Texila International Journal of Public Health
ISSN: 2520-3134
DOI: 10.21522/TIJPH.2013.12.01.Art022

Assessment of the Need, Demand, and Access to Mental Health Care Services by Nursing Staff in Dispensaries Within Mombasa County, Kenya

Khadija Mbarak Awadh[1]*, Mbaruk Abdalla Suleiman[2]
[1]*Department of Public Health, Texila American University, Mombasa, Kenya*
[2]*Department of Epidemiology, Biostatistics, and Community Health, School of Public Health, Mount Kenya University, Thika via Nairobi, Kenya*

Abstract

Mental health and well-being are crucial for a fulfilling life. Work related stress negatively impacts health care providers' professionalism, quality of care delivery, efficiency, and overall quality of life. It is important to identify and mitigate these work-related risk factors to protect the mental health well-being of healthcare workers. The aim of this study was to assess the provision, demand and awareness of need for mental health care services amongst nursing care staff stationed in dispensaries within Mombasa County, Kenya. This is a cross-sectional study that targeted nurses at the dispensary level, facility in-charges, and County health personnel. Quantitative data was collected using GAD-7 to measure anxiety, PHQ 9 to measure depression and PCL 5 to measure PTSD. Qualitative data was collected through IDI and key informant interviews with the facility in charges and the Sub-County County nurse officials. Quantitative data was analyzed descriptively while qualitative data was analyzed following Creswell six steps. The research discovered the proportion of nurses in Mombasa County affected by PTSD severe anxiety and severe depression as 12.6%, 22.6% and 3.2% respectively. These conditions have their origin in work and personal matters with work-related matters being the main contributors. Fear of stigmatization from colleagues and the community negatively affected care seeking behavior. Nine county facilities offered mental health services although understaffed with only 9 specialized staff. The county has made some investment in mental health service provision, this investment is however focused on service provision to the general public as opposed to health care workers.

Keywords: *County, Mental Health, Nurse, Service.*

Introduction

Mental health refers to cognitive, behavioral, and emotional well-being. It focuses on how people think, feel, and behave. People sometimes use the term “mental health” to mean the absence of a mental disorder [1]. In the World Health Organization (2022) mental health fact sheet, a mental disorder also referred to as mental health condition is characterized by a clinically significant disturbance in an individual’s cognition, emotional regulation, or behavior and is associated with distress or impairment in important areas of functioning. The WHO mental disorders fact sheet stipulates the presence of several types of mental disorders, and psychosocial disabilities which are attributed to significant distress, impairment of functioning, or risk of self-harm [2].

In 2021 a multi-stakeholder meeting held in Kenya under the WHO-UNDP taskforce, reviewed Kenya’s mental health data, and found that 1 in 4 adults in Kenya suffered from a mental disorder [2]. The Ministry of Health, Kenya indicated that, this number had risen from 1 in 10 adults, with depression and anxiety disorders being the lead forms of

Received: 09.01.2024 ***Accepted: 14.03.2024*** ***Published on: 29.03.2024***
****Corresponding Author: k.hadharmy@gmail.com***

mental conditions [2]. Mental illness is therefore quite common in Kenya, however accessing the services is a challenge due to poor health systems [2]. There is an increase in the reported suicides, mental health conditions, substance use and addictive disorders of an epidemic proportion in Kenya, an indication of social challenges and unmet needs at society level. It is estimated that half of all the mental disorders commence from 14 years and 75% by the age of 24 years. In addition, stigma and discrimination contributes to and perpetuates mental ill health and marginalizes persons with mental health conditions, intellectual, psychosocial, and cognitive disabilities, (KMHAP, 2021-2025). In an article by APHRC, in 2019, it stated that Kenya experiences around 1408 deaths annually from suicide, a significant number higher than the 421cases that were reported by the Kenya Bureau of Statistics in 2018. Among the ages of 15-29 years, suicide is listed as the second leading cause of death. There is lack of adequate data and information currently on the prevalence of mental health, neurological, and substance abuse in Kenya. It is estimated that up to 25% of outpatients and up to 40% of in-patients in health facilities suffer from mental health conditions. The prevalence of psychosis in Kenya is at an average of 1% of the general population. The most common diagnosis of mental illnesses made in the general hospital settings is depression, substance abuse, stress and anxiety disorders. The mental health disorders prevalence may also be attributed to the noted cases of suicide, homicides and violence at household levels [3].

The main objective of this study was to assess the provision, demand and awareness of need for mental health care services amongst nursing care staff stationed in dispensaries within Mombasa County, Kenya. The specific objectives being to determine the origin of mental health issues amongst nursing care staff stationed in dispensaries within Mombasa County, Kenya, to determine the prevalence/frequency of mental health conditions for purpose of assessing the need for care among nurses, to assess the availability of mental health care services within Mombasa County, Kenya, to establish factors contributing to the demand and consumption of mental health care services by nurses within Mombasa County and to evaluate the investment of Mombasa County government on mental health care services for its staff.

Problem Statement

The WHO constitution defined health as "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"[8]. Most of the economic burden as a result of mental illness is not the cost of care, but due to the loss of income as a result of unemployment, social support expenses, incarceration, and a range of indirect costs due to a chronic disability that begins early in life. Mental health disorders have a profound impact on physical health and are associated with the progression, prevalence, and outcome of some of today's most pressing chronic diseases, such as diabetes, heart disease, cancer, and greatly impacts businesses, education, law enforcement and the provision of social services. Overall, the impact on the global economy due to all mental disorders was approximately $2.5 trillion annually due to poor health and reduced productivity in 2010, a cost projected to rise to $6 trillion by 2030. Mental disorders also affect not only the people living with the disorder, but also their families, schools, workplaces, and communities [8].

While there is an array of effective prevention and treatment options in existence, most people with mental disorders do not have access to the appropriate care. People experience stigma, discrimination, and violations of their human rights [2]. Mental health conditions can be treated and managed effectively at relatively low cost, yet a

significant number of people needing care and those with access to care remains largely substantial. Effective treatment coverage remains extremely low [62]. In recent years, there has been increased acknowledgement and appreciation of the important role mental health plays in the achievement of the global development goals, as illustrated by the inclusion of mental health as the thirds goal for good health and well-being, in the Sustainable Development Goals [10]. Kenya has no record of national surveillance data on mental illness [11], thus making the mental health disease burden for Kenya difficult to estimate because of the lack of resources and governance systems that make mental health disease surveillance possible. The Kenya profile on the Mental Health Atlas provides the in-patient data generated by three out of the fourteen psychiatric hospitals in the country. Mental illness is not an exception in Kenya, yet there are fewer than 500 specialist mental health workers to serve Kenya's population of over 50 million [11].

The Kenyan Health Sector

The Kenyan health sector comprises the public system, with major players including the MOH and parastatal organizations, and the private sector, which includes private for-profit, NGO, and FBO facilities. Health services are provided through a network of over 4,700 health facilities countrywide, with the public sector system accounting for about 51% of these facilities [12]. According the Kenya health strategic plan, the public health system consists of the following levels of health facilities: national referral hospitals, provincial general hospitals, district hospitals, health centers, and dispensaries (Fig 1). Dispensaries are meant to be the system's first line of contact with patients, but in some areas, health centers or even hospitals are effectively the first points of contact. Dispensaries provide wider coverage for preventive health measures, which is a primary goal of the health policy [2].

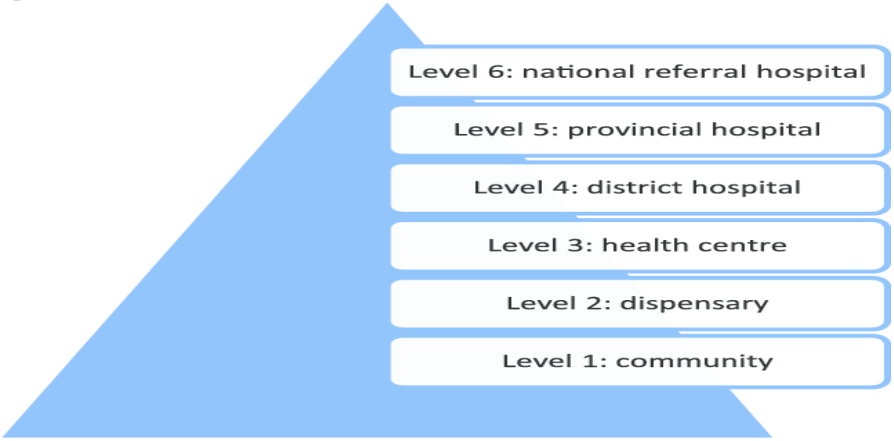

Figure 1. Levels of care in Kenya

Level 2 care facilities offer the first set of professional care to the patients by incorporating a proactive approach that utilizes several preventive measures, management of chronic disease, and promoting self-care. Along with that, primary health care provides increased accessibility to advanced health care systems for the community, which results in excellent health outcomes and prevention of delay. For most of the population, the Level 2 facility is their first contact with the health care system. The perennial health care worker shortage, poor infrastructure, and several industrial actions [13] necessitates the need for assessing the mental health status of the health workers. In addition, the advent of the COVID-19 pandemic, has had an unprecedented impact on the Kenyan health

care system, hence pre-disposing health care workers to a variety of mental disorders that affect their mental well-being (Søvold et al., 2021).

Research Objectives

Broad objectives

The general objective of this study is to assess the provision, demand and awareness of need for mental health care services amongst nursing care staff stationed in dispensaries within Mombasa County, Kenya

Specific Objectives

1. To determine the origin of mental health issues amongst nursing care staff stationed in dispensaries within Mombasa County, Kenya
2. To determine the prevalence/frequency of mental health conditions for purpose of assessing the need for care among nurses
3. To assess the availability of mental health care services within Mombasa County, Kenya
4. To establish factors contributing to the demand and consumption of mental health care services by nurses within Mombasa County
5. To evaluate the investment of Mombasa County government on mental health care services for its staff.

Methodology

Study Design

This study was conducted in dispensaries within the Department of Health, Mombasa County. This was a cross sectional study, carried out to address the study objectives, research questions targeting facility nurse in-charges at the dispensary level, the sub-county level nurse, and county nursing officer. All facility nurses in-charges, the nursing sub-county heads and the County nursing head and any nurse from level 2 facilities who consent to study procedures were included as participants. Mixed methods were used in gathering quantitative and qualitative data. Quantitative data was collected using GAD-7 to measure anxiety, PHQ 9 to measure depression and PCL 5 to measure post-traumatic stress disorder (PTSD) standardized tools. Qualitative data was collected through In-Depth Interviews (IDIs) and key Informant Interviews (KIIs) for the facility in charges and the Sub- County and County health officials.

Participation was on a voluntary basis, and informed consent was obtained from participants after explanation of the study objectives. Informed consent was first explained to the respondents, the questionnaire was then administered once consent had been sought.

Quantitative data from the facility assessment survey was coded and entered into an electronic database using a statistical analysis software/package (SPSS version 25). The data was analyzed descriptively. Qualitative data was analyzed manually. It was based on information collected through IDIs and KIIs with the Facility in- Charges, sub-county nurses and County nurse official.

Sample Size and Sampling

For an adequate sample size, for the quantitative method, the following formula i used in calculation was.

$$n = (Z^2pq) / d^2$$

Where:

n= Desired sample size

z= Standard normal deviation taken as 1.96 at a confidence level of 95%.

p= Proportion of target population estimated to have characteristics being measured. The estimated prevalence of mental disorders in Kenya is 10% (MoH,2020). Therefore P=0.1

Therefore.

q= Is standardized 1.0-P=0.9

d= Degree of accuracy desired 0.05 or 5%

In this case 95% confidence level has 5% error or 0.05 errors. Therefore 0.05 is a level of significance.

$$n = [(1.96)^2 \times 0.1 \times 0.9)/(0.05^2)$$

With the population being below 10,000 cases, the sample size was calculated as.

$$nf = n/(1 + n / N)$$

Where:
n = The desired sample size when population is above 10, 000

N= Estimate population size (100)

$$nf = n/(1 + n / N)$$

Sample size = 59

Participant identification was by use of stratified random sampling and purposive sampling.

Facility in charges: For the facility in charges, all facility in charges were included in the study.

Sub-county public health nurse: All sub-county public health nurses were included in the study. The sub-county public health nurse in is charge of supervising and organizing all nurses at the sub-county level.

County level: The county nursing officer was included in the study.

Nurses based in other health facilities other than level 2 facilities were excluded from this study.

Ethical Considerations

With approval from the Texila American University, research license was obtained from the National Commission for Science, Technology and Innovation (NACOSTI) based in Kenya. The study proposal was submitted to the Mombasa County Research Committee (MERC) for review and approval. Signed informed consent was required from each participant prior to participation and data collection. Information sheets were tailored to each group. Paper data and documentation containing participant identifiers were stored in locked cabinets in locked offices. Qualitative interview transcripts were anonymized to identify details separated from the data materials.

Digital recordings and data in paper format will be destroyed after 5 years. In addition, transcribers contracted were required to sign a confidentiality agreement, to uphold confidentiality of the participants. If participants face any distress during interviews, the interview is halted, and wellbeing of participant ensured. Research assistants were debriefed each day after data collection, to ensure their mental wellbeing.

Limitation of the study

1. The study was limited to the study objectives. The study collected data from 31 nurses picked from dispensaries within the DoH, Mombasa County.
2. Further, this study only focused on one level of care, i.e. dispensaries, and one cadre – nurses, thus we cannot generalize the findings to overall health in other settings.
3. Lastly, the study is only focused on Mombasa County, thus it cannot be generalized to the whole of Kenya.

Results and Findings

The calculated sample size for this study was 59 respondents, however, due to information saturation and redundancy observed in grounded theory studies that use in-depth interviews [14], A sample size of between 25 and 30 was viewed as sufficient. This study used 31 respondents. Most of the respondents worked in dispensaries (n=26, 83.9%). Twelve percent worked at the subcounty level while 3.2%, (n=1) worked at the county level.

Table 1. Rate of response

Responders' duty station	Responders	Percentage (%)
Dispensary (Facility level)	26	83.9
Sub-county (SCHMT)	4	12.9
County (CHMT)	1	3.2
Total	31	100

Sociodemographic Distribution of Study Respondents

The mean age of participants was 48 years (SD 8). Majority were of the female gender (n=24, 77.4%), married (n=27, 93.1%) and practiced Christianity (n=24, 77.4%). Slightly more than half of participants (n=18, 58.1%) were educated to diploma level with approximately one in three (35%) having degree level of education. On the other hand, 3.2% (n=1) had master's level education. The job designation of most participants was nurses' officer (n=22, 71.0%) with 6.5%(n=2) being senior nursing officers. The mean years of service for respondents was 17 years (SD, 8).

Table 2. Participant Characteristics

Participant characteristics	Count (%)
Age (Mean, SD)	43 (8)
Gender	
Female	24 (77.4)
Male	7 (22.6)
Religion	
Christian	24 (77.4)
Muslim	7 (22.6)
Marital status	
Married	27 (93.1)
Single	1 (3.4)
Widowed	1 (3.4)
Education status	
Diploma	18 (58.1)
Bachelor's Degree	11 (35.5)
Master's Degree	1 (3.2)
O level	1 (3.2)
Job designation	
Nurse	22 (71.0)

Registered Nurse I	3 (9.7)
Registered Nurse II	4 (12.9)
Senior Nursing Officer	2 (6.5)
Years in service (Mean, SD)	17 (8)
Duty station	
Facility level	26 (83.9)
Sub-county (SCHMT)	4 (12.9)
County (CHMT)	1 (3.2)

The Origin of Mental Health Issues Amongst Nursing Care Staff

Knowledge and Definition of Mental Health

Respondents' perceptions on the origins of mental health issues among nursing staff in Mombasa County were analyzed to answer study questions. Study respondents knew about mental health and its definition. In general, respondents defined mental health as the mental well-being of a person that incorporates the psychological, emotional, social and spiritual aspects of life.

The general society, however, had a different understanding of the knowledge and origin of mental health. Overall, society viewed mental health as madness that resulted from curses, witchcraft, drug abuse among the youth, hereditary, stress of life among the aged, a lack of faith and inability to handle life stressors.

Table 3. Society Perception on Mental Health

Cluster/ Category	Details (from interview responses)
Curse	Perceive as curse resulting from evil deeds done by a person
Genetics (hereditary)	Viewed as a hereditary condition and passed along family lineages.
Substance abuse	Viewed as resulting from substance abuse
Witchcraft	The community perceives mental disorders as caused by witchcraft and most cases are not reported since they don't come to hospitals. It is the work of evils and satanic power;

Responses to Society Perception on the Origin of Mental Health

Respondent 1; "*The community perceive mental disorders as witchcraft and most cases are not reported since they don't come to hospitals."*

Respondent 2; *"Society has not embraced mental health as a necessity just like physical health. Mental disorder is not regarded as an*

illness, on the contrary, it is perceived as a curse, witchcraft, weakness of faith."

Responder 3; *"That it is inherited and passed along family lineages. Most drug abusers end up with psychosis. That there's no treatment for psychosis. Unstable mental cases are triggered by stressors especially in families".*

The perception of society on mental health was found to negatively influence the health care-seeking behaviour of 30.8% of respondents. This was due to the associated stigma and labelling as mad of persons seeking mental health services. Moreover, the perceived lack of confidentiality from HCWs attending to mental health patients contributed to participants not seeking health services.

Respondent 9; *"Yes, society's perception is negative on mental health majority discriminate against people with mental health".*

Respondent 11; *"Because they will judge me to be having a mental disorder i.e., a mad person".*

Respondent 14; *"One would know of what I am undergoing and there is fear of lack of confidentiality hence all that you shared is spread across".*

Some respondents were however not bothered by society's perception towards their mental health-seeking behavior. These participants reported that they would seek mental health services irrespective of society's view.

Respondent 7; *"Because I will always seek health care when am not well. So, if I am told to seek mental health care, then I will do it".*

Respondent 10; *"Because I understand that my mental well-being has an impact on my productivity. Seeking help would help me take care of myself and my family".*

Mental Health Seeking Behavior

Approximately seven in ten (73%) of interviewed nurses had previously sought care related to mental health or knew of a colleague who had sought the services (Figure 2). On the contrary, 27% of participants had never sought healthcare services related to mental health. A mixture of work and personal stress was the main contributor to mental disorders that led responders to seek professional help. Work-related factors included financial constraints, salary delays, high expectations from one's seniors and lack of support from colleagues. Mentioned personal issues that contributed to mental disorders included stress from the loss of pregnancy and family issues.

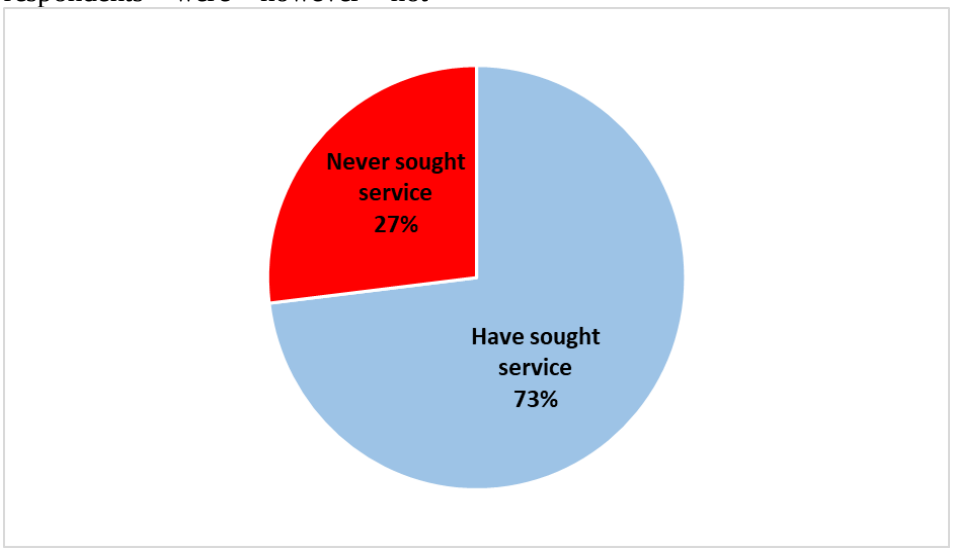

Figure 2. Participants Seeking Mental Health Care Services

Fear of society perception was cited as the main reason for respondents not seeking health care services.

Respondent 21: "I thought I would handle it

on my own. Fear to be known that am psychologically affected. Fear that my problems will be leaked out once I share them with the psychologist. The few mental health services providers/psychologists I have met appear to be judgmental and not sympathetic".

Prevalence of Mental Health Conditions Among Nursing Officers

Degree of Anxiety and Depression Among Nursing Officers

The levels of anxiety, depression and post-traumatic stress disorder were measured among respondents using the GAD-7, PHQ-9 and PLC-5 tools. An analysis of anxiety levels among participants found 29.0% (n=9) of participants to have mild anxiety, while 22.6% (n=7) had severe anxiety (Table 2). Post-traumatic stress disorder was found in 12.9% (n=4) of participants. Participants with severe depression were 3.2% (n=1), those with moderately severe depression were 6.5% (n=2), those with moderate depression were 3.2% (n=1), and those with mild depression were 22.6% (n=7). These conditions were found to occur concurrently among respondents with some experiencing all three conditions while others experienced none of the conditions.

Table 4. Degree of Anxiety and Depression Among Nursing Officers in Mombasa County

Mental health condition		**n (31)**	**%**
Level of anxiety			
	Minimal anxiety	15	48.4%
	Mild anxiety	9	29.0%
	Moderate anxiety	0	0.0%
	Severe anxiety	7	22.6%
Presence of PTSD			
	Don't have PTSD	27	87.1%
	Have PTSD	4	12.9%
Level of depression			
	None-minimal	20	64.5%
	Mild	7	22.6%
	Moderate	1	3.2%
	Moderately Severe	2	6.5%
	Severe	1	3.2%

Prevalence of Mental Health Conditions by Gender

Severe mental health conditions were found to occur more among male nurses compared to female nurses. More male nurses suffered from severe anxiety (n=3, 42.9%) compared to female nurses (n=4, 16.7%). Similarly, more male respondents experienced PTSD (14.3%) and severe levels of depression (14.3%) compared to female respondents (12.5% and 0% respectively) (Table 5).

Table 5. Comparison of Degree Mental Disorder Among Nurses by Gender

Mental health condition		Gender			
		Female		Male	
		n	%	n	%
Level of anxiety					
	Minimal anxiety	12	50.0%	3	42.9%
	Mild anxiety	8	33.3%	1	14.3%
	Moderate anxiety	0	0.0%	0	0.0%
	Severe anxiety	4	16.7%	3	42.9%
Presence of PTSD					
	No PTSD	21	87.5%	6	85.7%
	Has PTSD	3	12.5%	1	14.3%
Level of depression					
	None-minimal	15	62.5%	5	71.4%
	Mild	6	25.0%	1	14.3%
	Moderate	1	4.2%	0	0.0%
	Moderately Severe	2	8.3%	0	0.0%
	Severe	0	0.0%	1	14.3%

Prevalence of Mental Conditions by Level of Service of Nursing Officers

Higher proportions of nursing officers stationed at the sub county health management team (SCHMT) experience severe anxiety (75%) compared to nurses stationed at the facility (15.4%) and county level (0%). Depression and PTSD mostly occurred among nurses working at the facility level (Table 6).

Table 6. Comparison Of Degree of Anxiety and Depression by Duty Station of Nursing Officers in Mombasa County

Mental health condition		Level of service					
		Dispensary level		Sub-county (SCHMT)		County (CHMT)	
		n	%	n	%	n	%
Level of anxiety							
	Minimal anxiety	14	53.8%	1	25.0%	0	**0.0%**
	Mild anxiety	8	30.8%	0	0.0%	1	**100.0%**
	Moderate anxiety	0	0.0%	0	0.0%	0	**0.0%**
	Severe anxiety	4	15.4%	3	75.0%	0	**0.0%**
Presence of PTSD							
	No PTSD	22	84.6%	4	100.0%	1	**100.0%**
	Has PTSD	4	15.4%	0	0.0%	0	**0.0%**
Level of depression							

	None-minimal	17	65.4%	2	50.0%	1	**100.0%**
	Mild	5	19.2%	2	50.0%	0	**0.0%**
	Moderate	1	3.8%	0	0.0%	0	**0.0%**
	Moderately Severe	2	7.7%	0	0.0%	0	**0.0%**
	Severe	1	3.8%	0	0.0%	0	**0.0%**

The availability of mental health care services within Mombasa County

Facilities offering mental health services in Mombasa County

Participants reported that Mombasa County had made some investment in mental health care. Study respondents indicated that eight out of the 24 county dispensaries (33.3%) offered mental health services. These facilities either had a mental health trained nurse who offered the services to patients or had a psychologist who visited the facility on regular basis to attend to patients. The services were offered on outpatient basis.

The main county facility offering comprehensive mental health services to residents of Mombasa County was Port Reitz subcounty hospital that specializes in psychiatric care. This facility had resident psychologists and psychiatrics who offered both inpatient and outpatient care. Coast general teaching and referral hospital (CGTRH) was noted to offer outpatient psychiatric services. Psychiatric services were also offered by private facilities in Mombasa this being Mewa and Chiromo hospital that offered outpatient, inpatient psychiatric care and rehabilitative care. Other mental health services offered to residents were through rehabilitation and methadone services offered to persons undergoing therapy from drug abuse.

It was however reported that the main type of psychological care offered at level 3 facilities was counseling services to persons seeking HIV testing.

Table 7 Facilities Offering Mental Health Services in Mombasa County

Facility level	Example	Services offered
Level 2	Kaderbhoy dispensary Majengo dispensary	Outpatient services Trained mental health care nurse Psychologist visits periodically
Level 3	Mvita Health Centre Shika Adabu clinic	Outpatient services Trained mental health care nurse Psychologist visits periodically
Level 4	Port Reitz mental unit Likoni Sub-county hospital Tudor Sub-county hospital	Specialized psychiatric care (inpatient and outpatient services)
Level 5	Coast general teaching and referral hospital (CGTRH)	Outpatient (Psychologist available)

Private	Mewa Chiromo hospital	Rehabilitative care Specialized psychiatric care (inpatient and outpatient services)

Participant response on availability of facilities offering mental health care services.

Respondent 5: "I only know of Port Reitz because most other facilities I know don't have psychologists and counselling is mostly based on HIV testing".

Respondent 5; "Yes, very few and not daily. Since there are insufficient human resources specialized in mental health care".

Factors Contributing to the Demand and Consumption of Mental Health Care Services by Nurses Within Mombasa County

The Role of Covid-19 Pandemic on Mental Health

The COVID-19 pandemic was noted to have had a large impact on the mental state of respondents with most of them reporting an increase in mental disorders after the pandemic. The pandemic, resulting in lockdown and job cuts were noted to have resulted in economic, social and psychological strains that affected mental health. The pandemic was also noted to have resulted in increased investment in mental health by the government and increased demand for mental care by the public.

Respondent 19: "Before COVID – the economy was ok, my husband was employed and could afford to look after the family, and I had not given birth to fewer responsibilities. After COVID-19 – during covid my husband lost his job and I was the provider of the house, then I became pregnant then I lost the pregnancy. When he got the job life was then expensive due to inflation. Covid took away lives, increasing shortage in every department and workload has increased".

Response from CHMT: People did not care much about mental health before COVID-19, covid brought the engagement of psychologists for mental health for patients and staff. Psychologists were employed by the county to offer counselling services in the wards, and many were affected and dying – healthcare workers included.

Perception of Concern from the Department of Health of Mombasa County on the Mental Health of Its Staff

The general perception of respondents was that their employer was not concerned about the state of their mental health (Figure 3). Factors used by respondents as indicators of lack of concern from their employer included salary delays, delayed promotions, understaffing and heavy workload.

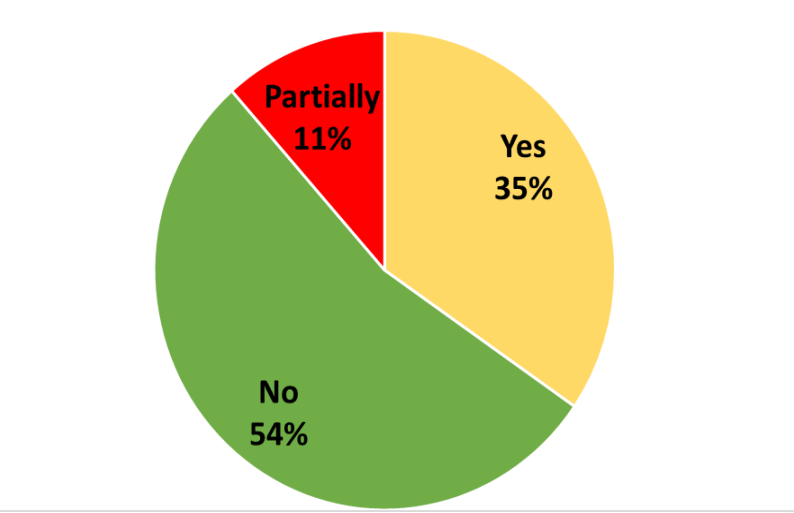

Figure 3. Perception of Concern from The Department of Health of Mombasa County on the Mental Health of its Staff

Investment Made by Mombasa County Government on Mental Health Care Services for Its Staff

Governance on Mental Health

The national government has laws and policies that guide mental health care; however, no policies were available to guide these services at the county level. Respondents also noted that national government policies on mental health were not domesticated at the county level. The lack of policies to guide mental health services at the county level has contributed to the lack of financing for mental health. In Mombasa County, mental health care was not included in the national budget allocation, instead, its funding was done as part of the department's annual work plan.

Response to Mental Health Financing at the County Level

Response from CHMT; "It's only on the department's annual work plan, but not there in the county budget. It is included in the department's annual work plan, but we cannot access money for that".

"I am not aware of any budgetary allocation that I can pinpoint".

As per the Mombasa County Department of Health structure, mental health care is grouped under the department of gender-based violence. Mental health care did not have a dedicated officer instead the officer leading GVB and AYP also led the mental health program in the county. The county officer was assisted by two sub-county officers, this structure disadvantaged the mental health program as it received little focus.

County Government Investment in The Mental Health of HCW

More than one in two respondents agree that the county government had made some investments in the provision of mental health care. However, a large percentage of this investment was towards the provision of health care services to the general public as opposed to improving the mental health of its employees. Investment in the mental health of HCW has been through training staff on mental health, having regular debrief sessions for health staff, and a psychologist visiting the facilities to offer mental health services.

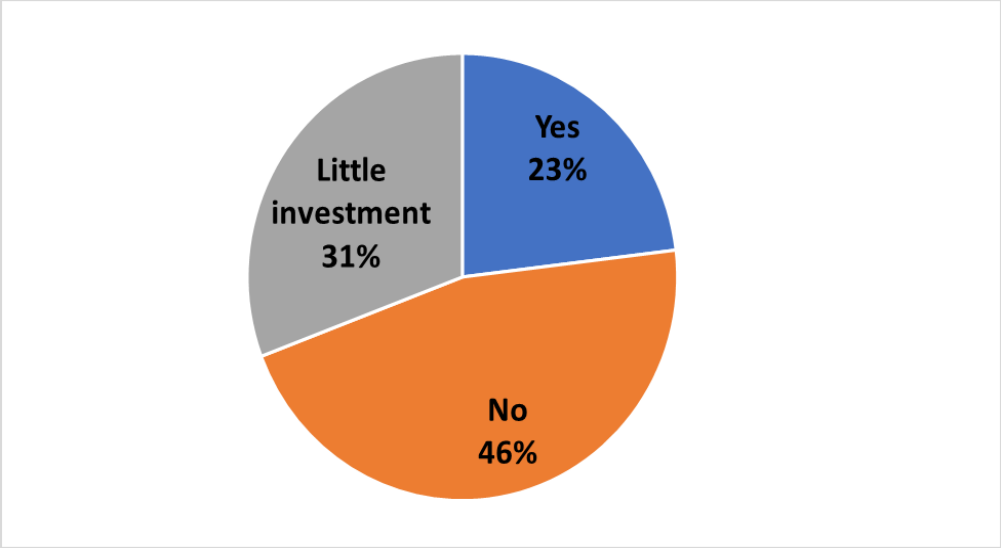

Figure 4. Staff Perception on The Department of Health Investing in Mental Health of Hcw

Response to Mental Health Financing at the County Level

Response from CHMT: "Yes, by training its staff on mental health issues and how to go about them. Debriefs have been done in facilities for the staff. psychologist who visits our facility".

Respondent 14: "Partial, very little, and not specifically to HCW, investment has been geared to the community in general, yet HCWs are at higher risk of mental health issues".

Human Resource

It was noted that the county had less than 10 healthcare workers trained in the mental health care of patients. The distribution of healthcare workers is indicated in Table 8. This number of healthcare workers trained in mental health care is insufficient to offer services to the close to 1.5 million population of Mombasa County.

Table 8. Human Resource

Carder	Number	Services offered
Trained nurses	5 trained, 2 not practicing	Offer services at county level facilities
Psychiatrics and Psychologist	3	2, in Port Reitz 1 CGTRH
M.O	1	In training

Challenges and Barriers to Mental Health Care

Perceived barriers to mental health care services in Mombasa County were multifactorial. These challenges and barriers could be categorized as personal, interpersonal community and system based. System barriers included staff shortage, very few psychologists to offer services, low budgetary allocation, lack of infrastructure (a limited number of mental health facilities in the county), and high cost of medication to treat the disease. It was noted that the mental health unit at Port Reitz needed to be expanded to cater for underage patients as well as the services being decentralized to lower-level facilities.

Community-related challenges to mental health care include lack of awareness or knowledge on mental health or its presentation, stigma towards those affected, fear of the unknown, religious beliefs (teachings on jinns, hasad), and misconceptions.

Mental Health Support for Health Care Workers

County and subcounty nurses noted that no mental health support was offered to nurses. Simar sentiments were noted by facility level nurses noting that no support was offered to the mental wellness of nurses. Suggestions offered to improve the mental health of nurses included increased debriefing sessions for HCWs, and improved work conditions through timely salary payment. Increase staff and balance human resources in all departments. Provide motivational activities for staff. Increase the frequency of psychologist visits to dispensaries to not only offer health services to the public but also to the health care staff. Moreover, it was suggested that more health staff and nurses should be trained to offer counselling services while difficult cases were reserved for the psychologist. In addition, it was suggested that mental health check services be offered to healthcare workers

periodically. Also, walk-in clients are to be screened for mental health.

Discussions

The first aim of this study was to identify the origin of mental health disorders among healthcare workers in Mombasa County. A mixture of work and personal stressors was observed to cause mental health disorders among nurses based in dispensaries. Work-related stressors were noted to form the majority of factors contributing to mental health disorders. These stressors resulted in most of the respondents seeking mental health care. Even so, stigma negatively affects the healthcare-seeking behaviour of a third of nurses.

The knowledge and perception of nurses on mental health differed from that of the society they served they viewed mental health disorders as not a disease but rather a result of curses, witchcraft, drug abuse, hereditary conditions, stress of life, a lack of faith and inability to handle life stressors. A study of exploratory models of illness notes that the way people perceive, interpret and respond to illness is mediated by not only the illness itself but also by culture and social context [15]. It was observed that mental health illness could result from a complex interaction of biological, psychological, and environmental factors, this study's findings agree with this observation as the mental disorders among nurses were found to originate from work and personal issues [16]. It also agrees with the observation that negative life events significantly elevate the risk of psychiatric diseases as one of the nurses reported a miscarriage to have resulted in mental illness [17]. Moreover, among environmental stressors reported to result in mental disorders by Helbich, 2018 was workplace stress.

The results of this study also agree with the observation that stigma is a major barrier to mental health service demand worldwide. The view of study respondents that they will be stigmatized and that HCW attending to their case could share their information with others agree with the observation that anticipated stigma, perceived stigma, and internalized stigma are some of the types of stigmas preventing health care seeking by patients afflicted by mental illness [18].

Prevalence of Mental Health Conditions Among Nursing Officers

Nurses attached to dispensaries in Mombasa were found to suffer from PTSD (12.6%), severe anxiety (22.6%) and severe depression (3.2%). Study participants were noted to present with varying levels of these conditions with others having a combination of the conditions. The prevalence of the three mental conditions was found to be generally higher among nurses at the facility level compared to those based at the county and sub-county level, on the contrary, levels of anxiety were found to be higher among nurses based at the sub-county level. Of note, male nurses were found to be disproportionally affected by these conditions compared to their female counterparts.

The reported prevalence of mental illness among participants in this study is within the estimated lifetime prevalence of mental disorders which stands between 12.2% and 48.6% globally [19]. This study's results mirror the findings reported high prevalence of anxiety and depression among healthcare workers in Nepal [20]. The high prevalence of mental conditions among healthcare workers has been reported to result from heavy workloads, long shifts, high-paced work, lack of physical or psychological safety, chronicity of care, moral conflicts, perceived job security, and work-related bullying or lack of social support that cause burnout [21]. This study's findings agree with this as participants reported high workloads and lack of support from their supervisors as a cause of mental illness. The high prevalence of mental illness among male nurses compared to their female

counterparts could be due to the nature of men not opening up or sharing their stressors. Females are known to share their issues with colleagues which helps in stress reduction and coping with situations.

The Availability of Mental Health Care Services Within Mombasa County

The county government has made significant strides at investing in the mental care of Mombasa residents by having a third of level 2 facilities in Mombasa County offering mental health services. Moreover, these facilities have a mental health care trained nurse to offer services to patients while a psychologist visits the facilities regularly to attend to patients. In addition, the county was noted to have invested in a specialized mental health facility that offered both outpatient and inpatient care. This facility had trained psychiatrists and psychologists. The county had also opened up to private facilities that specialized in mental health care. Besides the health facilities, the county was noted to have invested in rehabilitation centres to attend to patients recovering from drug abuse.

Though these investments are still low relative to the large population of Mombasa County, they are a step in the right direction. Level 2 facilities have been noted as the first point of interaction with patients from the community, thus including mental health among services at these facilities is important. This is a shift from the norm where mental disorders are diagnosed and treated in centralized psychiatric hospitals or clinics. It is a step towards implementing the Kenya Mental Health Policy 2015-2030 to integrate mental health services with general health care and have mental disorders diagnosed at primary health care facilities or community dispensaries [22]. The need to have a nurse trained in mental health care to take care of patients when a psychologist is not present has been proposed by several studies which noted that this framework allows for the nurse to deal with minor cases while more complex cases are reserved for the specialist thus allowing constant provision of services to patients. The health department at Mombasa County has a mental health policy that rides on the government policy. Implementation of these policy recommendations could result in better health services in the county.

Of note, however, is the observation that some of the counselling given at the listed facilities was about HIV testing counselling and not general mental health support. This calls for greater investment in training of the selected nurses in proper counselling and psychology so that they can handle other mental health-related cases.

Factors Contributing to the Demand and Consumption of Mental Health Care Services by Nurses Within Mombasa County

The Covid-19 pandemic and related factors led to an increase in mental illnesses thus contributing to an increased demand of mental health care among the general population and healthcare workers in Mombasa County. This pandemic has also resulted in an increase in investment in mental health services by the county government. Though there was an increase in mental services offered by the county government, it was noted that this investment was mainly focused on service to the general public while healthcare workers were neglected. Healthcare workers feel forgotten by their employer who is viewed as contributing to their ill mental state through salary delays, delayed promotions, understaffing and heavy workload. These findings agree with studies that have reported poor work organization, poor management, and unsatisfactory working conditions result in mental stress among workers [23].

Investment Made by Mombasa County Government on Mental Health Care Services for Its Staff

Mombasa County has developed a mental health policy which borrows from the national policy on mental health to guide its activities in the provision of mental health care. However, the county health structure has mental health categorized as a department thus denying it direct budgetary allocation from the county budget. The county has less than ten healthcare workers trained in mental health care. Even though nurses make up the majority of trained HCWs, some of those trained are not practising. This number of HCWs is very low and cannot effectively cater for the needs of the over 1.5 million Mombasa residents. The approximates an average of 13 HCWs to 100,000 population [7], however, the ratio of mental health care workers to the population in Mombasa is extremely high as 9 workers provide services to 1.5 million people.

Staff shortage, low budgetary allocation, and high cost of medication are some system barriers to mental health care service provision in Mombasa County, while lack of knowledge of mental health, stigma, fear and religious beliefs are some community barriers to mental health care. These results agree with the WHO observation that medicines for mental health conditions and psychosocial care in primary healthcare services remain limited [7]. The county has offered limited support to ensure the mental health of HCWs in county facilities. An improvement in their working conditions could result in improvement of this condition. This study's findings agree with the observation that human resource shortages, stigma, fragmented service delivery models, and lack of research capacity for policy change and implementation contribute to the mental health treatment gap [24].

Conclusion

This study found mental health disorders among nurses in Mombasa County to have their origin in work and personal issues. Work-related matters had a high contribution to these stresses. The COVID-19 pandemic and factors related to it such as lockdowns, and job losses have also contributed to mental illnesses. The prevalence of anxiety, depression, and PTSD varied among the nurses with male nurses being more affected compared to their female counterparts. Fear of stigma from colleagues and the community was a deterrent to patients seeking health care services. Moreover, the lack of support, poor working conditions, salary delays and heavy workload have contributed to mental illnesses among nurses.

The county government of Mombasa has made some investments in mental health care; however, this care is mostly focused on the general public while the health care workers are neglected. The Covid-19 pandemic had contributed to an increase in investment in mental health care services in the county. Mental health services have been integrated into general health care in the county with a third of dispensaries offering mental health services. Even so, there is a staff shortage to provide these services with only 10 health care workers in the county having the relevant training to serve 1.5 million residents. Low budgetary allocation and lack of non-domestication of government policies have contributed to poor mental health services in Mombasa County. The government has made minimal investment in mental health which is affecting its service delivery.

Acknowledgement

I would foremost like to thank God for empowering me to partake in this PHD course in public health. I would like to thank all those whose assistance proved to be a milestone in the achievement of this project: my family for

all their encouragement and support during my period of study; the Texila American University for enrolling me in this course; my research guide, my student mentor for his unlimited time, support and motivation; the Department of Health Mombasa County for allowing me to study while working and my colleagues for their endless support and assistance throughout this journey.

Thank you. May God bless you all always.

Conflict of Interest

The author Khadija Mbarak Awadh declares that there is no conflict of interest.

Reference

[1] Adam Felman, and Rachel Ann Tee-Melegrito., 2022, What is mental health. *Medical News Today*. https://www.medicalnewstoday.com/articles/154543

[2] WHO, W. H. O., 2021, *Mental Health ATLAS 2020*. https://www.who.int/publications/i/item/9789240036703

[3] Kenya Mental Health Action Plan 2021 – 2025

[4] Maddock, A., Blair, C., Ean, N., and Best, P., 2021, Psychological and social interventions for mental health issues and disorders in Southeast Asia: a systematic review. *International Journal Of Mental Health Systems, 15*(1), 56.

[5] World Health Organization, 2015, Poor mental health, an obstacle to development in Latin America

[6] Saloni, D., Hannah, R., and Max, R., 2021, *Mental Health*. https://ourworldindata.org/mental-health

[7] WHO., 2022b, *WHO Fact Sheet.Disorders*. https://www.who.int/news-room/fact-sheets/detail/mental-disorders

[8] WHO, 2022a, Constitution. https://www.who.int/about/governance/constitution

[9] OASH, 2020, Healthy People 2020, health.gov

[10] UNDP., 2022, *What are the SDGs? | The Sustainable Development Goals*. https://shop.undp.org/pages/what-are-the-sdgs-the-sustainable-development-goals

[11] Marangu, E., Mansouri, F., Sands, N., Ndetei, D., Muriithi, P., Wynter, K., and Rawson, H. (2021). Assessing mental health literacy of primary health care workers in Kenya: a cross-sectional survey. *Int J Ment Health Syst*, *15*(1), 55. https://doi.org/10.1186/s13033-021-00481-z

[12] Mwangi C., 2013, Accessibility to the Kenyan health care system Barriers to accessing proper health care, Helsinki, *Arcada University of Applied Sciences Nursing*.

[13] KIPPRA., 2021, *Strengthening Labour Relations to Avert Strikes in the Health Care Sector in Kenya*. https://kippra.or.ke/strengthening-labour-relations-to-avert-strikes-in-the-health-care-sector-in-kenya/

[14] Dworkin, 2012, Sample Size Policy for Qualitative Studies Using In-Depth Interviews Editorial Published: *Springer* Link, 12 September 2012 Volume 41, pages 1319–1320, (2012)

[15] Sokratis, D., Micol, A., John, A. O., and Kamaldeep, B, 2017, Assessing explanatory models and health beliefs: an essential but overlooked competency for clinicians. *BJPsych Advances*, *23*, 106–114. https://doi.org/10.1192/apt.bp.114.013680

[16] Smitha, B., 2020, *Causes of Mental Illness*. https://www.webmd.com/mental-health/mental-health-causes-mental-illness

[17] Keverne, J., and Binder, E. B., 2020, A Review of epigenetics in psychiatry: focus on environmental risk factors. *Medizinische Genetik*, *32*(1), 57-64.

[18] Devokta, 2021, Factors affecting utilization of mental health services from Primary Health Care (PHC) facilities of western hilly district of Nepal. Published online 2021 Apr 30. doi: 10.1371/journal.pone.0250694

[19] Mark, T., andCrick, L., 2012, Why Does Mental Health Not Get the Attention It Deserves? An Application of the Shiffman and Smith Framework. *PLoS Medicine*, *9*. https://doi.org/10.1371/journal.pmed.1001178

[20] Khanal, P., Devkota, N., Dahal, M., Paudel, K., and Joshi, D., 2020, Mental health impacts

among health workers during COVID-19 in a low resource setting: a cross-sectional survey from Nepal. *Global Health*, *16*(1), 89. https://doi.org/10.1186/s12992-020-00621-z

[21] Jumah, F. R., andDossani, R. H., 2023, Neuroanatomy, Cingulate Cortex. In *StatPearls*. *StatPearls Publishing* Copyright © 2023, StatPearls Publishing LLC.

[22] Kenya Mental Health Policy 2015-2030

[23] Maulik, P. K., 2017, Workplace stress: A neglected aspect of mental health wellbeing. *Indian J Med Res*, *146*(4), 441-444. https://doi.org/10.4103/ijmr.IJMR_1298_17

[24] Greene, M. C., Yangchen, T., Lehner, T., Sullivan, P. F., Pato, C. N., McIntosh, A., Walters, J., Gouveia, L. C., Msefula, C. L., Fumo, W., Sheikh, T. L., Stockton, M. A., Wainberg, M. L., and Weissman, M. M., 2021, The epidemiology of psychiatric disorders in Africa: a scoping review. *Lancet Psychiatry*, *8*(8), 717-731. https://doi.org/10.1016/s2215-0366(21)00009-2

[25] American Psychiatric Association, 2013, *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition

[26] Bandura, A., 2006, Toward a Psychology of Human Agency. *Perspect Psychol Sci*, *1*(2), 164-180. https://doi.org/10.1111/j.1745-6916.2006.00011.x

[27] Dhira, T. A., Rahman, M. A., Sarker, A. R., and Mehareen, J., 2021, Validity and reliability of the Generalized Anxiety Disorder-7 (GAD-7) among university students of Bangladesh. *PLoS One*, *16*(12), e0261590. https://doi.org/10.1371/journal.pone.0261590

[28] Dworkin, 2012, Sample Size Policy for Qualitative Studies Using In-Depth Interviews Editorial Published: *Springer Link*, 12 September 2012 Volume 41, pages 1319–1320.

[29] Errazuriz, A., andCrisostomo, N., 2021, Prevalence of depression in Latin America and the Caribbean: protocol for a systematic review and meta-analysis. *JBI Evidence Synthesis*, *19*(1), 201-207.

[30] Grace Fernandez., 2021, *The Intersection of Mental Health and Chronic Disease*. https://publichealth.jhu.edu/2021/the-intersection-of-mental-health-and-chronic-disease

[31] Hawkar et al , 2018, The validity of Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5) as screening instrument with Kurdish and Arab displaced populations living in the Kurdistan region of Iraq. BMC Psychiatry, Published online 2018 Aug 16. doi: 10.1186/s12888-018-1839-z

[32] Helbich, M., 2018, Mental Health and Environmental Exposures: An Editorial. *Int J Environ Res Public Health*, *15*(10). https://doi.org/10.3390/ijerph15102207

[33] Kumsta, R., 2019, The role of epigenetics for understanding mental health difficulties and its implications for psychotherapy research. *Psychol Psychother*, *92*(2), 190-207. https://doi.org/10.1111/papt.12227

[34] Kwobah et al, 2021, Mental Disorders Among Health Care Workers at the Early Phase of COVID-19 Pandemic in Kenya; Findings of an Online Descriptive Survey, PMID: 34366913 PMCID: PMC8339368 DOI: 10.3389/fpsyt.2021.665611

[35] Lansana Gberie, 2017, Mental illness: Invisible but devastating Superstitution often blamed for acute mental health diseases Lansana GberieFrom Africa Renewal

[36] Maddock, A., Blair, C., Ean, N., and Best, P., 2021, Psychological and social interventions for mental health issues and disorders in Southeast Asia: a systematic review. *International Journal of Mental Health Systems*, *15*(1), 56.

[37] Mendehall, et al,. (2017). Nurses' perceptions of mental healthcare in primary-care settings in Kenya, 2018 Apr;13(4):442-455. doi: 10.1080/17441692.2016.1207196. Epub 2016 Jul 12.

[38] NACADA (2022). National survey on the status of drugs and substance use in Kenya

[39] Nandikove & Ng'ambwa, (2020). *Community Perceptions on Mental Illness in Bungoma County, Kenya. Journal of Dental and Medical Sciences* 19(11), 45-52, November 2020IOSR

[40] Saia-Cereda, V. M., Cassoli, J. S., Martins-de-Souza, D., and Nascimento, J. M. (2017). Psychiatric disorders biochemical pathways

unraveled by human brain proteomics. *Eur Arch Psychiatry Clin Neurosci*, *267*(1), 3-17. https://doi.org/10.1007/s00406-016-0709-