SCHOOL OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF PUBLIC HEALTH

ASSESSMENT OF PREVENTION AND CONTROL OF SCABIES IN KABIPUPU OF MUFUMBWE DISTRICT

BY

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DECLARATION

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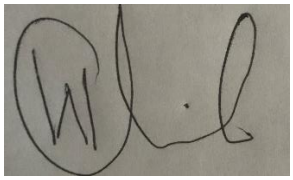
I declare that this dissertation is my creative work and to the best of my acquaintance has not been presented for a degree in any other institution.



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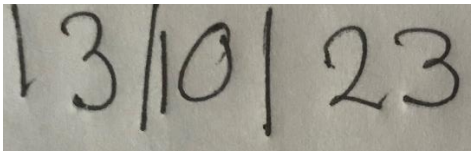

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Dedication

This dissertation is dedicated to my father, Mr. Ronald Chisha. Despite the fact that he motivated me to pursue a bachelor's degree, he passed away while I was still in my second year and was unable to see me graduate.

List of Abbreviations

CBV	Community Based Volunteer
CDC	Centre for Disease Control and Prevention
COG	Clinical Officer General
CSO	Central Statistics Office
DALYs	Disability-Adjusted Life-Years
DHO	District Health Office
FRA	Food Reserve Agency
HC	Health Centre
HW	Health worker
MDA	Mass Drug Administration
NHRA	National Health Research Authority
WHO	World Health Organization

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Abstract

Scabies has the highest prevalence in hot, humid climates such as the Pacific and Latin American regions several studies reported prevention and control of scabies, however prevention and control of scabies remains to be accomplished. Scabies is a contagious skin infection caused by the infestation of a mite known as *Sarcoptes Scabiei*. The mite burrows under the skin and cause severe itching, which is especially intense during night time. Scabies is mainly transmitted through skin to skin contact, making family members and close contacts at higher risk.

Scabies causes a host immune response which is intensely itchy. Scratching of the lesions can lead to secondary bacterial infections of the skin, such as impetigo this can have fatal consequences, such as septicaemia, Advances over the past 5 years indicate that mass drug administration, washing clothes and beddings with soap, not exchanging clothes of towels and avoiding staying in overcrowded homes are common effective strategies to control and prevent scabies from spreading. On the other hand once the diagnosis of scabies is established, not only the patient but also close contacts should receive treatment with either a topical medication (such as permethrin 5% cream) or a systemic drug (ivermectin) or both.

Keywords: burrow, eggs, ivermectin, mite, permethrin, *Sarcoptes scabiei*, scabies, prevalence, contagious

CHAPTER ONE

1.0Background/Introduction

Kabipupu is situated in the south west of Mufumbwe town, it shares borders with Kalengwa and Musonweji ward. It is 85 km from Mufumbwe town and it only has one health centre. It has total population of 2251 (CSO, 2021). The area is hard-to-reach due to its poor road network especially in rain season. The economic activity which the community members of Kabipupu are involved in is Agriculture, the main crop grown in the area is maize which is used to make maize meal and the excess maize is sold to FRA. This study tends to assess the prevention and control of scabies. Scabies it is infectious and can spread fast in areas where people are not taking preventive measures serious.

Why is it important to know more about scabies? Scabies will not go away without treatment and preventive measures. Scabies is a widely found infectious disease of the skin in Kabipupu the parasite responsible for the disease it is a mite. This mite, *Sarcoptes scabiei* causes extreme irritating sensation on the body, caused when the pregnant female mite burrows into the top layer of skin and lays eggs (Michigan, 2012). Scabies causes disturbance of the skin's function which encourages other bacterial diseases and it exists the whole world among all the people despite of their social class, race, age and gender and has been recognized as a neglected tropical disease (Walton, 2012). Scabies is very common in developing nations like Zambia mostly in rural areas, the state of being poor and lack of cleanliness contribute to the high prevalence of scabies as they are nearly always associated with a lot of people staying in one area closely, sharing of sleeping spaces, inadequate health services, not good enough treatment being provided, poor sanitation, primarily mediated by near and extended physical contact with scabies infected people and different infectious skin diseases (WHO, 2013). An intensely irritating skin eruption with papules, nodules, and vesicles is the outcome of scabies mite infestation. Although the direct impact of mite invasion plays a role, host hypersensitivity accounts for the majority of this. As a result, in cases of primary infestation, the incubation period before symptoms appear is between three and six weeks, while in cases of infestation, it can be as little as one or two days (chandler, 2018).

It is vital to know that people infected with scabies can spread the disease, even if they do not have signs of the disease. In people who have had scabies before, the sign and symptoms develop faster one to four days after being in contact with a person infected with scabies or their clothes and

beddings. Studies indicated that children who slept with other children who had scabies got infected and became re-infected in larger proportions. This facilitates skin-to-skin contact and therefore, the spread of scabies mites from infested children to other children who are not infected (Mclean, 2013). The consequences of scabies predisposes affected people to sepsis and other non-supportive invasive infections. The prevalence rates of scabies differs from one country to another this is due to several interplay factors, most frequently it ranges from 0.3 to 46 percent. Scabies contributes significantly to economic costs of a country's health services in the developed world, because of outbreaks in health institutions and extremely susceptible communities. However, in countries with poor resources, the sheer burden of scabies infestation, as well as their complications contribute to a major expenditure of resources on health care services. Complications include secondary infections by group of *streptococci* and *acute post-streptococcal glomerulonephritis*. Restriction of leisure activities, makes somebody feel inferior and stigmatization is common. Medical remedy of scabies includes different types of topical compounds, but prevention is not an easy task at the community level.

Therefore, the aim of this study will be to assess the prevalence of scabies in Kabipupu and also shed light on the burden of scabies and its prevention and control measures in Kabipupu.

1.1Statement of the problem

Scabies is one of the commonest skin diseases, accounting for a large proportion of skin diseases in Kabipupu (Mufumbwe DHO, 2021). It is approximated to affect more than two hundred million people at any given time (WHO, 2020). There is a lot which should be done to assess this burden. However, it is young children and the elderly who are more at risk of contracting scabies and the secondary complications of infestation. The burden of scabies infestation and its complications imposes a major cost on health care systems. Although the Ministry of Health has identified good hygiene and accurate treatment of scabies as one of the major interventions in controlling and managing the disease, there are many obstacles to the implementation of effective prevention and control of scabies in Kabipupu of Mufumbwe District. These challenges, range from shortages of drugs to treat scabies, lack of knowledge amongst the people of Kabipupu on how to prevent scabies and poor sanitation hinders the successful control and prevention of scabies. It is for this reason that research was done to find more lasting solutions to the problem and find more knowledge to add on existing body of knowledge.

1.2Justification of the study

The aim of this study was to establish the prevention and control measures of scabies in Kabipupu and seek the local people`s opinion on how the problem would be handled. Detailed findings on the research will help to find solutions to the problems and be able to prevent or avoid above mentioned problems that come as a result of many interlinked factors in Kabipupu. The study was also meant increase the community`s knowledge in prevention, treatment and control of scabies, identify sources of exposure to scabies, understand the impact of scabies on the health of people. Scabies need to be controlled because it causes health complications if left untreated or uncontrolled. The research will contribute to academic knowledge in terms of providing guidance on new knowledge and insights, and in ways that can be applied by those who make decisions or deliver care.

1.3General research objective

To assess the preventive and control measures of scabies amongst Kabipupu residents of Mufumbwe district.

1.4 Specific research objective

1. To determine the prevalence of scabies amongst Kabipupu residents of Mufumbwe District.
2. To determine measures being under taken by the people of Kabipupu to prevent scabies.
3. To assess the levels of knowledge about scabies amongst residents of Kabipupu.
4. To ascertain factors leading to the high number of cases of scabies in Kabipupu.

1.5 Research questions

1. What is the prevalence of scabies in Kabipupu?

2. What preventive and control measures being undertaken in Kabipupu to prevent scabies?

3. What levels of knowledge the residents of Kabipupu has on scabies?

4. What are the contributing factors which cause the spread of scabies in Kabipupu?

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews the literature on the topic (assessment of prevention and control of scabies). The following will be reviewed: diagnosis of scabies, control strategies of scabies and treatment.

2.1 Diagnosis

Scabies is mostly diagnosed based on clinical evidence. If somebody has been in contact with a person infected with scabies is generally evident, as is a report of a highly itchy rash that gets worse at night. Skin that is broken or infected in a typical distribution may be seen on examination.

A handheld dermatoscope gives for a clearer view of the curvilinear scaly burrow, and the mite itself can be seen at the end of the burrow as a dark triangular structure that corresponds to the scabies mite's pigmented head and front legs. A "jet with contrail" is a term used to describe this image. Eggs are also visible as little ovoid formations within the burrow. The "mini triangle indication," which refers to scabies eggs that display the head of the growing mite within the egg, is less usually seen (Fox, 2009). Emerging larvae exit through the burrow's ceiling, moving closer to the skin's surface, where they burrow out small pockets and moult to the next stage of development (Monsel, 2016). Other non-invasive imaging techniques, including as video dermatoscopy (Argenziano, 1997) and reflectance confocal microscopy (Levi, 2012), have been employed to examine the mite in greater detail.

For the identification of scabies, there are no standardized laboratory tests available. There have been a lot of candidate antigen and antibody immunoassays studied, but their effectiveness have not been satisfactory, and nothing has been approved to be used worldwide. In the field, a specific and sensitive quick diagnostic test for scabies can be extremely useful; contemporary molecular techniques may be able to help, and this area should be prioritized in the scabies study agenda. Previously, conventional Polymerase Chain Reaction targeting the *S. scabiei mitochondrial cytochrome* c oxidase subunit 1 (cox1) gene was employed to identify scabies infestation; but, the positive results were very low to give good findings (Wong et al, 2015).

2.2 Prevention and control strategies of scabies

The prevention and control of scabies needs well organized effort with contribution from different sectors. Scabies can be prevented from spreading by not having direct skin-to-skin contact with people are sick of scabies or with items such as blankets or clothing used by an infected person. Scabies treatment is advised for family members who belong to one household, especially for those who have had prolonged skin-to-skin contact. To avert re-exposure and re-infestation, all household members and other possibly exposed people should be put on medicine at the same time as the infected individual (CDC, 2018). Scabies can also be prevented by using the following methods: All garments, bedding, and towels should be washed in hot soapy water and dried on high heat within three days after starting treatment. Items that cannot be washed should be dry cleaned. Items like stuffed animals should be sealed in a plastic bag and stored for at least three days by doing so the mites will be starved (Felson, 2021).

With the available literature on prevention and control of scabies Palmer (2021) identified some of the measures and amongst these are: Not Sharing Towels, the people who are sick of scabies must have their own bathing towels and hand towels which no other person should use until treatment is completed. Knowing Your Sexual Partners, Scabies cannot be transmitted through sexual intercourse, but during sexual intercourse there is skin-to-skin contact which is actually a common way to contract scabies. Reducing the number of sexual partners can minimize the risk. Also, avoid having sex with your partner if they have an undiagnosed rash.

Scabies can be effectively treated with two doses of ivermectin-based medication given in a mass dosage. If successful, a one-dose ivermectin-based MDA technique would have significant advantages for deploying Mass Drug Administration for scabies on a wide scale (Hardy et al., 2021).

Taking treatment correctly and do not skip treatments or stop treatment before the healthcare provider tells you to stop can be very helpful in the prevention of scabies. If just one person in the family does not complete their treatment, it can allow the mites to gain strength and keep scabies passing along (Angela, 2021)

2.3 Treatment

Scabies can be treated with a variety of efficient treatments. However, clinical trials comparing the efficacy of these treatments, particularly available topical agents (Strong, 2007), are scarce; as a result, prescribing practice differs widely from one nation to another and it depends on several factors such as treatment availability, cost and physician's choice.

The amount of diagnostic certainty will influence individual case management, which can include a broad differential diagnosis based on patient and geographic circumstances. The 2018 consensus criteria for scabies diagnosis (Engelman, 2018) may be useful in guiding non-expert health workers through case management, but they will be more useful in research studies and mass treatment programs, where the diagnostic hierarchy can be used to identify suitable or comparable populations.

The most common treatments used for scabies are topical permethrin (a synthetic pyrethroid insecticide) and ivermectin which is taken orally (a macrocyclic lactone antibiotic with broad-spectrum activity against nematodes and arthropods); the two drugs have comparable effectiveness and are generally very well tolerated (Rosumeck, 2018).

Permethrin 5% cream is the first-line topical therapy in the United Kingdom and the United States of America. Permethrin is adulticidal and ovicidal against the scabies mite and therefore produces desired results after applying just once (Taplin, 1991). However, in practice the prescribed course frequently involves two applications. Unfavourable effects do not often occur and are limited to local skin reactions including redness of the skin, burning and itchiness (Mushtaq, 2010).

Scabies has been treated using a variety of topical medications. Sulphur compounds can be beneficial, with preparations containing 5% to 10% sulphur in paraffin being widely used in Africa and South America (Hengge, 2006). However, they are unpleasant to use and can cause skin irritation, so they are not well tolerated. Permethrin and sulphur preparations are both approved safe for use in pregnant women and small children, despite the lack of safety data (Karthikeyan, 2005). In several nations, including Europe and Australia, benzyl benzoate has been utilized in ten to twenty five percent formulations. If tolerated, the drug is a very effective in treating scabies and it has very good treatment rates.

2.4 The burden of Scabies

Scabies is a major worldwide health problem with ramifications for both developing and developed countries.

Karimkhani et al. (2017) used data from the Worldwide Burden of Disease Study 2015 to give the first reliable estimate of the world burden of scabies. They calculated disability-adjusted life-years (DALYs) using prevalence data weighted for disability and assuming a 0% mortality rate for scabies. Scabies was found to be the most prevalent in east and south-east Asia, Oceania, and tropical Latin America. The DALY burden is largest in younger age groups, especially children aged one to four years, in these and other tropical regions with less resources.

Scabies prevalence is more evenly distributed throughout all age categories in areas with a minimal total scabies problem, for example North America and Western Europe. Scabies rated one hundred and one in age-standardized worldwide DALYs, barely ahead of atrial fibrillation or flutter (102) and acute lymphoid *leukemia* (103) in the Worldwide Burden of Disease 2015 Study (103). It's worth noting that this study only looked at effects of the skin infestation; it didn't account for the considerable impact of bacterial super infection and its repercussions to the overall illness burden. Scabies-related impetigo is the leading cause of *post-streptococcal glomerulonephritis* in resource-poor areas, with about 0.5 million new infections every year (Carapetis, 2005). As well as *rheumatic* fever and *rheumatic* cardiac diseases, which are responsible for at least three hundred thousand fatalities each year (Watkins, 2017).

Within countries, there are known regional variances in scabies burden. Scabies and impetigo are far more common in Australian aboriginal populations than in the non-indigenous population (Romani, 2015). Poverty (Stanton, 1987), overcrowding (Gibbs, 1996), and poor access to health care services are all reasons which may add to the higher levels of endemic scabies in these areas and same circumstances in different nations (Currie, 1994). Immunosuppression is commonly blamed for crusted scabies, it has also been recorded in indigenous Australians with no apparent immune deficit. It's possible that these people have a unique immunological deficiency, albeit the nature of this is currently unknown.

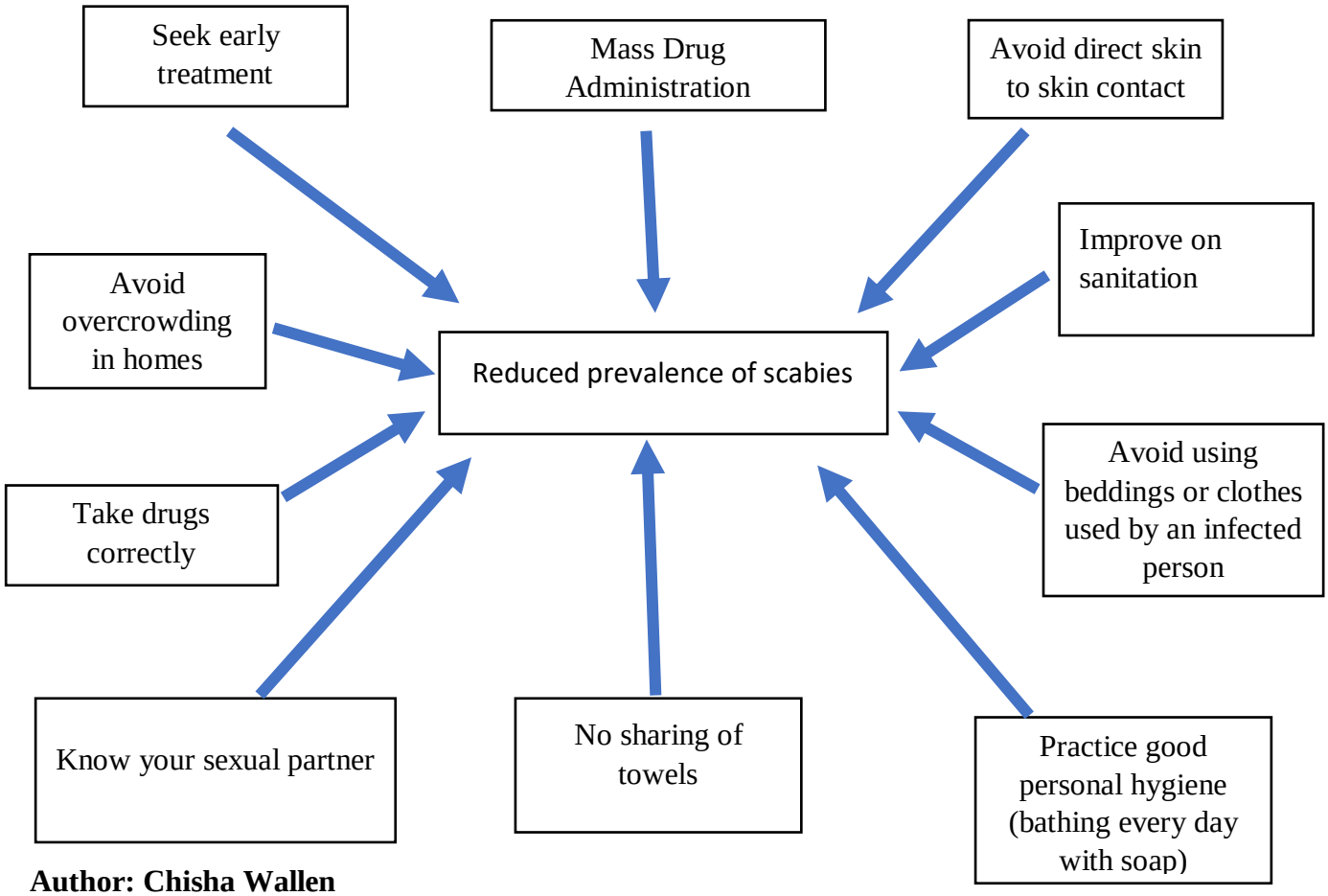
Scabies outbreaks in organizations, such as care homes, schools, military camps, and prisons, are a particular problem in affluent western hemisphere countries. There is a rising number of migrants

seeking asylum in Europe, many of whom have been uprooted by conflict in Africa or the Middle East. Individuals in these populations are at danger of getting a number of serious infectious disorders, including scabies, which frequently coexist (Bloch, 2017).

2.5 Conceptual framework

The research was based on the interplay of several factors as illustrated in Figure one. Some of factors that could reduce the prevalence of scabies.

Figure one



Author: Chisha Wallen

Figure 1: Conceptual frame work of factors which may reduce the prevalence of scabies based on literature review.

Chapter three: Methodology

3.0 Introduction

This chapter explains various ways which were used in collecting data and analysis. The methodologies includes the following areas; study area, research approach, study design, study population, sample size, sampling techniques, eligibility criteria, data collection techniques, data management and analysis.

3.1 Research approach

The research was carried out using a qualitative approach in data collection which involved the administering of a questionnaire to the respondents and clarifying where it was not clear. The questionnaire was divided into two parts, part 1 for the general public and the other part 2 was for health workers.

3.2 Study design

A case study was conducted between September and December 2022 by collecting data from different respondents.

3.3 Research area

The research was conducted in Kabipupu of Mufumbwe District which is situated in the south west of Mufumbwe town, it shares borders with Kalengwa and Musonweji ward. It is 85 km from Mufumbwe town and the area only has one HC.

3.4 Study population

The study population of 2251 aged 16 years and above in Kabipupu of Mufumbwe District. Regardless of their religious affiliation, literacy levels, tribe/race, political affiliation and cultural background were selected.

3.5 Sample size/ Sample size justification

A sample size of 16 people aged 16 years and above in Kabipupu. The sample size composed of 2 health workers from the local HC who have worked for a period of not less than a year and 14 residents of Kabipupu who have stayed in the area for more than one year, regardless of their educational level, religious affiliation, tribe and cultural background. Taking into consideration the principle of saturation.

Sample size justification- Limited resources are the primary reason for the choice of the sample size of 16 respondents.

3.6 Sampling technique

The sampling technique used was judgmental or selective sampling, where the researcher decided the number of people to participate in the study based on the researchers own judgment.

3.7 Eligibility criteria

3.8 Inclusion criteria

All 16 years and above residents of Kabipupu who have stayed in the area for more than one year were included in the study.

3.9 Exclusion criteria

Any resident of Kabipupu who is less than 16 years of age and anyone who has not stayed in the area for more than a year was excluded in the research.

3.10 Data collection techniques

Data was collected using a self-administered questionnaire and interviews, the questionnaire consisted of closed ended and open ended questions. The questionnaire addressed the following factors namely; demographic data, hygiene factors, living condition factors and knowledge about scabies.

3.11 Data management and analysis

The study used thematic analysis of which the responses from different people who took part in the research, were red through for familiarization and coding of the data. The themes were generated and then reviewed, after generating the themes they were all defined and lastly the themes were named.

3.12 Study limitations

1. Language problems as it was difficult to translate certain words into the local languages
2. A smaller sample chosen so it may not show the true picture of the population under study
3. No enough funds to conduct the research thoroughly

3.13 Validation

Validation was achieved by the data collection tool and validation was also achieved by correct filling of the data collection tool.

3.14 Reliability

Reliability was ensured by making sure the people taking part in the study understand all questions in the data collection tool.

3.15 Ethical consideration

Ethical clearance was got from the University of Lusaka Research Ethics Committee and letter of permission was requested from Mufumbwe DHO. Participates were informed about the main aim of the research and they have to participate on their own will. No names of participants were collected the questionnaires were numbered while the information obtained was treated with maximum confidentiality.

Chapter four

4.0 Demographic characteristics of participants.

Every participant in the study gave their consent to take part.

Sex	**#**	**age**	**#**	**occupation**	**#**	**Marital status**	**#**	**Educational level**	**#**
M	7	16-25	**7**	HW	**2**	married	**10**	Never been to school	**0**
F	9	26-35	**5**	Miner	**2**	single	**5**	primary	**8**
		26-45	**4**	Self employed	**9**	divorce	**0**	secondary	**6**
		Above45	**0**	pupil	**3**	separate	**1**	tertiary	**2**
TOTAL	17		**17**		**17**		**17**		**17**

4.1 Results

The primary purpose of this study was to assess prevention and control of scabies in Kabipupu of Mufumbwe district participant's experiences and feedback added insight to the research questions posed in this study. By getting information from these participants, valuable information was obtained about prevention and control of scabies

Six distinct themes emerged from the research data. The major themes identified from the results of this study included

1. Shortage of medicine to treat scabies at the local HC
2. Not washing and bathing with soap regularly
3. Poor hygiene
4. Seeking treatment late/not following health worker's instructions on how to use the drugs
5. Sharing a house, beddings and clothes with someone who has scabies
6. Sharing a house, beddings and clothes with someone who has scabies

CHAPTER FIVE

5.0 Discussion of findings

The prevention and control of scabies in Kabipupu is very poor because of the following themes which were produced from the analysis

5.1 theme 1: Shortage of medicine to treat scabies at the local HC

Almost all participants who took in the in the research reported that when a person of scabies and they visit the HC they are usually told to go and buy the drugs and not only for scabies also for other medical conditions the HC has no drugs most of the times. (Enbiale, 2020). Also in his study conducted in Ethiopia noted that, one factor blamed for the disease's (scabies) return was a scarcity of medication.

The clinical officer office at the local HC added that a lot of drugs such as antibiotics, pain killers, hypertensives drugs and vaccines are liable to the shortage and went further that this shortage came as result of covi19. And due to distance from Kabipupu to were to buy drugs which are prescribed to patients with scabies by the health worker its far and some people fail to buy the medication and they continue living with scabies without buying drugs which they told to buy. Some fail to buy drugs claiming that they have no money to buy the drugs this leads the peoples with scabies to regularly visit the HC hoping to find drugs and the conditions keep on worsening

5.2 theme 2: Not washing and bathing with soap regularly

A second theme which was analyzed and noted is that people in the community do not use soap regularly when washing cloths and bathing. Most participants reported that they cannot afford to always buy washing and bathing soap all the time because of lack of money (poverty). (Enbiale, 2018) Also confirms that there is a correlation between higher rates of scabies transmission and poverty. According to (Karaca Ural, 2022) also confirms that taking showers and utilizing cleaning supplies to maintain personal hygiene removing young mites from the skin will decrease the likelihood of scabies infection spreading. Karaca Urala also advises regular washing of the genitalia and bathing or showering at least twice weekly to maintain the body clean.

Participants said that the sources of money in the community are very scarce as most of the people rely on farming and fishing which is seasonal people only have money when they sale their farm

produce to FRA that's when they manage to at least buy soap regularly when the money finishers they have to stop buying washing or washing soap and wait to sale their farm products again the little money which remains its saved for farming inputs and other basic needs such as cooking oil, salt and relish. If at home there is a child meaning the soap which will be bought will on be the child to wash nappies and bathing while others people on bath only with water

5.3 theme 3: Poor hygiene

Third theme is poor hygiene all the health workers who took part in the research reported that poor hygiene in the community is the number leading cause of scabies in the community. It was noted that poor hygiene in the community ranges from different factors, which were highlighted include, most homes in the community have no toilets instead they use the nearby bushes as toilets and people don't take a bath every day especially children in the ages of 6 to 12 years also clothes are not changed regularly.

The findings of study, which was carried out at the Manhajul Ulum Islamic Boarding School, by (Pemuda et al, 2022) confirms that there is substantial correlation between scabies occurrence and practices related to personal cleanliness, bathing, and sleeping on clean beddings.

Another factors which contributes to buy hygiene was noted is that the community lacks adequate supply of clean water, most people use water from shallow wells and from streams which can be contacted looking at the fact that only few people have toilets o which faecal matter and others contaminants may find its way in the water.

5.4 theme 4: Seeking treatment late/not following health worker's instructions on how to use the drugs

The fourth theme which was noted is seeking medical treatment late and not following instructions given by a health worker on how to use the drugs. When a person notices or recognizes the symptoms of scabies they do not visit the HC for medical treatment or advice, but they stay until the condition worsens just when they decide to visit the health facility.

The health worker (nurse) added that when people delay to seek medical treatment for scabies increases the chances of passing on the disease to other people and difficult to treat as the disease may have brought other optimistic infections. The nurse further went on to say that people do not

use the drugs correctly once given, only use for few days and stop once they see the condition has reduced.

5.5 theme 5: Sharing a house, beddings and clothes with someone who has scabies

The fifth theme is sharing a house with someone who is sick of scabies. Scabies is more likely to spread among members of the same family, housemates, or those who live together in close houses. Regular and extended contact with sick people also increases the chances of getting scabies and there is a higher probability that being staying in the same house may share clothing, towels, sheets, or other bedding with a person who has scabies and this may cause other people to get infected with the disease.

(Leistner, 2017) Also affirms that Scabies can spread throughout homes and residential buildings. The mite spreads the infection by living for several days on items like furniture, bedding, towels, and clothing.

5.6 theme 6: Living in a crowded house

The sixth theme which was produced from the analysis is that living in crowded house, Scabies infestations can spread quickly in crowded housings.

According to prior research from endemic locations in Egypt, (Ugbomoiko , 2018) their study also confirms that overcrowding is a known risk factor for scabies. Looking at the living conditions in Kabipupu being a village people live in smaller houses and you find the houses are mainly over crowded, Scabies is more likely to affect people who live in such homes. From the findings the average family size per household it was found being five people

CHAPTER SIX

6.0 Conclusion

The number of scabies cases are high in the community which was under study because most preventive measures are not being implemented, but the people they have adequate knowledge on scabies. The control and prevention is not actively done because of some financial reasons which people are facing in the community.

The prevalence of scabies is relatively high which seeks public health attention sharing of clothes with other people, family history of scabies, sleeping with a person who had scabies, sharing towels with other people are significantly associated with scabies

6.1 Recommendation

From the overall findings the following are recommended to the responsible bodies and the community at large

Ministry of health to consistently supply enough drugs for scabies throughout so that each time a clients is diagnosed with scabies can be given the recommended drug and not told to go and buy because some they don't even go and buy after being told to buy.

Community members should avoid living in over-crowded homes as scabies infestations can spread quickly in crowded housings.

Parents, guardians and community at large should make sure the stated measures are followed: personal hygiene and sanitation to avoid sharing towels, sleeping with infected people, seeking treatment early, washing clothes with soap regularly, bathing with soap regularly and encourage people to build more toilets and bathrooms.

The community members especially parents and guardians should see to it that sharing of cloths amongst children it is avoided, also the community members should practice high levels of hygiene, improve sanitation and clothes should be washed with soap

People should be following the instructions given by health workers when they are given medication for scabies and finish the prescribed course.

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Appendices

Appendix A. Work plan

Activity	March 2022	April 2022	May 2022	June 2022	July 2022	August 2022	September 2022	October 2022	November 2022
Proposal writing									
Final Proposal writing									
Proposal defending									
Submission of the proposal									
Data collection									
Data analysis and report compilation									
Printing of the research									
Submission									

Appendix B. Budget for the research

S/N	Item	Unit cost	quantity	Total
1	Typing and printing	K5	100	K500
2	Photocopying	K1	100	K100
3	Binding	K100	1	K100
4	Transport			k700
5	Pens	K5	10	K50
6	Pencils	K2	5	K10
7	Folder	K20	2	k40
8	Ream of paper	K150	1	K150
9	Talk time	K200		K200
10	Miscellaneous	K100		K100
Grand total				**K1950**

Appendix C. Questionnaire

Dear respondent,

My name is……currently studying public health at the University of Lusaka in the school of health sciences. I am carrying out a research, which is part of the school requirement to complete my study.

This study is based on assessment of prevention and control of scabies in Kabipupu of Mufumbwe District. You have been selected as a respondent and I will be grateful if you answer the questions in the questionnaire. All the answer you give shall not be shared with anyone and will be used for the research reason only.

Date……..

Instructions; circle the correct response and write were required.

Section one; socio demographic data

1. What is your age? …….

2. What is your sex?

    a. Male
    b. Female

3. Which religion do you belong to?

    a. Christian
    b. Muslim
    c. Hindu
    d. Other specify……..

4. What is your marital status?

    a. Never been married before
    b. cohabiting
    c. widowed
    d. Divorced
    e. married
    f. Separated

5. How far have you gone with education?

a. Never been to school
b. Grade 1 to 7
c. Grade 8 to 12
d. College/university

6. What is your occupation?

a. Student/pupil
b. Self-employed /farmer
c. Miner
d. Government worker
e. Nothing
f. Other specify……..

If you are a health worker go to part 2 (question 27).

7. How many do you stay at your home? .....

Knowledge of scabies

8. Have you heard about scabies disease? .....

9. How is scabies transmitted?

……
……
……
……

10. Have you ever been sick of scabies before?.....

11. As any of your family member or friend been sick of scabies before?

.....
.....

12. Mention the symptoms of scabies?

i. …….
ii. …….
iii. …….
iv. …….

13. Which parts of the body are mostly affected with scabies?

i. ……..

ii. ……..
iii. ……..

14. Who can be affected with scabies? .....

15. What do you do when you or a family member has scabies?

…….

16. How can scabies be prevented?

……
……
……..
……..

17. Is Sharing of clothes, towels and bedding with a person infected with scabies associated with increased transmission of the disease? .....

Personal hygiene

18. Do you use washing soap when washing clothes and bedding at your home

a. Yes
b. No
c. Sometimes

If your answer is **b** or **c** to question 18 give reasons.

i. …….
ii. …….

19. How often do you take a bath? .....

20. Do you use soap when bathing at your home?

a. Yes
b. No
c. Sometimes

If your answer is **b** or **c** to question 19 give reasons

i. .....
ii. .....

21. How regularly do you change clothes? .....

House living conditions

22. Do you share the bed or sleeping space?

a. Yes
b. No

If your answer is **a** on question 21, how many do you sleep on the bed or sleeping space?
.....

23. Do you exchange clothes with others people?

a. Yes
b. No

24. Do any of your family members exchange clothes with others?

a. yes
b. No
c. I don't know

If your answer is **a** what could be the reasons?

i. …….
ii. …….

Sanitation

25. Where do you get water from for home use? .....

26. Is there a bathing shelter at your home?

a. Yes
b. No

If your answer is **b** to question 25 give a reason…….

27. Is there a toilet at your home?

a. Yes
b. No

If your answer is **b** to question 26 give reasons.

i. ……
ii. ……..

Part 2

For health workers

28. What is your profession?

a. Registered nurse

b. Zambia enrolled nurse
c. Community health assistant
d. Environmental health officer
e. Public health officer
f. Daily classified employee
g. Pharmacist
h. Clinical officer general
i. Other specify…….

29. Is scabies common in your catchment area? .....

30. What are the contributing factors to the high prevalence of scabies in the area?

i. ……
ii. ……
iii. …….
iv. …….

31. List common signs of scabies?

i. ……
ii. ……
iii. …….
iv. …….

32. Is health education given to people on how to prevent scabies?

a. Yes
b. No

If yes what are some of preventive measures being told to people

i. ……..
ii. ……..
iii. …….
iv. ……..

33. What are some of the drugs do you use to treat scabies at your facility

i. …….
ii. ……..
iii. ……..

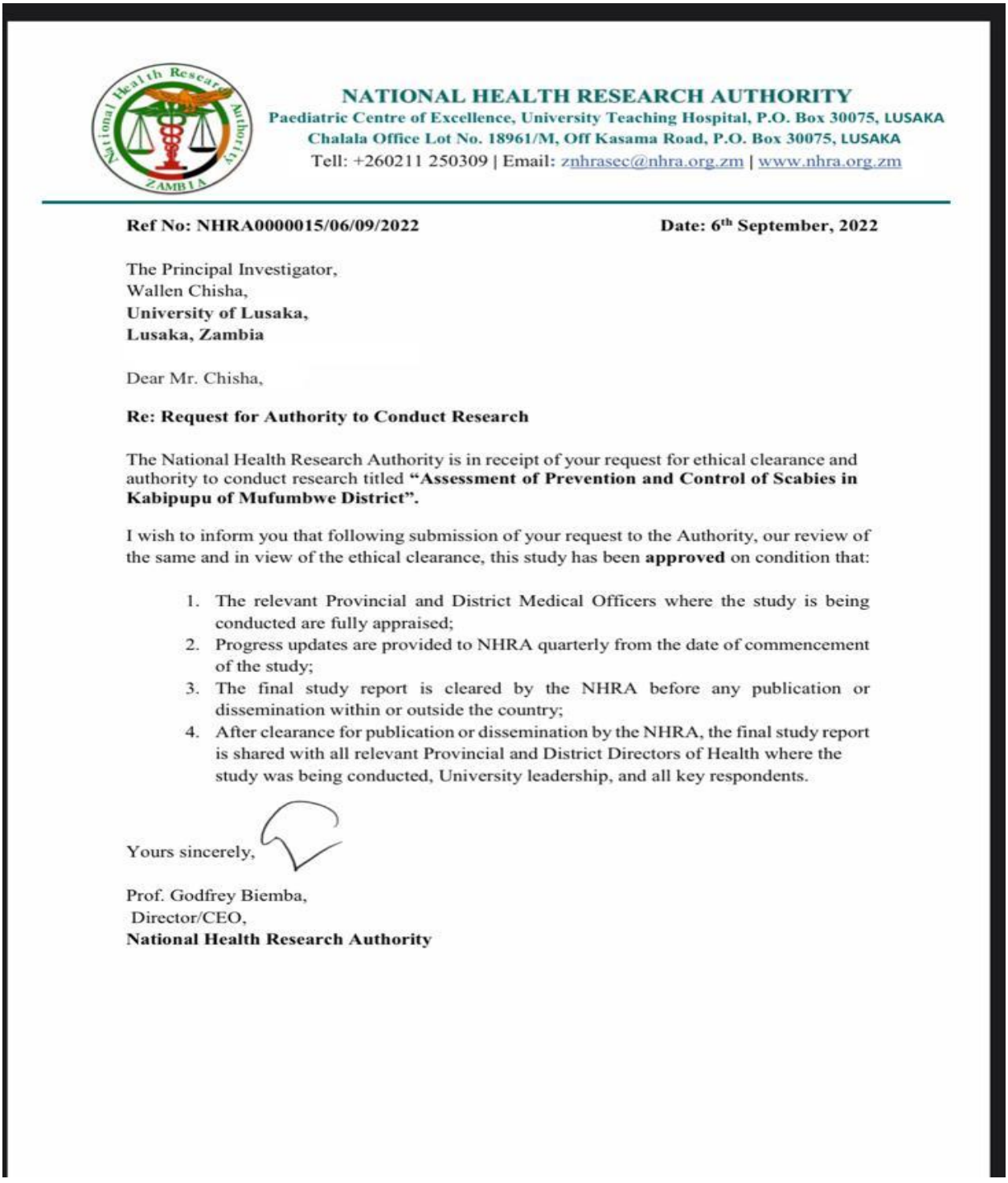
34. Is the facility supplied with drugs for treating scabies?

a. Yes
b. No
c. Rarely

35. If your answer is **b** or **c** to question 34, what do you do when a client comes with scabies and the facility has no drugs? .....

The End

Appendix D. letter of approval to conduct a research from NHRA



NATIONAL HEALTH RESEARCH AUTHORITY

Paediatric Centre of Excellence, University Teaching Hospital, P.O. Box 30075, LUSAKA

Chalala Office Lot No. 18961/M, Off Kasama Road, P.O. Box 30075, LUSAKA

Tell: +260211 250309 | Email: znhrasec@nhra.org.zm | www.nhra.org.zm

Ref No: NHRA0000015/06/09/2022 **Date: 6th September, 2022**

The Principal Investigator,
Wallen Chisha,
University of Lusaka,
Lusaka, Zambia

Dear Mr. Chisha,

Re: Request for Authority to Conduct Research

The National Health Research Authority is in receipt of your request for ethical clearance and authority to conduct research titled **"Assessment of Prevention and Control of Scabies in Kabipupu of Mufumbwe District".**

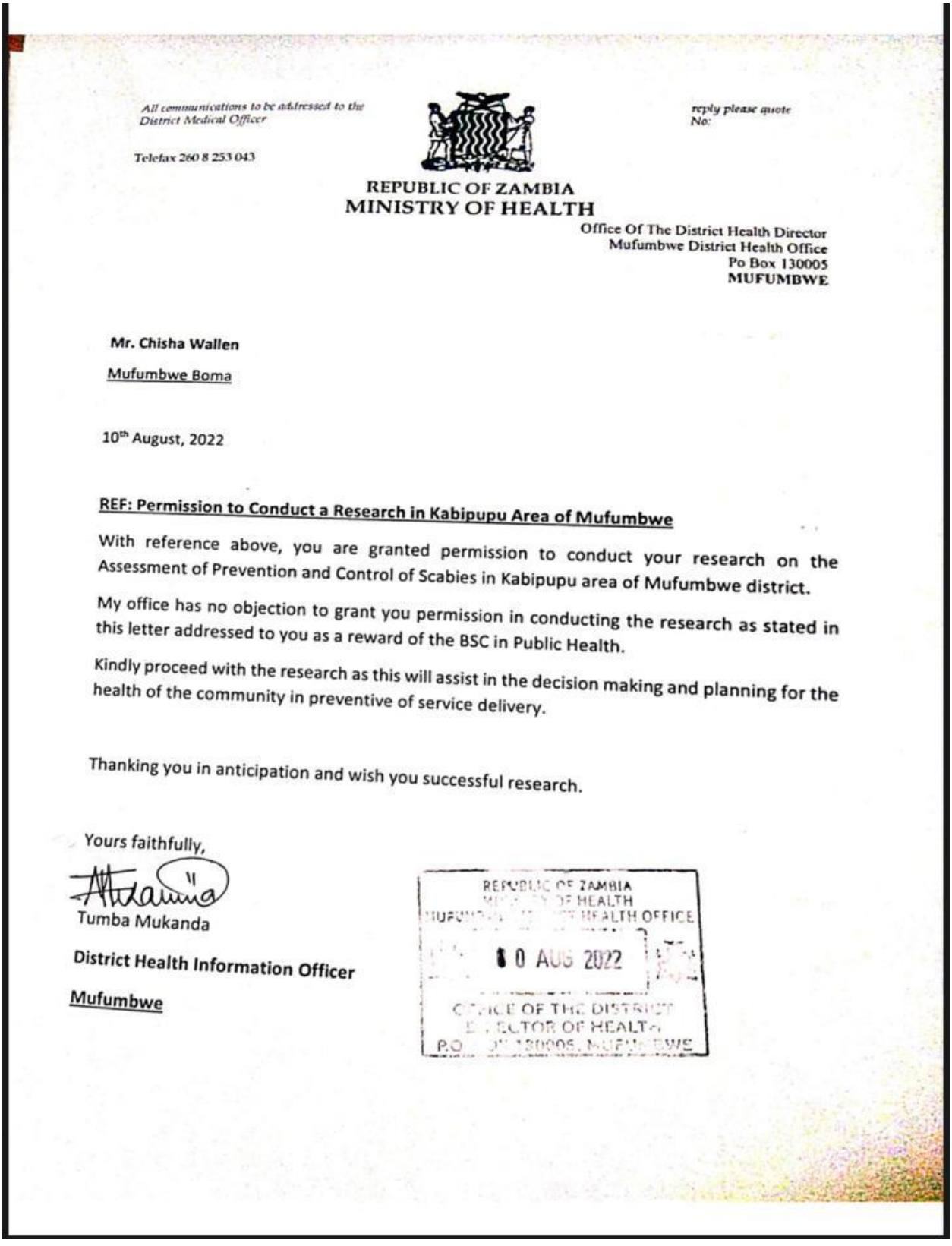
I wish to inform you that following submission of your request to the Authority, our review of the same and in view of the ethical clearance, this study has been **approved** on condition that:

1. The relevant Provincial and District Medical Officers where the study is being conducted are fully appraised;
2. Progress updates are provided to NHRA quarterly from the date of commencement of the study;
3. The final study report is cleared by the NHRA before any publication or dissemination within or outside the country;
4. After clearance for publication or dissemination by the NHRA, the final study report is shared with all relevant Provincial and District Directors of Health where the study was being conducted, University leadership, and all key respondents.

Yours sincerely,

Prof. Godfrey Biemba,
Director/CEO,
National Health Research Authority

Appendix E. letter of approval to conduct a research Mufumbwe DHO



All communications to be addressed to the District Medical Officer

Telefax 260 8 253 043

reply please quote No:

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH

Office Of The District Health Director
Mufumbwe District Health Office
Po Box 130005
MUFUMBWE

Mr. Chisha Wallen

Mufumbwe Boma

10th August, 2022

REF: Permission to Conduct a Research in Kabipupu Area of Mufumbwe

With reference above, you are granted permission to conduct your research on the Assessment of Prevention and Control of Scabies in Kabipupu area of Mufumbwe district.

My office has no objection to grant you permission in conducting the research as stated in this letter addressed to you as a reward of the BSC in Public Health.

Kindly proceed with the research as this will assist in the decision making and planning for the health of the community in preventive of service delivery.

Thanking you in anticipation and wish you successful research.

Yours faithfully,

Tumba Mukanda

District Health Information Officer

Mufumbwe

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
MUFUMBWE DISTRICT HEALTH OFFICE
10 AUG 2022
OFFICE OF THE DISTRICT
EDUCATOR OF HEALTH
P.O. BOX 130005, MUFUMBWE

Appendix F: Ethical clearance

UNIVERSITY OF LUSAKA

SCHOOL OF MEDICINE AND HEALTH SCIENCES
LEOPARDS HILL CAMPUS
Plot No. 37413, Off Alick Nkhata Mass Media. P. O Box 36711, Lusaka.
Phone: +260211258505, 258409 Fax +260211233409; Cell +260976075850,961917862,
E-mail:unilus@zamnet.zm,ictar@zamnet.zm

SCHOOL OF MEDICINE AND HEALTH SCIENCES RESEARCH ETHICS COMMITTEE

Ref no: IORG0010092-2022/192

Date: 14th June, 2022

CHISHA WALLEN – BSPH19115347

Re: Research Title; ASSESSMENT OF PREVENTION AND CONTROL OF SCABIES IN KABIPUPU OF MUFUMBWE DISTRICT

The above research was submitted to the research ethics committee for review. The study has no major ethical problems and is approved subject to the following:

1. The study cannot be changed without express permission of the UNILUS Research ethics committee
2. Approval from the Lusaka District health Management or equivalent health authorities should be sought.
3. The study tools should be added.
4. An informed consent form should be attached and filled by all study participants (If dealing with primary data)
5. The risks and benefits should be included in the consent form.

Congratulations and the committee wishes you success in your work.

Prof Kasonde Bowa
MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)
Chairman- UNILUS REC
Professor of Urology and Consultant Urologist
Executive Dean
University of Lusaka and University Teaching Hospital
School of Medicine and Health Sciences.

Appendix G: permission to conduct a research.

UNIVERSITY OF LUSAKA

SCHOOL OF MEDICINE AND HEALTH SCIENCES
LEOPARDS HILL CAMPUS
Plot No. 37413, Off Alick Nkhata Mass Media. P. O Box 36711, Lusaka.
Phone: +260211258505, 258409 Fax +260211233409; Cell +260976075850,961917862,
E-mail:unilus@zamnet.zm,ictar@zamnet.zm

Date: 14th June, 2022

……

……..

……..

PERMISSION FOR **CHISHA WALLEN – BSPH19115347** TO CONDUCT A RESEARCH STUDY AT YOUR FACILITY/ INSTITUTION/ ORGANIZATION
Reference is made to the above subject matter

The University of Lusaka, School of Medicine and Health Sciences here by requests for permission for **CHISHA WALLEN** Public Health Student to conduct research at your facility/ institution/ organization, entitled**; ASSESSMENT OF PREVENTION AND CONTROL OF SCABIES IN KABIPUPU OF MUFUMBWE DISTRICT.**

The research is in partial fulfillment of the requirements for the degree of Bachelor of Science Public Health. This is purely for academic purposes and information gained in such a way will not be used in the public domain without prior authorization from the institutions/ organizations involved.

The research topic has been cleared by the University of Lusaka, School of Medicine and Health Sciences Research Ethics Committee as per the attached copy. Data collection is expected to be done from **16th June, 2022 to 16th October, 2022**.

The University of Lusaka avails itself of this opportunity to review to your office the assurances of its highest considerations and looks forward to your timely and favorable response.

Prof Kasonde Bowa
MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)
Chairman- UNILUS REC
Professor of Urology and Consultant Urologist
Executive Dean University of Lusaka and University Teaching Hospital
School of Medicine and Health Sciences.

Appendix H. Showing a child with scabies

Appendix I. Showing a child with scabies

Appendix J. Showing a child with scabies

Appendix K. Showing a child with scabies

Appendix L. Showing a child with scabies