

**COMMUNITY PERCEPTIONS ON THE USE OF TRADITIONAL  
MEDICINES FOR MANAGEMENT OF COVID-19 IN ILALA, DAR  
ES SALAAM, TANZANIA**

**GETRUDE FRANK MWANGAMILO (BSc ESM)**

**Master of Public Health of Muhimbili  
University of Health and Allied Sciences**

**October, 2021**

**MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES  
SCHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES**



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FOR MANAGEMENT OF COVID-19 IN ILALA, DAR ES SALAAM, TANZANIA**

**BY**

**GETRUDE FRANK MWANGAMILO**

**A Dissertation submitted in (partial) Fulfillment of the Requirements for the Degree  
of Master of Public Health of Muhimbili University of Health and Allied Sciences**

**October, 2021**

**CERTIFICATION**

The undersigned certifies that, she has read and hereby recommends for acceptance by the Muhimbili University of Health and Allied Sciences a dissertation entitled **Perceptions of the community towards use of traditional medicines in the management of COVID-19, in Ilala, Dar es salaam Tanzania**, in fulfillment of the requirements for the degree of Master of Public Health of Muhimbili University of Health and Allied Sciences.

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**Idda Mosha (PhD)**

**(Supervisor**

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**Date**

**DECLARATIONANDCOPYRIGHT**

I, **Getrude F. Mwangamilo**, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other university for similar or any other degree award.

Signature: .....

Date:.....

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## ACKNOWLEDGEMENT

To begin with, I thank God for his divine glory, for guiding me and taking care of me throughout the entire course. I am glad and grateful for I know without God it would have been tough to accomplish this report.

I would also like to thank my supervisor, Dr. Idda Mosha, for the great support and untiring energy in guiding and instructing me throughout the research period. For also directing me on so much that I needed to learn with regard to research writing.

Special thanks to Prof. Malebo, for great support and contribution to the study.

More thanks to all my classmates for encouraging me and supporting me tirelessly. Thanks to all postgraduate students and academic staff in the School of Public Health and Social Sciences, at Muhimbili University of Health and Allied Sciences. This is for the support I have received during my academic process throughout the study period.

Much thanks to my Husband Mr. Martine S. Tibalinda for the endless support throughout my research period and course in general.

I deeply extend my gratitude to my Colleagues Dr. Siri Abiud and Dr. Valeria Sylvestri for encouragement and support in my research period.

Lastly, I would like to thank all participants in my research, for their contribution towards my study. Generally, I would also like to thank everybody who contributed towards the research and has not been identified, specifically I appreciate the support.

## **DEDICATION**

This dissertation is dedicated to my parents Mr. and Mrs. Frank Mwangamilo, my husband Mr. Martine S. Tibalinda, my boys Gabriel and Miguel, and my brother Gracias-Dio. This is for believing in me, and taking good care of me in my entire study period.

## ABSTRACT

**Background:** Traditional medicines have been used since long time ago even before the introduction of modern medicines, as treatment for various diseases including respiratory illnesses. During COVID-19 outbreak, traditional medicines were promoted as one of the means in management of COVID-19 in Tanzania.

**Objective:** This study aimed to explore the perceptions of the community on use of traditional medicines in management of COVID-19. Specifically, the study focused on understanding how adults within the community perceive the increased use of traditional medicines for management of COVID-19 in Ilala, Dar es Salaam, Tanzania.

**Methods:** This was a cross sectional exploratory study. In-depth interview guide was used to collect data. The study population was adults (both males and females), residing and working in Ilala Municipality, Dar es Salaam, Tanzania. The study participants were selected purposively and the sample size for the study were 16 respondents. The in-depth interviews were tape-recorded, transcribed verbatim, analyzed and subjected to thematic analysis with the assistance of NVivo 12? Software.

**Findings:** The study findings showed that people within the community were concerned with traditional medicines' use in management of COVID-19 in Tanzania. Some of the study participants perceived traditional medicines as safe and reliable for management of COVID-19. While some study participants were of the view that traditional medicines were beneficial especially in the treatment and control of COVID-19 symptomatic conditions. However, some study participants reported that traditional medicines could have allergic reactions or side effects.

**Conclusion:** Adults in the community perceive the use of traditional medicines as safe and beneficial in the management of COVID-19. However, some study participants were of the view that the traditional medicines could have some side effects when used for management of COVID-19. Generally, there is a need for improvement and promotion of traditional medicines awareness for fighting against COVID-19.

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**ABBREVIATIONS**

COVID-19:	Coronavirus Disease 2019
IDI:	In Depth Interview
RSV:	Respiratory Syncytial Virus
SARS:	Severe Acute Respiratory Syndrome
TCM:	Traditional Chinese Medicine
TCMHs:	Traditional Chinese Medicinal Herbs
TM:	Traditional Medicine
UNICEF:	United Nations Children's Fund
WHO:	World Health Organization

## DEFINITIONS OF KEY TERMS

**COVID-19:** is an infectious disease caused by a newly discovered coronavirus. Initially symptoms include; fever, dry cough, headache, sore throat, loss of appetite, and muscle pain, but eventually it worsens gradually expressing a wet slimy cough that produces green, yellow, or bloody mucus, chills that leads to shivers, feeling very tired, low appetite, sharp chest pain especially when coughing or taking a deep breath, sweating a lot, difficulties in breathing and fast heartbeat, blue lips and fingernails, vomiting, loss of taste and confusion especially in adults

**Traditional medicine:** Refers to health practices, approaches incorporating plant-based medicines, manual techniques and exercises, applied singularly or in combination to treat, prevent illnesses or maintain well-being.

**Community:** A group of people living in an area, with similar characteristics, common interests, such as norms, values, customs and identity.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 BACKGROUND

From a global perspective outlook, traditional Chinese medicines have been used in China for rehabilitation procedures in the management of COVID-19, particularly when there are no contraindications such as limb disorder, altered consciousness in the patient. Subsequently, from December 2019, COVID-19 has been a public health emergency all over the world (1). According to world meters on coronavirus, up to recently COVID-19 has affected 169 million people and has caused 3.52 deaths in all parts of the world (WHO, 2021). Traditional medical practices in China, involve practices and procedures such as acupuncture, herbal medicines, manual therapies, nutrition and mind–body therapies such as qi gong (a traditional Chinese medicines) (2).

A study done in Japan revealed that the reasons for community indulgence in traditional medicines use were; diversity, flexibility, easy accessibility, broad continuing acceptance in developing countries and increasing popularity in developed countries, relative low cost, low levels of technological input, relative low side effects and growing economic importance are some of the positive features of traditional medicine (3). Recently, the use of Traditional medicine has increased in both developing and developed countries. Globalization has led to widespread use of techniques and therapeutic products of traditional medicine(4). Hence the demand and utilization of traditional medicine is increasing globally.

According to WHO, at least 80% of people in Africa are reported to use traditional medicine for control, rehabilitation and general health maintenance (5). Whereas, traditional medicine have been used way back before the introduction of modern medicine and treatment for cure of various diseases including curing respiratory problems (6). In sub-Saharan Africa, for instance, a study in Ghana encouraged on incorporation of traditional medicine practices and local beliefs into the design of interventions; in which, the interventions involved movement of adults towards social and behavioral change

communication strategies for improvement of case detection and treatment of respiratory issues (7). This is due to vulnerability of adults in the community, where coronaviruses are the presumed causative agents in a third of cases of community-acquired pneumonia in adults (8).

COVID-19 case in Tanzania was first reported on 16<sup>th</sup> March 2020 (9). The use of traditional medicines including medicinal herbs and steam concoction were promoted in management of COVID-19. Studies revealed that the trend in the use of traditional medicine has been increasing in Tanzania as a means of controlling COVID-19. Scientists have raised a big concern on the community's perspectives towards traditional medicine as effective method for prevention and control of diseases (10). In some areas, people were advised to inhale steam from boiled herbal concoction (11). The medicinal herb steam inhalation was said to have no side effects, except that a person needs to make sure that the steam is not so hot and lasts for five minutes (9).

Despite the availability and use of traditional medicines in Tanzania in management of COVID-19, to my knowledge no study has been undertaken in Tanzania to explore community perception on the use of traditional medicine in the management of this disease in Tanzania.

Thus, it is important to explore community's perception on the use of traditional medicines in the management of COVID-19 in Tanzania in order to understand the community perspectives and provide means of supporting the people in the management of COVID-19.

## 1.2 PROBLEM STATEMENT

Several cases on COVID-19 in Tanzania led to promotion of traditional medicine use by the government of Tanzania, in partnership with health institutions within the country in order to manage COVID-19. As a result, the use of medicinal plants increased shortly without control (11). However, the adjustments of the community in response to the changes regarding traditional medicines use for management of COVID-19 have not yet been recognized. Hence, this calls for a need to document the perceptions of people within the community on the use of traditional medicine for management of COVID-19.

Globally, studies have been conducted, for instance on the community perceptions in the implementation of traditional medicine which was facilitated due to increased demands for disease prevention and health care and the prevalence of COVID-19 (12). However, consensus has not been reached on treatment of patients with COVID-19. Thus, there is no clear role for control, a concern for an increased use of traditional medicine (2).

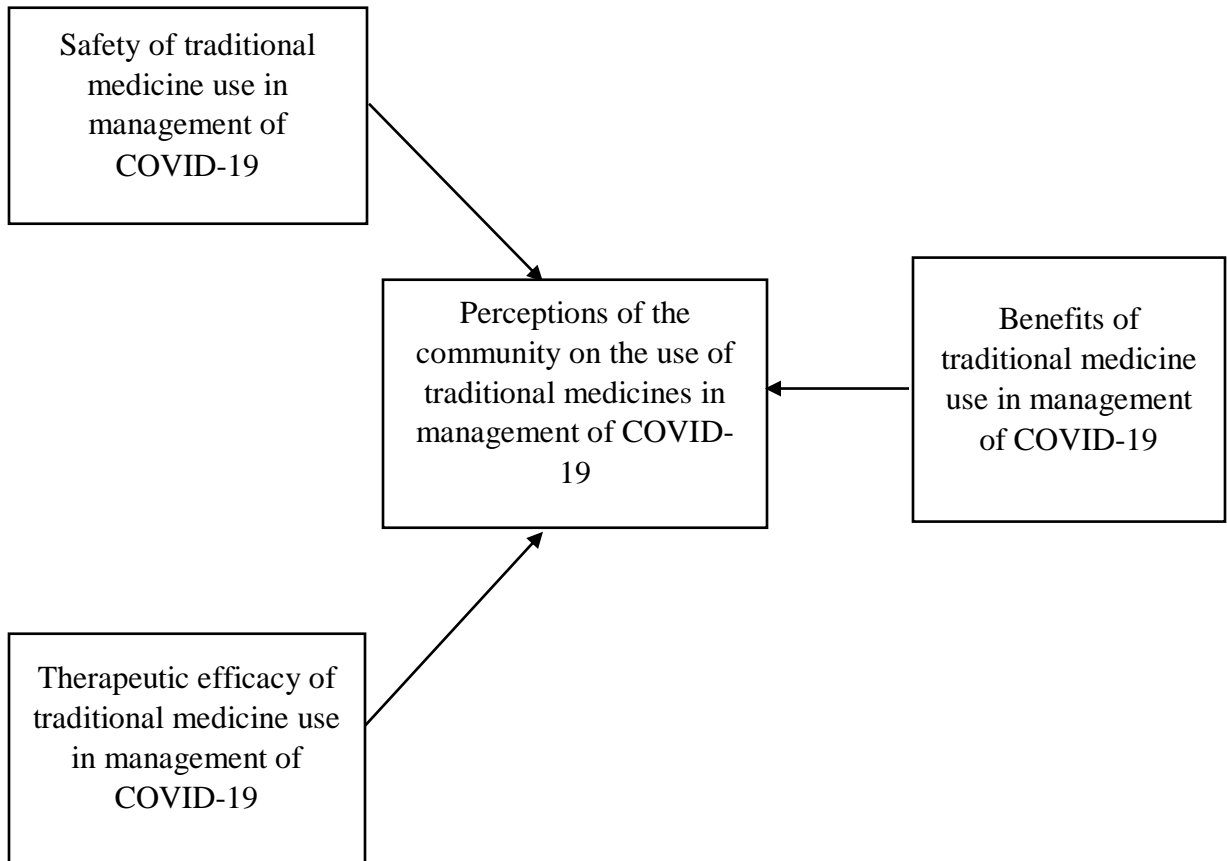
In Africa, communities require acclamation of herbal medicine as a culture, in the fight against COVID-19 (13). It has been observed that the use of traditional medicine in management of COVID-19 could possibly affect perceptions of the community. Which is either in coexistence with religious beliefs, or political and socio-economic conditions (14). Whereas, researchers seek to build concern on traditional medicine use in the society (15). Lack of competency and knowledge of traditional medicine within the country, and how traditional healers can manage such conditions needs to be considered (16).

A sequence of in-depth surveys have been conducted to assess the usefulness of traditional medicine in management of COVID-19 (17). Lack of documentations is a setback to traditional medicine evolvement in Tanzania (18). Little documentation has been done on the community regarding traditional medicine use for management of COVID-19; this reports on the increased promotion, and general increased use of traditional medicine with no control of practices in the community (15). Therefore, this study aimed at exploring community perceptions on traditional medicine use in management of COVID-19 in Dares



Salaam, Tanzania. Addressing this will help to improve competency in management of COVID-19 using traditional medicine in Tanzania.

### 1.3 CONCEPTUAL FRAMEWORK



**Figure 1: Conceptual framework:** adopted from *Ms. E. Mac, 2015*.

From the conceptual framework, the perceptions of the community on the use of traditional medicine for management of COVID-19 is inclined by the safety, benefits and therapeutic efficacy from the use of traditional medicine for management of COVID-19 within the Community.

While the safety of traditional medicine use in the management of COVID-19 depends on the quality of the traditional medicine, and the approval of the traditional medicine by the national medical research institute, as well as the reliability of the traditional medicines.

However, the benefits of using of traditional medicine in the management of COVID-19 could depend on the extent to which the traditional medicine controls, prevents and treats COVID-19.

Also, the therapeutic efficacy of traditional medicine in management of COVID-19 could influence the perception of adults within the community in various ways. This perhaps depends on the description of use of traditional medicine, inappropriate measurement of traditional medicine, preservation of traditional medicine, and side effect or of traditional medicine.

Therefore, the perception of people within the community on use of traditional medicine in management of COVID-19 could basically be inclined to the aspects of Safety, benefits and therapeutic efficacy of the traditional medicine that are utilized by people within the community for fighting against COVID-19.

#### **1.4 RATIONALE**

Recognizing the perception of the community on the use of traditional medicines in the management of COVID-19 will help the scientists, researchers, students, and health organizations to understand clearly about the community perspectives on the management of COVID-19 by using traditional medicines. Hence, the study findings will add knowledge on perceptions of the community on the use of traditional medicines for the management of COVID-19.

Moreover, the study findings will act as a source of literature on the community perspectives on the use of traditional medicine in management of COVID-19.

The study findings will provide information that will sensitize traditional medicine experts towards the community, which may trigger improvement and establishment of training and workshop to the community on traditional medicine use. Thus, promoting traditional medicines use in the community for the management of COVID-19.

Lastly, the study will help the author to fulfil the requirement for MPH programme and broaden researcher's understanding on community perception on the use of traditional medicines in the management of COVID-19 in Tanzania.

### **1.5 Main Research Question**

What is the perception of the community on the use of traditional medicine in the management of COVID-19 in Ilala, Dar es Salaam, Tanzania?

### **1.6 Research Questions**

1. What is the perception of the community on the safety of traditional medicine use in management of COVID-19 in Ilala, Dar es Salaam, Tanzania?
2. What is the perception of the community on the benefits of the use of traditional medicine in the management of COVID-19 in Ilala, Dar es Salaam, Tanzania?
3. What is the perception of the community on the therapeutic efficacy of traditional medicine use in the management of COVID-19 in Ilala, Dar es Salaam, Tanzania?

### **1.7 Broad Objective**

To explore perceptions of the community on the use of traditional medicines in the management of COVID-19 in Ilala, Dar es Salaam, Tanzania.

### **1.8 Specific Objectives**

1. To explore the perception of the community on safety of the use of traditional medicines in the management of COVID-19 in Ilala, Dar es Salaam, Tanzania.
2. To assess the perception of the community on the benefits of the use of traditional medicines in the management of COVID-19 in Ilala, Dar es Salaam, Tanzania.
3. To explore the perceptions of the community on the therapeutic efficacy of traditional medicines use in the management of COVID-19 in Ilala, Dar es Salaam, Tanzania.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 General Overview

Traditional medicines entail knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures(19), that are generally used in maintenance of health, prevention, diagnosis, improvement, or treatment of illnesses including respiratory illnesses.

With reference to Covid-2019 outbreak,(20)COVID-19 first case was identified in Wuhan, Hubei province, China, 2019. The spread of the new corona virus is believed to accelerate through person-to-person transmission in families, homes or hospitals, and direct spread occurs in crowding and gatherings. Whereas, in the course of time, traditional Chinese medicine (TCM) such as *qingfei paidu* decoction (QPD), *gancaoganjiang* decoction, *shenganmahuang* decoction and *qingfei touxie fuzhengre* cipe have been used in the treatment of COVID-19, also through immunity enhancement (21). In Chengdu, China, a randomized controlled trial study revealed that the use of herbal medicine in the community was observed to reduce the risk of the common cold by 89.6% among community-dwelling residents, and by 94.0% in residents aged between 16 and 59 years old within the communities (22).

However, According to (WHO,2019), COVID-19 has been reported to attack vulnerable people in the community, in which most of them are individuals who are 65 years or older, with chronic (ongoing) conditions like asthma, diabetes or heart disease, recovering from surgery, don't eat right or get enough vitamins and minerals, have another condition that weakens your body's defense, smoke, drink too much alcohol, are HIV positive, had recently received an organ transplant, have Leukemia, Lymphoma or severe kidney disease. While their vulnerability is a result of their bodies having a harder time to fight off the infectious agent compared to people with strong immune system (WHO, 2020).

Recently, the use of complementary medicine (CM) has increased in both developing and developed countries, and also within the Lombardy Region of Italy. Globalization has led

to intercultural exchanges and widespread use of techniques and therapeutic products of CM; hence the demand and utilization of TM is increasing globally(2).

In Africa, practices of traditional medicines vary within communities. Whereby, people within a community lack the knowledge of disease and traditional medicines supplementation unlike in the previous ancient times of medical traditional succession(5). People in the southern Africa continue to consult traditional healers; in which this is a practice that is currently improving among most the communities, which has become increasingly popular among westerners and tourists to Africa (14).

In the case of Tanzania, the Ministry of health has encouraged the use of traditional medicine in the fight against COVID-19(9). Hence, herbalists have developed gradually with the vast changes in the control of COVID-19. For example; plants which have been used since the last decade for treatment of breathing problems are *Acacia Schweinfurthii* (Kerefu-mzitu), *Cassia didymobotrya* (Muinu) Roots. In the preparation of the plants for medicinal use, the roots are pounded separately; 200g extracts of each plant are mixed with 20 g of pounded salt. On the dosage, 1 teaspoonful of powder is chewed and swallowed. This is administered for 2-3 days, or even longer. For children 1/4 teaspoonful is used, also for 2-3 days (23).

## **2.2. Perceptions on the safety of the use of traditional medicine**

Globally, still there is inadequate awareness among communities on the safety of traditional medicine use in management of COVID-19. Several countries have enrolled the use of traditional medicine in the management of COVID-19(24). Misinformation fueled by rumors, stigma, and conspiracy theories can have potentially serious implications on the community if prioritized over evidence-based guidelines. Health agencies need to beware of misinformation associated with the COVID-19 in real time, and also engage local communities and government stakeholders to deflate misunderstanding(11).

A study in Lampung, Indonesia, was conducted for empowering community participation in herbal medicine uses, the community stipulated need for herbal medicines to be

authorized as a culture, and integrated with conventional medicines for control of illnesses such as respiratory problems (13). In Nepal, it was observed that most of the people adopted medicinal plants to manage COVID-19. Whereas, in a population of 774 people, 45.61% people were observed to exploit more medicinal plants with the purpose of managing COVID-19. In which, *Zingiber officinale* was the most referred to species with 0.398 frequency (25).

In Tanzania, with an interest in returning to natural or organic remedies, this has led to an increase in herbal medicine use. The safety of the practices is not scientifically recognized or proven, whereas, the real perspective of the health practitioners in general on the use of traditional medicine for control over severe respiratory problems is generally undetermined (11).

### **2.3. Perceptions on benefits of the use of traditional medicines**

A study done in China, revealed that traditional medicines were beneficial for COVID-19 treatment through immunity enhancement and had shown to have lesser side effects than manufactured pharmaceuticals, which is not the case for treatment of a disease(26). The Traditional Chinese Medicine have been provided as an effective and personalized treatment and have revealed different effect on the distinct stages of the disease, contributing to the prevention, treatment and rehabilitation (27).

Traditional medicines have been infrequently used in China, Ghana, Mexico, Russia and South Africa and much less frequent than commonly reported in India over the past years. Previously, it was unnecessary to seek to harness traditional medicine for the population health needs (WHO Traditional Medicine Strategy (2014–23). Scientific data state that 80% of people in Asian and African countries use traditional medicines practitioners to meet their primary healthcare needs(28).

In Africa, it was suggested that the use of traditional medicine has positive significance but also has challenges that needs to be addressed (29). In which, it could offer more opportunities for researching into herbal medicine, more training for conventional health professionals in traditional medicine, and increase the chances of better management of

traditional medicine (30). In addition, strong advocacy and publicity is needed to educate more people on the integration and the utilization of the services.

COVID-19 is preventable, hence there is a need for facilitative implementation of appropriate effective programs and policies to reduce the burden of COVID-19 disease in the country (31). Increasing the relationship between traditional healers and modern health care providers has shown to improve the management of severe malaria in the studied areas. Hence, the use of traditional medicines or herbs in the role of managing COVID-19 is also impacted by the influence of both traditional healers and health care providers (32).

#### **2.4. Perceptions on the therapeutic efficacy of traditional medicines use**

On a global outlook; viral pathogen of the lower respiratory tract, which, in the absence of effective management, causes millions of cases of severe illness per year economic burden as well(33). In a recent traditional Chinese medical herbs(TCMHs) exploration; TCMHs has produced positive effect on inhibiting viral attachment, inhibiting viral internalization, syncytial formation, alleviation of airway inflammation, and stimulation of interferon secretion and immune system(34).

The health care practices of traditional healers offer viable alternatives in communities where sophisticated knowledge of disease and advanced technology are lacking. Between 70 and 80% of people in southern Africa continue to consult traditional healers (35); a practice which has become increasingly popular among westerners and tourists to Africa.

Nevertheless, the use of herbal medicines in developing countries has been increasing over the years in countries like Ethiopia, Burkina Faso, and Comoros Island(30). For instance, in Nepal, without control of the government ,the people have been using traditional medicine as a private behavior for prevention of COVID-19(25). However, studies reveal the strengths of the integration of traditional medicine using the WHO health systems framework. This inclines to the employment of medical herbalists, utilization of traditional knowledge, research opportunities, and efficient service delivery by restricting the prescription and use of fake herbal medicine; and the weaknesses as the lack of



government policies on implementing the integration, financial challenges and research opportunities(36).

In Kenya, it was found that the local knowledge of medicinal plants still exists among the herbalists and forms an important role in primary healthcare; whereby plants used in the management of several different conditions are identified(37). Attempts should also be made to document medicinal plants used by communities who still practice herbal medicine to create database for future research and potential development of new drugs before the knowledge is misplaced (38).

In Dar es Salaam, Tanzania, through the newspaper it was revealed that people around the communities had established small herbal concoction points as business; but also to support regular herbal steaming aimed at individuals, in the course of time during their daily activities. Some people perform herbal steaming in their homes and others use traditional medicine for management of COVID-19(39).

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Study Design**

The study design was a cross sectional exploratory design, with a phenomenal qualitative approach.

#### **3.2 Study Area**

The study was conducted in Dar es Salaam. Dar es Salaam has an area of 139.3 square Kilometers, and it has a very high population of about 7.1 million. Dar es Salaam was chosen of large exposure to COVID-19, many patients had been transferred to Dar es Salaam initially for diagnosis and treatment of COVID-19, thus, endangering increased transmission to the people in the city (40). Ilala is located within the centre in Dar es Salaam with a large population of approximately 1, 220, 611 (40). Ilala was selected purposeful for the study because it is an area which contains a large market of traditional medicine in comparison to other areas, particularly Buguruni Market. Also, it contains a large number of people and it is an area with business interactions, and residential areas which involves crowding. The market is situated at -6.824, 39.259 Latitude and Longitude (41).

#### **3.3 Study Population**

The study population included all people with the age of 18 and above, residing or working at Buguruni market in Ilala, Dar es Salaam, Tanzania.

#### **3.4 Sampling Selection and Sample Size**

Purposive sampling was used to select Dar es Salaam as a region, Ilala municipal council as a district Ilala as a ward, then Market Street where study participants were recruited. Study participants were selected purposively with the target of adults (aged 18 years and above), particularly residing and working in Buguruni Ilala market during the period of the study. Buguruni market was chosen because it is an area encompassing traditional medicines markets, however, it also holds within the target population. Quota sampling was used to ensure participation of females on a one-third proportion in order to get rich information. Whereby, both male and female were selected from education level criteria,

those who have achieved at least primary level education and above. Out of which, most of the participants were business people due to it being a common activity in the community. A total number of sixteen participants were interviewed when the saturation point was observed.

### **3.5 Data Collection methods**

#### **3.5.1 Data collection tools**

Data was collected through in-depth interview (IDI) interview guide. The purpose of using in-depth interview guide was to obtain detailed information beyond initial and surface-level answers, and gaining a deeper understanding for more opinions or impressions (42). However, since the perception of an individual is personal, an IDI guide gave space for an individual to provide confidential information.

The in-depth interview guide consisted of questions about the perceptions of adults in the community on safety, benefits and therapeutic efficacy on the uses of traditional medicine in management of COVID-19. The in-depth interview guide was prepared in English and then translated into Kiswahili by the principal researcher. All interviews were carried out by the principal investigator with assistance from a research assistant.

#### **3.5.2 Data collection procedures**

Data were collected by using in-depth interview (IDI) guide. During data collection, one research assistant with good research skills and experience in qualitative studies was recruited by the principal investigator. Data collection was done by the principal investigator in assistance with the research assistant, and data analysis were carried out by both the principal investigator and the research assistant for consistence and accuracy. Data collection of the research study was conducted for 3 weeks, July-August 2021. The interviews were conducted in Kiswahili (which is the common language in Tanzania), and were. Conducive places were sought such as inside shops and homes with quiet conditions by study participants in order to provide free conversation between the researcher and the participants. All in-depth interviews were digitally recorded after seeking consent from the participants. Each interview session lasted for about forty-five minutes. Two IDI were

executed each day. This facilitated reflection on, and consolidation of emerging issues for further questioning. All procedures of data collection involved the principal investigator in collaboration with the research assistant.

### **3.5.3 Pre-testing of data collection tool**

Pretest was done in Ilala Boma market among three participants who were business men and residents of Ilala Boma, which has similar settings as the Buguruni market in which the study was carried out. However, the participants in pretest were not included in the main study participants group. After pretesting of the tools, some questions were modified in order to ensure that they become clear and non-repetitive to study participants during the time of data collection.

### **3.6 Trustworthiness of the Study**

The aim of trustworthiness in this study was to ensure that the data collected from the field is valid. Trustworthiness of the study was based on the following dimensions; credibility, dependability, transferability, and conformability.

Credibility in this study was ensured through establishing in-depth interview questions to meet the demand of the information that was required to confirm to the objectives of the study. Kiswahili was the means of communication to ensure good understanding, also by checking with participants whether the research has exactly described their perceptions as well as consulting colleagues and experts in data processing and analysis.

Dependability in this study was ensured through reviewing the collected data. The data collected from the study field was reviewed by the principal researcher for consistency. Transferability in this study was ensured through proper description of the research processes including the study participants' details, analysis of information from in-depth interviews. Conformability in this study was ensured through detailed description of the information on perceptions of the community on the role of traditional medicine, that were collected from the field which, also I have included quotes from the participants to elaborate what was said by study participants(43).

### **3.7 Data process and analysis**

During data processing, all information from the participants was recorded and transcribed. Transcription was done by the researcher and research assistant to ensure that coded information corresponds to the research objectives. Data processing was carried out after collection of data from the field. Data processing involved: data review, data organization, data coding, and interpretation of data. Data processing was done with assistance of NVivo 1.0 version software in organizing, labeling (coding), and reviewing data.

The analysis of data started during data collection. Thematic analysis approach was employed during data analysis. The data analysis started with transcription, familiarization with data- this was done by reading the data several times which followed by coding or labeling of data. Coding was followed by development of categories and identification of themes. This was done by exploration of relationships between categories and refinement of categories which led to themes. Themes were developed considering similarities, differences and forms between categories.

Using NVivo software, all questions were inserted into the software, and each individual replies were inserted under each question. This was in order to make sorting easier in categorization. Then the transcripts were labeled and then coded. This was followed by categorization of the codes that led to development of themes. For each step, transcripts were initially coded by both the principle investigator and assistant researcher, and then compared across each other. This was done in order to ensure accuracy and consistency in coding(44). Thereafter, the emergent themes were discussed.

### **3.8 Ethical considerations**

Ethical clearance was obtained from the Institutional Review Board of Muhimbili University of Health Allied Sciences (MUHAS). Subsequently, the researcher sought permission to conduct this study from the Dar es Salaam city council, specifically from the Regional Administrative Secretary (RAS), District Administrative Secretary (DAS) and the Chairman of the town council. During data collection the written consent to participate in the study was sought from study participants. Moreover, consent was sought from study participants on the use of digital recorder before recording the interviews. The participants

were informed about the aim of the study and that their participation was voluntary. Additionally, the study participants were informed about the purpose for research and the confidentiality of their information.

## CHAPTER FOUR

### RESULTS

#### 4.0 Background characteristics of the participants

Sixteen participated in this study. The table below (Table 1) shows the Demographic characteristics of the participants in the study.

**Table 1: Demographic data**

Participants	Age	Gender	Tribe	Occupation	Marital status	Education level
1	24	Male	Masai	Business	Single	Secondary
2	38	Male	Zaramo	Business	Married	Primary
3	35	Male	Zaramo	Carpenter	Single	Secondary
4	49	Male	Bondei	Business	Married	Primary
5	23	Female	Sambaa	Tailor	Single	Diploma
6	26	Female	Rangi	Business	Married	Secondary
7	37	Male	Makonde	Business	Married	Primary
8	28	Male	Masai	Business	Single	Primary
9	32	Female	Hehe	Business	Married	Secondary
10	39	Male	Masai	Business	Married	Primary
11	23	Female	Makonde	Business	Married	Primary
12	36	Male	Zaramo	Business	Married	Primary
13	34	Female	Rangi	Housewife	Married	Secondary
14	53	Male	Sambaa	Business	Married	Secondary
15	31	Female	Gogo	Business	Single	Secondary
16	43	Male	Masai	Business	Married	Primary

Data analysis revealed the main themes to be associated with the perceptions of adults within the community regarding the use of traditional medicines in the management of COVID-19, with respect to the specific objectives of the research study. This has been shown below:

#### 4.1 Perception on Safety of traditional medicines

##### 4.1.1 Natural origin of traditional medicines

The research findings revealed that participants perceive traditional medicine as safe and reliable for use in management of COVID-19 due to its natural formation.

Study participants from the community reported to consider traditional medicines to be trustworthy with safety and instant protection against further contra-indications in the management of COVID-19. For instance, one of the participants said that:

*We consider them to be safe, and they are good medications, because they are medications which are naturally made. Also, they have no chemicals and are different, and they help to fight against different symptoms of corona disease(26years, Female).*

Also, most participants perceived traditional medicines as originating from the ancient when they relied on traditional medicines for uses in prevention, treatment and cure from symptomatic conditions of several diseases. One participant said:

*I think traditional medicines are safe for us to use for protection against Corona disease because they are medicines which we have been using every day and some of these medicines are grown by us, by our own hands; and others were being used by our elders' long time ago (49years, Male).*

Nevertheless, some participants referred to the safety of the use of traditional medicines for management of COVID-19 as adapting to nature, as utilizing well what surround them.

#### **4.1.2 Approval of traditional medicine**

The study findings revealed that some participants were of the opinion that most medicines were promoted by the ruling authorities, thus believing them to be safe enough use for management of COVID-19. This was due to the fact that some traditional medicines were made by institutions owned by the government like the National Institute of Medical Research in collaboration with other experts in traditional medicines.

One participant had this to share:

*I see these traditional medicines are safe ... mmmh ... because if we were told to use, some traditional medicines and we pick some traditional medicines around our areas and use them because are natural, also, for some traditional medicines*



*we buy are already certified and proven to be safe. So, we depend on them for the management of COVID-19(43years, Male).*

These traditional medicines produced by the institutions owned by the government were reported to be tested verified, and approved for use in management of COVID-19. Hence, the people within the community reported to perceive them as safe and secure for management of COVID-19.

#### **4.1.3 Preservation and duration of expiration of some traditional medicines**

According to some of the participants, challenges of using traditional medicines in the management of COVID-19 were observed in the preservation of such medicines, as most are fresh with no preservatives, thus rendering it difficult to maintain it for a longer time to use. One of the participants said that;

*The challenge that I get as a person who use mostly traditional medicines for management of COVID-19 and management of other diseases, as I also sell them; is that it takes a very short time to keep before it expires. So, when I request for herbs from far places and they take a long time to reach me, and hence take very little time before the herbs wither or dry out, as it is hard to preserve it and keep it fresh also (28 years, Male).*

However, because most traditional medicines are fresh and have no preservatives to keep them long enough, therefore, most medicines or herbs wither, rot or expire within a short period of time.

#### **4.1.4 Cost of preparation and time**

From the study findings, participants reported the use of traditional medicine to be challenging in terms of preparation as it requires specifically an amount of time for preparation before use. This is because most of them preferred to prepare medicines on their own at homes. One of the participants lamented:

*Of course, sometimes it is challenging to prepare traditional medicines because I have to prepare the traditional medicines most of the times because we use it in*

*our family regularly. Sometimes there is very little time to prepare it because I have a lot to do at home as house chores (34 years, Female)*

Although some traditional medicines are sold when they are ready made, most seemed to acquire materials and prepare on their own traditional medicines and they see this as an affordable means of getting them for the management of COVID-19.

One participant had this to say:

*It is a problem especially when you need to prepare the medicines by yourself, for instance the mixtures for herbal steaming, and even herbs for drinking sometimes. This is because you might have a busy day schedule and so many things awaiting you ahead every day (37 years, Male).*

Thus, consideration for safety of traditional medicine seemed to be a challenge to some people.

#### **4.1.5 Use of traditional medicine**

Study findings revealed that participants complained on the use of traditional medicines in the society as sold without appropriate certification in most cases of traditional medicines. Hence, most of the participants argued on the fact that most people within the community had the probability of running into inappropriate use of traditional medicines without knowledge.

. Moreover, one of the participants said that;

*Most of us are using traditional medicines but we are not sure if our utilization is correct in terms of amount and frequency of use. This is because usually medicines involve dosage, but most of the traditional medicines we use by self-monitoring without appropriate measurements. This also leads us to worry on the safety of our usage without appropriate measurements (49 years, Male).*

From the study findings participants claimed on the fact that they use the traditional medicines but are not well educated on the proper measurements and frequency for use of such medicines. Therefore, the participants argued this to be a greater challenge within their experience in the period of COVID-19 management.

For example, one of the participants had this to say:

*This has been my first time to use traditional medicines for protecting myself against Corona, so I am not well aware of the safety of these traditional medicines. I use them to protect myself against COVID-19 just as it has been recommended to us by our leaders, further than that I know nothing (24years, Male).*

However, from the study findings, a few of the participants reported to have no clue on whether traditional medicines are safe for use in management of COVID-19 or not.

## **4.2 Benefits of traditional medicines use in management of COVID-19**

### **4.2.1 Treatment and prevention**

The study findings revealed that some participants reported traditional medicines to be of great importance in the management of COVID-19 and that it served several functions in the control for and prevention of COVID-19 symptomatic conditions such as severe flu, coughing with chest pain and also difficulties in breathing. One participant opined:

*Most people who are using traditional medicines say that they are helpful in strengthening their immunity. There are some people I know who had reported to have all symptoms of COVID-19 but when they used traditional medicines, the symptoms disappeared, (23years, Female).*

Most participants reported to rely on traditional medicines in belief that it aids raising and strengthening their immunity in fighting against COVID-19.

Also, one participant lamented:

*Traditional medicines have helped me a lot, in the management of COVID-19, because I have been using them whenever I feel any COVID-19 symptoms such as severe flu, headache, and chest or breathing blockage. I use varieties of traditional medicines such as Aloe-Vera leaves, and leaves from neem tree, steam them and inhale their steam; I have found them helpful (28years, Male).*

Thus, traditional medicine was seemingly beneficial to provide healing from COVID-19 symptoms and people in the community relied on the aspect.

#### **4.2.2 Relief from COVID-19 symptomatic conditions**

The study findings revealed that participants reported to use traditional medicines as a means in control of COVID-19. Some participants reported to rely on traditional medical procedures like thermal herbal steaming in which they have obtained great relief in the course of management of COVID-19. For example, one of the participants said that;

*When I feel nose congestion, I normally go for traditional medicines mostly, I practice herbal steam with herbs such as eucalyptus leaves, guava leaves and neem leaves; especially during this period of COVID-19, because it makes me feel better a lot of times(38years, Female).*

Participants in the community revealed to rely on the use of traditional medicine as a means to liberate their bodies from COVID-19 conditions such as difficulties in breathing.

Another participant said;

*I am not a traditional medicine user, but once in a while I used ginger, garlics and certain leaves for management of COVID-19 at home, sometimes because I hear people say that they help them to remove symptoms of COVID-19(39 years, Male).*

Therefore, in the community, traditional medicines were used to provide aid in some COVID-19 symptomatic conditions that were difficult to endure.

### **4.3 Therapeutic efficacy of Traditional medicine in management of COVID-19**

#### **4.3.1 Patients with other diseases could interfere with their medications**

With respect to the promotion of use of traditional medicines in the course of management of COVID-19, some of the participants argued that if a patient is in other medications and gets also use traditional medicines that could possibly cause some side effects to the patient. One of the participants had this to share:

*Uses of traditional medicines is contradicting sometimes, because, we do not know what will happen for someone who is sick and is taking other modern medications; how he/she can manage COVID-19 using traditional medicines, won't those*

*traditional medicines interfere treatments with the modern medicines (32 years, Female).*

Hence, the people required knowledge on use of traditional medicines to specific conditions as indicated

### **Effects associated with traditional medicines use**

With respect to side effects associated with traditional medicines, participants stated that they did not suffer from any side effects associated with traditional medicines for management of COVID-19. However, most study participants were of the view that they found them to be helpful especially for management of COVID-19 symptoms.

One participant had this to say:

*I have not observed any side effects related to traditional medicines. Because there have been a lot of benefits in them, in this time of using traditional medicines in management of COVID-19; I have been using traditional medicines for management against COVID-19 since it emerged last year in Tanzania. Maybe if other people got any effects from using these traditional medicines for the management of COVID-19, but not me (37 years, Male).*

Furthermore, some participants who claimed not to use traditional medicines also stated that they have not heard any complaints of side effects so far from people who use traditional medicine, so they do not think that traditional medicines have any effects so far.

Another participant also said;

*Am not sure about effects because I don't use traditional medicines for the management of COVID-19, but I have not heard of side effects of traditional medicines from those who use them for management of COVID-19, so I don't think if they have any. I think maybe we should ask those who use traditional medicines about side effects, but as for me I think there are no effects(28 years, Male).*

However, the study findings revealed that, a few participants reported that traditional medicines could possibly produce side effects or allergic reactions.

The participant said:

*Just as in using modern medicines, I think traditional medicines have some effects also. For example, I hear some people saying that they get nausea or diarrhoea when they use some of the traditional medicines (39years, Male).*

One of the study participants explained the fact that it is possible for traditional medicines to pose some allergic reactions or side effects to an individual in the course of use of traditional medicines for management of COVID-19, which is also a challenge.

#### **4.3.3 Undetermined effects of traditional medicine**

From the study findings, a few of the participants stated that most traditional medicines are not certified hence the use may be altered depending on an individual's personal attributes. Thus, since some participants reported the use of traditional medicines to be undefined, and may contribute to overuse of traditional medicines which might cause some side effects to the users. One study participant had this to say:

*There might be some side effects related to consumption of traditional medicines for the management of COVID-19, especially to those people who use traditional medicines a lot, and without a specific amount. There is no defined way of taking (consuming) most of traditional medicines (39 years, Male).*

## **CHAPTER FIVE**

### **DISCUSSION**

#### **5.0 Introduction**

This section of report concentrates on discussion about the research study findings that have been presented in the previous chapter. The findings have been discussed in response to the specific objectives that generally includes; the safety of traditional medicines use, the benefits of traditional medicine use, and the therapeutic efficacy of traditional medicine in the management of COVID-19.

#### **5.1 Safety of traditional medicines use in the management of COVID-19**

The study findings revealed that most of the people within the community perceive that traditional medicines are very safe for use. This is because most of these traditional medicines are from herbs that are individually grown within their surroundings; hence they consider them to be natural and less harmful to human body. This corroborates to the findings by Mbuni Y. M et al.(45), in which the community members in Cherangani hills (Kenya) reported to rely on traditional medicine for respiratory illnesses because they believed they are safe; and that traditional medicines are the only natural remedies available and accessible in the remote rural communities that are significant for healthcare. Whereas, the similarities observed between the research findings could be due to similitudes in the study research areas settings.

In regard to approval of traditional medicine, according to the study findings, some of the people within the community doubted the safety of traditional medicine. This is because most of the traditional medicine were not certified but have been individually developed without further inspection or measurements before being taken to use. This is in alignment with a study that was done by Berreta M,(46), in which people within the community reported to require identity of traditional medicine before their use in the course of management of COVID-19. Thus, the resemblance in the research findings could possibly be as a result of similarities in culture between most African countries. Hence, these communities from different study settings could possibly share similar characteristics amongst them, leading to similar study results.

From the study findings, people claimed to face difficulties in preservation and storage of herbs that were home-made because they expired within very short time. Hence, it was a challenge for people to know how to store traditional medicine and keep them fresh from early expiration. Study findings revealed most people within the community had no knowledge on the proportions or measurements of use of traditional medicine. Hence, most people faced challenges in the procedures of traditional medicines that they have been using in management of COVID-19. Also, some of the people showed the concern to understand if there were any measurements for appropriate use of traditional medicine for management of COVID-19. The people complained on the traditional medicines in the community without appropriate certification, in most cases of traditional medicines. Of which, most argued on their likelihood of running into inappropriate use of traditional medicine without knowledge. Thus participants claimed that they were worried if use of traditional medicines could interfere with some conditions of other diseases.

However, this is opposed to the study findings from Azhar A,(47),that was done in South Africa, reported that people within the communities to have been keeping herbal drugs within glass containers to get rid of moisture and unnecessary heat. Hence, in turn, this was helpful to avoid expiration of herbal drugs. Moreover, the study revealed that the community also served traditional medicines in definite proportions in collaboration traditional medicines experts and health care providers. However, some people reported to have common understanding in such practices of traditional medicines and healthcare management especially for COVID-19 management. The differences observed between the study findings could be caused by differences in the communities, characteristics and culture.

The study findings revealed that people within the community found the use of traditional medicine in management of COVID-19 as challenging in terms of cost of preparations and time. The people claimed that they had been using most of their time to keep control over COVID-19 by preparing their own local traditional medicine. Whereas, people within the community showed to have rely most on their own local traditional medicine in order to save their earnings as well from buying the authorized forms of traditional medicine. Whereas, this differs from the study that was conducted in Nigeria by Ozioma J, (5),



where people from a number of villages reported to find traditional medicine practices very comfortable in terms of handling practices, and encouraged such practices to other neighboring communities. Thus, these observed differences between the study findings could be due to differences in the study areas, as well as the characteristics between the community settings.

However, the study findings revealed that people within the community adhered to the fact that they had no clue on whether there is safety or no safety within the use of traditional medicines with respect to the management of COVID-19. This people declared to have used traditional medicines because of the surrounding conditions, since they had no other choices with COVID-19 management. Moreover, most could not comply with the use of traditional medicines for management of COVID-19, but rather require modern medicines for prevention and treatment of COVID-19. Whereas, this is in contradiction to the study findings from Tabang et al.(7), that was conducted in Ghana, the community reported to believe in the safety provided with traditional medicines and how it contributed to strengthening their healthcare system within the community. Therefore, such differences between the study findings could be due to the differences in the governance and health management systems between the two different African countries from which the research findings were obtained.

## **5.2 Benefits of traditional medicines use in the management of COVID-19**

The study findings revealed that most of the people within the community found traditional medicines to be helpful for the management of COVID-19. Most of them reported to use traditional medicines to manage COVID-19 symptomatic conditions such as breathing difficulties or running nose. However, others relied on the traditional medicines use for improving and strengthening their immunity levels against COVID-19, of which they found it helpful. In alignment with this is a study that was conducted in northern Tanzania, where most people adhered to traditional medicine use for management of breathing difficulties or complications; and reported traditional medicine to be useful and helpful in treatment and health improvement to patients with such symptomatic conditions(48). These studies have similar research findings, probably due to

similarities in the study setting area, and possibly similar characteristics of the community. This is because both studies were carried out in Tanzania.

Moreover, the study findings revealed that some of the people within the community had been using traditional medicines to gain or obtain relief from certain conditions which they felt that had been related to COVID-19 symptoms. From which, most of the people claimed that they conducted traditional medicine procedures like thermal herbal concoction on a daily to weekly basis in order to feel good, obtain relief and get control over COVID-19. This is similarly related to a study in Zhejiang by Kaijin, (49), which reported to depend on the use of traditional medicines in management of COVID-19 in order to provide relief to first stage patients, as well, to prevent secondary transmission. However, the similarities observed in these studies could possibly be due to global health management system approaches. In which, most health management systems in Tanzania depend on developed countries which could lead to similar responses in management of COVID-19.

### **5.3 Therapeutic efficacy of traditional medicine use in the management of COVID-19**

Study findings revealed that some of the people in the community thought of possible side effects associated with the use of traditional medicines. According to some of these people within the community, possible effects could be associated with traditional medicines use because it something that is common to treatments. A few people within the community also talked of allergic reactions to some traditional medicines or rather herbs that they thought could be due to personal allergies or inability of their bodies to be compatible to such medications. All of these claims were locally based on the people's perceptions and not further investigation or knowledge. Some people were of the perception that traditional medicines and its side effects to users are not well known. Most people in the community relied on traditional medicines for safety against the side effects as common to most modern medicines. In the study findings, a few participants revealed that they deliberately depend on the use of traditional medicines because they think it is safe and has lesser side effects. According to the study findings, it was revealed that most people within the community were in confusion on the effects that could be associated with the use of traditional medicine especially for patients who had been enrolled on medications

from other diseases other than COVID-19. This was in respect to the promotion of use of traditional medicines in the course of management of COVID-19. Hence, most of the people in the community were worried in case of any significant side effect that could be posed to their bodies from medicines interactions or interferences.

Relatively, study findings from Rasamiravaka T et al.(6), revealed that a few people in the society settings do not perceive traditional medicines to be totally free from possible side effects; whereas, most reported to use traditional medicine with precautions especially if any kind of severe symptomatic conditions was noted. However, the study findings revealed the use of common techniques that were observed as reliable and effect-free with respect to the community perspective; but also, the presence of traditional medicines practices that had been used to ensure minimal effects to the human body. The relativity between these study findings could be due to similarities in techniques of using traditional medicines between many countries in the approach of management of COVID-19.

From the study findings, participants claimed that traditional medicine use with undefined measurements can result into overuse of traditional medicines which could possibly pose some side effects to their health. On the other side, people within the community stated that they did not find any effects associated with traditional medicine. Whereby, other participants claimed not to have used traditional medicine in the management of COVID-19; but also, they have not heard any complaints of side effects so far from people who they have known, and they do not think that traditional medicine have any effects. This is relative to a study by Lin Li, (34), in which most people within the state identified the use of traditional medicines to be significant and with relatively little or no significant impacts upon medication. However, this similarity is due to similar purpose in the use of traditional medicines for fight against COVID-19.

#### **5.4 Limitations and mitigations**

The major limitation that the researcher faced during conducting of the study is that some of the study participants were not cooperative and some preferred not to be recorded at all during the interview. This required the researcher to give thorough explanations to them on the purpose of the study, and in some occasions the researcher was forced to take short notes during the interview due to participants' preferences, in order to make the participant comfortable to provide answers in the study.

However, the study area was crowded and encompassed with a lot of noise, hence, the researcher had to seek for quiet places to conduct the interview without any interferences.

## CHAPTER SIX

### Conclusions and Recommendations

#### 6.0 Conclusion

Adults in the community perceive the use of traditional medicine as safe and beneficial in the management of COVID-19. However, some people perceived on possible side effects that could be aligned with traditional medicine use for management of COVID-19. Generally, there is a need for improvement and promotion of traditional medicine awareness so as to promote community health in fight against COVID-19.

#### 6.1 Recommendations

These recommendations are focused to the all organizations in concern of the community including government, non-governmental, institutions, faith-based organizations, and the community. Therefore, the government needs to ensure improvement of the safety of traditional medicine with the aid of traditional medicine experts and partnership with other eligible health and traditional medicine institutions. However, the government needs to also ensure promotion of the benefits of traditional medicine; to perform scientific researches and understand the therapeutic efficacy of traditional medicine in use for management of COVID-19. This will help to improve community health in fight against COVID-19.

- In order to improve community utilization of traditional medicine in the management of Covid-19, the government in hand with traditional medicine institutions needs to promote proper use of traditional medicine within the community. This is based on building traditional medicine awareness interventions in the community. Thus, by providing training, workshops and getting in touch to local traditional medicine dealers, suppliers, vendors and other people interested within the community. This will help to improve and promote appropriate practice and use of traditional medicine within the community.
- Based on the findings, the researcher recommends a further study on the practices of the community in traditional medicine use for management of COVID-19. This will help provide insight into detailed individual fights and struggle of people

within the community on fighting against COVID-19 with reference to traditional medicine uses. Hence, this will complement the obtained research findings.

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## APPENDICES

### **Appendix I (a): Interview Guide (English version).**

First, I would like to thank you for taking your time to participate in this study. The information you provide will help improve the understanding of people especially on the perceptions of herbal users on the use of traditional medicine in management of spread of respiratory problems in the COVID-19 era, in Dar es Salaam, Tanzania. I will ask you a few questions on your perception regarding the use of traditional medicines for management of spread of respiratory problems in the COVID-19 era. Your responses will be kept confidential. There is no right or wrong answer and the intent of the interview is to understand the perception of herbal users on the uses of traditional medicines in the management of spread of respiratory problems in the COVID-19 era. You are free to open up and be honest and if there is a question you would not prefer to answer, or you would like to stop the interview, please let me know. There will be no consequence if you decide not to answer any of the questions or if you would like to stop the interview.

#### **Participant demographics:**

Name of Interviewer.....

Date.....

Participant number.....

Age.....

Tribe.....

Marital status.....

Occupation.....

Education level.....

#### **Interview questions**

1. What do you understand by the term Covid -19? What are the signs and symptoms for Covid -19 that you know? How is it transmitted? How is it prevented? How is it treated?

2. What is community perception on the use of traditional medicines in the management of COVID-19?

**Probe;** How do you perceive the safety of traditional medicines for use in management of COVID-19? what do other people in the community think about the safety of these traditional medicines used in the management of Covid 19?

3. In your opinion what are the significance of use of traditional medicines as a remedy for management of Covid 19?

**Probe:** its advantages and disadvantages? In your opinion how useful have traditional medicines been in management of COVID-19?

4. Have you used any traditional medicines for the management of Covid -19? **If yes,**

**Probe: when was that?** What traditional medicines have you been using in the management of COVID-19? How these traditional medicines did help you in the management of Covid 19? What was the cost of those medicines that you used? From your perception, based on the uses of traditional medicines, what do you think are the challenges of using traditional medicines in the management of Covid -19?

**Probe:** how do you overcome those challenges?

5. Do you incorporate traditional medicines in to your daily schedule? **If yes,**

**Probe:** why or why not? How do you manage to incorporate traditional medicine use in to your daily schedule?

6. What do you think are the impacts of using traditional medicines for management of COVID-19?

**Probe:** What are the positive and negative impacts to an individual using traditional medicines in the course of management of COVID-19?

7. Before we end this interview, is there any other important issue related to use of traditional medicines in the management of Covid -19 that you would like to share with me?

We have reached the end of our interview. Thank you for your information and time

**Appendix I (b): Mwongozo Wa Majadiliano (kwa Kiswahili).**

Kwanza, ningependa kukushukuru kwa kuchukua muda wako kushiriki katika utafiti huu. Maelezo utakayotoa yatasaidia kuchangia kuongeza uelewa kwa watu tofauti ikiwemo wataalamu wa dawa za asili kuhusu mitazamo ya watumiaji wa dawa za asili kwenye matumizi ya dawa za asili kwaajili ya kusimamia matatizo ya upumuaji kwenye kipindi cha korona, Dar es Salaam, Tanzania. Nitakuuliza maswali kadhaa nipate kuhusu mtazamo wako juu ya matumizi ya dawa za asili katika kudhibiti na kusimamia matatizo ya upumuaji kwenye kipindi cha Korona. Majibu yote utakayotoa yatakua siri. Hakuna jibu sahihi au lisilosahihi kwenye utafiti huu. Dhumuni la mahojiano haya ni kutafuta mtazamo wako juu ya matumizi ya dawa za asili katika kusimamia matatizo ya upumuaji kwenye kipindi cha korona Jiskie huru kadri unavyoweza. Kama kuna swali ambalo hujiskii kulijibu au ungependa kusitisha mahojiano, tafadhali kuwa huru kunijulisha. Hakutakuwa na madhara yoyte kwako iwapo utaamua kusitisha mahojiano au kutojibu swali lolote.

**Taarifa za mshiriki:**

Jina la mhoji.....

Tarehe.....

Namba ya mshiriki.....

Umri.....

Kabila.....

Hali ya Ndoa.....

Kazi.....

Kiwango cha Elimu.....

**Maswali ya mahojiano.**

1. Nini maana ya neno Uviko-19? Ni dalili au viashiria gani vya Uviko-19 unazozifahamu? Inasambazwaje? Inazuilikaje? Inatibiwaje?
2. Ni nini mtazamo wa jamii kuhusu matumizi ya dawa za asili katika kusimamia Uviko-19?  
Uchunguzi: Unamtazamo gani juu ya usalama wa matumizi ya dawa za asili katika usimamizi wa Uviko-19? Watu wengine katika jamii wanamtazamo gani kuhusu usalama wa matumizi ya dawa za asili katika usimamizi wa Uviko-19?
3. Kwa mtazamo wako, kumekuwa na manufaa gani katika matumizi ya dawa za asili kama njia mbadala kwenye usimamizi wa ugonjwa wa Korona?  
Uchunguzi: Kwa mtazamo wako kumekuwa na umuhimu gani katika matumizi ya dawa za asili katika usimamizi wa Uviko-19?
4. Umetumia dawa ya asili yoyote katika usimamizi wa Uviko-19? Kama ndio,  
Uchunguzi: Ni lini? Ni dawa gani za asili ambazo umetumia katika usimamizi wa Uviko-19? Ni kiasi gani ulitumia kuweza kupata dawa ambazo umezitumia katika kipindi hiki cha Uviko-19? Kwa mtazamo wako, kwa kuzingatia matumizi ya dawa za asili, unadhani kuna changamoto gani za utumiaji wa dawa za asili katika usimamizi wa ugonjwa wa Korona?  
Uchunguzi: Unafanyeje kuzikabili hizi changamoto?
5. Je, Unahusisha matumizi ya dawa za asili katika ratiba zako za kila siku? Kama ndio;  
Uchunguzi: Kwanini? Unawezaje kujisimamia kuzingatia matumizi ya dawa za asili katika ratiba zako za kila siku?
6. Unadhani kuna madhara gani katika matumizi ya dawa za asili kwenye usimamizi wa Uviko-19?  
Uchunguzi: Ni madhara gani chanya na hasi ambayo mtu anaweza kupata katika matumizi ya dawa za asili kwenye usimamizi wa Uviko-19?



7. Kabla hatujamaliza mahojiano haya, kuna jambo lolote muhimu kuhusiana na matumizi ya dawa za asili katika usimamizi wa Uviko-19 ambalo ungependa kunishirikisha?

Tumefika mwisho wa mahojiano

**Appendix II (a): Informed Consent form (English Version)**



**MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED HEALTH SCIENCES**

**DIRECTORATE OF RESEARCH AND PUBLICATIONS**

ID. NO

**CONSENT FORM FOR PARTICIPATING IN A RESEARCH STUDY**

Hello greetings! My name is **Getrude Frank Mwangamilo**, Student at Muhimbili University of Health and Allied Sciences (MUHAS) in the School of Public Health and Social sciences. I am performing research on perceptions of herbal users on traditional medicines use in management of respiratory problems during COVID-19 era, Dar es salaam, Tanzania

**The aim of the Study**

This study aims to explore the perception of herbal users on the use of traditional medicines in the management of respiratory problems in the COVID-19 era in Ilala, Dar es Salaam, Tanzania.

The study finding is going to address the perception of herbal users from the community on the use of traditional medicine in the management of respiratory problems in the COVID-19 era, which is going to make people, including responsible traditional medicine professionals understand on the community perceptive of traditional medicine as an influence in management and control of spread of respiratory symptoms in the COVID-19era in Dar es Salaam, Tanzania. It is also going to foster change in the utilization of traditional medicines through observing perceptions of traditional medicine as the input in management of respiratory problems.

### **Procedure**

I would like you to participate in this study. I have selected you because you are in the target group of the study, either dealing with or using traditional medicines for management of spread of respiratory problems. Your opinions will help to improve interventions, policies and programmes to the community on the use of traditional medicines for management of respiratory problems. If you choose to participate, I will ask you a few questions using an in-depth interview guide.

### **Confidentiality**

All responses will be kept confidential. This means that your interview responses will only be shared with research team members and MUHAS when necessary. I will ensure that any information included in my report does not identify you as the respondent.

### **Right to refuse or withdraw**

It is your choice to participate in this study. Also, you don't have to respond about anything you don't want to and you may stop at any time you desire. However, I encourage you to participate because your views/response are very important in this study.

### **Benefits**

Participating in this study may not benefit you personally, but might provide useful information that will benefit others and improve the understanding of traditional medicine professionals and those interested on the perceptions of herbal users on the use of

traditional medicine in management of spread of respiratory problems in the COVID-19 era, in Dar es Salaam, Tanzania.

**Risks**

There will be no any harm to you as a result of participation in this study although some questions will be personal.

**Whom to Contact**

In case of any inquiry please contact the principal researcher, Getrude. F. Mwangamilo, student from MUHAS, P. O. BOX 65001, Dar es Salaam, mobile number +255 743110451. If you ever have questions about your rights as a participant, you may call Dr. Bruno Sunguya the Chairperson of the Senate, Research and Publications Committee, MUHAS. P.O. Box 65001, Dar es Salaam-Tanzania, Tel+2552150302-6)

**Signature**

Do you agree to participate? Put a tick in appropriate box

Participant agrees  participant does NOT agree

I, ..... have read the contents of this form and understood. My questions have been answered I agree to participate in this study.

Signature of participant.....Date.....

Signature of researcher/research assistant ..... Date.....

**Appendix II (b): Fomu ya ridhaa (Kiswahili)**

CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI  
KURUGENZI YA UTAFITI NA MACHAPISHO

NAMBA YA FOMU

**FOMU YA IDHINI YA KUSHIRIKI KATIKA UTAFITI**

Habari, naitwa Getrude .F. Mwangamilo, ni Mwanafunzi katika Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili (MUHAS). Ninafanya utafiti kuangalia mitazamo ya watumiaji wa dawa za asili juu ya matumizi ya dawa za asili katika kusimamia matatizo ya upumuaji kwenye kipindi cha korona, Ilala, Dar es Salaam, Tanzania.

**Lengo la Utafiti**

Utafiti huu unalenga kuangalia mitazamo mitazamo ya watumiaji wa dawa za asili juu ya matumizi ya dawa za asili katika kusimamia matatizo ya upumuaji kwenye kipindi cha korona, Ilala, Dar es Salaam, Tanzania.

Matokeo ya utafiti huu utawasilisha mitazamo ya watumiaji wa dawa za asili juu ya matumizi ya dawa za asili katika kusimamia matatizo ya upumuaji kwenye kipindi cha korona, Ilala, Dar es Salaam, Tanzania. Taarifa za matokeo ya utafiti huu zitakuwa na mchango mkubwa kwenye jamii, haswa kwa wataalamu wa dawa za asili katika kuongeza uelewa juu ya mitazamo ya watumiaji wa dawa za asili juu ya matumizi ya dawa za asili kama mchango kwenye udhibiti na usimamizi wa matatizo ya upumuaji kwenye kipindi cha korona, Dar es Salaam, Tanzania. Pia, utafiti utasaidia kuboresha au kukuza mabadiliko kwenye matumizi ya dawa za asili kwa kutizama mitazamo ya watumiaji na mchango wake kwenye jamii katika kusimamia matatizo ya upumuaji.

### **Utaratibu**

Ningependa ushiriki katika utafiti huu. Umechaguliwa kwa sababu unatumia unatumia dawa za asili kwa ajili ya usimamizi na udhibiti wa matatizo ya upumuaji. Maoni yako yatachangia katika uboreshaji wa hatua, sera, Pamoja na mipango ya matumizi ya dawa za asili katika kudhibiti na kusimamia matatizo ya upumuaji kwenye jamii. Ikiwa unachagua kushiriki katika utafiti huu, nitakuuliza masawali kadhaa kwa kufuata mwongozo kwaajili mahojiano kwa kina.

### **Usiri**

Majibu yote utakayotoa yatakuwa siri. Hii inamaana ya kuwa majibu yako yatatumiwa na mtafiti kwa lengo la utafiti huu na kama kunaulazima yatatumiwa na Chuo Kikuu Muhimbili. Tunakuhakikishia kwamba taarifa zote tutakazojumuisha katika utafiti huu hazitakufanya ujulikane kama mshiriki, hivyo jina lako halitatumika.

### **Haki ya kukataa au kujitoa**

Ushiriki katika utafiti huu ni wa hiari. Pia hulazimishwi kuongea jambo lolote ambalo usingependa kuliongea. Unaweza kusitisha kujibu wakati wowote endapo utaona ni vyema kufanya hivyo. Licha ya hayo tungependa ushiriki wako katika utafiti huu kwani maoni yako yana umuhimu mkubwa.

### **Faida**

Kushiriki katika utafiti huu hauwezi kufaidika wewe binafsi, lakini utaweza kuchangia kuongeza uelewa kwa wataalamu wa dawa za asili kuhusu mitazamo ya watumiaji wa dawa za asili kwenye matumizi ya dawa za asili kwaajili ya kusimamia matatizo ya upumuaji kwenye kipindi cha korona, wilaya ya Ilala, Dar es Salaam, Tanzania.

### **Madhara**

Hatutegemei ya kwamba utapata madhara yoyote kwa kushiriki kwako katika utafiti huu japo

baadhi ya maswali utakayoulizwa ni ya binafsi zaidi.

**Watu wa kuwasiliana nao**

Kama una maswali katika utafiti huu unaweza kuwasiliana na mtafiti mkuu, Ms. Getrude F. Mwangamilo mwanafunzi kutoka Chuo Kikuu cha Afya na Sayansi shirikishi Muhimbili, S.L.P. 65001, Dar es Salaam. Simu namba 0743110451. Kama utakua na swali kuhusu haki yako ya ushiriki, unaweza kupiga kwa Dr. Bruno Sunguya (Mwenyekiti wa kamati ya utafiti na machapisho, MUHAS. S.L.P 65001, Dar es Salaam-Tanzania, Tel +2552150302-6)

**Sahihi**

Je? Unakubali kushiriki weka alama ya tiki (√) katika kisanduku husika

Ndiyo

Hapana

Mimi.....nimesoma fomu hii ya idhini na nimeielewa. Maswali yangu yamejibiwa. Nakubali kushiriki katika utafiti huu.

Saini ya mshiriki..... Tarehe.....

Saini ya mtafiti/ mtafiti msaidizi .....

### Appendix III: Introduction letter from MUHAS to Ilala Municipality



**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.746/2020

03<sup>rd</sup> August, 2021

The Municipal Director,  
 Ilala Municipality,  
 P.O. Box 20950,  
 DAR ES SALAAM

**Re: INTRODUCTION LETTER**

The bearer of this letter is Getrude Frank Mwangamilo, a student at Muhimbili University of Health and Allied Sciences (MUHAS) pursuing MPH-Regular Track.

As part of her studies she intends to do a study titled: *“Perceptions of the community towards the use of traditional medicines in the management of Covid-19 in Ilala, Dar es Salaam, Tanzania.”*

The research has been approved by the Chairman of University Senate.

Kindly provide her the necessary assistance to facilitate the conduct of her research.

We thank you for your cooperation.




For: **DIRECTOR, POSTGRADUATE STUDIES**  
 Dean, School Public Health and Social Sciences, MUHAS  
 cc. Getrude Frank Mwangamilo

## Appendix IV: Permission letter from the Regional Administrative Secretary

**THE UNITED REPUBLIC OF TANZANIA**  
President's Office  
**REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**

**DAR ES SALAAM REGION**  
Phone Number: 2203158  
Fax number: 2203158  
email: [ras@dsm.go.tz](mailto:ras@dsm.go.tz)  
website: [www.dsm.go.tz](http://www.dsm.go.tz)



**REGIONAL COMMISSIONER'S OFFICE,**  
3 RASHID KAWAWA ROAD,  
P.O. BOX 5429,  
12880 DAR ES SALAAM

In reply please quote:  
Ref. No. ....

06/08/..... 2021

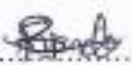
District Administrative Secretary,  
ILALA  
.....  
P. O. Box .....,  
**DAR ES SALAAM.**

**RE: RESEARCH PERMIT**

Prof/Dr/Mrs./Ms/Miss GETULIE FRANK MUKANGAMILLO is  
student/Research from MUHAMMADIYAH UNIVERSITY (MUHAM) has been  
permitted to undertake research on Perceptions of the  
community towards the use of traditional  
medicines in the management of Covid-19  
in Ilala, Dar es Salaam.

From 06<sup>th</sup> August 2021 to 28<sup>th</sup> August 2021.

I Kindly request your good assistance to enable her/his research.

  
.....  
For; **REGIONAL ADMINISTRATION SECRETARY**  
**DAR ES SALAAM**

Copy: Municipal Director,  
ILALA  
.....  
**DAR ES SALAAM.**


Principal/Vice Chancellor  
MUHAM  
.....



**Appendix V: Permission letter from the District Administrative Secretary**

**THE UNITED REPUBLIC OF TANZANIA**  
**President's Office**  
**REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**

ILALA DISTRICT  
Phone Address:  
Phone No: 2203185/2203182  
In reply quote: Ref. No: AB.60/87/01/




DISTRICT COMMISSIONER'S OFFICE  
ILALA DISTRICT  
P. O. Box 15486,  
**DAR ES SALAAM**  
Date: 06/08/2021

Municipal Director,  
P. O. Box 20950,  
Ilala,  
**DAR ES SALAAM.**

**RE: RESEARCH PERMIT**


Prof./Dr./Mr./Mrs./MS./Miss: GETRUISE FRANK MWANGAMULO  
from The MUHIMBI UNIVERSITY OF HEALTH AND ALLIED SCIENCES she/he has been permitted to undertake a field work research on "Perceptions of the community towards the use of traditional medicines in management of covid-19 in Ilala." The case study at Ilala District from 06<sup>th</sup> August 2021 to 28<sup>th</sup> August 2021.

Therefore, you are asked to give the said researchers necessary assistance and Cooperation.


  
For: District Administrative Secretary  
**ILALA**

Copy: ILALA GETRUISE F. MWANGAMULO  
.....  
Principal/Vice Chancellor,  
MUTHAS

## Appendix VI: Approval for Ethical clearance



**UNITED REPUBLIC OF TANZANIA**  
 MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY  
 MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES  
**OFFICE OF THE DIRECTOR - RESEARCH AND PUBLICATIONS**



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Ref. No.DA.282/298/01.C/791 Date: 30/07/2021

**MUHAS-REC-07-2021-791**

Getrude Frank Mwangamilo,  
 MPH -School of Public Health and Social Sciences,  
**MUHAS**

**RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: Perceptions of the community towards the use of traditional medicines in the management of Covid-19 in Ilala, Dar es Salaam, Tanzania**

Reference is made to the above heading.

I am pleased to inform you that the Chairman 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: 30/07/2021  
 EXPIRATION DATE OF APPROVAL: 29/07/2022

**STUDY DESCRIPTION:**  
**Purpose:**  
 The purpose of this cross-sectional exploratory study is to explore the perceptions of people in the community towards the emergency increased use of traditional medicines for the purpose of management of Covid-19, due to Covid-19 outbreak.

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-%20868.pdf> and in the MUHAS archives.