# COMMUNITY WILLINGNESS TO UTILIZE TRADITIONAL MEDICINE SERVICES AT DODOMA REGIONAL REFERRAL HOSPITAL, TANZANIA

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# COMMUNITY WILLINGNESS TO UTILIZE TRADITIONAL MEDICINE SERVICES AT DODOMA REGIONAL REFERRAL HOSPITAL, TANZANIA

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**A Dissertation Submitted in (Partial) Fulfilment of the Requirement for the Degree of Master of Public Health**

**Muhimbili University of Health and Allied Sciences**

**October 2024**

## CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled; **''Community Willingness to Utilize Traditional Medicine Services at Dodoma Regional Referral Hospital, Tanzania''** in (partial) fulfilment of the requirements for the degree of Master of Public Health at Muhimbili University of Health and Allied Sciences.

_____

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(Supervisor)

**Date:** _____

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**Ms. Faithness Kiondo**

(Supervisor)

**Date:** _____

## DECLARATION AND COPYRIGHT

I, **Lucy Samwel,** declare that this **dissertation** is my original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature: _____ Date: _____

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## DEDICATION

To my late mother, who passed on 21 July **2024** and beautiful daughters, **Cordelia**, **Mirakel** and **Caleesia,** for bearing with my university's stress and understanding me while I was undertaking this project. I appreciate and love you very much.

## ABSTRACT

**Background:** The utilization of traditional medicine (TM) has been growing rapidly in Tanzania, yet its integration into the healthcare system remains limited. The Ministry of Health (MoH) in Tanzania has recognized this trend and taken steps toward integrating TM services into modern healthcare, beginning with several regional referral hospitals, including Dodoma Regional Referral Hospital (DRRH).

**Objective:** This study aims to assess the community's willingness to use traditional medicine services when integrated into modern health services at DRRH, Tanzania.

**Methodology:** A **descriptive** cross-sectional study was carried out among 370 clients at DRRH using a questionnaire with semi-structured questions. Data were collected using mobile devices and analyzed using descriptive statistics, including frequencies and percentages. The Chi-square test was employed to assess associations between variables, and a p-value of 0.05 was used to determine statistical significance. Logistic regression was applied to identify factors associated with willingness to use TM services.

**Results:** The study found that 55.4% of respondents had previously used traditional medicine, with only 22.4% aware of its availability within modern health facilities. Of those aware, 59% had utilized the integrated services. A significant proportion (74.6%) held positive perceptions toward integrating TM into modern health services. Past positive experiences with traditional medicine were significantly associated with willingness to use integrated services (p=0.001). Chronic diseases like hypertension and diabetes were frequently preferred for management through integrative services.

**Conclusion:** The study highlights strong community support for integrating traditional medicine into modern healthcare systems. However, increasing awareness and enhancing healthcare infrastructure are critical for successful implementation.

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## ABBREVIATIONS

| | |
|---|---|
| DRRH | Dodoma Regional Referral Hospital |
| ITM | Institute of Traditional Medicine |
| MOH | Ministry of Health |
| TBAs | Traditional birth attendants |
| TAHPC | Tradition and Alternative Health Practice Council. |
| TM | Traditional medicine |
| TMDA | Tanzania Medicine and Medical Devices Authority |
| WHO | World Health Organization. |

## DEFINITION OF TERMS

According to this study, these terms are defined as follow;

**Biomedicine:** means the diagnostic and therapeutic methods and practices first developed in Europe, based on experimentally derived understandings of the body as a biological system(1).

**Chinese Traditional Medicine (TCM):** a system of theories and practices based on a vast collection of ancient texts that have been enriched with clinical experiences in China and other parts of Eastern Asia (1).

**Integration of Traditional Medicine:** means systematic and collaborative incorporation of traditional medicine into modern medicine. In this study, the integration of traditional medicine and integrative medicine are used interchangeably (2).

**Dispenser:** Any person licensed or authorized by the Traditional and Alternative Health Practice Council (TAHPC) to dispense traditional medicine (3).

**Herbal Medicine:** This refers to any product derived from plant that contains active ingredient(s), it can be aerial or underground parts of plants, or combination thereof. This study uses traditional medicine remedies/ remedies and traditional medicines (3,4).

**Rural area**: is a low population density place with an economy primarily based on agriculture and limited access to modern infrastructure and services.

**Sub - urban area:** is a medium population density place characterized by a mix of urban and rural features.

**Traditional Medicines:** This refers to any product with medicinal value that contains, active ingredient(s), it can be a mineral, plant, part of animal or algae (3,4).

**Traditional Medicine** is the total knowledge and practice passed from generation to another that is based on experience and it is used in prevention and diagnosis.

**Traditional Medicine Remedy:** Refers to any methods, processes, practices, or any medicine consisting of a substance or a mixture of substances produced by drying, extracting, crushing, or commuting, compressing natural substance of a plant, animal, or mineral origin or any part of such substances(3).

**Traditional Medicine Practitioners** are people who are providing traditional medicine services including prescribers, sellers, and dispensers (3).

**Urban area:** is a densely populated area with well-developed infrastructures including electricity, roads, water supply and sewage system.

# CHAPTER ONE

## 1.0 INTRODUCTION

### 1.1 Background

Traditional medicine was the only healthcare system before the introduction of conventional medicine and is currently the primary healthcare system in developing countries (5,6)**.** Globally, over 80% of the world's population use traditional medicines to manage different ailments (7,8) In developing countries, knowledge of traditional medicine is passed from one generation to another mostly informally. In contrast, in developed countries like China, India and South Korea, traditional medicine system such as Traditional Chinese Medicine (TCM), and Ayurveda have been documented and standardized leading to formal training and widely practiced alongside modern medicine. This integration has contributed to improved health outcomes and reduced healthcare costs (9)

Public interest in naturally derived medicines has increased, especially in developed countries, where country specific traditional medicines are carefully regulated to maintain safety and efficacy (5,9). Advancement of traditional medicine products in the first world countries goes together with incorporating country specific traditional medicine in modern medicine, where a client who visits health care services has more options as to which therapy they can opt for optimal management of their conditions (5,10,11).

WHO encourages member states to explore the integrative approach where emphasis should be put on evidence-based Traditional Medicine (12) Each member state has to enforce the implementation of already established legislation to ensure that traditional medicine remedies in the market and used for integration are of good quality, safe, and their efficacy is known (13) In China, Chinese traditional medicine is provided under the same roof as modern health services; more than 40% of the Chinese population opt for complementary services to suffice their health needs and reduce the death rate by 80% (5,12,14)

In developed nations, the use of complementary and alternative medicine is also widespread. For instance, in Australia, nearly 48% of the population uses traditional or complementary

medicine, with services such as homeopathy and acupuncture being incorporated into the mainstream healthcare system (15,16). Similarly, in Germany, over 60% of the population relies on complementary therapies such as herbal medicine and naturopathy, particularly for the management of chronic conditions (17). These examples demonstrate the global shift towards integrative healthcare, where traditional medicine is not only preserved but also enhanced through regulation, research, and integration into formal healthcare structures.

In Tanzania, it is estimated that about 60% of urban and more than 70% of rural use traditional medicine (18). Moreover, among users of traditional medicine services, about 60% target chronic diseases that were not adequately treated by modern medicines (19). The country realized the vast number of its citizen utilizing the fore mentioned service, hence established effective policy that facilitate execution and implementation of traditional medicine related strategies, interventions and activities (20,21)

In safely guiding public health, the Ministry found the necessity of ensuring those who opt to explore the medical advantage of traditional medicine receive safe and good quality medicine concerning their health needs. Therefore, the Ministry of Health introduced traditional medicine services into modern health facilities, where trained healthcare providers will provide the service in integrative manner (2). In May 2023, the MoH started implementing integrative services in its seven Regional Referral Hospitals, namely Morogoro, Tanga, Temeke, Sekou Toure, Dodoma, Mbeya, and Mt. Meru. Each hospital's three health personnel, medical doctors, pharmacists, and nursing officers were trained in integrative services except in Dodoma RRH where more than 50% of the staff were trained(21).Therefore, introduction of the new intervention in these facilities was supported by the available data with the baseline of more than 60% of Tanzanians using traditional medicine services for primary health care, political support, multilateral relationships, and agreements through country-to-country agreements to collaborate in the area of traditional medicine (21,22) Behind the aforementioned driving factors, there was a need to consider citizens' voices by assessing community willingness to utilize such service, which should be at the core of the decision-making to maximize prompt utilization of the service.

## 1.2 Problem statement

The global rise in the use of traditional medicine (TM) has gained attention, with the World Health Organization (WHO) recommending the integration of TM into modern healthcare systems (23,24). Countries like China have successfully implemented this by offering traditional Chinese medicine alongside modern services, with over 40% of the population using complementary medicine, leading to improved health outcomes (23)

In Tanzania, over 60% of the population uses TM as their first point of care, particularly for chronic conditions that modern treatments may not fully address (20). In response, the Ministry of Health (MoH) has initiated efforts to integrate evidence-based TM into modern healthcare, aiming to provide safe and high-quality services  Pilot programs have been launched in seven regional referral hospitals, based on data showing widespread TM use(2).

However, there is limited evidence on the community's readiness to use integrated services within modern healthcare. Understanding this readiness is crucial for the Ministry of Health to expand integrative services successfully and ensure community acceptance of the combined traditional and modern healthcare approach.

## 1.3 Conceptual framework

This study aimed to assess community's willingness to use traditional medicine services when provided within modern health facilities. To better explore this, the study uses Andersen's Behavioral Model of Health Services Use to explain the relationship between different factors that influence the community's decision to use traditional medicine as part of integrated health services. Andersen's model, highlights three main components: predisposing, enabling, and need factors. These components offer a comprehensive perspective on the factors that influence of health-seeking behavior in the Tanzanian.

The study incorporates several variables that are vital to understanding community willingness. These include belief-related factors, which are seen as predisposing influences; disease preferences, which represent health needs or need factors; awareness of existing health facility structures supporting the integration of traditional medicine, which is considered an enabling factor; and finally, the overall willingness of the community to utilize

traditional medicine services provided within modern healthcare facilities.

Predisposing factors involve the belief systems of the community, which significantly shape an individual's willingness to use integrated health services. In Tanzania, cultural beliefs hold a powerful influence over people's decisions regarding their healthcare, particularly their inclination towards traditional healing practices. It is essential to explore these belief systems to understand why certain individuals or groups may be more inclined to use traditional medicine services. These beliefs serve as fundamental motivators, driving a significant portion of the population towards seeking out traditional medicine.

Enabling factors are essential to ensuring that the community can access integrated services. This includes awareness of the existing healthcare structure, specifically the availability of trained healthcare providers and traditional medicine products at the facilities. When the community knows that there are trained professionals who can offer reliable and evidence-based traditional medicine treatment, it builds trust and increases their willingness to use these services. These enabling factors are supported by the policies, research, and capacity of healthcare providers, providing a framework that assures the quality of care.

Need factors play an equally crucial role, as they are concerned with the health needs perceived by the community. This factor reflects what diseases or health conditions are preferred by the community to be treated with integrated services that involve both traditional and modern medicine. By understanding what diseases, the community prefers to manage with traditional medicine, healthcare services can be more tailored to meet these specific needs, leading to increased effectiveness and community acceptance

The interconnection of these three independent variables influence decision making and willingness of the community to engage with traditional medicine services in modern healthcare settings. Therefore, the outcome of this study is the utilization of traditional medicine integrative services in the modern health facilities.

Independent variables Outcome variables

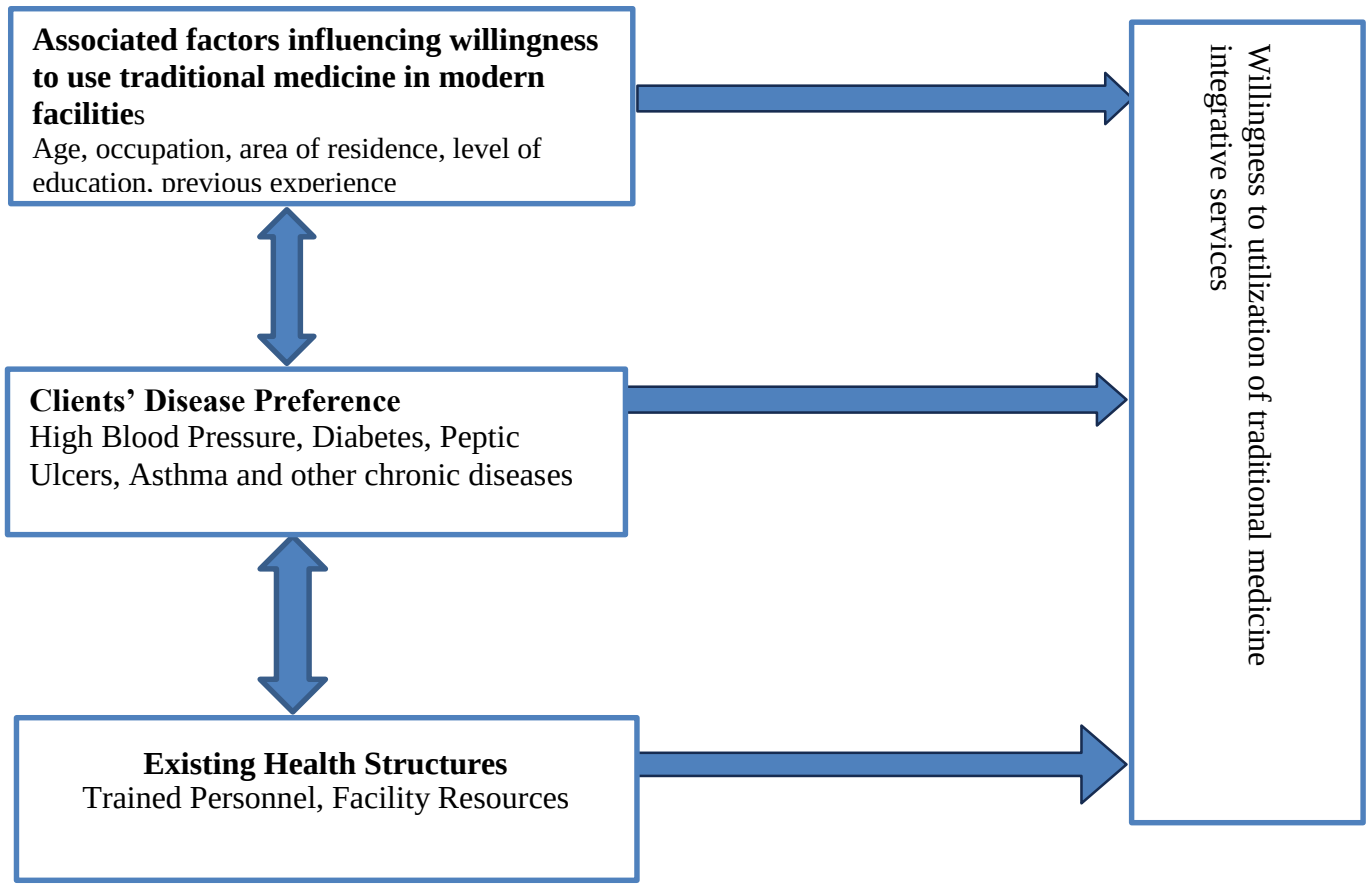



**Figure 1:** Conceptual Framework of utilization of traditional medicine services in modern health services based on Andersen's Behavioral Model

## 1.4 The rationale of the study

The integration of traditional medicine (TM) into modern healthcare is increasingly recognized as a critical step toward improving healthcare delivery, particularly in areas where a large portion of the population relies on traditional remedies. The World Health Organization (WHO) advocates for this integration to enhance healthcare access and quality, aligning with global trends in health systems strengthening (5). In Tanzania, over 60% of the population uses traditional medicine as a first point of care before accessing modern

healthcare (27), emphasizing the importance of exploring how to effectively integrate these systems.

Research from other low- and middle-income countries has shown that integrating TM with conventional healthcare can improve patient outcomes, reduce healthcare costs, and expand access, particularly in underserved areas ((11,28–31). Studies in China and India highlight that TM integration preserves cultural heritage while strengthening primary healthcare (10). In Sub-Saharan Africa, combining traditional practices with biomedical services has been linked to better health outcomes, especially in managing chronic conditions (28).

Despite its recognized significance, there is limited evidence on community readiness to use integrated TM services in Tanzania. While TM is widely accepted, factors such as cultural beliefs, trust in healers, and healthcare infrastructure influence the willingness to adopt integrative services (4). This research aims to fill this gap by evaluating community perceptions and readiness to embrace integrated services, considering cultural beliefs, past experiences, and perceived quality of care.

Understanding community expectations and readiness is crucial for designing interventions that are culturally appropriate and meet the healthcare needs of Tanzanians (15,32,33). These insights could inform national healthcare policies and guide the Ministry of Health in scaling up integrative services, contributing to improved quality of care (6)). The study's findings will help bridge the gap between traditional and modern healthcare, ultimately supporting efforts to achieve accessible, equitable, and high-quality healthcare for all Tanzanians.

## 1.5 Research questions

### 1.5.1 Main research question

What is the willingness community to utilize traditional medicine services in modern health services at Dodoma Regional Referral Hospital in Tanzania?

### 1.5.2. Specific research questions

1. What is the proportion of clients at Dodoma Regional Referral Hospital have previously used traditional medicine?
2. What are belief associated factors which influence the willingness of clients to utilize traditional medicine services at Dodoma Regional Referral Hospital?

3. What diseases do clients prefer to be addressed through integrative services at Dodoma Regional Referral Hospital?
4. How familiar are clients with the healthcare structure that support the integration of services at Dodoma Regional Referral Hospital?

## 1.6 Study objectives

### 1.6.1 Broad objectives

To assess community willingness to utilize traditional medicine services in modern health services at Dodoma Regional Referral Hospital in Tanzania.

### 1.6.2 Specific objectives

1. To determine the proportion of clients at Dodoma Regional Referral Hospital who have previously used traditional medicine be.
2. To determine factors which influence the willingness of the clients to utilize traditional medicine services at Dodoma Regional Referral Hospital.
3. To determine diseases that clients prefer to be addressed through integrative services at Dodoma Regional Referral Hospital
4. To assess clients' familiarity with the healthcare structures that support the integration of traditional medicine services at Dodoma Regional Referral Hospital.

# CHAPTER TWO

## 2.0 LITERATURE REVIEW

### 2.1 Concepts of traditional medicine and its integration in the modern healthcare facilities

Traditional Medicine refers to the knowledge, practices, and remedies that have been passed down through generations and are used in many parts of the world, especially in low- and middle-income countries (7,23). The World Health Organization (WHO) defines TM as the sum total of knowledge, skills, and practices used to maintain health and treat physical and mental illness, based on indigenous traditions (12). Traditional medicine remains an important part of healthcare delivery worldwide. Approximately 80% of the global population relies on TM for their primary healthcare needs, especially in regions with limited access to modern healthcare services (23)

Integration of Traditional and Modern Medicine refers to the formal inclusion of traditional medicine into the healthcare system, where patients can receive traditional remedies alongside modern medical treatments (1,7,25). The goal of integration is to enhance access to healthcare by providing patients with a wider range of options for managing their health conditions. Countries like China, India, and South Africa have successfully implemented integrative healthcare models, resulting in better health outcomes and improved patient satisfaction (12,26).

The integration of traditional medicine into modern healthcare systems has emerged as a vital focus of health policy and practice in numerous countries, including Tanzania. The existing healthcare landscape in Tanzania is characterized by widespread utilization of both traditional and modern medical practices, particularly among communities seeking accessible and culturally accepted healthcare solutions (18). The integration of traditional medicine into modern healthcare systems has received increased attention as it offers potential solutions to unmet healthcare needs and cultural alignment (2,7,24,27). Therefore, further exploration on the existing body of knowledge regarding community willingness to

utilize traditional medicine within modern health facilities in Tanzania is important. As per this study, focus is on four key areas: the proportion of clients who have previously used traditional medicine, factors influencing willingness to utilize traditional medicine services, clients' disease preferences for integrative services, and familiarity with the healthcare structure that supports integration.

## 2.2 Proportion of patients who have previously used traditional medicine

The global prevalence of traditional medicine use is estimated to be around 80%, with people across various regions utilizing traditional practices to meet their primary healthcare needs (23). In developing countries, this reliance is often attributed to factors such as affordability, cultural compatibility, and limited access to modern healthcare facilities (18). Even in developed countries, traditional and complementary medicine remains popular, with around 48% of Australians, for example, using TCM for medical purposes or supplements ((28).

In Sub-Saharan Africa, more than 50% of the population uses TCM to manage different diseases. Interestingly, users belong to all socioeconomic groups, including educated individuals and healthcare professionals, suggesting a high level of trust in the effectiveness of traditional practices (29). In Tanzania, traditional medicine is widely used, with approximately 60% of the urban population and over 70% of the rural population depending on traditional health practices (18) For reproductive health, traditional birth attendants (TBAs) play a significant role, with around 32% of women without formal education giving birth at home, assisted by TBAs, particularly in Arusha and Tanga regions (30).

While these statistics indicate a high reliance on traditional medicine, there is limited up-to-date data quantifying the actual proportion of clients utilizing traditional medicine in modern health facilities in Tanzania. This gap emphasizes the need for current evidence to facilitate informed decision-making for future healthcare interventions, particularly in Dodoma Regional Referral Hospital.

## 2.3 Factors influencing clients' willingness to utilize traditional medicine when provided in the modern health facilities

The use of traditional and complementary medicine has increased globally, with more than 70% of people incorporating these practices into their healthcare routines (24). The

widespread use is driven by several factors, including perceived cultural alignment, cost-effectiveness, and dissatisfaction with modern healthcare options, particularly for conditions that do not have specific or effective treatments in conventional medicine (8). Patients often believe that traditional medicine provides a more personalized approach and can offer permanent solutions for chronic conditions where modern medicine falls short.

In Sub-Saharan Africa, cultural beliefs are a significant driver for the use of traditional medicine. Services are often tailored to meet community preferences, and this alignment makes traditional medicine more accessible than modern healthcare in some instances (31) In Tanzania, supportive policies and a legal framework have contributed to the increasing acceptance and use of traditional medicine (3). This supportive framework has enhanced community trust in traditional medicine services, further driving demand.

Despite the community's belief in traditional medicine, it is essential that services are delivered safely and effectively. Integration within modern healthcare facilities, under the supervision of trained personnel, is critical to ensuring the efficacy of treatments while minimizing potential adverse effects (11) Providing integrative services within the same facility as modern healthcare can also improve diagnosis accuracy and allow for prompt medical intervention if complications arise.

Although there is a strong cultural belief in traditional medicine, there is a lack of understanding regarding the specific factors influencing the community's willingness to use integrated traditional and modern healthcare services. This study aims to bridge this gap by exploring the key enabling, predisposing, and need factors that drive client willingness to utilize such services in Dodoma.

## 2.4 Clients' diseases preference to be addressed through integrative services

For centuries, many countries have used traditional medicine to manage different diseases. Some countries such as China, India, and Germany have well-documented their practices, and the philosophy and theories are formally trained in different levels of education, including higher learning training (1,32). Moreover, the majority of their population embraces the practice and utilizes it in the management of diseases, especially chronic diseases, as self-medication or through traditional healers and primary healthcare facilities

(33–35). The main users of traditional are the elderly population, who often use them together with modern medicine to manage chronic diseases (26,33,34). Users claim a good prognosis of their conditions upon using traditional medicines (26,36).

However, in Africa, the use of traditional medicine in managing chronic diseases is more of self-medication, while some visit traditional medicine practitioners for the service. Most of the time, the use is done in combination with modern medicines (29)

A drastic increase in the use of traditional medicine in Tanzania for the management of chronic diseases has been observed. A large part of the Tanzanian population has been using traditional medicine concurrently with modern medicine for the alleviation of pain and treatment of chronic diseases such as high blood pressure, cancer, diabetes, chronic kidney failure, and HIV/AIDS (37,38). Whether self-administering or upon the consultation of a traditional medicine practitioner, the use of this medicine should ensure the safety of the consumer, considering drug interaction and individual drug side effects, including hematological derangement and normal functionality of organs (8,29)

Despite the evident preference for traditional medicine in managing chronic diseases, there is limited information on the specific diseases that clients would prefer to be managed through integrated services. This study seeks to identify these disease preferences to guide healthcare providers in the effective integration of traditional medicine into chronic disease management.

## 2.5 Clients' familiarity with existing health structure that support integration of traditional medicine into modern health services

The World Health Organization (WHO) has recognized the role of traditional and complementary medicine and has actively supported member states in integrating these services into national healthcare systems (39). This support has included the development of guidelines for training, product registration, and practice standardization. In the European Union, countries have collaborated to establish common regulatory frameworks that govern traditional medicine practices, including training and product safety (17).

In Africa, WHO has developed guidelines to help countries institutionalize traditional medicine, which has led to the establishment of regulatory bodies and formalized training

programs. Ghana is a notable example, where the Directorate of Traditional Medicine and the Noguchi Memorial Institute for Medical Research work together to regulate and promote traditional medicine (40).

Tanzania has also made considerable strides in promoting and regulating traditional medicine through the Ministry of Health. The country has developed policies and guidelines to ensure the safety, efficacy, and quality of traditional medicine products and services (41). The establishment of the Traditional and Alternative Health Practice Council in 2002 marked a significant milestone in regulating traditional medicine practices (3). Furthermore, the National Institute for Medical Research (NIMR) has conducted extensive research to support evidence-based practices, ensuring that traditional medicine services are integrated into modern healthcare safely and effectively (42).

Despite having supportive policies, legal frameworks, and resources, such as referral hospitals with trained personnel, there is limited knowledge among the community about the existing structures that support the integration of traditional medicine into modern services. The study will examine the community's willingness to use traditional medicine alongside modern health services by exploring their awareness of the existing structures that support these integrative services. This awareness is key to encouraging the use of these services and fostering trust in their long-term sustainability.

# CHAPTER THREE

## 3.0 METHODOLOGY

### Introduction

This chapter narrates method, materials and procedures used to collect, generate and analyze data. It explains approaches used and the software employed throughout the study as well as the variables studied to understand the willingness of community to traditional medicine services when provided within modern health facilities.

### 3.1 Study design

It is a hospital-based study which employed **descriptive** cross-sectional study design to assess community willingness to utilize integration of traditional medicine services within modern health facilities.

The cross-sectional design focused on collecting quantitative data from a specific sample at a single point in time. Conveniently selected participants, who represented a diverse cross-section of individuals accessing hospital services, were drawn on the day of data collection. Quantitative data was collected through structured interview forms, which allowed for the efficient examination of prevalent trends, attitudes, and preferences related to traditional medicine integration among the community.

### 3.2 Study setting

The study enrolled clients attending OPD since it is the only department that practice traditional medicine integrative services. On the day of data collection, a list of hospital attendees is obtained from the electronic registry and participants were selected by using simple random sampling.

Initially, all hospital attendees present on the day of data collection were identified. This included patients, their caregivers, and other individuals eligible for the study based on established criteria. A list was generated containing all attendees who met the inclusion

criteria, with specific focus on adult patients, who were listed accordingly.

Each eligible individual was assigned a unique number, ranging sequentially from 1 to the total number of attendees. To facilitate random selection, slips of paper were used, with each slip representing a unique number corresponding to an attendee. These slips were then placed in a container, and slips were drawn randomly until the desired sample size was reached.

Selected attendees were subsequently approached, and the purpose of the study was explained to them. Informed consent was obtained from each participant before proceeding with data collection. This ensured a truly random and unbiased selection of participants for the study.

The study was conducted at Dodoma Regional Referral Hospital, one of the seven regional referral hospitals in Tanzania where the Ministry of Health has piloted the integration of traditional medicine services into modern healthcare. The hospital serves as a referral centre for the Dodoma region, offering a range of medical services including outpatient and inpatient care. The integration of traditional medicine services at the hospital is part of a national initiative to enhance healthcare delivery through a more holistic approach.

Dodoma is the capital city of Tanzania, and the hospital provides care for a diverse population, including urban and rural residents. The region has a high reliance on traditional medicine, particularly for managing chronic diseases. This makes Dodoma Regional Referral Hospital an ideal location for assessing community perceptions and willingness to engage with integrative healthcare services.

### 3.3 Study population

Clients aged 18 years and above accessing healthcare services at Dodoma Regional Referral Hospital.

### 3.4 Sample size determination

The participants involved in the study were obtained by using simple random sampling where. The number of participants was obtained by using the following formula;

$$n = \frac{Z_{\alpha}^{2} p\,(1-p)}{e^{2}}$$

Whereby;

n= Minimum sample size

Z= Standard normal deviation 1.96 for 95% confidence interval.

P= percentage of Tanzania population who are willing to use traditional medicine in modern health facilities (where P=60% (value obtained from previous study (27))

From the formula, the sample size of clients included in the study was 370.

## 3.5 Selection criteria

### 3.5.1 Inclusion criteria

Clients aged 18 years and above, accessing healthcare services at Dodoma Regional Referral Hospital.

### 3.5.2 Exclusion criteria

Clients with cognitive impairments or mental health conditions that hinder their ability to comprehend and respond to the interview questions were excluded.

## 3.6 Variables and measurement

Outcome variable of this study was the willingness to utilize traditional medicine services provided within the modern health facility**.** Independent variables were previous traditional medicine experience, cultural belief, social demographic characteristics (age, sex, level of education, income), perceived efficacy and safety of traditional medicine for specific conditions and awareness of services provided at the hospital.

The collection method of independent variables was through interview.

## 3.7 Data collection and instrumentation

### 3.7.1 Interview form administration

Interview form with semi structured questions was designed to assess clients' willingness to utilize integrative traditional medicine services. The questionnaire consisted of both closed- and open-ended questions, and was divided into sections addressing: demographic characteristics (age, gender, education level, etc.), awareness of integrative traditional medicine services, past experience with traditional medicine, beliefs and perceptions

regarding integrative services and preferred diseases for integrative treatment.

### 3.7.2 Data collection instruments

The study utilized an interview form to gather quantitative data concerning the integration of traditional medicine into modern health services. The interview form elicited information about clients' willingness to utilize traditional medicine when provided in the modern facility was obtained with the reason behind the use and diseases preferred by clients to be included in the integrative services.

Data was collected electronically using tablets and smartphones with Open Data Kit (ODK) software. This data was uploaded to the server daily and subsequently imported into excel for cleaning and later into Stata version 17.0 (Stata Corp 2016) for cleaning and analysis.

Data collection was done in Kiswahili, the national and widely spoken language in Tanzania. The interview forms were in both English and Kiswahili. This translation aimed at enhancing the validity of responses, considering that most respondents were more proficient in Kiswahili than in English. Subsequently, a back-translation of the instruments from Kiswahili to English was conducted to verify the accuracy of the translation and further bolster content validity.

### 3.7.3 Pre-testing of tools

Tools were pre-tested on a small sample at Dodoma Regional Referral Hospital to assess the appropriateness of the questions, clarity, validity, and reliability of the instruments. The questions or procedures were modified based on pre-test feedback. Modification included the removal of some questions and refining of others. All participants included during validation were later not included as part of the study.

### 3.7.4 Collected processing and curation

Data collection was done by the PI and two trained research assistants with medical backgrounds who underwent three days of training conducted by the PI. The training enabled familiarization with the tools and research ethics. However, there were daily feedback meetings to evaluate daily work.

### 3.8 Addressing social desirability and influence of religious belief

Participants were assured of the confidentiality of their responses, with a focus on creating a trusting environment. They were explicitly informed that their feedback would not impact their care in any way. Clear explanations were provided, emphasizing that their honest responses were crucial for understanding the true impact of integrating traditional medicine into modern healthcare services.

Recognizing that personal beliefs could influence how participants perceive traditional medicine, efforts were made to clarify the purpose of the study. Participants were reassured that the study aimed to gather genuine community perspectives, regardless of whether their views were positive or negative. This clarification was intended to ensure that participants felt their beliefs were respected and that there was no need to present traditional medicine in a particular light to align with perceived expectations.

### 3.9 Data management

Data were collected using a mobile app and later moved to Microsoft Excel for organization and cleaning. Regular checks were done to make sure the data was accurate, and any issues were resolved.

### 3.10 Data analysis

For the determination of proportion of who have previously used traditional medicine, descriptive statistics were applied to summarize the socio-demographic characteristics of clients and their use of traditional medicine. Categorical variables, such as previous use of traditional medicine, were described using frequencies and percentages. Continuous variables were summarized using means and standard deviations. This allowed for a clear understanding of the extent to which traditional medicine has been used by clients at some point in their life time.

While determining factors influencing the willingness of clients to utilize traditional medicine services in the modern health facility, a binary logistic regression model was used to assess the association between various independent variables (e.g., socio-demographic factors and associated factors) and the clients' willingness to use traditional medicine services. Crude Odds Ratios (COR) and Adjusted Odds Ratios (AOR) with 95% confidence intervals were calculated to quantify the strength of the associations, adjusting for potential

confounding factors. Variables with a p-value of less than 0.05 from bivariate analysis, which were identified using Chi-Square tests, were included in the final multivariate regression model. Before inclusion in the model, variables were checked for multicollinearity to ensure accurate results.

The preferences of clients for diseases to be treated through integrative services were analyzed using descriptive statistics. Frequencies and percentages were calculated for categorical responses regarding disease preferences. This helped identify the most common diseases that clients believe should be addressed using integrative traditional and modern medicine services.

Descriptive analysis was conducted to evaluate the level of familiarity among clients with the existing healthcare structures that support traditional medicine integration. Frequencies and percentages were calculated to describe clients' awareness and understanding of these structures. This analysis provided insights into how well-informed clients are about the availability and functionality of integrative services within the hospital.

### 3.11 Ethical clearance

The research senate and publication committee of MUHAS issued an Ethical clearance with reference number **DA.282/298/01.C/2230** for the study. The approval was submitted to Dodoma Regional Referral Hospital to request for the permit to conduct the research at their facility. The Dodoma Regional Referral Hospital granted the permit to collect data at the facility for the period of one month.

This study respected the rights of participants by allowing them to freely decide if they wanted to take part or not. Informed consent was obtained from patients before including them in the study. Importantly, if a patient chose not to participate, it did not affect their right to receive treatment.

During data collection, written informed consent was obtained from study participants before enrollment after the goals and benefits of the study were explained to them. All information was anonymously obtained for confidentiality and they will be archived for five years before destruction.

# CHAPTER FOUR

## 4.0 RESULTS

### 4.1 Proportion of clients at Dodoma Regional Referral hospital who have previously used traditional medicine

This study involved 370 participants aged 18 years and above from Dodoma Regional Referral Hospital. The average age was 35 years, with more than half being female (63.0%). A significant portion (32.2%) of participants were between 25 and 34 years old. Most of the participants resided in rural areas (41.6%), and 27.6% were self-employed. In terms of education, 34.3% had attained a university degree, and 60.0% of participants were married.

More than half of the participants (55.4%) reported having used traditional medicine for various health issues in the past, indicating a high level of familiarity with traditional medicine among those attending the hospital.

**Table 1: Sociodemographic characteristics of the study population (n=370)**

| Demographic variable | Frequency | Percentage |
|---|---|---|
| **Sex** | | |
| Male | 137 | 37.0 |
| Female | 233 | 63.0 |
| **Age group** | | |
| <25 | 70 | 18.9 |
| 25-34 | 119 | 32.2 |
| 35-44 | 77 | 20.8 |
| 45-54 | 58 | 15.7 |
| >54 | 46 | 12.4 |
| **Place of residence** | | |
| Urban | 134 | 36.2 |
| Suburban | 82 | 22.2 |
| Rural | 154 | 41.6 |

| | | |
|---|---|---|
| **Source of income** | | |
| Agriculture | 67 | 18.1 |
| Employed | 89 | 24.0 |
| Self-employed | 102 | 27.6 |
| Not working | 94 | 25.4 |
| Other | 18 | 4.9 |
| **Highest level of education attained** | | |
| No formal education | 13 | 3.5 |
| Primary | 93 | 25.1 |
| Secondary | 81 | 21.9 |
| Collage/Vocation training | 56 | 15.1 |
| University | 127 | 34.3 |
| **Marital status** | | |
| Never Married | 120 | 32.4 |
| Married | 222 | 60.0 |
| Separated/Divorce | 8 | 2.2 |
| Widow/Widower | 20 | 5.4 |
| **Number of children** | | |
| None | 93 | 25.1 |
| One | 58 | 15.7 |
| Two | 88 | 23.8 |
| More than two | 131 | 35.4 |

### 4.2 Factors influencing the willingness of clients to utilize traditional medicine services at Dodoma Regional Referral Hospital

Several key factors influenced clients' willingness to use traditional medicine services at Dodoma Regional Referral Hospital. Age was a significant factor, with respondents over 54 years being more likely to use traditional medicine compared to younger individuals (AOR=2.77, p=0.028). Positive past experiences also played a major role, with those who had previously used traditional medicine being much more willing to continue its use (AOR=3.86, p=0.001).

Although the majority of respondents were female, gender did not significantly affect the willingness to use traditional medicine (p=0.503). Educational attainment, while not statistically significant, showed that those with higher education were more inclined to use integrative health services.

Overall, individual beliefs, perceptions, and prior experiences with traditional medicine were stronger predictors of willingness to utilize traditional medicine services than socio-demographic factors.

**Table 2: Distribution of factors influencing utilization of traditional medicine services within modern health facilities among clients attending Dodoma Regional Referral Hospital**

| Demographic variable | Total (%) | Utilization of traditional Services | | P-value (Chi-Square) |
|---|---|---|---|---|
| | | Yes (%) | No (%) | |
| **Sex** | | | | |
| Male | 137(37.0) | 79(38.5) | 58(35.1) | |
| Female | 233(63.0) | 126(61.5) | 107(64.8) | 0.503 |
| **Age group** | | | | |
| <25 | 70(18.9) | 36(17.6) | 34(20.6) | |
| 25-34 | 119(32.2) | 64(31.2) | 55(33.3) | |
| 35-44 | 77(20.8) | 37(18.1) | 40(24.2) | |
| 45-54 | 58(15.7) | 33(16.1) | 25(15.2) | |
| >54 | 46(12.4) | 35(17.1) | 11(6.7) | 0.036 |
| **Religion** | | | | |
| Christian | 266(71.9) | 151(73.7) | 115(69.7) | |
| Muslim | 102(27.6) | 52(25.4) | 50(30.3) | |
| Other | 2(0.5) | 2(1.0) | 0(0.0) | 0.270 |
| **Place of residence** | | | | |
| Urban | 134(36.2) | 68(33.2) | 66(40.0) | |
| Suburban | 82(22.2) | 44(21.5) | 38(23.0) | |
| Rural | 154(41.6) | 93(45.4) | 61(37.0) | 0.243 |

| | | | | |
|---|---|---|---|---|
| **Source of income** | | | | |
| Agriculture | 67(18.1) | 35(17.1) | 32(19.4) | |
| Employed | 89(24.0) | 48(23.4) | 41(24.8) | |
| Self employed | 102(27.6) | 65(31.7) | 37(22.4) | |
| Not working | 94(25.4) | 46(22.4) | 48(29.1) | |
| Other | 18(4.9) | 11(5.4) | 7(4.2) | 0.284 |
| **Highest level of education attained** | | | | |
| No formal education | 13(3.5) | 8(3.8) | 5(3.0) | |
| Primary | 93(25.1) | 57(27.8) | 36(21.8) | |
| Secondary | 81(21.9) | 36(17.6) | 45(27.3) | |
| Collage/Vocation training | 56(15.1) | 32(15.1) | 24(14.6) | |
| University | 127(34.3) | 72(35.1) | 55(33.3) | 0.232 |
| **Marital status** | | | | |
| Never Married | 120(32.4) | 63(30.7) | 57(34.6) | |
| Married | 222(60.0) | 125(61.0) | 97(58.8) | |
| Separated/Divorce | 8(2.2) | 4(1.9) | 4(2.4) | |
| Widow/Widower | 20(5.4) | 13(6.3) | 7(4.2) | 0.724 |
| **Number of children** | | | | |
| None | 93(25.1) | 52(25.4) | 41(24.8) | |
| One | 58(15.7) | 28(14.1) | 29(17.6) | |
| Two | 88(23.8) | 47(22.9) | 41(24.8) | |
| More than two | 131(35.4) | 77(37.6) | 54(32.7) | 0.696 |

**Table 3: Perception and belief factors associated with the utilization of the traditional medicine integrative services at Dodoma Regional Referral Hospital (n=370)**

| Awareness and Perception variable | Total | Utilization of traditional services | | P-value (Chi- Square |
|---|---|---|---|---|
| | | Yes | No | |
| **Perception towards traditional medicine integrative services** | | | | |
| Positive | 276(74.6) | 166(60.1) | 110(39.9) | |
| Neutral | 59(15.9) | 26(44.1) | 33(55.9) | |
| Negative | 35(9.5) | 13(37.1) | 22(62.8) | 0.006 |
| **Belief associated factors influencing the utilization of traditional medicine** | | | | |
| Cultural beliefs | 94(25.4) | 34(36.2) | 60(63.8) | |
| Lack of awareness | 27(7.3) | 11(40.7) | 16(59.3) | |
| Previous positive experience | 137(37.0) | 97(70.8) | 40(29.2) | |
| Inaccessibility of modern health services | 43(11.6) | 14(32.6) | 29(67.4) | |
| Unaffordable modern health services | 2(0.5) | 1(50.0) | 1(50.0) | |
| Other | 67(18.1) | 48(71.6) | 19(28.4) | 0.001 |

### 4.3 Diseases that clients prefer to be addressed through integrative services at Dodoma Regional Referral Hospital

Clients at Dodoma Regional Referral Hospital demonstrated a significant inclination toward integrating traditional medicine into chronic disease management, as evidenced by the distribution of responses. Hypertension and diabetes emerged as the most prevalent conditions, collectively accounting for a substantial proportion of preferences. These findings suggest a strong demand for integrative services in the management of non-communicable diseases, highlighting the potential role of traditional medicine in complementing modern healthcare practices.

Asthma and peptic ulcers were also moderately represented, indicating a relevant interest in applying integrative medicine to address respiratory and gastrointestinal conditions. Hemorrhoids, though less frequently cited, still reflected a notable demand for traditional interventions. Conditions such as skin diseases and chest problems were less prominent, but the data reveal a non-negligible interest in integrative care for these issues.

A very small proportion of participants identified sexually transmitted infections (STIs) as a target for traditional medicine integration, further demonstrating the variance in demand across different health conditions. The "Other" category, accounting for a diverse range of health issues, underscores the heterogeneous nature of client preferences. Overall, these results illustrate a robust preference for integrative medicine, particularly in the context of managing chronic diseases, emphasizing the role of traditional medicine in providing comprehensive, long-term healthcare solutions.

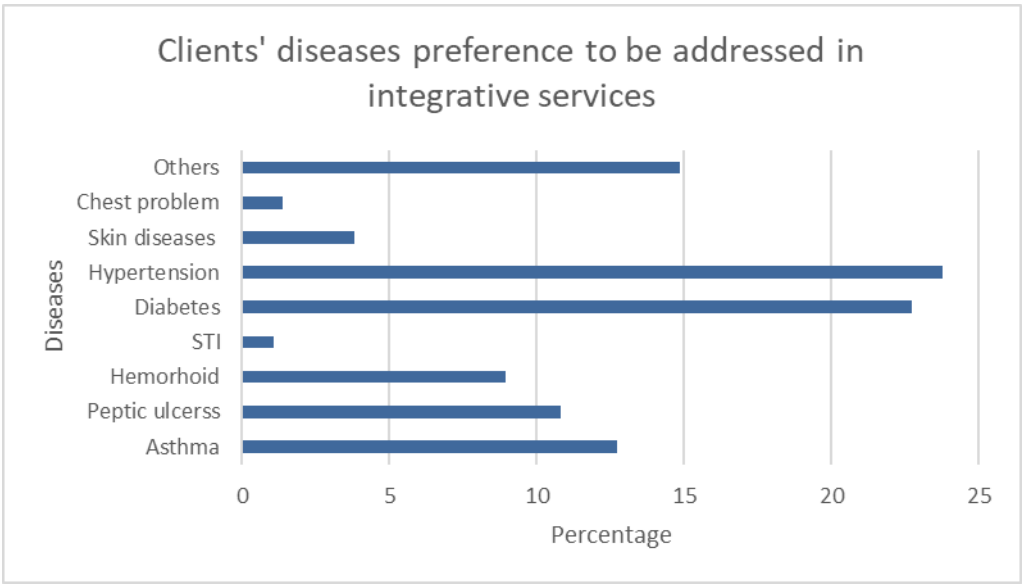



**Figure 2:** Proportion of diseases proposed by clients to be included in traditional medicine integrative services

### 4.4 Clients' familiarity with existing health structure that supports integration of traditional medicine into modern health services hospital

Awareness and perception of traditional medicine integration were key factors influencing its utilization. Only 22.4% of respondents were aware of this integration, and among them,

59.0% had used traditional medicine services. This highlights the importance of awareness in promoting utilization.

Perception also played a significant role: 74.6% of respondents had a positive view of integrating traditional medicine, and 60.1% of these individuals had used such services. In contrast, those with neutral or negative views were less likely to have used traditional medicine. The relationship between perception and service utilization was statistically significant (p=0.006).

Previous positive experience with traditional medicine was the strongest predictor of utilization, reported by 37.0% of respondents. Cultural beliefs and access to modern healthcare also influenced usage but to a lesser extent. Overall, the findings emphasize the need for improved awareness and education to support the integration of traditional medicine into modern healthcare system.

**Table 3: Awareness and utilization of the traditional medicine integrative services at Dodoma Regional Referral Hospital (n=370)**

| **Awareness and Perception variable** | **Total** | **Utilization of traditional services** | | **P-value (Chi-Square** |
|---|---|---|---|---|
| | | **Yes** | **No** | |
| **How do you perceive tradition medicine integration** | | | | |
| Positive | 276(74.6) | 166(60.1) | 110(39.9) | |
| Neutral | 59(15.9) | 26(44.1) | 33(55.9) | |
| Negative | 35(9.5) | 13(37.1) | 22(62.8) | 0.006 |

### 4.5 Multivariate logistic regression for factors associated with utilization of traditional medicine service

To assess factors associated with the utilization of traditional medicine services, multivariate logistic regression was conducted. Before adjusting for other variables, those age > 54 years

were 3.00, 95%CI (1.32-6.84) more likely to utilize traditional medicine service compared to those aged less than 24 years p-value 0.009. After adjustment age groups were not statistically significant associated with tradition medicine services. Those with positive perception towards integrating tradition medicine services to the modern health facility were 2.32, 95%CI (1.37-3.92) more likely to utilize tradition medicine services, p-value 0.002.

Respondent with positive previous experience with tradition medicine services have 4.28, 95% CI (2.44-7.48) odds of utilizing tradition medicine services, compared to those with negative experience p-value 0.001. Those who reported other factors which influence the use tradition medicine services were 4.78, 95% CI (2.37-9.67) more likely to utilize tradition medicine compared to cultural belief p-value 0.001.

**Table 4: Multivariate logistic regression for factors associated with utilization of tradition medicine service**

| | **Crude Odds Ratio** | | **Adjust Odds Ratio** | |
|---|---|---|---|---|
| **Factors for utilization** | **Odds Ratio(95%CI)** | **P-value** | **Odds Ratio(95%CI)** | **P-value** |
| **Age group** | | | | |
| <24 | Ref | | | |
| 25-34 | 1.09(0.61-1.98) | 0.754 | 1.19(0.62-2.27) | 0.598 |
| 35-44 | 0.87(0.46-1.67) | 0.684 | 1.05(0.52-2.12) | 0.895 |
| 45-54 | 1.26(0.62-2.51) | 0.537 | 1.08(0.51-2.31) | 0.834 |
| >54 | 3.00(1.32-6.84) | 0.009 | 2.77(1.12-6.84) | 0.028 |
| **Perception towards integration** | | | | |
| Negative | Ref | | | |
| Positive | 2.13(1.32-3.42) | 0.002 | 2.32(1.37-3.92) | 0.002 |
| **Factors influence utilization** | | | | |
| Cultural belief | Ref | | | |
| Lack of awareness | 1.21(0.51-2.91) | 0.665 | 1.26(0.51-3.1) | 0.613 |
| Previous experience | 4.28(2.44-7.48) | 0.001 | 3.86(2.17-6.87) | 0.001 |
| Inaccessibility health services | 0.85(0.39-1.83) | 0.681 | 0.88(0.4-1.93) | 0.756 |
| Unaffordability health services | 1.76(0.11-29.12) | 0.691 | 0.93(0.05-16.75) | 0.959 |
| Other factors | 4.46(2.26-8.78) | 0.001 | 4.78(2.37-9.67) | 0.001 |

# CHAPTER FIVE

## 5.0 DISCUSSION

The study aimed to assess the willingness of clients at Dodoma Regional Referral Hospital to use traditional medicine services within a modern healthcare setting, evaluate the factors influencing this willingness, and explore the diseases clients preferred to be treated with integrative medicine. Additionally, the study assessed clients' familiarity with the existing health structures supporting the integration of traditional medicine into modern healthcare systems. The findings revealed that more than half of the respondents were willing to use traditional medicine services. Factors such as age, previous experiences with traditional medicine, and education levels significantly influenced this willingness, while diseases like hypertension and diabetes were among the top preferences for integrative treatment. These results align with current discussions about integrating traditional and modern healthcare services.

One of the significant findings was that age had a profound effect on clients' willingness to use traditional medicine services. Older participants, particularly those over 54 years, were more inclined to incorporate traditional medicine into their healthcare practices (26). This observation is consistent with studies conducted in Sub-Saharan Africa, where age has been associated with a higher reliance on traditional remedies, particularly among older populations (6,19). The similarity across studies suggests that as populations age, they may continue to rely on traditional medicine, reinforcing the value of integrating these practices into modern health systems. This finding emphasizes the importance of accommodating cultural ties within healthcare systems for older adults.

Gender, despite the majority of the study sample being female, did not show a significant impact on the willingness to use traditional medicine. Previous studies in Sub-Saharan Africa have presented mixed results on the role of gender in traditional medicine use, particularly for reproductive health issues, where women tend to use traditional medicine more frequently than men (7,19). However, in the context of this study, both men and women appeared equally open to using integrative healthcare services. This broader acceptance of

traditional medicine highlights its appeal across gender lines, making it an essential part of healthcare for diverse populations.

Previous experiences with traditional medicine emerged as a strong determinant for the continued use of traditional medicine services. Those who had positive past experiences were significantly more willing to continue using these services. This finding aligns with studies conducted in Ghana and Uganda, where personal testimonies of effective traditional treatments reinforced patients' trust in these remedies (27,43). The implication here is that healthcare providers should recognize the value of personal experiences in shaping patient preferences and consider these when designing integrative healthcare models.

Education level, while not statistically significant, still influenced the inclination to use traditional medicine, with higher-educated respondents demonstrating a greater openness to integrative services. This observation is in line with findings from Tanzania and other countries, which suggest that individuals with higher education tend to be better informed about healthcare options and are thus more receptive to blending traditional and modern healthcare approaches (37). This underscores the need for public health campaigns that emphasize the benefits of integrative health models, particularly in highly educated populations who may serve as key advocates for traditional medicine.

Surprisingly, socio-demographic factors like marital status and place of residence did not significantly impact the willingness to use traditional medicine. This contrasts with studies in Ethiopia and Uganda, where rural populations tend to rely more on traditional medicine due to limited access to modern healthcare (44). The lack of significant findings in this study could suggest that both rural and urban populations in Dodoma are equally interested in traditional medicine, possibly due to strong cultural ties. This broad appeal further supports the need for inclusive healthcare systems that integrate both traditional and modern practices.

In terms of disease preferences, the study revealed a clear inclination towards using traditional medicine for managing chronic conditions like hypertension and diabetes. This finding aligns with global trends, where patients with long-term illnesses often seek alternative therapies perceived to have fewer side effects than conventional treatments (12,45). The preference for integrative services in managing chronic diseases reflects the

potential of traditional medicine to complement modern healthcare, particularly in low-resource settings where access to conventional treatments may be limited.

Despite the positive findings, the study highlighted gaps in clients' awareness of existing health structures supporting the integration of traditional medicine. Similar findings have been reported in Ghana and Nigeria, where insufficient knowledge about integrative health services has been a major barrier to successful adoption (19,27). This underscores the need for public health campaigns to raise awareness about integrative services and their benefits. Healthcare providers should focus on educating the public about the safety and efficacy of traditional medicine when combined with modern treatments.

In conclusion, this study demonstrates a significant willingness among clients at Dodoma Regional Referral Hospital to incorporate traditional medicine into modern healthcare, particularly for the management of chronic conditions. Key factors influencing this willingness include age, previous experience with traditional medicine, and education. However, there remains a gap in awareness regarding the healthcare structures that support this integration, pointing to the need for public health initiatives to bridge this gap. While the cross-sectional nature of the study limits its generalizability, the findings provide valuable insights for healthcare policymakers in Tanzania. Further research is needed to explore how these findings evolve over time and to assess the long-term viability of integrating traditional medicine into the country's healthcare system.

# CHAPTER SIX

## 6.0 CONCLUSION AND RECOMMENDATIONS

### 6.1 Conclusion

This study assessed the community's willingness to utilize traditional medicine services when provided within modern healthcare at Dodoma Regional Referral Hospital. The integration of traditional medicine into modern healthcare system provides an important opportunity to improve healthcare access, equity, and patient care. Older populations, in particular, have shown a greater willingness to use these integrated services, especially when they have positive attitudes toward traditional medicine. Additionally, cultural beliefs and past positive experiences play a key role in the community's acceptance of traditional medicine.

**The community displayed varied levels of confidence in the health system's ability to integrate traditional medicine services,** indicating concerns that could pose challenges to the effective integration of traditional and modern healthcare services. These uncertainties suggest that further efforts are needed to build public trust and address potential gaps in the system.

Overall, the study indicates a considerable willingness among the community to integrate traditional medicine into modern healthcare, albeit with necessary improvements and supportive measures to address confidence and capability concerns.

### 6.2 Recommendations

Several key strategies must be implemented to integrate traditional medicine services into modern healthcare successfully.

1. The Ministry of Health should conduct extensive public awareness campaigns on the introduction and existence of traditional medicine services within modern health facilities. These campaigns should build trust and acceptance among the population by providing clear, factual information about how traditional medicine can complement modern medical practices.

2. The Ministry of Health should provide training to health car workers to enhance the knowledge and skills in traditional medicine practices. Equipping healthcare workers with the necessary expertise will enable them to handle integrated services effectively, ensuring that patients receive comprehensive care.

3. Healthcare facilities should upgrade their infrastructure to accommodate traditional medicine integrative services. This involves creating dedicated spaces for ensuring proper storage for traditional medicines, and maintaining health and safety standards.

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# APPENDICES

## Appendix 1a: Informed consent form – English version

**TITLE: ASSESSMENT OF COMMUNITY READINESS OF INTEGRATION OF TRADITIONAL MEDICINE INTO MODERN HEALTH SERVICES**

PID No _____ Greetings,

### Introduction

I invite you to participate in this study related to your field of practice/health care need as a stakeholder of traditional medicine.

### Aim of the study

This study is for the fulfillment of my Master's Degree in Public Health at Muhimbili University of Health and Allied Sciences (MUHAS). Assessment of Community Willingness to Utilize Integration of Traditional Medicine into Modern Health Services could provide an insight into whether the community will utilize traditional health services when provided under the same roof as modern health services. Moreover, this research will enable obtaining information on the proportion of the community who had used traditional medicine services before visiting modern health services, which disease they would like to be included in this intervention and community. This helpful information will provide guidance and suggestions on how to implement the already-started intervention and facilitate rational decision-making.

### Participation

Participation is voluntary. The study and the reason for its conduction will be described to you. The one-hour interview will be conducted to obtain information that will be recorded using a questionnaire after signing an informal consent form.

### Confidentiality

No name will be recorded on the during the interview and on the interview form; participation is anonymous. Response to the questions will be used for this study only. Data will be kept for five years from the Date of collection.

**Who to contact**

If you have any inquiries or concerns about the study, please contact the Principal Investigator, Lucy Samwel.

Mobile phone number +255 656 787 64. E-mail: luccisamwel@yahoo.com

Or you can contact the Director of Research, Publication and Innovation,

Muhimbili University of Health and Allied Sciences, PO Box 65001, Dar es Salaam.

**Consent**

I have read and understood the information provided. I know my participation is voluntary and that I can withdraw at any time, even without any given reason. I agree to participate in this research voluntarily, and a signed copy of this form will be given to me.

Participant's signature _____Date _____

Investigator's signature _____Date _____

**Appendix 1b: Consent form – Swahili version**

**UTAFITI: TATHMINI UTAYARI WA JAMII JUU MATUMIZI YA HUDUMA JUMUISHI ZA TIBA ASILI KWENYE VITUO VYA TIBA ZA KISASA**

Nambari ya mshiriki _____

Salamu,

**Utangulizi**

Ninapenda kukukaribisha kushiriki kwenye utafiti huu ambao unahusiana na mambo ya tiba asili ukiwa kama mdau wa tiba asili/ mtumiaji wa huduma za afya.

**Dhumuni la Utafiti**

Utafiti huu ni kwa ajili ya kukamilisha masomo yangu ya uzamili kwenye Afya ya Jamii katika Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili. Natumai kuwa utathmini wa utayari wa jamii juu ya matumizi ya huduma za tiba asili kwenye vituo vya tiba za kisasa italeta taarifa ya utayari wa jamii kutumia huduma za tiba asili zikiwa zinatolewa chini ya paa moja na huduma za tiba za kisasa. Zaidi, utafiti huu utawezesha kupata taaarifa za idadi ya watumiaji wa huduma za tiba asili kabla ya kwenda kwenye huduma za tiba za kisasa. Taarifa hizi zitawezesha kutoa muongozo na mapendekezo ya kutekeleza afua hii kiufasaha ambayo imeshaanza kwenye hospitali za rufaa za mikoa saba na kuwezesha ufanyaji sahihi wa maamuzi juu ya huduma jumuishi.

**Ushiriki**

Ushiriki ni wa hiyari. Mshiriki ataelekezwa kuhusu utafiti huu na atapatiwa fomu ya ushiriki ili aweze kuisoma. Baada ya kukubali na kujaza fomu ya ridhaa ya ushiriki, mshiriki atafanyiwa mahojiano kwa muda wa nusu saa kwa ajili ya kurekodi/ kujaza dodoso.

**Utunzaji wa Siri**

Taarifa zitakazochukuliwa kutoka kwa mdau zitazingatia usiri. Hakuna jina litakaloandikwa kwenye muongozo wa usahili wala kwenye kifaa cha kurekodia. taarifa za

usahili zitatumika kwenye utafiti huu tu. Taarifa za usahili zitahifadhiwa kwa kipindi cha miaka mitano kuanzia siku zilivyochukuliwa.

**Mawasiliano:**

Endapo una maswali au unahitaji maelezo na taarifa zaidi kuhusu utafiti huu, tafadhali wasiliana na Lucy Samwel.

Simu ya mkononi: +255 656 787 64. Barua pepe: luccisamwel@yahoo.com

Au Mkurugenzi wa Idara ya Utafiti, Machapisho na Ubunifu,

Chuo Kikuu Cha Afya na Sayansi Shirikishi, S.L.P 65001, Dar es Salaam.

**Ridhaa**

Nimesoma na kuelewa maelezo yaliyotolewa juu ya utafiti huu. Ninafahamu kuwa ushiriki wangu ni wa hiyari na ninaweza kujiondoa muda wowote, hata bila kuwa na sababu yoyote. Ninakubali kushiriki kwenye utafiti huu kwa hiari na nitakabidhiwa nakala moja iliyosainiwa ya hii fomu.

Saini ya mshiriki _____Tarehe _____

Saini ya mtafiti mkuu _____Tarehe _____

**Appendix 2: Interview Forms – English version**

**Interview Form ID Number: ……..**

Name of the Regional Referral Hospital ……

**Section 1: Demographic Information**

1. Age …….
2. What is your religion?
    a) Christian
    b) Muslim
    c) Other ……..
3. Where were you born
    a) Urban
    b) Suburban
    c) Rural
4. What do you do for a living?
    a) Agriculture (Farming/Livestock keeping) Employed
    b) Self Employed
    c) Not working
    d) Student
    e) Others ……..
5. What is your highest level of education?
    a) Never attended school
    b) Primary
    c) Vocational training
    d) Secondary
    e) College training
    f) University
    g) Post-graduate
6. What is your current marital status

a) Never married

b) Married monogamous

c) Married polygamous

d) Separated

e) Divorced

f) Cohabiting

g) Widow(er)

7. Number of children

a) None

b) One

c) Two

d) More than two

**Section 2: Traditional Medicine Preferences**

1. Have you ever sought traditional medicine services?

a) Yes

b) No

2. Did you use it for yourself or member of the family?

a) For myself

b) For the member of the family

- If for the member of the family, explain your relationship with him/her:

3. If yes, please specify the type of traditional medicine services you have utilized.

a) Herbal remedies

b) Rituals/ceremonies

c) Orthopaedic related service/ bone setting

d) Other (please specify):

4. Was the service utilized satisfied your health need?

a) Yes

b) No

b) I am not sure Explain……

5. Do you think the one provided the service gave you the right diagnosis Yes

    a) No

    b) Somehow

    c) I am not sure

**Section 3: Integration Awareness and Perception**

3.1. Are you aware of the potential integration of traditional medicine services with modern health facilities?

a) Yes

b) No

3.2. How do you perceive the integration of traditional medicine with modern health services?

a) Positive

b) Neutral

c) Negative

Explain …….

3.3. What factors do you believe influence the utilization of traditional medicine within modern health facilities?

a) Cultural beliefs

b) Lack of awareness

c) Previous positive experiences

d) Inaccessibility of modern health facility

e) Unaffordability of modern health services

f) Other (please specify):

**Section 4: Disease-Specific Utilization**

4.1. In your opinion, which diseases or health conditions could benefit the most from the integration of traditional medicine with modern health services?

a) Diabetes

b) Chest (can refer to chest problems or diseases)

c) Common cold

d) Hypertension (high blood pressure)

e) Worms (intestinal worms)

f) Skin diseases

g) Sexually transmitted diseases; specify……

h) Stomach ulcers

i) Fibroid

j) Hemorrhoids

k) Asthma

l) Cancer; specify the type of cancer……

m) Other (specify): ……

**Section 5: Readiness and Capacity Assessment**

5.1. How confident are you in the existing healthcare structure's capacity to support the integration of traditional medicine services?

a) Very confident

b) Somewhat confident

c) Neutral

d) Not confident

5.2. What improvements or changes do you think are necessary in the current healthcare system to successfully integrate traditional medicine services?

a) Training for healthcare professionals

b) Public awareness campaigns

c) Infrastructure improvements

d) Other (please specify):

**Section 6: Open-Ended Questions**

6.1. What are your general thoughts regarding the integration of traditional medicine with modern health services?

……

6.2. What are your worries regarding the integration of traditional medicine with modern health services?

……

**Appendex 2b: Interview form - Swahili version**

**Namba ya Utambulisho**: ……..

Jina la Hospitali ya Rufaa ya Mkoa ……

**Sehemu ya 1: Taarifa za Kidemografia**

Umri …….

1.1. Wewe ni dini gani?

a) Kristo
b) Waislamu
c) Nyingine ……..

1.2. Ulizaliwa wapi

a) Mijini
b) Kijijini
c) Mji mdogo

1.3. Unafanya shughuli gani?

a) Kilimo (Kilimo/Ufugaji wa Mifugo)
b) Muajiriwa
c) Ujasiriamali
d) Binafsi
e) Sifanyi kazi
f) Mwanafunzi
g) Nyingine ……..

1.4. Elimu yako ya juu ni ipi?

a) Haujawahi kwenda shule
b) Msingi
c) Mafunzo ya ufundi
d) Sekondari
e) Mafunzo ya chuo
f) Chuo Kikuu

g) Uzamili

1.5. Hali yako ya ndoa kwa sasa ni ipi Haujaoa/hujaolewa

a) Ndoa ya mke moja

b) Ndoa ya mke zaidi ya moja

c) Tumetengana

d) Talaka

e) Kuishi pamoja bila ndoa

f) Mjane

1.6 Idadi ya watoto

a) Sina mtoto

b) Mmoja

c) Wawili

d) Zaidi ya wawili

**Sehemu ya 2: Matumizi ya Tiba ya Asili**

2.1. Je! Umewahi kutumia huduma za tiba ya asili?

a) Ndiyo

b) Hapana

2.2. Umetumia tiba asili kwa ajili yako au ndugu yako

a) Ndiyo

b) Hapana

2.3. Ikiwa ndiyo, tafadhali eleza aina ya huduma za tiba ya asili ulizotumia.

a) Dawa za mitishamba

b) Jadi/ tunguli

c) Huduma zinazohusiana na mifupa

d) Nyingine (taja):

2.4. Je! Huduma ulizotumia zilikidhi mahitaji yako ya afya?

a) Ndiyo

b) Hapana

c) Sijui

Elezea ……

2.5. Je! Unadhani yule aliyetoa huduma alikupa uchunguzi sahihi?

a) Ndiyo

b) Hapana

c) Vibaya kidogo

d) Sijui

**Sehemu ya 3: Uhamasishaji na Uelewa wa Utekelezaji**

3.1. Je! Unafahamu juu ya uwezekano wa kuingiza huduma za tiba ya asili katika vituo vya afya vya kisasa?

a) Ndiyo

b) Hapana

3.2. Unachukuliaje kuhusu uingizwaji wa tiba ya asili na huduma za afya za kisasa?

a) Chanya

b) Huru

c) Hasi

Elezea jibu lako ……

3.3 Unaona mambo gani yanaweza kusababisha jamii kutumia huduma za tiba asili ndani ya vituo vya afya vya kisasa?

a) Imani za kitamaduni Ukosefu wa ufahamu

b) Matokeo chanya ya huduma za tiba asili hapo zamani

c) Gharama kubwa ya huduma za tiba za kisasa Kutokuwepo kwa vituo vya tiba za kisasa karibu na jamii

d) Nyingine (taja):

**Sehemu ya 4: Mapendekezo ya magonjwa ya kutibiwa kwenye huduma jumuishi**

4.1. Kwa maoni yako, ni magonjwa au hali za afya zipi zinazoweza kunufaika zaidi na uingizaji wa tiba ya asili katika huduma za afya za kisasa?

a) Kisukari

b) Kifua

c) Mafua

d) Presha

e) Minyoo

f) Magonjwa ya Ngozi

g) Magonjwa ya zinaa; yataje……..

h) Fibroid

i) Vidonda vya tumbo Bawasiri

j) Asthma

k) Saratani ; taja aina ya saratani……

l) Mengine (taja): …….

**Sehemu ya 5: Tathmini ya utayari na uwezo**

5.1. Je, Miundo mbinu iliyopo katika hospitali hii unadhani ni wezeshi kwa utoaji wa huduma jumuishi?

a) Ndiyo

b) Inaweza kwa kiasi kidogo

c) Hapana

d) Sina uhakika

5.2. Ni maboresho au mabadiliko gani unafikiri yanahitajika katika mfumo wa afya wa sasa ili kuwezesha huduma za tiba asili katika hospitali?

a) Mafunzo kwa wataalamu wa afya

b) Kampeni za uelewa wa umma

c) Kuboresha miundo mbinu

d) Nyingine (taja):

**Sehemu ya 6: Maswali ya Wazi**

6.1. Una maoni gani kuhusu uingizwaji wa tiba ya asili na huduma za afya za kisasa?

……

6.2. Una wasiwasi gani kuhusu uingizwaji wa tiba ya asili na huduma za afya za kisasa?

……..

**Appendix 3: Ethical clearance**

**UNITED REPUBLIC OF TANZANIA**

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

OFFICE OF THE DIRECTOR – RESEARCH, PUBLICATIONS AND INNOVATIONS

Ref. No.DA.282/298/01.C/2230 Date: 08/05/2024

MUHAS-REC-05-2024-2230
LUCY SAMWEL
SHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES
MUHAS

**RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: ASSESSMENT OF COMMUNITY WILLINGNESS TO UTILIZE INTEGRATION OF TRADITIONAL MEDICINE WITHIN THE MODERN HEALTH SERVICES AT DODOMA REGIONAL REFERRAL HOSPITAL**

Reference is made to the above heading,

I am pleased to inform you that the Chairperson has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

APPROVAL DATE: 08/05/2024
EXPIRATION DATE OF APPROVAL: 08/05/2025

**STUDY DESCRIPTION:**
**Purpose:**
The purpose of this cross sectional study is to assess the willingness of the community to utilize the integration of traditional medicine into modern health services.

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided: https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%2015581.pdf and in the MUHAS archives.

**The PI is required to:**

1. Submit bi-annual progress reports and final report upon completion of the study.
2. Report to the IRB any unanticipated problem involving risks to subjects or others including adverse events where applicable.
3. Apply for renewal of approval of ethical clearance one (1) month prior its expiration if the study is not completed at the end of this ethical approval. You may not continue with any research activity beyond the expiration date without the approval of the IRB. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.
4. Obtain IRB amendment (s) approval for any changes to any aspect of this study before they can be implemented.
5. Data security is ultimately the responsibility of the investigator.
6. Apply for and obtain Data Transfer Agreement (DTA) from NIMR if data will be transferred to a foreign country.
7. Apply for and obtain Material Transfer Agreement (MTA) from NIMR, if research materials (samples) will be shipped to a foreign country.
8. Apply for and obtain permission to publish the results from National Institute for Medical Research. The application should be before submitting to a publisher and not concurrently through the email publications@nimr.or.tz.
9. Any researcher, who contravenes or fail to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine as per NIMR Act No. 23 of 1979, PART III section 10 (2)
10. The PI is required to ensure that the findings of the study are disseminated to relevant stake holders.
11. PI is required to be versed with necessary laws and regulatory policies that govern research in Tanzania. Some guidance is available on our website https://drp.muhas.ac.tz/.

DIRECTOR
Research,
Publications &
Innovations
Box 65001

Dr. Nahya Salim Masoud,
**Chairperson, MUHAS Research and Ethics Committee**

**Appendix 3b: Introduction**

**UNITED REPUBLIC OF TANZANIA**
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
**OFFICE OF THE DIRECTOR – POSTGRADUATE STUDIES**

In reply quote;
Ref. No. HD/MUH/T.725/2022

16th May, 2024

THE EXECUTIVE DIRECTOR,
DODOMA REGIONAL REFERRAL HOSPITAL,
P.O BOX 904,
**DODOMA.**

**RE: INTRODUCTION LETTER OF LUCY SAMWEL**

We would like to inform you that the carrier of this letter is Lucy Samwel with registration number HD/MUH/T.725/2022 a student in the School of Public Health and Social Sciences at Muhimbili University of Health and Allied Science (MUHAS), pursuing Master of Public Health.

As part of her studies, she will be doing an elective research titled **"ASSESSMENT OF COMMUNITY WILLINGNESS TO UTILIZE INTEGRATION OF TRADITIONAL MEDICINE WITHIN THE MODERN HEALTH SERVICES AT DODOMA REGIONAL REFERRAL HOSPITAL".**

The Ethical Clearance for doing the said research has been given by the University.

Kindly request your assistance and cooperation to our student.

Yours Sincerely,

*Ms. Victoria Mwanilwa*
**For: DIRECTOR, POSTGRADUATE STUDIES**

Cc: Lucy Samwel

9 United Nations Road; Upanga West; P.O. Box 65001, Dar Es Salaam: Tel. G/Line: +255-22-2150302/6; Ext. 1015; Direct Line:+255-22-2151378;Telefax:+255-22-2150465;E-mail:dpgs@muhas.ac.tz;Web:https://www.muhas.ac.tz

**Appendix 3c: Permission letter**

# THE UNITED REPUBLIC OF TANZANIA

## *Ministry of Health*

Telegram: "Afya" DODOMA
Tel. No:: +255 026 23223267
(All letter should be written to Permanent Secretary)

Dodoma Regional Referral Hospital,
P. O. BOX 904,
DODOMA.

REF.NO.PB.22/1307/02/.....

DATE: 28/05/2024

Muhimbili University of Health
and Allied Sciences,
P.O. BOX 65001,
DAR ES SALAAM.

**REF: DATA COLLECTION PERMIT / RESEACH**

Please refer to the above captioned subject matter.

This is to introduce to you M. LUCY SAMWEL who is a M.P.H student has been permitted/~~not permitted~~ to collect data for her/~~his~~ Research titled Assessment of Community Willingness to Utilize Integration of Traditional Medicine within the Modern Health Services at Dodoma Regional Referral Hospital

Dodoma Regional Referral Hospital grants him/her permission to carry out his research as a requested from 28/05/2024 to 02/07/2024

Thank you.

FOR: MEDICAL OFFICER INCHARGE
DODOMA REGIONAL REFERRAL HOSPITAL
P.O. BOX 904 DODOMA(DRRH)

.....

Kny: Research and Training Committee
**DODOMA REGIONAL REFERRAL HOSPITAL**