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**FACTORS INFLUENCING THE ACCEPTABILITY OF ISONIAZID PREVENTIVE
THERAPY AMONG HEALTHCARE WORKERS AT KABWATA HEALTH CENTRE**

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DISSERTATION CLEARANCE AND DECLARATION

I, MEMORY ABIGAIL MIYANDA, hereby announce that my own original work is this dissertation. In keeping with the requirements for the Bachelor of Science in Public Health at the University of Lusaka, it was directed and labelled by my supervisor. It has not been applied

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SUPERVISOR

I, Professor Andrew L Mbewe , directed, read and accepted this dissertation for submission. I am satisfied that this is the author's original work under the name it is referred to. I accept that the work has been successfully completed and ready for submission.

Signature 

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ACRONYMS

CDC	Centre for Disease Control and Prevention
HCWs	Healthcare Work
IPT	Isoniazid Preventive Therapy
LTBI	Latent Tuberculosis infection
MOH	Ministry of Health
TB	Tuberculosis
WHO	World Health Organisation

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ABSTRACT

Background

Tuberculosis (TB) is classified as an occupational illness, and health care workers (HCWs) are among the most vulnerable populations to contracting the disease due to its transmission mechanism in a healthcare setting. The health facility serving as a source of infection for HCWs produces a deadly TB infection cycle that spreads throughout the community. Isoniazid (INH) preventive therapy (IPT) is recognized as an important component of TB infection control activities. INH therapy of latent TB infection has been shown to reduce the incidence of active TB by >60%, where adherence could be guaranteed. Isoniazid preventive therapy (IPT) among HCWs has not been fully utilised hence very little research has been conducted around it. Therefore, this study helped explore information on the Factors Influencing the Acceptability of Isoniazid Preventive Therapy among Healthcare Workers at Kabwata Health Centre so as to improve IPT uptake.

Methods

The study was guided by the use of a cross sectional study approach. A descriptive and study was used. Primary data was collected through actual field research using questionnaires that were distributed to the respondents. Data was coded manually into themes through the use of content analysis. The study comprised 30 participants, which include Clinical Officers, Nurses and treatment supporters from chest clinic at Kabwata Health Centre.

Results

All the 30 respondents that were interviewed had knowledge about IPT and that it did not influence acceptability. 90% of the HCWs interviewed reported that IPT duration influenced their acceptability of the treatment pointing out that the treatment duration was too long to endure through. Furthermore, reported side effects negatively influence acceptability such as fear of organ damage secondary to INZ administration.

Conclusion

Isoniazid preventive therapy is effective and reduces the occurrence of tuberculosis infection in HIV-infected individuals significantly. However, its use in the prevention of tuberculosis among HCWs in this health facility is extremely poor. An adequate supply of isoniazid, as well as increased awareness among health care providers who are occupationally exposed to tuberculosis, will improve IPT uptake. As well as creating awareness and policies supporting IPT administration to the first line health workers. Effective and on-going adherence counseling for eligible clients, will aid in lowering the rate of IPT defaulters.

CHAPTER ONE

1.0 INTRODUCTION

World Health Organisation (WHO) defines “Tuberculosis (TB) as an infection that is caused by bacteria (mycobacterium tuberculosis) that most often affects the lungs. Tuberculosis (TB) is a chronic infectious illness that is still one of the world's top infectious diseases, with substantial morbidity in low and middle-income countries (LMICs)” (Klimuk et al., 2014). Tuberculosis (TB) is an airborne disease caused by inhaling tubercle bacilli that are disseminated through coughing or sneezing from someone who has active TB.

"There were 9 million new cases in 2013 and 1.5 million deaths (1.1 million among HIV-negative people and 0.4 million among HIV positive people," according to the 2014 World Health Organization (WHO) global TB report (Zumla et al., 2015).

Zambia's first national tuberculosis prevalence survey, conducted in 2013-2014, revealed a prevalence of 455 per 100,000 people (Kapata et al., 2016). Zambia has been designated as one of the 41 countries having a high TB/HIV burden, due to the high prevalence of tuberculosis among HIV-positive people (WHO, 2015).

Tuberculosis (TB) is classified as an occupational illness, and health care workers (HCWs) are among the most vulnerable populations to contracting the disease due to its transmission mechanism in a healthcare context. The health facility serving as a source of infection for HCWs produces a deadly TB infection cycle that spreads throughout the community. Healthcare workers (HCWs) are at an increased risk of acquiring TB compared to the general population because of the face to face contact or potential exposure to TB through shared air or space with infectious patient(s), regardless of economic setting and local TB incidence. The increased risk of tuberculosis (TB) infection among healthcare workers (HCWs) is well established and widespread; encompassing not just direct providers but also a range of health personnel and auxiliary staff in healthcare settings, particularly in high TB burden countries. The prevalence of tuberculosis in healthcare workers is predicted to be 1801 per 100,000. This figure is three times greater than the national average in Zambia. "Because tuberculosis is transmitted through the air, Health Care Workers (HCW) in health institutions have an even larger risk of infection" (Sehulster and Chinn, 2003).

Preventive therapy, also known as chemoprophylaxis, with isoniazid was introduced to reduce the risk of (i) a first episode of TB occurring in people exposed to infection or with latent infection and (ii) a recurrent episode of TB. IPT was piloted in Zambia in 2013 through the Centre for Disease Control and Prevention (CDC) supported project on intensified case finding, IPT and infection control. Isoniazid Preventive Therapy (IPT) which entails use of an anti-TB Drug called Isoniazid (INH) for at least 6 months, treats latent TB infection thus preventing the development of active TB disease in high risk population such as people living with HIV, HCWs and so on (Getahun et al., 2010). IPT is a proven public health intervention to reduce TB disease in high risk individuals in real world settings.

Isoniazid (INH) preventive therapy (IPT) is recognized as an important component of TB infection control activities. IPT is also one of the 'I's in WHO's 'Three I's for HIV/TB' (the other two being Infection control for TB and Intensified TB case finding). INH therapy of latent TB infection has been shown to reduce the incidence of active TB by >60%, where adherence could be guaranteed.

Isoniazid preventive therapy (IPT) among HCWs has not been fully utilised hence very little research has been conducted around it. Most studies have been centred more on people living with HIV with limited studies on the possible benefits that HCWs could get if IPT was given the attention it deserves. Therefore, undertaking this study will help yield information on the Factors Influencing the Acceptability of Isoniazid Preventive Therapy among Healthcare Workers at Kabwata Health Centre. Every HCW should have easy access to IPT as it has proven benefits of reducing TB disease in high risk individuals.

1.1 STATEMENT OF THE PROBLEM

Healthcare workers (HCWs) play a critical role in the management and control of nosocomial transmission of tuberculosis (TB). HCWs in hospital settings such as wards, diagnostic and treatment facilities are at increased risk of acquiring TB due to occupational exposure. The risk is further heightened in high TB prevalence populations such as Zambia as HCWs are exposed both occupationally and in the community. The incidence of Tuberculosis (TB) in Health Care Workers (HCWs) can be as high as twice that in the general population. Undiagnosed TB among HCWs may result in the transmission of infection to family members, colleagues, and patients (Mwinga et al, 2017). This puts them at risk of contracting latent tuberculosis, which can lead to sickness (Casas et al., 2013, Kapata, 2014, Tudor et al., 2014). "The problem here is that HCWs are more likely to contract tuberculosis from patients with active TB, and hence could become potential sources of infection within the hospital, to their immediate families, and in the community" (Chen et al., 2010, Joshi et al., 2006).

According to findings from previous study, the incidence of tuberculosis among health-care workers is poorly reported in most countries, including Zambia. Even in high-income nations, research have indicated that the prevalence of tuberculosis among this susceptible group is two to three times higher than in the general population (Cuhadaroglu et al., 2002, Jo et al., 2008, Joshi et al., 2006, Kanjee et al., 2011, Menzies et al., 2007, Tudor et al., 2014).It's for this reason that HCWs should take Isoniazid preventive therapy (IPT) as it has been recommended globally as an effective intervention in tuberculosis prevention among healthcare workers. This study intends to explore the factors influencing the acceptability of isoniazid preventive therapy among healthcare workers at Kabwata Health Centre.

1.2 JUSTIFICATION OF THE STUDY

HCWs are at risk of contracting TB, despite the fact that they offer their skills to help cure the disease. HCWs can act as a source of infection for the general public (Chen et al., 2010). In order to meet the global "End of TB Strategy" beyond 2015, the WHO and its member nations (including Zambia) must focus on eradicating all potential sources of TB infection and developing measures to prevent active disease, which is why IPT was introduced in high-risk categories. Although the prevalence of active TB cases is not well documented, it's of the view

that the preventive therapy is highly recommended for full utilization by HCWs since IPT is a proven public health intervention.

This research aims to examine the Factors Influencing the Acceptability of Isoniazid Preventive Therapy among Healthcare Workers at Kabwata Health Centre.

Objectives:

1.3 General objective

To explore the factors influencing the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre.

1.4 Specific objectives

- To determine the influence of knowledge on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre.
- To explore the influence of the duration of IPT on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre.
- To determine the influence of IPT side effects on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre.

1.5 Research Questions

1. What is the influence of knowledge on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre?
2. What is the influence of the duration of IPT on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre?
3. What influence do side effects have on acceptability of Isoniazid Preventive among healthcare workers at Kabwata Health Centre?

CHAPTER TWO

2.0 LITERATURE REVIEW

Literature review is the process of reading, analysing, evaluating and summarizing scholarly materials about a specific topic (Fink, 2014). This chapter seeks to review the various factors that may influence the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre. These factors include influence of knowledge, duration, and IPT side effects.

Overview of TB and IPT

According to the WHO, “the global burden of Tuberculosis in 2014 was approximately 9 million new cases and 1.5 million deaths. The 22 High Burden Countries (HBCs) account for approximately 80% of the global TB burden”. TB is still the second highest cause of morbidity from infectious disease after HIV. This burden is but not limited to the general population alone, but people offering direct care such as HCWs are at increased risk of infection. The estimated annual incidence of active TB and latent TB infection was 2.4%-3.7% and 3.8%-8.4% respectively among HCWs with varying TB incidences in general population (Baussano et al, 2011).

The World Health Organisation (WHO) endorses a strategy for preventing TB among high risk groups based on administration of isoniazid for 6 months and calls for a case by case evaluation and further operational research regarding the provision of IPT among HCWs (WHO, 2009). The routine provision of IPT to HCWs, requires that adequate systems are in place to establish HCWs’ HIV status, rule out active TB disease and monitor latent TB infection (LTBI). Some evidence suggests that the introduction of IPT has reduced relative lifetime risk for active TB for HCWs (Raj et al, 2011).

Tuberculosis continues to be among the major Public Health problems in the Country, partly as a consequence of HIV. The National Health Policy for Zambia seeks to respond to this problem and has since adopted the Stop TB strategy for the control of tuberculosis. During the course of the policy, the focus of the National TB and Leprosy Programme is mainly directed towards strengthening and scaling up of the already proven interventions and any other evidence-based emerging interventions and approaches recommended by WHO.

To further accelerate implementation of the 2030 Agenda for Sustainable Development, Zambia acknowledges the need to translate the ambitions into tangible outcomes by integrating the sustainable development goals (SDGs) into the national visions and plans. SDG number 3 which states “good health and well-being: ensure healthy lives and promote well-being for all at all ages” is important to the health fraternity. Zambia recognises that good health is an important determinant of socio-economic development and therefore interventions such as strengthening public health programmes are important in reducing the number of deaths associated with TB.

Knowledge factors

In comparison to the general population, HCWs had a greater rate of active TB and a higher risk of TB (Menziés et al). (2007). The Centers for Disease Control and Prevention (CDC) has released guidelines for avoiding the spread of mycobacterium tuberculosis in healthcare settings, include TB screening programs for all healthcare workers and treatment when latent tuberculosis infection (LTBI) is detected (CDC, 1994)

One of the most significant obstacles to initiating and maintaining IPT is the general public notion that ‘no symptoms’ indicated ‘no need for treatment’ (Murimi, 2010). Many people are hesitant to go for IPT initiation because they are healthy and symptom-free (Black et al.2018). HCWs cannot be ruled out from this misconception on IPT. This is demonstrated in a study conducted by Kagujje et al, (2019) highlights that the fears and misconceptions among health workers in other regions of the world have been documented in Zambia. Because IPT is linked with social stigma associated with TB infection and as such it can contribute to poor drug adherence. IPT hurdles in IPT implementation in South Africa and Ethiopia has been noted as a general lack of understanding and expertise to IPT implementation (Teklay et al, 2016)

Information about the benefits and effects of IPT has not been widely reported and information lacking can be one of the contributing factors influencing acceptability of IPT among health care workers. Improved education around IPT for HCWs particularly concerning the benefit and duration of therapy is required to enhance knowledge. A Kenyan study for instance, revealed that both clinical and non-clinical providers indicated that there was need for them to be empowered on the administration of IPT through additional information and training as these were lacking and thereby limited their ability to deliver the intervention.

Duration of IPT

Studies have been conducted on the impact of duration of INZ on IPT. A study by Wambiya (2018) on acceptability of IPT among HCWs in selected HIV clinics in Nairobi, Kenya Found that healthcare providers largely expressed dissatisfaction with the long duration of IPT regimen and pill- burden and unpleasant effects reported by patients, were shown to be major sources dissatisfaction among healthcare practitioners to providers. Unfortunately, in Zambia there is no data on the impact of duration on acceptability of IPT. This is the reason why it is critical to analyse the factors that influence HCWs acceptance of IPT.

Influence of IPT side effects

Adverse effects of isoniazid are obstacles to completing isoniazid therapy (loBue, 2003). This is demonstrated in a prospective cohort study conducted by Denholm et al (2011) that highlights a variety of somatic adverse effects that occurred in a real world cohort of patients receiving IPT. Majority experienced low grade and transient effects. Variable (and frequently low) treatment completion rates have been reported in other cohorts receiving IPT, leading to concerns about effectiveness of treatment as a preventive strategy (Hirsch-Moverman et al, 2008). A Cochrane systematic review conducted in 2010 found adverse events leading to discontinuation of treatment to be common when multiple drug combination therapy are used compared to isoniazid alone. Unfortunately, in Zambia there is no data indicating the influence of side effects on acceptability of IPT. This is the reason why it is important that factors influencing the acceptability of IPT among HCWs should be assessed.

2.1 THEORETICAL FRAMEWORK

Health Belief Model (HBM)

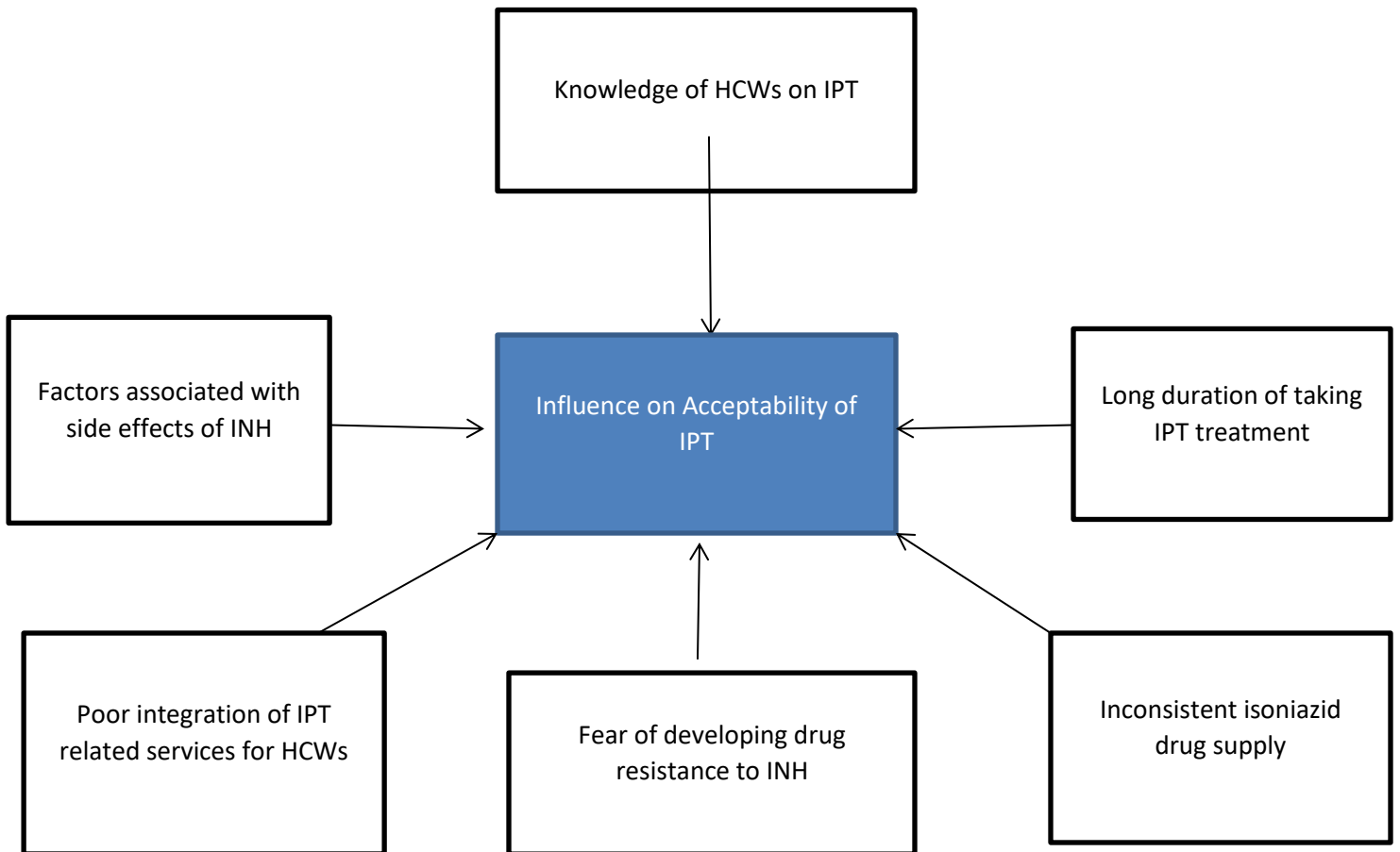
The Health Belief Model (HBM) was developed in 1950's by social psychologists Hochbaum, Rosenstock and others who were working in the U.S Public Health Service to explain the failure of people participating in programs to prevent and detect disease. The HBM suggests that a person's belief in a personal threat of an illness or disease together with a person's belief in the effectiveness of the recommended health behaviour or action will predict the likelihood the person will adopt the behaviour. Ultimately, an individual's course of action often depends on the person's perceptions of the benefits and barriers related to behaviour. For instance if HCWs

perceive TB to be a fatal disease, they are likely to adopt behaviours that are going to prevent the disease.

This theory will help in showing how an individual's perception on benefits and barriers related to behaviour play a role in influencing the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre.

2.2 CONCEPTUAL FRAMEWORK

Problem Analysis Diagram



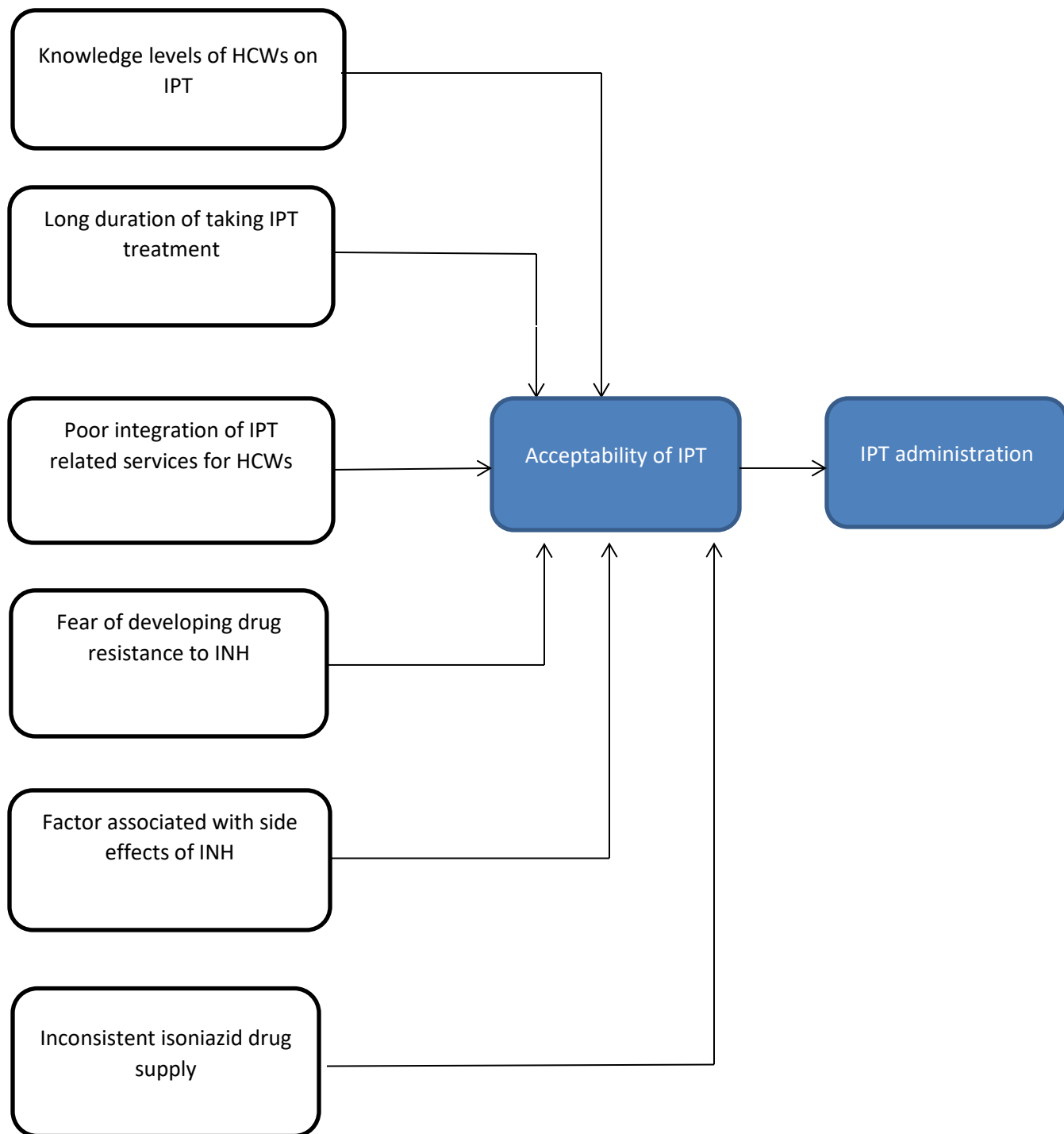


Figure 2.2 Refined conceptual framework for factors influencing acceptability of IPT among healthcare workers at Kabwata health centre.

Source; Adapted from Chaudoir et al. Year; 2013

CHAPTER THREE

3.0 METHODOLOGY

This section details the various methods used to finish the research project. These methods comprised of; study approach, study design, study population, sample size/sampling procedure, data collection, data analysis, ethical considerations.

3.1 STUDY APPROACH

This study adopted a qualitative study approach. This was chosen because it gave the researcher a unique depth of understanding of the research study and the factors being explored mainly due to respondent's ability to express their thoughts and feelings in their own words without limitation.

3.2 STUDY DESIGN

The study adopted a cross sectional design. The researcher chose this study design because it occurs at a single point in time and is frequently used to examine the prevalent features in a specific inhabitant, among others (Cherry 2019). It is a qualitative method which used the descriptive and explanatory design. This is so that the researcher could go in depth in explaining and understanding the factors that were being explored.

3.3 STUDY POPULATION/TARGET POPULATION

The study will be conducted at Kabwata health Centre in Lusaka.

Inclusion and Exclusion criteria for study participants

The inclusion and exclusion criterion for the study participants that was considered is shown below;

Inclusion criterion	Exclusion criterion
Healthcare workers working in Out Patient Department(OPD), ART clinic and Chest clinic.	Healthcare workers working in MCH(Maternal and Child Health) and those in administrative positions because they have

	minimal exposure to TB
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3.4 SAMPLE SIZE DETERMINATION

Sample size was determined by *theoretical data saturation*. This is a term in qualitative research that entails that a researcher will reach a point in the analysis of data will not lead to more information related questions Seale C. (1999). The researcher saw in the data similar instances over and over again that gives confidence that the categories were saturated.

3.4 SAMPLE SIZE, SAMPLING PROCEDURE

In qualitative research, sample size determination usually necessitates a small sample size. Saturation is achieved in qualitative research when the researcher adds more participants to the study but receives no more information or perspective. As a result, this study followed Morse's sample size suggestion for ethnography, which is where this study falls. In its most basic form, ethnography is the study of people in their own surroundings using techniques like participant observation and face-to-face interviewing. When conducting a study, for example, Morse (1994) recommended 30–50 participants. He claims that using in-depth interview instructions, the smallest sample size is required to achieve saturation and redundancy. As a result, the study sample size was set at 30 participants as this would permit for comprehensive scrutiny of the characteristics that were going to address the research questions and maximize the probability that sufficient data was collected.

SAMPLING PROCEDURE

Convenience sampling method was used in the selection of the study site for logistic reasons. The simple random sampling was used to select the participants because it gave each healthcare worker an equal opportunity of being selected thereby avoiding biasness. The population from which the sample was selected comprised of clinical officers, Nurses and treatment supporters from chest clinic at Kabwata Health Centre. The researcher randomly chose 30 from staff register and then administered questionnaires to them.

3.6 DATA COLLECTION METHODS

Data was gathered using interview guides in the field in order for the study to acquire particular and detailed information from the respondents' narrations, suggestions, opinions, views and remarks

A questionnaire was used to acquire primary information. This allowed for the collection of more particular and thorough data, allowing for easier comparison of different participants viewpoints. Questionnaire was used when collecting information from clinical officers, nurses and lab technicians at Kabwata health centre.

3.7 DATA ANALYSIS

Data was mostly evaluated qualitatively. All data was reviewed for uniformity, consistency and completeness once it was collected from the field.

The distributed questionnaires were used to collect qualitative data. Thematic analysis were used to manually analyse the data. Thematic analysis is a method for analysing qualitative data that entails searching across a set to identify, analyse, and report repeated patterns (Braun & Clarke, 2006).

3.9 ETHICAL CONSIDERATIONS

The following ethical issues were considered in the research. The researcher received an official letter from the University of Lusaka defining the study's duration, scope, and purpose, as well as formal ethics and research committee approval to conduct research. Participants were also given consent forms that explained the study's purpose and stated that the researcher would respect their wishes if they wished to withdraw from the interviews; if they had any concerns about the research, the researcher was able to address them and fully explain the study's benefits. This study's participation is completely voluntary. Participants' identities and responses were kept completely private. Participants' and responses' confidentiality was also protected by using questionnaire numbers rather than names, as well as privacy and respect for dignity.

CHAPTER FOUR

4.0. INTRODUCTION

4.1 Overview

This chapter presents the results from the qualitative research; it is divided into two sections. The first section presents background information of the respondents while the second part is a layout of the research findings in relation to the study objectives.

Table 4.1

Q1. GENDER				
	Frequency	Percent	Valid Percent	Cumulative Percent
Male	14	46.7	46.7	46.7
Female	16	53.3	53.3	100.0
Total	30	100.0	100.0	
Q2. AGE				
20-25	8	26.7	26.7	26.7
26-30	13	43.3	43.3	70.0
31-35	1	3.3	3.3	73.3
36-40	4	13.3	13.3	86.7
40 and above	4	13.3	13.3	100.0
Total	30	100.0	100.0	
Q3. Occupation				

Clinical Officer	20	66.7	66.7	66.7
Nurse	6	20.0	20.0	86.7
Treatment Supporter	4	13.3	13.3	100.0
Total	30	100.0	100.0	
Q4. Length of Service				
1 year and below	2	6.7	6.7	6.7
2-10 years	25	83.3	83.3	90.0
11-20years	3	10.0	10.0	100.0
Total	30	100.0	100.0	

Thirty health care providers from the Kabwata Health Centre participated in the interviews. Their demographic characteristics are presented in Table 4.1. 43% were aged between (26 - 30) years. The sample comprised of twenty clinical officers, six nurses, and four Treatment supporters. A majority of the participants (83.3%) had between 2 to 10years experience in providing health care. After thematic analysis of the qualitative data, three broad themes were elucidated. These included: The influence of knowledge on the acceptability of isoniazid preventive therapy, the influence of the duration of IPT on the acceptability of isoniazid preventive therapy, and the influence of IPT side effects on the acceptability of isoniazid preventive therapy among healthcare workers.

The influence of knowledge on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre

The participants defined IPT as:

a measure that reduces the risk of the first episode of its occurring in people exposed to infections or with latent infections and recurrent episode of TB.

others defined it as:

the prophylactic treatment given to persons in order to prevent them from contracting TB,

the least group of HW defined IPT as:

a Drug that Prevents TB.

Health care providers reported that they came to know about IPT through working at Clinics and/or Hospital, however, the least group learnt about IPT through interaction with work mates, attending IPT workshops and staff orientation programs.

The participants also indicated that Children who are less than 5years old and persons living with HIV infection as well as household in contact with TB patients were more eligible for IPT. However, others Health workers reported that Patients who are HIV positive and anyone exposed to TB were eligible for IPT. The current research also revealed that Isoniazid Preventive Therapy guidelines and standard operating procedures included among others, conducting an examination for active TB through X-Ray Screening prior to putting patients on IPT. Another category of respondents highlighted that counselling parents, monitoring side effects, aligning with INH was very cardinal. Adults INH 5mg/kg/day maximum 300mg/day were among the Isoniazid Preventive Therapy guidelines and standard operating procedures.

Health workers were asked to mention at least two benefits of taking Isoniazid Preventive Therapy, in response the majority of respondents highlighted that IPT prevents TB contraction and the progression of latent TB to active TB in humans. Other participants reported to the same that IPT treats active TB and stops the growth of bacteria.

Participants were questioned what some of the contraindications of IPT were. In response, the majority reported that contraindication of IPT included suspected or confirmed active TB, Active hepatitis and known or suspected hypersensitivity to Isoniazid. Another group reported that immune compromised people and those on ART including pregnant women were some of the contraindications of IPT.

Table 4.2 shows that of the 30 respondents interviewed, all had had knowledge about IPT and that it did not influence acceptability.

Healthcare workers	Influence of knowledge on acceptability(frequency)	Lack of knowledge had no influence on acceptability(frequency)
Clinical officers	20	0
Nurses	6	0
Treatment supporters	4	0
Total	30	0

5.4.4 The influence of the duration of IPT on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre

Participants reported that the recommended IPT dose was 300mg per day for adults and 10 mg per day for children taken for a period of Six months in both instances. However, others health care workers indicated that in children, the dose depended on their weight. 90% of the HCWs interviewed reported that IPT duration influenced their acceptability of the treatment pointing out that the treatment duration was too long to endure through.

Healthcare workers	Influence of duration of IPT on acceptability(frequency)	Duration of IPT had no influence on acceptability(frequency)
Clinical officers	18	2
Nurses	6	0
Treatment supporters	3	1
Total	27(90%)	3(10%)

5.2.5 The influence of IPT side effects on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre

Participants highlighted the following as side effects; peripheral neuropathy, vomiting, yellow eyes and skin. Additionally, respondents listed confusion, disorientation, hallucination and arthritis as some of the side effects. The other category outlined rash, abdominal pains and numbness as part of the side effects of IPT. Furthermore, HCWs at Kabwata Health Centre indicated that most Health workers refuse IPT because they fear the side effects. Another category reported that side effects negatively influence acceptability because they entail absenteeism from work. Some HCWs highlighted fear of organ damage secondary to INZ administration as notably seen in those that presented with jaundice and liver complications.

The majority of HCW interviewed reported that when side effects are severe to an extent of developing peripheral neuropathy and severe liver problem the treatment could be discontinued. The other category reported that IPT can be discontinued when the client has been diagnosed with active TB. Moreover, Health care workers reported that the general clinical examinations required before IPT included Chest X-Ray, Sputum, FBC, LFT and KFTs. Others reported that screening for TB symptoms done in the screening room and Testing for HIV were other general clinical examinations required before IPT.

The researcher asked HW what influence integration of Isoniazid Preventive Therapy related services had on acceptability of IPT among healthcare workers, the majority of respondents reported that it had no influence on acceptability. However, another group reported that the lack of privacy in the administration of the treatment negatively influenced the acceptability of IPT among HWs. Additionally respondents reported that they had never taken Isoniazid Preventive Therapy before.

What influence do side effects have on acceptability of Isoniazid Preventive among healthcare workers?		
RESPONSE	FREQUENCY	PERCENTAGE %
DRUG REJECTION	29	96.67
DRUG ACCEPTANCE	0	0.00
LOW ACCEPTANCE	1	3.33
TOTAL	30	100.00

CHAPTER FIVE

5.0 DISCUSSION OF FINDINGS

5.1 Overview

The previous chapter presented the findings factors influencing the acceptability of isoniazid preventive therapy among healthcare workers at Kabwata health centre. This chapter therefore, proceeds with discussion of the key findings earlier presented.

5.1.1 The influence of knowledge on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre

The study revealed that the majority of Health workers had excellent knowledge regarding IPT, 30 health workers correctly defined:

IPT as a measure that reduces the risk of the first episode of its occurring in people exposed to infections or with latent infections and recurrent episode of TB.

Others defined it as:

the prophylactic treatment given to persons in order to prevent them from contracting TB, and barely as a Drug that Prevents TB.

This is similar to a definition by (Abdulrazaak, et al., 2018) who defined IPT as “the administration of isoniazid (INH) to individuals with latent TB infection in order to prevent progression to active TB disease”.

The high score in our study is most likely due to the formal training, good orientation they received on TB/HIV and IPT. These findings are supported by a study conducted in Brazil, which reported that IPT training resulted in significantly increased knowledge of and prescription of IPT (Durovni, et al., 2010). However, these findings are in contrast with a large study conducted in Ethiopia, which indicated that efficient IPT implementation in that country was hindered by the healthcare providers’ poor knowledge of IPT.

The study revealed that apart from healthcare workers who were exposed to occupational tuberculosis, children who are less than 5years old and persons living with HIV infection as well

as household in contact with TB patients were more eligible for IPT. Similar to these finding, the handbook for national tuberculosis Control Programmes revealed that the main groups for preventive therapy under programmatic conditions are those at most risk of progressing to TB disease. PLHIV, infants and children who are contacts of TB patients and recent TST converts are among those at risk of getting active TB in the first few years (WHO, 2008).

5.1.2 The influence of the duration of IPT on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre

The study revealed that more than 90% of the HW interviewed reported that IPT duration influenced their acceptability of the treatment pointing out that the treatment duration was too long to endure through. Similarly, (Boon, et al., 2021) revealed in their study that the long duration and limited tolerability of isoniazid-based treatment regimens substantially reduced the acceptability and compliance to treatment, adding to this, another study outlined that directly observed preventive therapy and a shorter duration regimen for preventive therapy were both found to improve treatment completion rates (Golub, et al., 2009). On the contrary a study by (Wambiya, et al., 2018) revealed that the acceptability of IPT was influenced by factors related to the organisational context, provider training on IPT and their perception of its efficacy, length and clarity of IPT guidelines and standard operating procedures, as well as structural factors (policy, physical, and work environment), and never mentioned treatment length in their discussion.

5.1.3 The influence of IPT side effects on the acceptability of isoniazid preventive therapy among healthcare providers at Kabwata Health Centre

A study by (Wambiya, et al., 2018) revealed that non-adherence was attributed to patients' fear of side effects and pill burden Both clinical and non-clinical providers agreed on these points. Some patients stopped using the therapy as a result of reported side effects, according to providers. This leads support for the current research's finding in which the majority of participants indicated that most HW refuse Isoniazid as they are afraid of the side effects. Similarly, (Shayo & Moshiro, 2015) conducted a study which revealed that 6 cases that did not complete 6 months of IPT due to side effects stopped using IPT on their own against physicians' advice. The study also revealed that the side effects were mild rash in 4 patients, burning sensation of limbs in 1

patient and numbness of the feet. Furthermore, (Denholm, et al., 2014) reported that eighty-five patients had completed therapy locally, with 10 patients discontinuing IPT due to side effects, according to their cohort analysis. Finally, in their study,(Abdulalim, et al., 2017) in their study found that Abdominal side effects, ambiguous information from health care professionals, not using memory aids for dose schedule and perceived lack of confidentiality were among the factors that linked to poor IPT adherence.

5.2 CONCLUSION

Isoniazid preventive therapy is effective and reduces the occurrence of tuberculosis infection in HIV-infected individuals significantly. However, its use in the prevention of tuberculosis among HCWs in this health facility is extremely poor. An adequate supply of isoniazid, as well as increased awareness among health care providers who are occupationally exposed to tuberculosis, will improve IPT uptake. As well as creating awareness and policies supporting IPT administration to the first line health workers. Effective and on-going adherence counselling for eligible clients, will aid in lowering the rate of IPT defaulters.

LIMITATIONS OF THE STUDY

Some limitations encountered during the study were;

- Some of the staff members were not willing to participate in the study due to stigma associated with tuberculosis.
- Due to the polio campaign during data collection, most staff members were working out of station and that made it difficult to capture a lot of respondents.
- Additionally, the study was only carried out at Kabwata Health Centre and the findings cannot be generalized for other parts of health facilities.
- Some HCWs however knowing about IPT, they did not know that they are supposed to take IPT.

5.3 RECOMMENDATIONS

In the study clinic, we offer a number of measures that might be tested in other similar settings to improve healthcare provider acceptability.

- Ministry of Health should ensure that isoniazid tablets are more widely available and accessible for all health care providers.
- Effective adherence counselling for eligible Health care workers prior to the start of IPT at facility level will help to lower the rate of IPT defaulters.
- Ministry of Health in conjunction with other stakeholders should conduct further studies on IPT implementation among Health workers. The benefits are known, however information on how often one needs to take INZ as prophylaxis is still not well documented.
- Ministry of Health should make IPT in healthcare workers a more important aspect of TB/HIV planning, reporting, monitoring, and evaluation in secondary and tertiary hospitals.
- Ministry of Health must involve healthcare providers in the formulation and modification of IPT guidelines as this will not only enhance skills, but also increase sense of ownership of the program as hands on team thus increase acceptability of the regimen.
- Ministry of health must ensure that at facility level, they must be better integration of all IPT-related services as this may aid acceptability, initiation, retention, and follow-up.
- Finally, to increase IPT acceptability and delivery, Ministry of Health must ensure to conduct regular trainings and on-going mentorship (capacity building) for both clinical and non-clinical practitioners on implementation and its benefits.

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APPENDIX 1

1. Budget and Timeframe

Budget

Requirements	Amount
Transport money	K100
Meals	K150
Stationary	K100
Printing and photocopying of consent forms and questionnaires	K300
Printing, binding and laminating final research document	K375
Incidentals	K400
Total	1425

The proposed duration of time that the researcher will take to collect data, analyze and generate the final research report is illustrated in the Gantt chart below.

	Activity	Responsible person	Aug 2021	Aug-Nov 2021	Jan 2022	Feb – April 2022	Jun 2022
1	Research Topic Submission	Researcher					
2	Research Proposal writing and Submission	Researcher					
3	Pre testing of the survey Instrument testing	Researcher					
4	Data collection	Researcher					
5	Data entry and cleaning	Researcher					
6	Data analysis	Researcher					
7	Report writing	Researcher					
8	Submission of dissertation	Researcher					

APPENDIX 2: INFORMED CONSENT FORM

Topic: Factors influencing the Acceptability of Isoniazid Preventive Therapy among healthcare workers at Kabwata Health Centre

Dear Participant,

My name is Memory Abigail Miyanda, and I am a University of Lusaka undergraduate student. You were purposefully chosen to participate in this study by filling out questions. Your participation is entirely voluntary, and you may withdraw at any moment. Even if you choose to participate in this study, you have the choice to refuse to answer any questions that make you uncomfortable.

Purpose of the study

The purpose of this study is to look at the elements that influence healthcare personnel' acceptance of Isoniazid Preventive Therapy at Kabwata Health Centre. This is necessary so that the researcher may provide recommendations that are based on the findings.

Procedures

You will be informed about the study and given information on how to complete the questions. If you opt to participate in the study, you will be asked to sign an informed consent form by the researcher. Your name will not be recorded anywhere, and the information you provide will be kept in strict confidence.

Possible benefit to participants

The study will not provide you with immediate benefits, but it will provide you the opportunity to express yourself on what you believe are the variables impacting the acceptability of Isoniazid Preventive Therapy among Kabwata Health Centre healthcare staff. Your input to this study will yield results that will be utilised to improve advocacy for the delivery of Isoniazid Preventive Therapy in health workers. This will assist key authorities and stakeholders in developing good policies for the country, resulting in improved health outcomes for Zambian health workers.

Risks and/ or discomforts

If certain questions make you uncomfortable, feel free to refuse to answer and be assured that you are not in danger as a participant.

Reasons to withdraw from the project

Because participation in this study is optional, you can withdraw at any time.

Costs to you

No financial or material costs will be incurred in this study.

Confidentiality

The information gathered during the interviews will be kept in strict confidence. If you have agreed to participate in this study, please submit initials or a thumbprint where requested. If you have any questions about this study, please contact University of Lusaka at Plot No 37413, off Alick Nkhata Road, Mass Media P.O Box 36711, Lusaka, Zambia. If you have any questions, please contact Mrs. M. Phiri, the research coordinator at the University of Lusaka.

I.....having fully understood the nature of this study, I agree to participate.

Participant’s Signature or Thumbprint

Date

Researcher’s signature

Date

APPENDIX 3

STUDY TITLE: FACTORS INFLUENCING THE ACCEPTABILITY OF ISONIAZID PREVENTIVE THERAPY AMONG HEALTHCARE WORKERS AT KABWATA HEALTH CENTRE

QUESTIONNAIRE NUMBER.....

DATE OF ADMINISTRATION.....PLACE/LOCATION.....

INSTRUCTIONS TO RESPONDANTS

1. Do not write your name on the questionnaire.
2. Write the responses in the spaces provided.
3. Answer all questions.
4. Write all responses honestly and clearly.

Section A

1. Sex of respondent. Indicate male or female
.....
2. What is your current age from your last birthday (in years)
.....
3. What is your occupation at Kabwata Health Centre?
.....
4. How long have you been serving in the same capacity?
.....
5. Have you ever suffered from tuberculosis? If yes, how long ago?
.....
6. Do you have any long term illness? Tick where appropriate
 - a) Diabetes
 - b) Hypertension
 - c) Other.....

Section B

1. What do you understand about Isoniazid Preventive Therapy?

.....
.....
2. How did you get to know about Isoniazid Preventive Therapy?

.....
3. Whom do you think is eligible for Isoniazid Preventive Therapy?

.....
.....
4. What are the Isoniazid Preventive Therapy guidelines and standard operating procedures?

.....
5. Mention at least 2 benefits of taking Isoniazid Preventive Therapy?

.....
6. What are some of the contraindications of Isoniazid Preventive Therapy? Mention at least three(3)

.....
7. What is the recommended daily dose for Isoniazid Preventive Therapy?

.....
8. What is the recommended duration of Isoniazid Preventive Therapy?

.....
9. In your own words, do you think that the duration of Isoniazid Preventive Therapy have an influence on acceptability among healthcare workers? Elaborate your answer

.....
10. List at least 2 side effects of Isoniazid Preventive Therapy

11. What influence do side effects have on acceptability of Isoniazid Preventive among healthcare workers?

.....
.....

12. When do you think Isoniazid Preventive Therapy can be discontinued?

.....
.....

13. What are the general clinical examinations required before Isoniazid Preventive Therapy initiation? Where are these examinations conducted?

.....
.....

14. What influence has integration of Isoniazid Preventive Therapy related services have on acceptability of IPT among healthcare workers?

.....
.....

15. Is isoniazid consistently supplied at the health centre? If no, how do you think this affects acceptability of Isoniazid Preventive Therapy among healthcare workers?

.....
.....

16. Seeing that you are exposed to occupational tuberculosis, have you ever taken Isoniazid Preventive Therapy before?

.....

17. In your own words, what are some of the fears that you might have towards acceptability of Isoniazid Preventive Therapy?

.....
.....

18. What suggestions would you make to address the factors influencing acceptability of Isoniazid Preventive Therapy among health workers?

.....
.....
.....

I am very grateful for your participation.....

Address All correspondence to the
Medical Officer in Charge and not to individuals
P.O. Box 50827 Lusaka
Telephone : +260 924044519, +260 776767523



In reply please quote.....

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
Chilenje General Hospital

7th March 2022.

Ms Memory Miyanda
Lusaka, Zambia.

Dear Memory,

RE: RESEARCH APPROVAL FROM KABWATA HEALTH CENTRE

Reference is made to the above subject.

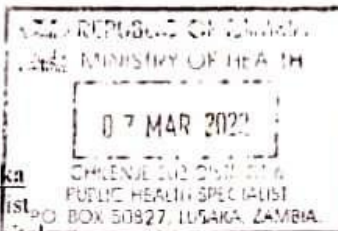
I wish to inform you management at Chilenje General Hospital has approved you to do a research entitled, **Factors Influencing The Acceptability of Isoniazid Prevention Therapy Among Health Care Workers at Kabwata Health Centre**. My office is glad to inform you that we have no objection to your request provided that:

1. The ward in-charges and the nursing officer are fully appraised
2. You provide us with progress updates
3. The final study is shared with hospital management
4. Ensure that there is minimum disruption in health service delivery as you carry out your research study.

I wish you well.

Yours Faithfully

Dr. Miyanda Simwaka
Public Health Specialist
Chilenje General Hospital





**SCHOOL OF MEDICINE AND HEALTH SCIENCES
LEOPARDS HILL CAMPUS**

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**SCHOOL OF MEDICINE AND HEALTH SCIENCES
RESEARCH ETHICS COMMITTEE**

Ref no: IORG0010092-2022/038

Date: 17th January, 2022

MEMORY ABIGAIL MIYANDA – BSPH18212782

**Re: Research Title; FACTORS INFLUENCING THE
ACCEPTABILITY OF ISONIAZID PREVENTIVE THERAPY
AMONG HEALTHCARE WORKERS AT KABWATA HEALTH
CENTRE**

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.



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E-mail: unilusa@zamnet.zm, letara@zamnet.zm

Date: 17th January, 2022

.....
.....
.....
**PERMISSION FOR MEMORY ABIGAIL MIYANDA No. BSPH18212782 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 **Memory Abigail Miyanda** a Public Health Student to conduct research at your facility/ institution/ organization, entitled; **FACTORS INFLUENCING THE ACCEPTABILITY OF ISONIAZID PREVENTIVE THERAPY AMONG HEALTHCARE WORKERS AT KABWATA HEALTH CENTRE.**

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 **1st February, 2022 to 29th April, 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.