



COLLEGE OF MEDICINE

**Exploring Barriers to Cervical Cancer Screening among Women
Living with HIV (WLHIV) attending an ART clinic at Nkhoma
Hospital, Malawi**

By

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(Bachelor of Science in Community Health)

**A Dissertation Submitted in Partial Fulfilment of the Requirements of Master of Public
Health Degree**

10th November 2020

DECLARATION

I, Beatrice Phakira Kabota, hereby declare that this dissertation is my original work and has not been presented for any other awards or other purposes to the University of Malawi or any other university for academic purposes. All references are properly acknowledged.

Signature:



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10th November 2020

CERTIFICATION OF APPROVAL

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A handwritten signature in cursive script, appearing to read "Christine Campbell", with a horizontal line underneath it.

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DEDICATION

I dedicate my dissertation work to my family and many friends. A special feeling of gratitude to my loving parents, Alton and Elizabeth Pakira who have always loved me unconditionally and whose good examples have taught me to work hard for the things that I aspire to achieve.

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May the Almighty God bless you all in a special way.

ABSTRACT

Women living with HIV (WLHIV) are at higher risk of developing cervical cancer than those who are HIV negative. In order to increase access to services, international policy recommendations include the integration of cervical cancer screening into HIV care: a pilot study carried out in Malawi reported high uptake of cervical cancer screening after integration with HIV care in Malawi. However, evidence has shown that despite attempts at integration, there is still underutilization of cervical cancer screening services among WLHIV in clinics across Malawi. Hence this study that aimed to explore the barriers to cervical cancer screening among WLHIV attending the Anti-Retroviral Treatment (ART) clinic at Nkhoma Hospital, Malawi. A qualitative study design, was carried out at Nkhoma Hospital ART clinic. Seventeen in-depth interviews were conducted among WLHIV who had never accessed cervical cancer screening services. Data was analyzed using thematic analysis method. Eight (8) themes emerged from the study. These include: (i) poor communication approaches, (ii) lack of knowledge of where to access screening services, (iii) fear emanating from negative experiences shared by peers, and fear of a cancer diagnosis itself), (iv) feeling of embarrassment over exposure of private body parts, (v) myths and misconceptions (vi), low perceived vulnerability, (vii) long travelling distances and (viii) long waiting times. These findings confirm the need to improve delivery of cervical cancer screening for WLHIV at Nkhoma Hospital. They highlight the need for client-centered counseling and support to overcome fears and misconceptions, and designing health promotion messages that may directly address the concerns of WLHIV.

Key words: *Women living with HIV, Cervical cancer screening, Barriers, Nkhoma Hospital*

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ABBREVIATIONS AND ACRONYMS

AIDS:	Acquired Immunodeficiency Syndrome
ART:	Antiretroviral Treatment
CCAP:	Church of Central African Presbyterian
CECAP:	Cervical Cancer Control Program
COMREC:	College of Medicine Research and Ethics Committee
HBM:	Health Belief Model
HIV:	Human Immunodeficiency Virus
HPV:	Human Papilloma Virus
HSA:	Health Surveillance Assistant
VIA:	Visual Inspection with Acetic Acid
STI:	Sexually Transmitted Infections
WLHIV:	Women Living with Human Immunodeficiency Virus

CHAPTER ONE: INTRODUCTION AND OBJECTIVES OF THE STUDY

1.1 Introduction

This chapter introduces the context of this research study and gives an overview of the local and global perspective of cervical cancer screening utilization among women living with HIV (WLHIV). It further describes the rationale of the study, the literature review, and the main objective together with the specific objectives.

1.2 Background

Cervical cancer is one of the most common cancers among women worldwide. According to global cancer epidemiological statistics, this cancer is the fourth most diagnosed among women in the world and the fourth leading cancer that contribute to the mortality rate [1]. It is caused by different types of Human Papilloma Viruses (HPV) whereby types 16 and 18 are believed to cause 70% of all cervical cancer cases [2,3].

1.2.1 Cervical Cancer Burden

In 2018, approximately 570,000 cases and 311,000 deaths of cervical cancer were estimated to have occurred worldwide [4]. With this rate, It was projected that by 2030, the global burden of cervical cancer is expected to increase to nearly 700,000 cases and 400,000 deaths representing a 21% and 27% increase in the number of cases and deaths, respectively [4]. In 2020, it was reported that an estimated 604,127 new cases were diagnosed and 341,831 women died from cervical cancer globally [3]. The 2020 statistics are already closer to the 2030 projected figures which is very worrisome. Most of these cases are diagnosed in lower and middle income Africa

and Asia countries [4]. In Malawi, 4145 new cervical cancer cases were diagnosed while 2905 deaths were registered in 2020 [5]. Nkhoma Hospital in Malawi registered 87 cervical cancer cases between 2018 and 2019. Out of these, 29% (n=25) were WLHIV. 46% (n=40) of the registered cases died with WLHIV accounting for 45% (n=18). According to IARC GLOBOCAN figures cited in [6–8], Malawi has the highest age standardized incidence rate (75.9/100,000 women) of cervical cancer in the world, with the risk of one out of 14 Malawian women developing cervical cancer in her life time as reported in 2019-2029 Malawi national cancer control strategic plan [3]. However, this projected cancer burden might be underestimated due to inadequate cancer diagnostic services and underreporting of clinically diagnosed cases given that only 18% of all reported cancers were histopathologically confirmed [3]. Many factors that lead to underestimation of cervical cancer burden in Malawi and many poor countries include: inadequate screening programs, poor community and healthcare worker cancer awareness, plus shortage of trained professionals, treatment facilities and equipment [2,3,9,10]. In addition, delays in seeking health care, often attributed to patient/community and healthcare determined delays have been reported. There is also documented evidence that people start seeking care from traditional healers [11]. All these factors contribute to late presentation and diagnosis of advanced cervical cancer, consistent with the findings of a study done at Queen Elizabeth Central Hospital in Malawi where women delayed by 23.1 weeks between the onset of symptoms and being seen by a clinician [6].

1.2.2 HIV and Cervical Cancer

Malawi has one of high prevalence rates of HIV among women of reproductive age in the world at 11.7% [12]. Women living with HIV (WLHIV) are at 6 - 8 times higher risk of developing

cervical cancer [13] than those who are HIV negative due to their compromised immunity [14]. Cervical cancer is an AIDS defining illness in WLHIV [13]. The relationship between HIV and cervical cancer is complex, due to an increased risk of pre-invasive cervical lesions among WLHIV [15]. WLHIV especially those with more advanced immunosuppression (CD4 count <200 cells/uL) seem to be particularly vulnerable to infection with Human Papilloma Virus (HPV), the pre-requisite to developing cervical cancer [16,17]. This means that once they have been infected with HPV, WLHIV are more likely to develop pre-invasive lesions that can, if left untreated, quickly progress to advanced incurable cervical cancer [11,18]. With access to screening and treatment, rates of cervical cancer have steadily declined in many high-income countries unlike in poorest regions which are worst affected by HIV [18]. The World Health Organization (WHO) recommends screening and providing adequate treatment to all women living with HIV as soon as they know their status and if they have started sexual relations [18].

1.2.3 Cervical Cancer Screening and Treatment Services

Cervical cancer screening and availability of treatment for pre-cancerous lesions are the recommended ways of preventing women from developing advanced cervical cancer disease [3,11]. Cervical cancer screening is defined as “identification of asymptomatic disease in apparently healthy target population by means of tests (e.g. HPV testing), and examinations (e.g. visual inspection of cervix with acetic acid (VIA), that can be applied rapidly and accessed widely by clients” [3]. With rising cervical cancer cases globally, regionally and locally; screening, early treatment of precancerous lesions and HPV vaccination are the main strategies aimed to eliminate this cancer by 2030. However, these services are not available to many at risk groups. For instance, HPV vaccine only targets age groups of between 11 and 15 years leaving

aside other at risk groups such as WLHIV [8]. Treatment of precancerous lesions with surgery and radiotherapy are difficult to access in poor countries including Malawi. The experience in central hospitals in Malawi is that a lot of women could be booked for surgery but they wait long time due to long list of waiting patients. This leads to progression to advanced incurable cancer lesions needing radiotherapy or chemotherapy treatments which are not readily available to all. Hence, screening and early treatment of precancerous lesions remain the best options in poor countries. However, cervical cancer screening has been facing a lot of challenges such as inadequate human and material resources, long distance to access the services, as well as personal factors like low perceived vulnerability just to mention few [2]. Semi-annual screening of cervical cancer neoplasia in sexually active WLHIV is recommended during the first year following a diagnosis of HIV, or if levels of CD4+ T lymphocytes are less than 200 cells [19]. The Malawi national HIV guidelines recommend that all WLHIV receive VIA annually [2]. In order to ease access to cervical screening for WLHIV, cervical cancer screening services were integrated into HIV care globally and in Malawi [13]. A pilot study conducted in 2014 by the Lighthouse, Malawi reported high utilization of cervical cancer screening services after integration into HIV care which resulted in adoption of this approach in other ART facilities across Malawi [20]. Despite this recommendation and integration into HIV care, there is still low utilization of the service [19]. The Nkhoma Hospital and its catchment areas in Malawi were one of the first health facilities in Malawi to start cervical cancer screening services in 2004 and it integrated cervical screening services into HIV care in 2018. In 2013, it received funding from the Scottish Government to expand screening services and treatment of pre-cancerous lesions. Mass community sensitization was carried out [8]. Findings of one study done in Nkhoma showed that two years after Scottish funding, over 7000 previously unscreened women had

attended VIA clinics with an overall VIA positivity of 6.1% and 10.4% in HIV negative women and WLHIV respectively [8]. Furthermore, at the end of 2016 and 2018, the number screened had risen to more than 18,000 and more than 27,000 respectively. The VIA positive rate for 2016 was 6.5% and in WLHIV was 8.1% while in by mid-2018, VIA positivity was comparable at 6.3% and 8.3% in WLHIV” [8]. High positivity rate in WLHIV at Nkhoma supports the literature [11,12,18]. Despite HIV care and cervical screening services integration, as well as available resources provided for screening at Nkhoma Hospital and surrounding catchment areas, it has been observed that there is still low turn up for screening among WLHIV at ART clinics.

1.3 Statement of the Problem

Uptake of cervical cancer screening services is still a challenge globally and in Malawian communities. There are many documented reasons for low uptake from studies carried out globally such as lack of awareness, poor attitude towards cervical cancer screening, and poor perception of the severity of the disease [3,21,22]. Consistent with international findings, Malawian studies found that gross shortage of staff, lack of equipment and supplies, the lack of supportive supervision, lack of awareness about the disease among community members, long distances to health facilities, the lack of involvement of husbands, and misperceptions about the disease affected the uptake of cervical screening services [6,8,12]. Most of local studies focused on general women not WLHIV only as with the focus of this study at Nkhoma Hospital in Malawi.

In addition, Nkhoma Hospital has a comparative advantage over other hospitals in that it has been receiving funding support for cancer services since 2013 from Scottish Government. Mass

community sensitization on cervical cancer are routinely done. Resources for screening and treatment of precancerous lesions are available. However, in 2020, out of 2888 WLHIV attending ART clinic only 199 (7%) were screened for cervical cancer. There must be other reasons beyond what is known from the various literature. This raised curiosity in the researcher to explore the barriers hindering WLHIV from utilizing the cervical screening services that are under one roof of HIV care services.

1.4 Literature Review

This section presents a review of the literature. A literature review involves the critical analysis and summarizing of available information related to the study topic which may involve the conceptual, empirical, and research related findings [23]. Literature review on individual, health system and community barriers to cervical screening was done.

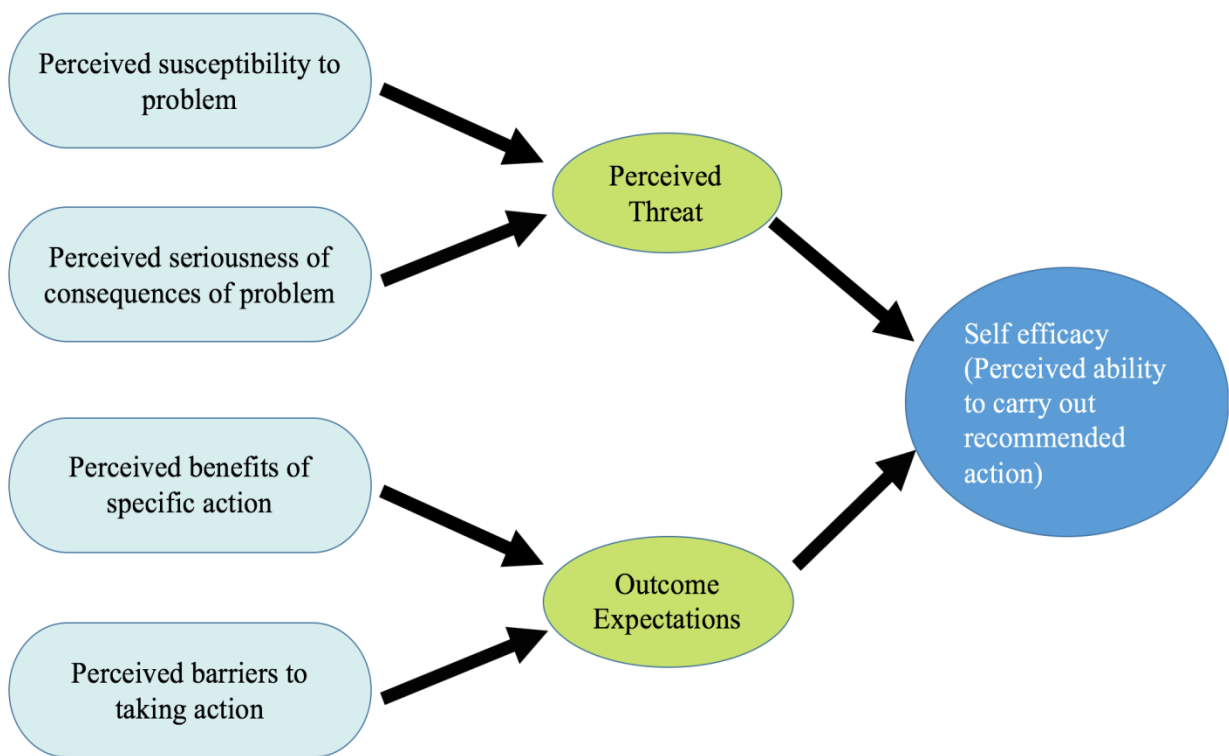
This study used the Health Belief Model (HBM) to explore the individual-level barriers to cervical screening. The HBM is one of the first theories of health behavior, developed in the 1950s by social psychologists Irwin M. Rosenstock, Godfrey M. Hochbaum, S. Stephen Kegeles and Howard Leventhal at the U.S. Public Health Service to better understand the widespread failure of screening programs for tuberculosis [24]. The HBM focuses on factors at the individual level that contribute to a person's decisions regarding their preventive health behaviours [25]. In particular, the HMB focuses on a person's belief in their perceived threat to the disease in question and also their belief in the effectiveness of the health intervention or treatment. The HBM was one of the first attempts to describe individual disease prevention and health maintaining behavior through the identification and assessment of the balances between

expectations for action and reward [25]. As originally conceived, the model postulates that people will not engage in disease prevention behaviours unless they have some knowledge and motivation, and more importantly, believe themselves to be at risk or vulnerable, and feel the potential condition is threatening [24]. They must also believe in the efficacy of the intervention and perceive few barriers to following recommended actions . According to the HBM, when individuals regard themselves as susceptible to a particular disease or condition, believe that the disease could have potentially serious outcome, that a particular course of action would benefit in reducing either their susceptibility to or severity of the disease, and that the anticipated benefit of taking an action outweigh the barriers to action, they are more likely to take the recommended actions [24]. Perceived barriers of specific health issues are more powerful in affecting access to health care services [26].

Therefore, the model explains preventive behavior and assumes that belief and attitudes of people are critical determinants of their health-related actions. It holds that when cues to actions are present, the variations in uptake behavior can be accounted for by beliefs concerning four sets of variables [27]. These include:

- a. The individual's view of own vulnerability to illness. If an individual does not see him or herself as being at risk of any problem, he or she will not seek care.
- b. Belief about severity of the illness. The associated problem could be seen as minor therefore little attention will be required.
- c. The person's perception of the benefits associated with action to reduce the level of threat or vulnerability.

- d. The individual's evaluation of the potential barrier associated with the proposed action, this could be physical, psychological, financial and social.



Adapted from: Nutbeam and Harris

Figure 1: Health Belief Model

An individual's perception of being at risk of cervical cancer will motivate the person to seek preventive services. A narrative synthesis of HBM on its applicability in African women showed that women who believe that they are at risk of cervical cancer are the ones interested in screening, and adhere recommendation to access cervical cancer screening in order to prevent an adverse outcome [28]. A study from Ethiopia showed that women who had no perceived barriers

to cervical cancer screening were two times more likely to access screening than those who had perceived barriers [2]. Literature has also shown that lack of awareness about cervical cancer and knowledge about prevention are key factors hindering access to cervical cancer screening: one systematic review study found that many WLHIV were completely unaware of the risk of cervical cancer and that HIV infection increases the risk of HPV and cervical cancer [29]. In most low- and middle-income countries, barriers to cervical screening uptake also include a lack of familiarity with the concept of preventive health care, and geographic and economic inaccessibility to the services [30]. Some studies found that women knew of the importance of screening but saw no reason to go for the service because they were asymptomatic. For example, a study done at Midmay clinic in Uganda found that all participants knew the value of screening early and that HIV increases the risk of HPV infection, but most waited for a warning sign like an abnormal vaginal discharge to access the screening services [31].

In addition to knowledge deficit, an Ethiopian study found perceived fear of positive results, perceived pain during screening procedure and financial factors as barriers to cervical cancer screening. These were also similar to findings of studies done in Tanzania, Uganda, Botswana and Southern Mississippi which found that participants' worries about finding out about additional health problems that is cervical cancer in addition to their HIV illnesses, embarrassment, body modesty, and fear of painful procedures were significant barriers [32–34]. Furthermore, women attributed their poor health as a barrier to the access to cervical cancer screening [13]. Additionally, having chronic illnesses such as diabetes and hypertension were reported to be barriers to cervical screening due to fear of the stress that would arise from an additional diagnosis of a serious illness [31].

Furthermore, health care utilization involves the interaction between patient needs and health system. Literature has shown that many WLHIV indicated their need to have female primary care providers perform the cervical cancer screening due to their cultural and religious practices [39]. Others identified long waiting time as a barrier to screening [32]. Limited resources (human and financial), inadequate infrastructure and lack of screening programs are also barriers to cervical cancer screening [30–32]. A study in Uganda found that cervical cancer screening services were not integrated into ART clinic and women complained of long distances to access the screening services [35]. WLHIV noted that health workers only informed clients about the existence of cervical screening services and encouraged them to screen without giving regular and detailed information about the disease, related services and importance of these services. The clients felt that this was due to the heavy work load coupled with inadequate staffing [31]. These issues are consistent with those of a major study done in 13 districts across Malawi that assessed the experiences of coordinators and service providers [36].

Fear of stigma and discrimination from family and friends has been reported as a barrier to cervical cancer screening and treatment services in addition to cultural values and religious beliefs. For instance, a study done in Tanzania found that women were afraid of going for cervical cancer screening due to the concerns that once found positive, they are considered valueless in the community since they are thought to be unable to engage in sexual relations with their husbands or partners [33]. Myths and misconceptions held by WLHIV also brought fears regarding cervical screening. For instance, one scoping review found that some of WLHIV believed that family planning increased the risks of cervical cancer and that vaginal washing

would decrease the risks. In the same review, women considered cervical cancer as fate or the will of God and therefore, felt nothing could prevent it [34]. Some women did not engage in screening as they believed that service providers would remove their ovaries and uterus during the procedure [31]. This shows that women lacked knowledge on HPV and cervical cancer as well as significance of screening for it.

In summary, the literature has shown that women and young girls in low- and middle-income countries face many barriers that prevent them from receiving adequate and timely cervical cancer vaccination, screening and treatment [34]. The model explains preventive behavior and assumes that belief and attitudes of people are critical determinants of their health-related actions [37].

1.5 Justification/Significance of the Study

In Malawi, cervical cancer is the most common cancer among women with 80% mortality rate [32]. In the UK and USA, cervical cancer screening programs have been successful in reducing incidence and mortality rates [38]. Cervical cancer screening is important for preventing cancer of the cervix. Without regular cervical cancer screening, the early changes that could progress to cancer will not be picked up [39]. Efforts are being put in place to increase cervical cancer screening in order to reduce morbidity and mortality rates across Malawi.

Cervical cancer screening has been integrated into HIV clinics in several countries like Zambia, Botswana Cote d'Ivoire as well as Malawi where all WLHIV attending HIV services are offered VIA as part of clinical care resulted in high uptake of cervical cancer screening [40]. At Nkhoma

Hospital, cervical cancer screening was integrated with HIV care in 2018. However, cases of advanced cancer continue to be diagnosed and low uptake of cervical screening services has been observed. This research study will seek to understand barriers to accessing cervical screening services within the context of the everyday lives and understanding of cervical screening among WLHIV attending the ART clinic from the Nkhoma Hospital catchment area. Although much can be learnt from the experiences in other settings as described in the research literature (some of which is summarized above), the improvement of care at the local level requires a detailed understanding of the specific needs of the women in the local area, including any current misconceptions or concerns in the community, and any problems with how the service is set up.

The research uses the HBM, with the rationale that the health messages are more likely to achieve behaviour change if they successfully target the perceived barriers, benefits, self-efficacy, and threats of the service users. The findings of this research study will therefore be of direct applicability: they will provide a better understanding of the reasons why women underutilize the screening services at Nkhoma Hospital, which in turn will inform health promotion and education initiatives at both the community and individual levels, especially for WLHIV. The findings will also identify issues in the design of services that act as barriers to WLHIV access the screening service and support decision-making by management. The findings of the study will add to existing literature on the barriers to cervical cancer screening faced by WLHIV.

1.6 Objectives

1.6.1 Overall Objective

To explore barriers of cervical cancer screening among WLHIV attending ART clinic at Nkhoma Hospital.

1.6.2 Specific Objectives

1. To identify individual factors that affect cervical cancer screening among WLHIV attending ART clinic at Nkhoma Hospital.
2. To identify health systems factors that affect cervical cancer screening among WLHIV attending ART clinic at Nkhoma Hospital.
3. To identify community factors that affect cervical cancer screening among WLHIV attending ART clinic at Nkhoma Hospital.

CHAPTER TWO: RESEARCH METHODS

2.1 Introduction

This is a qualitative study design with phenomenological approach that seek to explore the barriers to cervical cancer screening among WLHIV at Nkhoma Hospital. This chapter outlines how the research was conducted. The research design and procedures for data collection and the data analysis approach are outlined.

2.2 Research Design

The study used a qualitative study design with phenomenological approach because qualitative designs are exploratory in nature and answers the complex nature of the phenomena and reality from the perceived lived experiences [23]. Therefore, it was appropriate for this study which explored the factors hindering women living with HIV from undergoing cervical cancer screening.

2.3 Study Location

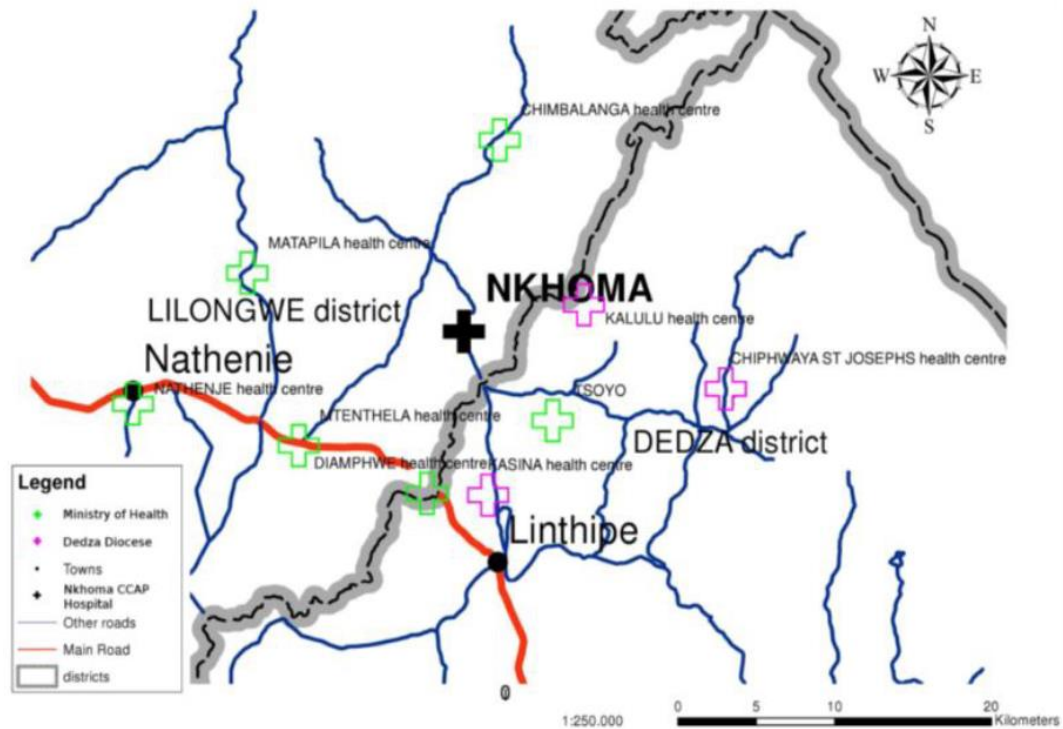


Figure 2 Map of Research Area

Figure 2: Map Showing Location of Nkhoma Hospital

The study was conducted at Nkhoma Mission Hospital ART clinic. The hospital is located in the Southeast of rural Lilongwe district in central region of Malawi and bordering with Dedza district. It serves as primary care for a population of about 80,000, as well as secondary referral hospital with ten health facilities as peripheral sites and has a catchment population of more than 490,000.(See appendices 1.12, study area map). Nkhoma Hospital was selected because it was one of the first health facilities in Malawi to start cervical cancer screening services in 2004. Its cervical cancer program has been receiving funding support from Scottish Government since

2013. The funding has helped with resources for screening and treatment of precancerous lesions. Mass community sensitization was carried out [8]. Cervical screening was also integrated into HIV care services to ease access under one roof. Despite all these, it has been noticed that there is low turn up among WLHIV to undergo cervical screening. Only 7% (199/2888) of WLHIV who were attending ART clinic were screened in 2020. Hence, this study that explored why there is still low turn up despite sensitization about the importance of cervical screening for WLHIV.

2.4 Study Population

All WLHIV who have never accessed cervical cancer screening were the target population.

2.5 Study Period

The study period started in April, 2019 from period of research proposal writing up to 30th November 2020 when Research dissertation was submitted. Data collection took place from 19th February, 2020 to 27th March, 2020.

Table 1: Gantt's Chart Showing Study Activities and Their Time Frames

Item	Apr-19	May	June	July	Aug/Sept	Oct/Nov/Dec	Jan-Mar	Apr-June	Jul-Aug	Sept
Two-page proposal										
Proposal writing May-Aug 2019										
August 20 Submission to COMRC										
Oct 2019- Jul 2020 Data collection and analysis										
30th Sept 2020 submission of research dissertation										
20th August 2020 Viva Voce										

2.6 Sample Size

The sample size was planned to be 15 to 20. However, in qualitative research study, the sample size is adequate when saturation of information is achieved and that small sample size is considered ideal in qualitative studies because it is concerned with a phenomenon of interest and not necessarily to generalize the results in other contexts [23]. Therefore, in this study, 17 women were interviewed following data saturation.

2.6.1 Sampling Technique

Purposive sampling technique was used. Purposive sampling is defined as a deliberately non-probability sampling technique commonly used in qualitative research [41]. The purpose of

using purposive sampling was to select a relatively small sample with a particular characteristic relevant to answer the research questions that were posed [41]. Furthermore, in this sampling technique the emphasis was on the quality of information rather than quantity and the aim was not to maximize numbers but to become saturated with information on the subject matter [42]. In this case, eligible participants were enrolled as they came in for review at Nkhoma Hospital ART clinic. First of all, the interviewer asked all female patients that came to get their ART care if they had ever had screening before. Those that had never had cervical cancer screening were asked to consider participating in the study. Depending on the availability of time, two to three participants were being purposively selected and interviewed per day. This is because clients are mostly available during morning hours. If the woman was willing to take part, she was asked to sign the consent form (Appendix 1.0).

2.6.1.1 Inclusion Criteria

All WLHIV aged 18 years and above, able to provide consent and who had never previously been screened for cervical cancer.

2.6.1.2 Exclusion Criteria

Those women who seemed reluctant to participate were excluded from the study in order to reduce distress during data collection. In addition, those who were not able to communicate in the local language (Chichewa) or English were excluded.

2.7 Data Collection

With an institutional approval letter, the researcher briefed the ART coordinator and health workers in the ART department on the data collection exercise. This was a qualitative study and data was collected using in-depth interviews (IDIs). In-depth interviews are often described as being; conversation with a purpose which differentiates them from a normal conversation [23]. The aim of using IDIs was to get women to talk about their personal feelings, opinions and experiences about barriers to cervical cancer screening in their own words [23]. The researcher used a pre-tested semi-structured interview guide developed from themes that emerged from literature review in order of specific objectives (Refer Appendix 1.2). In this case, open ended questions were used followed by probing questions which resulted in participants introducing new ideas that were being explored further. Two versions of this guide (English and Chichewa language) were used. This was because not all women could understand English, so they were interviewed using the local language version. Pre- test of the interview guide was carried out among WLHIV two days before data collection started. This resulted in clearer wording questions and using simple language. The researcher, who is also a cervical cancer screening provider at Nkhoma Hospital, carried out the data collection.. A digital recorder was used to ensure that correct information was gathered. Participant information sheets were read to each individual to let them understand all ethical issues surrounding the study. Thereafter, individual interviews were conducted by the researcher with patients who had given their consent to take part and give an informed consent. Each interview took a maximum of forty-five (45) minutes. Probes, prompts and clarification statements were used to allow deep explanation and description of the aim. New themes that emerged during the interviews were incorporated into the next

interview until when data saturation was reached at 17th interviewee. A thematic analysis approach was used to analyze the transcripts.

2.8 Data Analysis

An inductive analytical approach was used. The purposes for using an inductive approach was to condense raw textual data into a summary format, to establish clear links between the evaluation or research objectives and the summary findings derived from the raw data and to develop a framework of the underlying structure of women's lived experiences that are evident in the raw data [43,44]. Data were analyzed using thematic analysis. Thematic analysis is the process of identifying patterns or themes within qualitative data [44]. Data were analyzed using six steps of thematic analysis which are: Becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, defining themes and writing-up [44]. Participants were audio recorded then data were transcribed verbatim in the same language as recorded. Reading and re-reading of transcripts were done to become familiar with the data. Then initial coding was done by organizing data into a meaningful and systematic way which helped in reducing lots of data into small chunks of meaning. Thereafter, themes were searched and reviewed to check if they made sense or if they supported the data. Then themes were defined to check for their meanings as well as checking the interaction of subthemes with the main themes. Finally, results were presented in the chapter four below.

2.8 Trustworthiness of the Study

Instead of focusing on reliability and validity, qualitative researchers substitute for data quality. Trustworthiness consists of credibility, transferability, dependability and conformability [41].

Credibility of this study was achieved through the review process of the tool by the research supervisor and through prolonged engagement with the participants and establishing rapport. Dependability was ensured by the voice recorder which stored data that can be listened to frequently. In addition, all nonverbal cues from participants were clarified and all data was reviewed by the research supervisor before data analysis. Confirmability was ensured by conducting the interviews until data saturation was attained and all observations from participants were written in a notebook. The raw data, such as audio-taped data and recorded nonverbal cues were carefully processed for auditing and confidentiality purposes. To facilitate transferability, a clear description of the inclusion and exclusion criteria of the study participants, study setting, data collection process and analysis was done.

2.9 Data Management

Written information was stored in note pads; codes not names while recorded information has been stored in digital formats. Interview guides were kept in a safe locker. All data that has been entered on computer has been kept on Google drive and encrypted using passwords. Interviews were then transcribed and translated into English by the researcher.

2.9 Ethical Considerations

Ethical approval was obtained from COMREC on 22nd November, 2019, number: P.09/19/2789 and at Nkhoma Hospital Management on 10th September, 2019 (Appendix 1.5 and 1.8 respectively). All respondents who participated in the study signed informed consent forms before participating and no one was coerced to participate in the study. In addition, the participants were asked to be free to withdrawal from the study at any time they wished to. All

respondents were assured of confidentiality during and after interviews, no names or other personal identification information were used on data collection tools. The respondents were briefed about the purpose of the study.

CHAPTER THREE: RESULTS

3.1 Introduction

This chapter present the findings of barriers of cervical cancer screening among WLHIV attending the ART clinic at Nkhoma Hospital.. The socio-demographic profile of the participants as well as themes and subthemes generated from the data are described. Specifically, individual, health system and community barriers reported by the women are reported.

3.2 Social-demographic Data

As shown in the table 1 below, 64.7% (n = 11) of study participants were married while those divorced and widowed were 17.6% (n = 3) each. In terms of the age distribution, majority were those aged between 30 and 50 years 70.5% (n =12).Further, the table 1 shows that more than half of participants attained only primary education 76.5% (n = 13). In relation to the employment status of the participants, the majority were subsistence farmers 88.2 % (n=15). In terms of duration on ART, 47.1% (n=8) have been on treatment for more than 10 years, 41.2 (n=7) were on treatment for more than a year while 11.7% (n=2) were only three months each on ART.

Table 2: The Socio-demographic Characteristics of Respondents (n=17)

Socio-demographic characteristics	Respondents	Percentage
Marital status		
• Married	11	64.7
• Divorced	3	17.6
• Widow	3	17.6
Age of respondent		
• Less than 30	2	11.9
• 30 - 50	12	70.50
• 51 - 60	3	17.6
Education level		
• No formal education	3	17.6
• Primary	13	76.5
• Tertiary	1	5.9
Occupation		
• Farmers	15	88.2
• Business	1	5.9
• Employed	1	5.9
Duration on ART		
• Less than 3 months	2	11.7
• More than 1 year	7	41.2
• More than 10 years	8	47.1

3.3 Findings of Thematic Analysis

Eight (8) major themes merged from the thematic analysis as factors hindering access to cervical cancer screening among women living with HIV at Nkhoma Hospital. These were subsequently grouped into individual, health systems and community barriers. Individual factors identified were (i) personal fears of the screening procedure and fear of cervical cancer disease diagnosis itself, (ii) low perceived vulnerability and (iii) feeling of embarrassment over exposure of private body parts. Health system factors highlighted (i) long waiting time, (ii) poor communication approaches, and (iv) lack of knowledge of where to access screening services (v) long travelling distances ii. Community factors included (i) myths and misconceptions.

3.3.1 Individual Factors

(i) Fear

Fear emerged as an important theme within the interviews. This has been divided into two sub-themes: fear emanating from negative experiences of screening shared by peers, and fear of being diagnosed with cancer on top of HIV.

Fear due to reported experiences of others

Almost all participants attributed their failure to go for screening to fear of what their friends have said concerning the actual screening procedure. Interviewees reported that they have heard that the procedure is painful, similar to the way they felt during child birth. Their friends have told them that a big metal object with a mouth ‘similar to that of a duck’ is inserted into the vagina. In addition, another small metal object is inserted into the vagina and grip the cervix which causes a lot of pain when removing it.

“I have never gone for screening because of fear. What I hear in our community is that during screening the uterus is taken outside using metal objects and then take it back after screening it, so it’s scary.” (IDI # 17).

Similar sentiments were echoed by other participants:

“I wish I can get screened for this cancer but those who came for screening say the procedure is painful hence I fear to experience that. Even a lot of women in our

community have fear because of what we hear from those who came for screening. They say a big painful metal object is inserted into the vagina.” (IDI# 12)

“I wish I could have come for screening but I heard that women feel pain during the screening procedure. I have been hearing it even here at ART clinic soon after the nurse finishes health education, women start discussing that it’s a painful procedure. Even at antenatal clinic women discuss that the screening procedure is very painful.” (IDI10)

I heard about screening ca cx, mmmmh they say it’s painful like the time of delivering a baby. You are put in a position like during labour and a big metal is inserted into the vagina which is painful. (IDI#13)Fear of cancer diagnosis

Some women expressed a fear of being diagnosed with cancer on top of their HIV/AIDS disease. They decided to not to go for screening rather than provoking more stress in their lives.

“Another fear for me is that what if I am diagnosed with this cancer yet am already having another problem of HIV.” (IDI#13)

“What comes into my mind when I hear about it is fear....., this cancer is deadly and if you contract it, it means you are already dead. If you delay, it spread fast. This is the same way I delayed to be tested for HIV and now my child is on ART. However, I failed to come for screening because of fear of being found with another serious disease on top of this HIV which I have.” (IDI# 5)

“I have never heard women discussing this cancer and I might be the first one coming here to get screened. We don’t come because of fear of being found with cancer.” She also said “I can’t even tell my friends that I went for cervical screening because of fear of being diagnosed with cancer and that people might take advantage of my diagnosis and bewitch me.” (IDI# 15)

(iii) Low perceived vulnerability

Lack of understanding of the purpose of screening, that it is for asymptomatic women was also a barrier to cervical screening. Sixteen out of the seventeen women who were interviewed had heard about cervical screening and cervical cancer from the health education offered at Nkhoma ART clinic, antenatal clinics, listening from the radio, and health education offered at community gatherings by Health Surveillance Assistants (HSAs). All women had basic information about cervical cancer; they were aware of the disease and that it can be prevented and treated if you seek early medical help. However, the majority of them were waiting for a ‘trigger’ to go for screening. They claimed that their own menstrual patterns were normal, in contrast to those who go for screening who have abnormal menstrual pattern and who experience foul smelling vaginal discharges.

“Until now I experience normal menstrual flow so why should I come for screening? Women who come here say they did so because their menstrual flow has been abnormal.” (IDI# 3)

“I just keep on rescheduling to come here for screening. There no hospital reasons but just that am waiting for the right time.” (IDI#8)

“The message I heard about this cancer is enough only that we just choose not to be screened.” (IDI#10)

“Men encourage us to come for screening that the disease is very dangerous but women just say they will come one day when time is right. Now I don’t experience any symptoms like abnormal vaginal bleeding.” (IDI#11)

“I never come for screening in the past because I was waiting for time to come. I am not feeling anything right now.” (IDI# 15)

*“Apart from fear, I just don’t have that urge to go for screening because I don’t experience problems.I will come in the future to come for screening when time is right.
” (IDI#17)*

(iv) Feeling of embarrassment over exposure of private body parts

The uncomfortable feeling of exposing one’s private parts was cited as one of the key factors that prevent women from screening for cervical cancer. Many women seemed uncomfortable with “exposing” themselves to health workers, especially male providers, during screening.

“Also, women say they cannot come for screening because they find male providers who ask them to undress which is embarrassing.” (IDI# 9)

It is not proper to undress yet it’s not the time of labour. (IDI#13)

“A lot of women don’t come to be screened because they say they can’t keep on undressing in front of men when they are not sick” (IDI# 14)

3.3.2 Health Systems Factors

(i) Long waiting time

Long waiting times at the screening clinic was another key barrier to cervical screening mentioned by those women. Some of the women had not been screened because they had gone to the screening clinic location, but ended up going back home due to long waiting hours on the queue. These are excerpts from some of the participants:

“I really wish I can get screened but one day when I came I found providers were on lunch but I waited so long that I just went back home.” (IDI# 7)

Like for me, I came last time but didn’t get screened because of time since I waited for so long, so I just decided to go back home. . So women fail to get screened because they fear they will go home very late looking at the long queue to receive ARVs and then also go to queue to get screened for ca cx (IDI# 14)

“I know where to get screened for this cancer here at hospital. I came one day to get screened but I returned home because of time since it was becoming dark after waiting for so long.” (IDI#16)

(ii) Poor communication approaches

Almost all participants voiced dissatisfaction over the group mode of delivering health education as currently practiced at the ART clinic. Some women do not feel comfortable to ask their concerns or worries concerning what they have heard from their peers in a large group setting. The majority of participants suggested that it could be better if health education is individualized by calling one by one.

“I suggest that its better health education be given to individual to hear their concerns because many are shy to ask during group teaching. The same way HIV test is done.”
(IDI# 3)

“For women to come for screening, health workers should be explaining in details what really happens during screening to individuals.” (IDI#10)

“Also, for many to be screened, it’s better to give health education on individual basis not as a group. Or if done on a group basis, the message should be given in a polite manner not like what happens through shouting.” (IDI#2)

In addition, almost all participants suggested explaining in detail everything that happens during screening procedure to allay their fears.

“Health workers don’t give us enough information and that’s why we keep on fearing... I suggest that the message should be clear on how the screening is done and that’s the only way a lot of women can come for screening.” (IDI# 4)

“For women to come in large numbers for screening, I suggest that health workers should be open when giving health education and explain in details what really happen during screening.” (IDI#17)

“You should start educating women in detail especially the real process of screening. Also educate women on this cancer. Its better if health education is given to individuals as at the group some women come late while others are shy to ask more.” (IDI#15)

“Health workers should be asking women who came for screening to be telling what exactly happens during screening so that other women should be encouraged to get screened. In addition, I heard that today’s screening doesn’t involve inserting the metal object into the vagina, so health workers should start educating women about this and you will see a lot of them coming.” (IDI# 16)

(iii) Lack of knowledge of where to access screening services

Most women did not know the physical location of the clinic where cervical screening services are provided at Nkhoma Hospital. They attend the ART clinic where they receive health education including about cervical cancer screening, but they report they were not told where to

actually go for cervical screening. This made them only concentrate on getting antiretroviral drugs and go home. The following are excerpts from participants:

“I don’t know the room is, where cervical cancer is screened here at the hospital.” (IDI#4)

“At this hospital, I don’t know and was never told where this cancer screening takes place although I do come to collect ARVs.” (IDI#6)

“I don’t know where ca cx screening is done here. Before receiving ARVs we are educated about this cancer and screening but they just encourage us to go for screening. However, I don’t know exact room where screening is done.” (IDI#12)

“I heard that somewhere at this hospital you screen cancer of the cervix but I don’t know exactly the place or room.” (IDI# 15)

(iv) Long travelling distances

The majority of women attributed long distances between their homes and the hospital as a challenge to get screened for cervical cancer. They only prioritize accessing ARVs with the limited time they have. They claim that due to long queues at ART clinic, it becomes difficult to queue again for screening cervical cancer because of time. The long distances of going back home with another long queue for cancer screening hamper their desire for screening.

“Some women come from very far so to queue again for cervical screening then time cannot allow. And some say they wait for long time so they just go back home.” (IDI#12)

“Others fail to come here because of long distance to access the service. A lot of women can get screened if you can start bringing the services close to them. Some women fail to get screened because they fear they will go home very late looking at the long queue to receive ARVs and then also go to queue to get screened for cancer of cervix.” (IDI# 14)

“It might also be good not to keep women waiting for long time to be screened. Some come from very far and they are already tired at ART clinic.” (IDI#9)

3.3.3 Community Factors

Myths and misconceptions

Lack of knowledge about cervical cancer causes and how the screening procedure is done generates a lot of myths and misconceptions with the community. Among the myths and misconceptions that prevented women from screening was the perception that, after the screening you stop sleeping together with your husband. The following example by one participant describes this clearly:

“I heard that when you get screened you should stop sleeping with your husband, so I feel it uncomfortable with issues of not having sex.” (IDI# 7)

“They say that during screening intestines are twisted which later complicates and die at home. (IDI#1)

CHAPTER FOUR: DISCUSSION OF FINDINGS

4.1 Introduction

This chapter discusses the findings of the study which was conducted to explore the barriers to cervical cancer screening among WLHIV at Nkhoma Hospital, Malawi. The discussion of the findings focused on addressing the set objectives of the study. Therefore, the following areas are discussed: individual, health systems and community barriers to cervical screening. The Health Belief Model has been incorporated to help discuss the individual perceived barriers to cervical cancer screening among these women. HBM is more individualistic in explaining why people behave the way they behave when it comes to decisions regarding their preventive health behaviours [23].

4.2 Discussion

This study explored the reasons for underutilization of already integrated cervical screening services among women living with HIV who come to ART clinic at Nkhoma Hospital. The findings showed that some of the women had knowledge about their increased risk of developing cervical cancer, and appreciated the need to be screened. However, a number of barriers were identified in this study which include fear (comprising two subthemes, fear emanating from negative experiences shared by peers, and fear of a cancer diagnosis itself), poor communication approaches, lack of knowledge of where to access screening services, feeling of embarrassment over exposure of private body parts, myths and misconceptions, low perceived vulnerability, long distances and long waiting time.

As described in Chapter one, the Health Belief Model (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 that the person will adopt the behavior [45]. The HBM predicts the reason(s) individuals take action to prevent, screen for and control illness; as in the case of VIA testing in WLHIV. While considering the impact of social and cultural factors that influence individual behaviour, the HBM was designed to try and explain why individuals did not participate in programs or detect their own disease due to myriad factors that can be personal or environmental [37,46]. The three major components of the health belief model are: individual perception; modifying factors; and variables affecting likelihood of action [15,45].

Individual perception are person's belief about one's own susceptibility to a disease plus the seriousness with which one views the perceived threat of the illnesses. For example, women belief about their susceptibility to cervical cancer and perceived severity of cervical cancer [17]. Low perceived vulnerability was one of the major themes found in this study. This study found that despite women's knowledge for the need to be screened for cervical cancer, many were waiting for a 'trigger'. Women reported that their friends who came for screening had problems such as prolonged menstrual flows, foul smelling vaginal discharges or abdominal pains. Similar findings were reported in studies done in Midmay Clinic [31] and in Bishoftu town, East Shoa, Ethiopia [47]. One study done in Iran that assessed the use of HBM constructs to understand the differences in adhering to cervical screening showed that 81% of participants failed to go for screening due to low perceived vulnerability while 68% and 48% lacked knowledge on importance of screening and feared test results respectively [48]. In line with the perceived

vulnerability and consistent with other studies [19,49], this study has shown that the women had little awareness of cervical cancer and poorly understood their vulnerability to the disease due to their HIV status, thus they lacked motivation to utilize cervical screening services.

Modifying factors are variables that change or improve likelihood of action. They include demographic variables, level of education, location of health facility, cost, as well as mass media. They affect perception of threat: increased knowledge will result in correct perception of threat based on scientific knowledge of cervical cancer [34]. The study showed that once WLHIV understand their risk and risk levels they understand how serious cervical cancer is. The majority of women who were interviewed had heard about cervical screening and cervical cancer from the health education offered at Nkhoma ART clinic, antenatal clinics, listening from the radio, and health education offered at community gatherings by Health Surveillance Assistants (HSAs). All women had basic information about cervical cancer; they were aware of the disease and that it can be prevented and treated if they seek early medical help. However, the majority of them were waiting for a ‘trigger’ to go for screening. They claimed that their own menstrual patterns were normal, in contrast to those who go for screening who have abnormal menstrual pattern and who experience foul smelling vaginal discharges as discussed earlier. The Health Belief Model postulates that people will not engage in disease-preventing behaviour unless they have some knowledge and motivation, and more importantly, believe themselves to be at risk or vulnerable, and feel the potential condition is threatening [37]. In this study, most of participants were not well educated and the screening facility was not easily accessible due to long distance in addition to other identified barriers. Therefore, it is not surprising that these women were not able to utilize cervical cancer screening services despite having knowledge about it. Low

education levels have been reported as a barrier to accessing cervical screening in a study done in France [33]. Long distances to the facility to access the screening services have been widely reported as a barrier in many studies done globally [31–33,50].

Likelihood of action: an individual will take action if he or she understands that there is a need and that the particular action will help in meeting the need. This can be achieved when information is provided, promote awareness by use of appropriate communication systems like personalized messages, use of peers that helps to activate readiness for cervical cancer screening [50]. Also, if the perceived barriers to the utilization of such services are minimized, the individual is more likely to take action [45]. Most of women in this study admitted that they had some knowledge about cervical cancer and screening. However, women were not going for cervical screening. One study that examined the impact of perceived barriers on pap cervical smear screening within the Health Belief Model (HBM) [51] reported that perceived barriers such as perceived pain associated with the procedure, long distances to access the services, long queues at VIA clinics, lack of social support, attitude, and embarrassment over exposure of private body parts were the potential barriers for them to take an action to go for screening. The findings of the study done at Nkhoma Hospital also found similar barriers. For instance, the study found that a lot of women had perceived fear about the cervical screening procedure. Their peers who went for screening shared bad experiences about the procedure, claiming that a big metal object is inserted into the vagina which causes intense pain. Fear emanating from shared peer experiences about the screening procedure has been a widely reported barrier in various studies globally [19,32,33,52]. This is possibly due to inadequate counselling of the clients before the procedure. Fear arising from a misconception that health workers take the uterus out

of the body to screen it was found in this study as well. Similar myths and misconceptions were found in a study done in Uganda where women reported that health workers remove tissues like ovaries [31].

In addition, perceived fear of cancer diagnosis was another barrier to cervical screening. This could be the reason where some participants reported that issues of cervical cancer are kept secret in their communities. Some had fear of adding another serious disease on top of their HIV status. Similar findings were reported in other studies [53,54]. This might be due to inadequate counselling about the procedure as reported by a study done in Botswana [55], as well as a possible lack of patient/client centred approach to communication. Women could have been sharing negative experiences regarding the procedure because of failure to address their concerns individually after the procedure. These fears could be attributed to failure in our education programs to inform the communities and clients of what exactly happens during screening [33].

Low perceived seriousness of cervical cancer could also be the reason for lack of motivation to screen in this study. This is consistent with findings of a study conducted in Botswana which showed that WLHIV who had a negative initial cervical test result were not coming for follow up schedules due to low perceived seriousness [55]. High perception to seriousness of cervical cancer was found to have a double drive for women to have an intention to go for cervical screening [56]. Therefore, there is a need to reduce these perceived barriers such as fear of pain during procedure or embarrassment if screened by male provider [50].

Further hindrances to access cervical screening found in this study were long queues and long travelling distances. The majority of women claimed that they walk long distances to come for

ART clinic. Worse still, when they come to the clinic, they find long queues to access ARVs. This makes them very unwilling to queue again for cervical screening considering long distances to go back home. Studies done elsewhere have also reported similar concerns [19,21,30,50,54,57]. For example, a study done in Addis Ababa, Ethiopia found that long distance to health facility was a major problem and suggested that a lot of women could get screened if the services are done close to them [1]. Cervical screening services are mostly institutionalized in many countries including Malawi. Community based screening services in form of outreach VIA clinics have proven to be effective in increasing accessibility of screening services [57]. Hence, integrating VIA services in outreach clinics could improve utilization and acceptability since women in Malawi walk more than 60 kilometre distances to have a VIA test [30].

Despite the fact that cervical screening services were integrated into HIV care in Malawi a number of years ago, and have proved effective [13,20], a lot of women cited no knowledge of where exactly screening is done within Nkhoma Hospital as a reason for failing to access the services in this study. Women could receive health education on cervical cancer before getting supplies of ARVs but they categorically denied being directed where to get cervical screening. This shows that there is gap in the way health education is given. At the end of health education as well as when giving ARVs, health workers should emphasize on the room where VIA is done. Posters to illustrate the direction where screening services are offered could help mitigate the barrier. Posters might also help some women who missed the group health talk session.

4.3 Study Strengths

This is the first study so far conducted to evaluate the gaps leading to unsuccessful implementation of integrated cervical screening and HIV care at Nkhoma Hospital. Use of a qualitative research method allowed in-depth exploration of the views of individual women, essential to inform subsequent quantitative work with larger numbers of women. Participants had a range of ages and personal circumstances, allowing different views to be captured. The data collection for this study was done at the location where women routinely access ART services, they were assured of the importance of their perspectives, and participants were free to speak their mind based on experience and reality of Nkhoma Hospital settings.

4.4 Study Limitations

The results might be affected because the interviews were carried out by a health worker from the same institution. There was also a difference in socioeconomic status between the researcher and most of the participants. These difference may have meant women did not speak openly, or be free to speak critically of the Hospital. However, as the results show, many different views, including some critical of the hospital service, were obtained. Results of qualitative studies are not generalisable to the broader population since they represent the views of relatively small number of WLHIV who were interviewed: as stated above however, qualitative work can inform the subsequent quantitative surveys.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The findings of this study highlight the important challenges affecting women's accessibility of cervical cancer screening services at Nkhoma Hospital. WLHIV first need to access HIV care, but also cervical cancer screening because lower immunity predisposes them to HPV infection and HPV-related diseases, including cervical cancer [45].

ART and cervical screening staff at Nkhoma Hospital should address above barriers using HBM as another method of increasing cervical cancer screening uptake in WLHIV. Strategies such as enhanced health promotion messages on the incidence cervical cancer, the potential of screening to reduce incidence and mortality, and clearer information on the screening procedure will increase the risk perception of cervical cancer. It is also recommended that HIV care providers regularly raise the topic of cervical cancer, emphasizing the benefits of screening. Ensuring privacy and respect to clients' choice of provider's gender where possible, coupled with more sensitive behavior and attention to patient's comfort by the VIA provider can strongly affect the experience of patients and increase their cervical screening acceptance and adherence to future follow up cervical screening. Additionally, HIV community outreach should consider provision of cervical screening sensitization, and offer cervical cancer screening: for women who would otherwise walk long distances to access cervical screening.

5.2 Recommendations

The recommendations address individual, health systems and community barriers.

5.2.1 Individual barriers

Short term

Women who have consented for VIA procedure should be given the choice between male and female providers, where possible, to reduce service underutilization due to feeling of embarrassment over undressing in front of a male provider as it is reported in this study. However, this is not always possible due to lack of female providers at some facilities. Women should be encouraged to have a chaperone present.

Health care workers need to provide intensive pre-VIA counseling services for all ART care attendants who have consented to go for cervical cancer screening to reduce perceived fear of the screening procedure.

Medium term

Use of cancer screening champion clients (women on ART who have been screening before and treated, to give their experience and benefit of early screening) during motivation talk.

Consider using existing community groups or civil society within the communities to help health care providers in educating women about the importance of cervical cancer screening.

Long term

ART mother to mother mentor volunteers to be well trained about the benefit of cervical cancer screening so that they should be doing the same as they do with ART at facility and community.

To integrate cervical cancer prevention messages into ART session counselling as they do with other opportunistic infection management in ART care

Where possible, to prioritize provision of female providers for cancer screening rather than male providers.

5.2.2 Health Systems Barriers

Short term

ART women should be escorted to where cancer screening is being done

Include location of screening during health talk.

Medium term

The Nkhoma Hospital management should allocate additional staff to ART and VIA clinics to reduce clients' waiting time.

Cervical cancer screening to be done at ART clinic.

In addition to group health education, individualized approach should be used so that individual concerns can be addressed immediately.

Reorient all cancer screening providers to give details of screening procedural during pre-counselling talk.

Long term

Propagation of educational programs based on HBM on cervical cancer prevention to various age groups would help raise public awareness about cervical cancer and take action for its prevention.

The Malawi health system should train all ART providers on cervical cancer prevention service, and how to address barriers to accessing this service.

In the future, it would be reasonable to conduct research, which includes more regions and districts as well as combining both quantitative and qualitative approaches to provide a more comprehensive information about utilization of the integrated cervical cancer screening services in Malawi.

5.2.3 Community Barriers

Providers should be probing for myths and misconception during health talks, and addressing these concerns with clear information in order to dispel false beliefs.

Nkhoma Hospital should intensify measures used in HIV care retention such as use of peer educators to reduce fears and myths/misconceptions associated with actual cervical cancer screening.

Medium term

Sensitization campaigns should be conducted targeting especially rural women who have poor knowledge and little access to cervical cancer prevention services. The messages in the campaign should target dispelling myths and misconceptions towards cancer screening.

Long term

Further research should focus on the feasibility of establishing community-based structures for VIA screening services.

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APPENDICES

Appendix 1: Participant Information Sheet and Consent

Researcher and Title of Study

Beatrice Phakira Kabota, a nurse at Nkhoma Hospital and a student from the College of Medicine is conducting a study to determine how can cervical cancer screening be best delivered to women living with HIV (WLHIV) attending the ART clinic at Nkhoma Hospital?

Before you make a decision to participate, you need to understand why the research is being done and what it would involve you. Please take time to read the following information carefully. Please ask if there is anything that is not clear or if you would like more information.

Purpose of the study

Cervical cancer is one of cancers that is causing more deaths among women globally. Women living with HIV (WLHIV) are at high risk of suffering from this type of cancer due to compromised immunity. Mostly, this cancer is noticed at late stage due to its slow progression. When women start experiencing symptoms, mostly it is already at an advanced stage. In this case, screening becomes part of preventive measures to detect it at an early stage that can be successfully treated. Screening services are now being done, in Nkhoma, despite this, some women have not yet accessed the screening services. This study will try to understand how best cervical cancer screening can be delivered to WLHIV attending the ART clinic at Nkhoma Hospital. This information can help improve delivery of screening and other preventive services for these women.

Who is responsible for the data collected in this study?

The researcher, **Beatrice P. Kabota**, who will be working alone will have overall responsibility for data collected in this study.

- Interview will be recorded using a digital audio recorder and later transcribed into digital documents which will be analyzed and stored on a laptop computer.
- The data will be stored in a password-protected computer accessed only by the researcher. The actual recording and any data containing personal identifiers will be stored for the duration of the research project and disposed of within 6 months of handing in the dissertation by deletion from the laptop and from any backup sources.
- No individual woman's data will be shared with other organizations, but anonymized combined findings will be shared so that others can learn how to improve services too.

The research has been reviewed and approved by the College of Medicine Research Committee on 22 /11/2019.

What is involved in the study?

The research will involve WLHIV having a face to face conversation (interview) with the researcher, conducted in October and November, 2019. The conversations will last from 20-40 minutes.

What are the risks involved in this study?

Your contribution to the study will be kept confidential. Your name will not be added to study reports. Your opinions and ideas will not be shared with ART clinic staff with your name attached

The contact information at the bottom of this information sheet be used if participants require additional information, wish to change or withdraw information or withdraw participation at any point.

What are the benefits for taking part in this study?

Taking part in this study will help improve services for WLHIV in their communities, and that by sharing their concerns and ideas the messages about cervical cancer screening for WLHIV will be made better.

What are your rights as a participant?

Taking part in the study is voluntary. You may choose not to take part, or subsequently cease participation at any time by informing the researcher. If you want your sister or a friend to be with you in this discussion you are allowed to do so.

Will I receive any payment or monetary benefits?

You will receive no payment for your participation. The data will not be used by the researcher for commercial purposes and you should therefore not expect any payments from the research project in the future.

For more information

This research has been reviewed and approved by Malawi College of Medicine Research and Ethics Committee. If you have any further questions or concerns about this study, please contact the researcher:

Beatrice Phakira Kabota

Address & contact details of research investigator: Nkhoma CCAP Hospital, Box 48. Nkhoma, Lilongwe. Mobile no: +265999793650

Email: beatricekabota@yahoo.co.uk

You can also contact Beatrice Kabota research supervisor:

Dr. Martha Makwero

University of Malawi, College of Medicine, Box, Blantyre.

Cell: +265 E-mail:

Consent Statement

I have read the provided information about this study, or it has been read and explained to me. I have been informed of the potential risks involved in participating in this study. I have been given a chance to ask any questions that I may have and I feel that all of my questions have been answered. I have been informed that participating in this study is voluntary, and that I may withdraw from it at any time in the future. I have been informed that if I participate now, or quit/withdraw from the study at a later time, this will not affect my care at this clinic in any way. I have been informed that all information about me and my illness will be kept private at all times. My signature/thumbprint below indicates that I agree to participate in this study.

Name of the Participant: _____

Signature/thumbprint of the Participant: _____ Date _____

If illiterate

A literate witness must sign (if possible, this person should be selected by the participant and should have no connection to the research team). Participants who are illiterate should include their thumb print as well.

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness _____

Signature/ thumbprint of witness _____ Date _____

Using language that is understandable and appropriate, I have explained this research project to the participant.

Name of Investigator: _____ Signature of Investigator: _____ Date _____

Appendix 2: Consent (Chichewa)

Kalata ya uthengakomansochilolezochotengambali.

MutuwakafukufukundiwoOfufuza

Beatrice Phakira Kabota ndinamwinoyemweamagwiratchitopachipatalacha Nkhoma komasoakuphuzirasukulukusukulu ya zamakhwala, akupangakafukufukutiapezenjirazimenezingathandizilekutikuyezaamayikhasa ya khomalachibelekolokungachitikirekutiafikireazimayiambiri amene alindikachilomboka HIV pachipatalacha Nkhoma.

Musanapangechiganizopakutenganawogawomukafukufukuamenayi,

mukuyenerakudziwachifukwachimenekafukufukuyiakuchitikirandipoinuzikukhuzanibwanji.

Chondemumvetsalebwinopamenemukuwerengauthengawo.

Chondemfusanipamenesimukumvetsabwinokutizivekebwino.

Cholingachakafukufuku

Khasa ya khomo la chibelekolondikhasaimodziyomweikuphaazimayiambiridzikolonsepansiazimayi amene alindikachilomboka HIV alipachiopysezokudwalasokhasaimeneyichifukwachakuchepakwachitetezothupi.

Nthawizambirikhasayimaziwaikapameneyafalikira kale ziwalozinathupichifukwaamafalapang'nopang'ono. PamenemayiWayambakumvazizindikiro, imakhalakutiyaifikapamulingowosachizika.

Pachifukwaichi,

kuyezakumathandizakupewakhasayichifukwaimapazekamwachangupameneikungoyambakumen

endipoamathasokupelekachitandithoKuyezakukukuchitapanopachipatalacha Nkhoma,
komangakhalekuyezakukukuchikakunokuchipatala, azimayienasanayezetse.
Kafukufukuameneyuathandizakuvetsetsammenetchitoyoyezaamayiwaangachikirekwaamayi
amene alindimkachilomboka HIV kunokuchipatalacha
NkhomaZimenezingapezekemukafufukuameneyizithandizakutukulammenekuyezakuzakungapiti
tsidwilepatsogolokomasonjirazinazotetezeraamayiwa.

Kodindandaniyemweakukhudzidwandiuthengaomweudzatoledwe mu kafufukuyu?

Ofufuza, Beatrice P. Kabota, amene adzagwirantchitookha,
aliokhudzidwandiuthengaonseomweudzatoledwe mu kafufukuyu.

Kufunsamafunsokudzatepedwakupolerachojambuliramauchadijitokenakozizasinthidwakukhalaz
olembazadijitokenakozizasanthulidwandikusungidwa mu makina a computa.

Uthengaonseudzasungidwa mu makina a computa yotetedwandinambala ya
chinsinsiyodziwidwandiofufuzayekhabasi.

Zojambulazonsekomansouthengaonsewautengambalizisasungidwa mu nthawi ya
kafukufukundipozizatayidwapakuthamiyezi 6 ya kuulutsazotsatirazakafukufukupofufuta mu
makinaonse a computa.

Palibeuthengawamunthuukutoleledwaudzapelekedwekwamabungweenakomazotsatilazonsezime
nezezatoleledwazizagwaidwakwaenakutizithandizekutukulakuyezaamayi

Kafukufukuyuwaunikiridwakomansowavomerezedwandibungwe la College of Medicine
Research Committee on 22/11/2019.

Kodi kafukufukuyuakukhudzachani?

Kafukufukuyuakukhudzaamayi amene alindikachilombo ka HIV kuchezanawo
(kufunsamafunso) masondimasondiwoofufuza.

IzizikhalazikuchitikamweziwaOkotobalapakanaNovembala mu chaka cha 2019.
Kukambilananakutenganthawiyakwanamphindimakhumiawirikapenamakumianayi.

Kodi palichiopsezochanji mu kafukufukuyu?

Kutenganawombalikwanu mu kafukufukukuzasungidwamwachinsinsi

Dzinalanusilizalembedwamuzotsalitulazakafukufukuyi

Maganizo anu sazagawidwakwaonseogwiratchitopatalembdwadzinalanu.

Ngatimungafuneuthengawinawapaderaokhudzakafukukuyukapenakufunakusiyamugwiritsentchit
onambalazilimmunsimwachikalatachi.

Kodi paliubwinowanjipakutengapombali mu kafukufukuyu?

Kutengambali mu kafukufukuyindinjirayoti tithi
kukambiranantchitoyopitsapatsogolokuthandizaamayi amene alindikachilombo ka HIV,
kutipakugawanakhawazawo and maganizoawozokhuzakuyezakhasayakhomo la chibelekero.

Ufuluwanungatiotengambalindiotani?

Kutengambali mu kafukufukuyundikosakakamiza.
Muthakusakhaosatengambalikapenakusiyakutengambalinthawiinailiyonsemutafunakutelopomud
ziwatsaofufuza.Ngatimukufunachemwaliwanukapenazanukutiakhalepopazokambilanizimuliolole
dwakutelo.

Kodindizalandiramalipiroenaaliwonse?

Pakutenganawombalisimudzalandirandalamailiyonsekomachakumwakomansochodyerapanthawi
yomwemukufunsidwamafunso. Uthengaotoleledwasudzagwiritsidwantchitopazokhudzandalama
choncho simukuyenerakulandirandalamailiyonse.

Ngatipalimafunso

Kafukufuyuwaunikiridwakomansokuvomerezedwandibungwe la Malawi College of Medicine
Research and Ethics Committee,

Ngatipalimafunsookhudzakafukufukuyuchondeapezeni Beatrice Phakira Kabota

Adilesi ya ofufuza: Nkhoma CCAP Hospital, Box 48. Nkhoma, Lilongwe. Mobile no:
+265999793650

University of Malawi, College of Medicine, The Chairperson,
College of Medicine Research and Ethics Committee,

P/Bag 360, Blantyre. Telephone: 01 871911

Email: beatricekabota@yahoo.co.uk

Komansomuthakuwapezaowayang'anira a Beatrice Kabota:

Dr. Martha Makwero

University of Malawi, College of Medicine, P/Bag 360, Blantyre.

Cell: +265

E-mail:

Chilolezo

Ndawerengauthengaonseokhudzakafukufukuyu, kapenaandiwerengerandipoandilongosolera.

Andidziwitsa za kuopsakotenganawombali mu

kafukufukundipondinapatsidwamwayiofunsamafunsondipondayankhidwabwino.

Ndaziwitsidwakutikutengambalisikokakamizandipondithakusiya pa nthawiinailiyonse.

Ndadziwitsidwakutikutengambalikomansokusiyasikudzakhudzachithandizo changa

chakuchipatala mu njirailiyonse. Ndadziwitsidwakutiuthenga wanga onse,

matendaangazisasungidwamwachinsinsinthawizonse. Kusainirakapenachidindo change

zikutanthauzakugwirizananazokutengambali mu kafukufuku.

Dzina la otenga mbali: _____

Saini/chidindochaotengambali _____ Tsiku _____

Osaziwakulembandikuwelenga

Mboni ya otengambaliyodziwakuwelenga a saine (

ngatikothekamunthuameneyuakhalekutiwasakhidwadindimwiniyotenganawombalindiposoasakh
alendiubalewinauliwonsendiwofufuza)

Otengambalawosathakulembakapenakuwelengaayenerakudinda chala chawo.

Ndaonelerakuwelengakovekabwinokwachilolezokwa amene

akufunakutenganawombalimukafukufuku, Ndipootenganawombalianalindimwayiofusamafuso.

Ndipondikusimikizakutiwavomeramosakakamizidwakomamwakufunakwakwe.

Lembanidzina la mboni _____

Saini/chidindo cha mboni _____ Date _____

Pogwiritsantchitochiyankhulochomvekakomansochoyenera, ndalongosola za kafukufukukwa
otenga mbali

Dzina la ofufuza: _____

Saini ya ofufuza _____ Tsiku _____

Appendix 3: Interview Guide

Code:

Today we are going to be talking about how cervical cancer screening can best be delivered to WLHIV attending the ART clinic at Nkhoma Hospital?

Sociodemographic Data

1. Age
2. Marital status.....
3. Level of education.....
4. Employment.....
5. Parity.....
6. Duration on ART.....

Cervical cancer

- Is cancer of the cervix something you've heard much about? Have you known women with this cancer? Probe... (E.g. tell me more.)
- What do you think about when you hear cervical cancer?
- Can you tell me anything about the disease itself e.g. what factors do you think could increase the chances of a person developing cervical cancer?

Cervical cancer screening

- Have you heard about cervical screening? If yes, please tell me where you have heard about it?
- What do the women in your family or social circle think about cervical screening?
 - Probe: what do they say?

- What are the different names/ terms used for cervical cancer screening in your community?
- What do you think is the purpose? What do you think happens during screening?
- Do you have any worries about cervical cancer screening?
- I see that you have never had cervical cancer screening, why is that so?

(Give them time to answer but maybe probe reasons – a different building? Didn't know who would do the screening? They weren't told enough about it to want to decide? Wanted more information but didn't want to ask or look foolish? Etc.

- What can we do to improve so that the next time you are offered, you would be more likely to come?
- Can you tell me anything either men or women in your community say about cervical cancer that makes you or other women afraid of coming for cervical cancer screening services? (**Probe:** Are there differing views among younger and older women?)

Suggestions

What are your suggestions for how we can make it easier for you to have cervical screening?

What do we need to tell women more about to reduce any fears or concerns?

Are there any other issues about cancer in general or about cancer screening that you would like to speak about?

Thank you very much!!

Appendix 4: Interview Guide (Chichewa version)

ZOTSOGOLELA KUFUSIDWA MAFUSO

Code:

Lerotikambirana

za

njirazimenezingathandizilekupititsapatsogolokuyezaamayikhasayakhomalachibelekolokungachiti
kirekutiafikireazimayambiri amene alimdikachilombo ka HIV pa chipatala cha Nkhoma.

Sociodemographic Data

1. Zaka
2. Muli pa banja?.....
3. Sukulumunalekapati?.....
4. Mumagwirantchitoyanji.....
5. Mwabelekakangati.....
6. Makhala pa mankhwalaotalikitsamoyonthawiyaitalibwanji?.....

Khasayakhomolachibelekeru

- Kodimunayambamwamvapo zokhuzakhasa ya khomolachibelekeru?
Mukudziwapomayi wina aliyeseanadwalapokhasa ya khomolachibelekeru?
Probe....(e.g. ndiuzeni za mbiri).
- Kodichimabwera mu maganizo anundichanimukavazakhansa ya khomo la chiberekeru?
- Ndiuzenichilichonsechokhudzamatendawa monga,
kodindizinthuzitizingapangitse munthukupezekandikhansa ya khomo la chiberekeru?

Kuyezakhasayakhomolachibelekeru

- Kodimunamvapo zakuyezakhasa ya khomo la chiberekero? (ngatieya...)
Nenanikomwemunamvazimenezi
- Kodiazimayikubanjakwanukapenaazanuamaganizabwanjizakhasayakhomo la chibelekro?
 - Probe: amatichani?
- Ndimainaenaati amene khasa ya khomolachibelekerolimadziwakanalokumudzikwanu?
- Mukuganizandikofukanibwanjikuyezetsa?
Mukuganikutichimachitikandichaniakamayeza?
- Ndizithu ziti zimakudandaulitsanizokhuzakuyezetsakhasayakhomolachibelekero?
- Ndaonakutisimunayezesekokhasa ya khoma la chibelekero, izizili chocho chifukwachani?

(Mupelekempatakutiayakhekomamufufuzebezifukwazina monga kuyezakumachitikira mu nyumbaina)
- Simumadziwa amene amayeza?
Kapenasimunauzidweuthengawokwanilakutimukanafunakutimuyezetse?
Kapenamumafunauthengawokwanilakomamunalephelakufusa? Etc.
- Kodi tipangechanikutitipititsepatsogolokapenakukozakutiatakuuzanikutimukauyezetsemuthaku dzatero?
- Mungandiuzezimeneamayikapena a bamboo amanenamudzimwanuzokhuzakhasayakhomolachibelekerozimenezimakulepheletsaniinu kapenaamayienakutiabwelekuzayezetsa? (Probe: Alipomaganizoenaochokerakwaachitsikanakapenaamayiachikulire?)

Maganizo anu

Kodimaganzoanundiotanipochepetsazotchingapakuyesetsakhansa ya khomo la chiberekero?

Koditiyenerakuwauzaamayizitikutiachepetsemathakapenakhawazimeneamakhalanazo?

Alipomaganizoenaokhozamatenda a khasakapenakuyezakhasazimenemukufunamutayakhulapo?

Zikomkwambiri!!

Appendix 5: Public Health Course Director Introduction Letter



COLLEGE OF MEDICINE
Public Health Department

TO: Chairperson, COMREC

FROM: MPH Tutor

DATE: September 09, 2019

SUBMISSION OF MPH RESEARCH PROPOSAL

Please find enclosed research proposal from our MPH student Beatrice Kabota, version I, entitled, "Exploring Barriers to Cervical Cancer Screening among Women Living with HIV (WLWHV) attending ART clinic at Nkhoma hospital, Malawi."

The proposal was reviewed by the Public Health Research and Postgraduate Committee and was approved for submission to COMREC. The thesis supervisor of this student Dr. Martha Makwero has endorsed the submission.

Thank you.

Dr. Susan Carnes Chichlowska
MPH Tutor

Appendix 6: The Principal Investigator Introductory Letter

C/O Nkhoma Hospital
Box 48
Nkhoma
2nd September 2019

The Chairperson
COMREC
P/Bag 360
Chichiri
Blantyre 3
Dear Sir/Madam,

SUBMISSION OF RESEARCH PROPOSAL FOR APPROVAL

I write to ask for approval to conduct a research project to explore barriers to cervical cancer screening among women living with HIV (WLWHV) attending art clinic at Nkhoma hospital, Malawi.

I am Beatrice Phakira Kabota, a student doing Master of Public Health at college of medicine and would like to conduct a research project mentioned above in partial fulfilment of the requirement for MPH program.

This research topic was chosen after observing the low uptake of cervical cancer screening among women on ART despite sensitizing them for screening and making the service available and the service being offered for more than 5 years.

I therefore, submit my research proposal for your approval.

Your assistance will be highly appreciated.

Yours faithfully



Beatrice Phakira Kabota

Appendix 7: COMREC Checklist

UNIVERSITY OF MALAWI - COLLEGE OF MEDICINE RESEARCH and ETHICS COMMITTEE (COMREC)
CHECKLIST TO ACCOMPANY RESEARCH PROPOSALS SUBMITTED TO THE COMMITTEE

*When you submit a research proposal for the Committee to approve, first read the document entitled **General Guidelines on Health Research (Revised in September 2010)**.*

Make sure that your proposal is in the format outlined in the Guidelines.

*Before sending or giving the proposal to the Committee, complete the following check-list by ticking each item you have included. **Do not submit** the proposal unless you can tick all the boxes, or provide a reason for the absence of any item. Attach the completed check-list to the front of your submission.*

TITLE OF PROPOSAL:
Exploring Barriers to cervical cancer screening among women living with HIV (WLWHIV) attending ART clinic at Nkhoma Hospital, Malawi

Name of Principal Investigator: Beatrice Phakira Kabotsa

Name of Sponsor and amount of sponsorship: none

(tick boxes)

Have you applied for a waiver of 10% COM overhead fee from the Office of Postgraduate Dean of Studies and Research? If yes, please attach a waiver letter. Yes No NA

Have you submitted this proposal to another Ethics Committee? Yes No NA

If yes, please specify -----

The following are included in or with this proposal:

1. Covering letter of introduction from Investigator

2. Letter of support from Head of Department(s) in which work will be done

(a) Principal Department hosting the research

(b) each other Dept. in which any work will be done

3. A copy of registration from Medical Council of Malawi for Principal Investigator and other investigators which are involved in clinical research

5. Submit an **electronic copy** and **4 hard copies** of the proposal and attached documents (which should include:

Title

Investigators

Institution[s] under whose umbrella the research project will be conducted:

Executive Summary

Brief CV of each investigator, Institution involved, Executive Summary

Background/Introduction

Rational/Justification

Objectives of the study; Broad and Specific

Methods

Type of study

Place of study

Study population

1 | COMREC Checklist to accompany protocol submissions.
version 2.0 dated 15th April, 2013.

Study period
 Sample size
 Data collection *[NB: include data proformas]*
 Data management/analysis
 Presentation of results
 Dissemination of results
 Ethical considerations
 - NB: include consent forms in both English & Chichewa
 Possible constraints
 Requirements
 Budget
 Justification of budget
 References
 Material transfer agreement forms/documents *Not applicable*
 Indemnity cover *Not applicable*
 If any item is not ticked, explain why this is not included with the submission.

A vertical column of 15 checkboxes. The 14th checkbox from the top is checked. Below the column are the labels "yes" and "or no" with a small square box next to "or no".

Signed: Bwita Name (print): Beatrice Phakira Kabota
 Date: 15-09-2019

Appendix 8: Letter of Support from Head of Department



Nkhoma CCAP Hospital.

All correspondence to be addressed to The Principal Hospital Administrator



10th September, 2019.

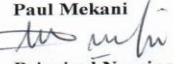
To : Beatrice Kabota
Nkhoma Mission Hospital,
P.O. Box 48,
Nkhoma.

RE: REQUEST TO CONDUCT A RESEARCH ON BARRIERS TO CERVICAL CANCER
SCREENING AMONG WOMEN LIVING WITH HIV (WLWHIV) ATTENDING ART CLINIC
AT NKHOMA HOSPITAL, MALAWI.

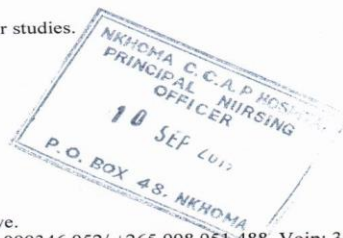
Your request to conduct the above captioned study at Nkhoma Mission Hospital has been granted. Furthermore, the hospital management requests a copy of the findings of your study once completed.

Wishing you all the best in your studies.

Yours faithfully,


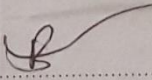
Paul Mekani

Principal Nursing Officer,

Nkhoma CCAP Hospital,
P.O Box 48, Nkhoma, Lilongwe.
Cell: +265 888 674 233/ +265 999346 952/ +265 998 951-488 Voip: 301
Email: p.mekani@nkhomahospital.org.mw, paulmekani@yahoo.com,
favourmekani@gmail.com
Website: www.nkhomahospital.org.mw



"serving with Love and Care"

Appendix 9: Copy of Nurses and Midwives Council of Malawi registration

	NURSES AND MIDWIVES COUNCIL OF MALAWI P.O. Box 30361 Lilongwe – Malawi	Tel: (265) 01 772 044 / 730 Fax: (265) 01 773 932 E-mail: nmcm@nmcm.org.mw www.nmcm.org.mw	
Account No : 2012-03189		General Receipt	
Receipt No.	870014	Date	15-Jun-2019
Received from:	BEATRICE PHAKIRA KABOTA	Reg. No.	NMT/1999/295
Address:	NKHOMA HOSP P.O. BOX 48 NKHOMA		
The Sum of (In Words)	Eight Thousand Kwacha Only AR - ANNUAL REGISTRATION FEES 2019/2020 Your account balance is MWK 0.00		
Paid by:	EFT	Amount:	MWK 8,000.00
RECEIVED BY:	BKAFWAMBA		Official Stamp
COMMENT:		Signature	

Appendix 10: Study Period

The development of proposal started in April, 2019 up to 30th September 2020 when Research dissertation shall be submitted.

Appendix 11: Study Budget

The researcher proposed that this project will need a budget of approximately MK530,462.00 as illustrated in Table below.

Table 2: Estimates of the Study Budget

ITEM	QUANTITY	COST/ITEM (MK)	TOTAL
Reams of paper	4	15000.00	60,000.00
HP toner	2	85,000.00	170,000.00
Flash disk	1	8,000.00	8,000.00
Pens	10	100	1000
Re writable disk	4	1,000.00	4,000.00
Transportation	-	50,000	50,000
Printing dissertation	6	10,000.00	60,000.00
Airtime & internet	-	20,000.00	20,000.00
Blank audio tapes	4	2000	8,000.00
Pencils	2	100	200
Editing fees	2	20,000.00	40,000.00
Large envelopes	4	250	1,000.00
Soft drinks and snacks	20	1000	20,000.00
Total Cost			442,200.00
Contingency (10% of total amount)			44,220.00
Subtotal			480,420.00
10% COM overhead fees			48,042.00
Grand total			530,462.00

Justification of the Budget

The above budget items have been included based on the study design and the planned activities outlined in the proposal. The investigator has only considered estimations of expenditure on important activities. The amounts will also provide refreshments during debriefing with workers and clients involved from whom the data will be collected. The researcher will borrow recorders from other hospital projects at no cost.

Printing will be done at the investigator's place of work but the investigator will be required to contribute the toner as it is expected that protocol and final report color printing and

photocopying will demand a lot of toner. Significant amount of paper will be required to complete this project.

Airtime has been included because the investigator will need to communicate with her supervisors, MPH Tutor and COMREC. It is assumed that there may be other dissertation related activities that may demand money, hence inclusion of the contingent funds for that purpose. The investigator will need to source funding to cover for all the planned study activities because this dissertation does not have any special funding.

Appendix 12: Certificate of Ethical Approval



**CERTIFICATE OF ETHICS
APPROVAL**

This is to certify that the College of Medicine Research and Ethics Committee (COMREC) has reviewed and approved a study entitled:

P.09/19/2789 - Exploring Barriers to Cervical Cancer Screening among Women Living with HIV (WLWHIV) attending ART clinic at Nkhoma hospital, Malawi. by Beatrice Phakira Kabota

On 22-Nov-19

As you proceed with the implementation of your study, we would like you to adhere to international ethical guidelines, national guidelines and all requirements by COMREC some of which are indicated on the next page for your study

 _____ Dr. YB. Mlomba - Chairperson (COMREC)	22-Nov-19 _____ Date
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Approved by
College of Medicine

22-Nov-2019

(COMREC)
Research and Ethics Committee