and to protect the rights of study subjects).

? **Will the information I provide be kept private?**

All reasonable efforts will be made to keep your protected information (private and confidential. Protected Information is information that is, or has been, collected or maintained and can be linked back to you. Using or sharing ("disclosure") of such information will follow National privacy guidelines. By signing the consent document for this study, you are giving permission ("authorization") for the uses and disclosures of your personal information.

As part of the study, John Wamwaki Njoroge may share the results of your [age, residence, level of education health status e.t.c]. These may be study or non-study related. They may also share with the groups named below:

- The Institutional Review and Ethics Committee,
- MTRH and Moi University

National privacy regulations may not apply to these groups; however, they have their own policies and guidelines to assure that all reasonable efforts will be made to keep your personal information private and confidential.

The study results will be retained in your research record for at least 7 years after the study is completed. At that time, the research information not already in your medical record will be stored in a secure location, only accessible to the researcher. Research information will be kept for a period of 7 years and will then be destroyed permanently.

Part II: Consent of Subject:

I have read (or have had read to me) the description of the research study. The investigator or his representative has explained the study to me and has answered all of the questions I have at this time. I have been told of the potential risks, discomforts and side effects as well as the possible benefits (if any) of the study. I freely volunteer to take part in this study.

Name of Participant	Signature of subject/thumbprint	Date

Printed name of Investigator	Signature of Investigator	Date

Appendix II: Data Collection Tools

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS			
NO	Question	Response	Code
1	SEX	F=1 M=2	[]
2	AGE	18-24=1 25-24=2 35-44=3 45-54=4 Above 54=5	[]
3	Highest Education level	1=Certificate 2=Diploma 3=Higher Diploma 4=Bachelor's Degree 5=Postgraduate Degree 6=Other	[]
4	Cadre	1=Clinical Officer 2=Nurse 3=Medical Officer 4=Registrar 5=Consultant 6=Pharmacist 7= Nutritionist 8= Psychological Counsellor 9=Social Worker 10=Occupational Therapist 11=Others (State)	[]
5	Marital Status	1= Married 2= Single 3=Separated 4=Widowed	[]

Mental Illness: Clinicians' Attitudes Scale

MICA-4

Note to researchers distributing this scale: please only use after reading instructions in "Manual for Researchers".

Instructions: for each of questions 1-16, please respond by **ticking one box only**. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

		Strongly agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
1	I just learn about mental health when I have to, and would not bother reading additional material on it.						
2	People with a severe mental illness can never recover enough to have a good quality of life.						
3	Working in the mental health field is just as respectable as other fields of health and social care.						
4	If I had a mental illness, I would never admit this to my friends because I would fear being treated differently.						
5	People with a severe mental illness are dangerous more often than not.						
6	Health/social care staff know more about the lives of people treated for a mental illness than do family members or friends.						
7	If I had a mental illness, I would never admit this to my colleagues for fear of being treated differently.						
8	Being a health/social care professional in the area of mental health is not like being a real health/social care professional.						
9	If a senior colleague instructed me to treat people with a mental illness in a disrespectful manner, I would not follow their instructions.						

Mental illness: Clinicians' Attitudes Scale MICA-2 © 2010. Health Service and Population Research Department, Institute of Psychiatry, King's College London. We would like to thank Aliya Kassam for her major contribution to the development of this scale. Contact: Professor Graham Thornicroft, Email: graham.thornicroft@kcl.ac.uk

Kassam A., Glozier N., Laese M., Henderson C., Thornicroft G. (2010) Development and responsiveness of a scale to measure clinicians' attitudes to people with mental illness (medical student version). Acta Psychiatrica Scandinavica 122(2), 153-161.

Mental Illness: Clinicians' Attitudes Scale

MICA-4

Note to researchers distributing this scale: please only use after reading instructions in "Manual for Researchers".

Instructions: for each of questions 1-16, please respond by **ticking one box only**. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

		Strongly agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
10	I feel as comfortable talking to a person with a mental illness as I do talking to a person with a physical illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	It is important that any health/social care professional supporting a person with a mental illness also ensures that their physical health is assessed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	The public does not need to be protected from people with a severe mental illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	If a person with a mental illness complained of physical symptoms (such as chest pain) I would attribute it to their mental illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	General practitioners should not be expected to complete a thorough assessment for people with psychiatric symptoms because they can be referred to a psychiatrist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	I would use the terms 'crazy', 'nutter', 'mad' etc. to describe to colleagues people with a mental illness who I have seen in my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	If a colleague told me they had a mental illness, I would still want to work with them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you very much for your help.

Mental Illness: Clinicians' Attitudes Scale MICA-2 © 2010, Health Service and Population Research Department, Institute of Psychiatry, King's College London. We would like to thank Aliya Kassam for her major contribution to the development of this scale. Contact: Professor Graham Thornicroft, Email: graham.thornicroft@kcl.ac.uk

Kassam A., Glozier N., Leese M., Henderson C., Thornicroft G. (2010) Development and responsiveness of a scale to measure clinicians' attitudes to people with mental illness (medical student version). Acta Psychiatrica Scandinavica 122(2), 153-161.

Reported and intended behaviour scale

RIBS

Instructions: The following questions ask about your experiences and views in relation to people who have mental health problems (for example, people seen by healthcare staff). For each of questions 1–4, please respond by ticking one box only.

		Yes	No	Don't know
1	Are you currently living with, or have you ever lived with, someone with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Are you currently working with, or have you ever worked with, someone with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Do you currently have, or have you ever had, a neighbour with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Do you currently have, or have you ever had, a close friend with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Instructions: For each of statements 5–8, please respond by ticking the appropriate box.

		Agree strongly	Agree slightly	Neither agree nor disagree	Disagree strongly	Disagree slightly	Don't know
5	In the future, I would be willing to live with someone with a mental health problem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	In the future, I would be willing to work with someone with a mental health problem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	In the future, I would be willing to live nearby to someone with a mental health problem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	In the future, I would be willing to continue a relationship with a friend who developed a mental health problem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you very much for your help.

Reported and intended behaviour scale RIBS-10 © 2009 Health Service and Population Research Department, Institute of Psychiatry, King's College, London. Contact: Professor Graham Thornicroft. Email: graham.thornicroft@kcl.ac.uk



Appendix III: Budget

ITEM	COST
Stationery.....	20,000
Laptop	60,000
Printer	20,000
Toner	15,000
Data analysis	50,000
Transport	20,000
Contingency	40,000
Total.....	225,000/=

Appendix IV: Time Schedule.**Activity Timeline**

1.	Writing and submission proposal from	April 2018 to Dec 2018
2.	Present proposal to IREC for approval	December 2018
3.	IREC Approval	Jan 2019
4.	End of proposal writing	February 2019
5.	Data collection	March 2019-Sep 2020
6.	Data cleaning, coding and entry	Oct 2020 to Feb 2021
7.	Data analysis	March 2021 to June 2021
8.	Submission of the draft of thesis for scrutiny	July 2021
9.	Correction of thesis and submission for final scrutiny	August to Sept of 2021
10.	Correction, binding, and submission of thesis	November 2021.


Appendix V: IREC Approval

MU/MTRH-INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE (IREC)

MOI TEACHING AND REFERRAL HOSPITAL
P.O. BOX 3
ELDORET
Tel: 334711023
Reference: IREC/2019/01
Approval Number: 0003266

MOI UNIVERSITY
COLLEGE OF HEALTH SCIENCES
P.O. BOX 4606
ELDORET
14th March, 2019



Dr. John Wamwaki,
Moi University,
School of Medicine,
P.O. Box 4606-30100,
ELDORET-KENYA.

Dear Dr. Wamwaki,

RE: FORMAL APPROVAL


The MU/MTRH- Institutional Research and Ethics Committee has reviewed your research proposal titled: -

"Stigma Related to Mental illness among Healthcare Providers at Moi Teaching and Referral Hospital, Eldoret, Kenya".

Your proposal has been granted a Formal Approval Number: **FAN: IREC 3266** on 14th March, 2019. You are therefore permitted to begin your investigations.

Note that this approval is for 1 year; hence will expire on 13th March, 2020. If it is necessary to continue with this research beyond the expiry date, a request for continuation should be made in writing to IREC Secretariat two months prior to the expiry date. You will be required to submit progress report(s) on application for continuation, at the end of the study and any other times as may be recommended by the Committee.

Furthermore, you must notify the Committee of any proposal change (s) or amendment (s), serious or unexpected outcomes related to the conduct of the study, or study termination for any reason. You will also be required to seek further clearance from any other regulatory body/authority that may be appropriate and applicable to the conduct of this study.

Sincerely,

DR. S. NYABERA
DEPUTY-CHAIRMAN
INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE

cc CEO - MTRH Dean - SOP Dean - SOM
 Principal - CHS Dean - SON Dean - SOD



MOI TEACHING AND REFERRAL HOSPITAL
P.O. BOX 3
ELDORET
Tel: 33471/2/3
Reference: IREC/2019/01
Approval Number: 0003266



MOI UNIVERSITY
COLLEGE OF HEALTH SCIENCES
P.O. BOX 4606
ELDORET
14th March, 2020

Dr. John Wamwaki,
Moi University,
School of Medicine,
P.O. Box 4606-30100,
ELDORET-KENYA.

Dear Dr. Wamwaki,

RE: CONTINUING APPROVAL



The Institutional Research and Ethics Committee has reviewed your request for continuing approval to your study titled:

"Stigma Related to Mental illness among Healthcare Providers at Moi Teaching and Referral Hospital, Eldoret, Kenya".

Your proposal has been granted a Continuing Approval with effect from 14th March, 2020. You are therefore permitted to continue with your study.

Note that this approval is for 1 year; it will thus expire on 13th March, 2021. If it is necessary to continue with this research beyond the expiry date, a request for continuation should be made in writing to IREC Secretariat two months prior to the expiry date.

You are required to submit progress report(s) regularly as dictated by your proposal. Furthermore, you must notify the Committee of any proposal change (s) or amendment (s), serious or unexpected outcomes related to the conduct of the study, or study termination for any reason. The Committee expects to receive a final report at the end of the study.

Sincerely,

DR. S. NYABERA
DEPUTY-CHAIRMAN
INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE

cc CEO - MTRH Dean - SOP Dean - SOM
 Principal - CHS Dean - SON Dean - SOD

Appendix VI: Hospital approval (MTRH)



An ISO 9001:2015 Certified Hospital



MOI TEACHING AND REFERRAL HOSPITAL

Telephone : (+254)053-2033471/2/3/4
 Mobile: 722-201277/0722-209795/0734-600461/0734-683361
 Fax: 053-2061749
 Email: ceo@mtrh.go.ke/directorsoffice@mtrh@gmail.com

Nandi Road
 P.O. Box 3 – 30100
 ELDORET, KENYA

Ref: ELD/MTRH/R&P/10/2/V.2/2010

18th March, 2019

Dr. John Wamwaki,
 Moi University,
 School of Medicine,
 P.O. Box 4606-30100,
ELDORET-KENYA.

APPROVAL TO CONDUCT RESEARCH AT MTRH

Upon obtaining approval from the Institutional Research and Ethics Committee (IREC) to conduct your research proposal titled:-

"Stigma Related to Mental illness among Healthcare Providers at Moi Teaching and Referral Hospital, Eldoret, Kenya".

You are hereby permitted to commence your investigation at Moi Teaching and Referral Hospital.

Wilson K. Aruasa
DR. WILSON K. ARUASA, MBS
CHIEF EXECUTIVE OFFICER
MOI TEACHING AND REFERRAL HOSPITAL

cc - Senior Director, (CS)
 - Director of Nursing Services (DNS)
 - HOD, HRISM

MOI TEACHING AND REFERRAL HOSPITAL
 CEO
 APPROVED

18 MAR 2019

P. O. Box 3 - 30100, ELDORET

All correspondence should be addressed to the Chief Executive Officer

Visit our Website: www.mtrh.go.ke

TO BE THE LEADING MULTI-SPECIALTY HOSPITAL FOR HEALTHCARE, TRAINING AND RESEARCH IN AFRICA