HEALTH CARE WORKERS' ATTITUDES AND PRACTICES TOWARDS PEOPLE LIVING WITH HIV/AIDS AND THEIR UTILIZATION OF HIV AND AIDS SERVICES IN LILONGWE DISTRICT.

M.A (SOCIOLOGY) Thesis

By

LOT JATA NYIRENDA
Bsoc (Sociology)-University of Malawi, Chancellor College

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Chancellor College

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DECLARATION

I, the undersigned, hereby declare that this thesis is my own original work which has not been submitted to any other institution for similar purposes. Where other people's work has been used, acknowledgements have been made.

_____

Full Legal Name

_____

Signature

_____

Date:

CERTIFICATE OF APPROVAL

The undersigned certify that this thesis represents the student's own work and effort and has been submitted with our approval.

Signature:_____Date:_____

P. NTATA, PhD (Senior Lecturer)

Main Supervisor

Signature:_____Date:_____

C.P.N KAPONDA, PhD (Associate Professor)

Second Supervisor

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ABSTRACT

This study set out to describe the relationship between health workers' attitudes and practices and their utilization of HIV couselling and testing (CT) and post-exposure prophylaxis (PEP) in Lilongwe district. It was a survey that used a cross-sectional design and employed a functional approach to attitudes as its theoretical framework. Associations between utilization of CT and willingness to utilise PEP as dependent variables, and socio-demographics, attitudes and practices as independent variables were assessed using Pearson's Chi-square or Fisher's Exact tests. Eight in every ten of health workers reported that they had utilised CT at the time of the study. Negative attitudes and practices towards PLHA were still high amongst health workers. The study found that holding judgmental attitudes towards PLHA and having fear of HIV transmission made health workers less likely to utilise CT in general and VCT in particular. Fear of HIV transmission made health workers more willing to utilise PEP. The study further found that observing stigmatizing practices and holding negative attitudes towards disclosure did not make health workers less likely to utilise CT including VCT and PEP. Study results should however be interpreted with caution as social desirability bias might have played a role considering the design used. The study was however one of the first in Malawi and acted as a springboard for further research.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral
CHAM	Christian Health Association of Malawi
CRHCS	Commonwealth Regional Health Community Secretariat
CT	HIV/AIDS Counselling and Testing
DCT	Diagnostic Counselling and Testing
DHO	District Health Officer
HIV	Human Immunodeficiency Virus
HSA	Health Surveillance Assistant
ICRW	International Centre for Research on Women
JCE	Junior Certificate of Education
MoH	Ministry of Health
MSCE	Malawi School Certificate of Education
NAC	National Aids Commission
NGO	Non Governmental Organisation
PEP	Post Exposure Prophylaxis
PLHA	People Living With HIV and AIDS
PPS	Proportionate Probability Sampling
PSLCE	Primary School Leaving Certificate of Examination
QECH	Queen Elizabeth Central Hospital
REACH	Research for Equity and Community Health

RCT	Routine Counselling and Testing
SRS	Simple Random Sampling
USA	United States of America
USAID	United States International Development
VCT	Voluntary Counselling and testing
WHO	World Health Organisation

CHAPTER ONE

1.0 BACKGROUND

Health workers' attitudes and practices towards people living with HIV and AIDS (PLHA) have been characterized as uncaring in nature. Some studies document that health workers use both judgmental and blaming attitudes against PLHA and regard PLHA as dangerous people probably due to their potential to infect others (Reis et al, 2005; Hentgen et al, 2002; Talashek et al, 2007). In addition to having their own negative views about PLHA, health workers have also reported observing fellow health workers display stigmatizing practices as they interact or offer care to PLHA (Reis et al, 2005). Observing such practices can make people including health workers to shun HIV and AIDS services and be reluctant to disclose their HIV status (Sethosa and Peltzer, 2005; Kalichman and Simbayi, 2003; Paxton, 2002). Thus, unwillingness to disclose ones status may reflect high levels of stigma in a society (DeMatteo et al., 2002; Derlega and Barbee, 1998).

Health care workers are a very valuable resource and leaders in the fight against HIV and AIDS (Talashek et al., 2007) yet like any other member of the general community they are just as vulnerable to contracting HIV sexually (WHO 2006; Muula and Maseko, 2006). But, unlike members of the general community, health care workers especially

those working in direct patient care carry an additional occupational risk of contracting HIV through work-related exposure to body fluids of clients with HIV (Van Oosterhout 2007; Ippolito, 1999). As expected, more than any workforce, health care workers are uniquely affected by HIV and AIDS, as they are constantly confronted by death and illnesses on both a professional and personal level (WHO 2006; Talashek et al, 2007). In dealing with these experiences, health workers could easily project these feelings on their HIV and AIDS clients or they could ignore their own need to receive care if need be.

Exposure to HIV at professional and personal levels requires that the affected health workers use counselling and testing (CT) as well as post exposure prophylaxis (PEP), a factor that can be considered as a reversal of their care giving role. The two HIV and AIDS services are important because CT can serve as a prevention method as well as a gateway to HIV treatment, care and support (Corbett, 2006; Valdiserri, 2002; MoH 2004) while PEP is crucial when it comes to occupational exposure to HIV by health care workers (Van Oosterhout, 2007).

The extent to which health care workers in Malawi utilize CT is not known. Estimates from the Malawi Demographic and Health Survey (2004), show that for both men and women, amongst the general population, 83% were reported to have never tested for HIV despite knowing where to go for testing. Considering that health workers are part of the general population, it can be said that HIV testing levels amongst health workers may be low. As regards utilization of PEP by health workers, the rates are also not known. The major reason for this is that the service is relatively new in Malawi.

The World Health Organization (WHO) identifies stigma as one of the challenges preventing health care workers from utilizing HIV and AIDS services such as CT and PEP (WHO, 2006). Related studies also document that negative attitudes prevent people including health workers from utilizing HIV and AIDS services such as CT (Bishop et al, 2000; Chandra et al, 2003). It is argued that health workers may be reluctant to utilize CT and PEP for fear of being stigmatized in the way they have stigmatized PLHA or in the manner they have seen other health care workers stigmatize PLHA (WHO, 2006).

In Malawi, there is some evidence about how health workers' negative attitudes affect the utilization of HIV and AIDS services by other population groups such as PLHA (MANET, 2003). However, little is known about how such attitudes affect the utilization of HIV and AIDS services by health workers themselves (WHO, 2006). This study set out to describe the relationship between health workers' attitudes and practices and their utilization of HIV and AIDS services, particularly CT and PEP. Thus, the study set out to find out if there was a relationship between attitudes and practices (independent variable) and health care workers' utilization (dependent variable) of CT and PEP services. The study, which was a cross sectional survey of health care workers was conducted in Lilongwe district.

1.1 STATEMENT OF THE PROBLEM

In Malawi, little is known about utilization of HIV and AIDS services by health care workers despite their unique positioning and relatively easier access to these services. Studies have shown that negative attitudes and practices prevent people including health

care workers from utilising HIV and AIDS services such as CT and PEP. However, no study has been documented that addresses how such negative attitudes affect health care workers' utilisation of HIV and AIDS services such as CT and PEP. Identifying such a relationship will help in understanding the nature and context of these barriers to CT and PEP for this specific group of people in society.

1.2 GENERAL STUDY OBJECTIVE

The broad objective for this study is to determine how health workers' attitudes towards PLHA and other work-related factors influence health care workers' utilisation of HIV counselling and testing and post exposure prophylaxis services in Lilongwe.

1.2.0 SPECIFIC STUDY OBJECTIVES

The specific objectives of this study were to describe:

1. Health workers' attitudes towards PLHA and their relationship to the health workers' utilisation of CT and PEP.
2. Health workers' views about other health workers' practices towards PLHA and their relationship to the health workers' utilisation of CT and PEP.
3. Health workers' views regarding disclosure of HIV status and their relationship to the health workers' utilization of CT and PEP.
4. Health workers' views on fear of HIV transmission and their relationship to the health workers' utilisation of CT and PEP.

1.3 THEORETICAL FRAMEWORK

The study employed a functional approach to attitudes to explain the relationship between attitudes and utilisation of HIV and AIDS services particularly CT and PEP. Ribeaux and Poppleton (1978) define an attitude as a learned predisposition to think, feel and act in a particular way towards a given object or class of objects. Such an object or class of objects would include PLHA, HIV and AIDS services or an idea.

As a theoretical perspective, functionalism in Sociology and other social sciences has its roots in the writings of the French Sociologist, Emile Durkheim (1858-1917). The perspective applies a scientific method to the objective social world and uses an analogy between the individual organism and society (McClelland, 2000). Functionalists assert that the social world can be studied just like the physical world is studied.

In comparing society and an organism the perspective holds that social systems maintain equilibrium regardless of external shocks that may disturb the balance among social institutions. According to functionalists, socializing members of society into basic norms and values helps the social system to attain equilibrium. Following this approach, Sociologist Talcott Parsons conceptualized society as a collection of systems within systems: the personality system within the small-group system within the community system within society {Parsons 1951, cited in McClelland, (2000)}. When the functionalist analysis focuses on the individual, it is done to show how broader social forces mold individual behaviour.

Amongst his many contributions, Robert Merton, another functionalist, distinguished between manifest and latent functions. Manifest functions, he theorized, are those which are recognized and intended by actors in the social system and may represent motives for their actions. Latent functions are those which are unrecognized and thus, unintended by the actors. Merton also made a distinction between consequences which are functional to the society, in a positive way, those which are dysfunctional for the society and those which are neither functional nor dysfunctional (Mitchell, 1970; McClelland, 2000).

The functional approach to attitudes holds that attitudes are necessary because they permit the individual to achieve certain goals or value states. The functional approach to attitudes therefore looks at the purpose attitudes serve for people which is the promotion of people's wellbeing. According to McGuire {1969, Katz 1960 and Smith, Bruner and White 1956 cited in Keegan (2008)}, attitudes have at least four functions, namely; adaptive function, knowledge function, self-expressive function and ego-defensive function.

Firstly, adaptive function enables people to reach a desired goal and avoid things that are distasteful and allows the process of identification to occur. This function sees people as pleasure seeking, avoiding punishment or pain. Secondly, knowledge function of attitudes concerns the information people possess about the physical or social world. As a result, stereotypes are formed which help simplify the environment, because they determine what aspects of the world people attend to and what they ignore. Thirdly, according to the approach, attitudes have a self-expressive function. Attitudes express

people's need to tell others about themselves and to state their own mind. Through the expression of attitudes, people affirm their self-concepts by expressing personal values. Finally attitudes have an ego-defensive function. The expression of attitudes protects people from themselves and other people. Attitudes help to maintain people's self-image; people often find it painful to think how they have behaved. People cast themselves in a more positive mould, and dismiss bad behaviour on the overwhelming balance of their good points (Keegan, 2008; Herek and Capitanio, 1998).

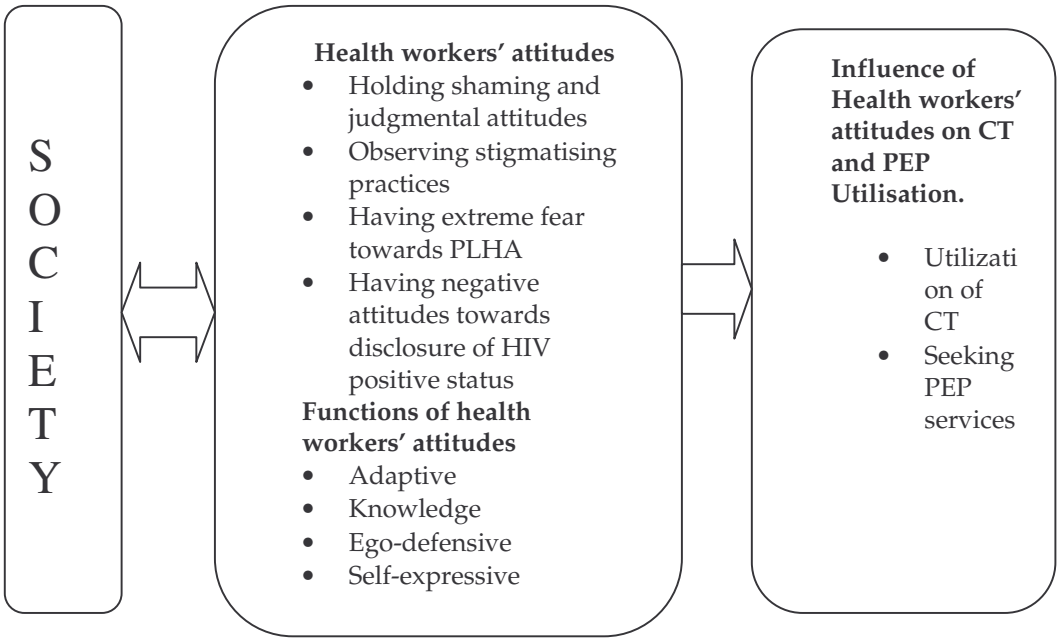
In relation to health workers' attitudes and utilization of CT, the attitudes have different functions which may have an impact on the utilization of the service. Holding shaming and judgmental attitudes may lead to less utilization of CT because health workers may think that they would get the same treatment should they test positive for HIV. Health workers may therefore want to adapt to the situation by not utilizing CT in order to avoid pain brought about by stigma targeted at those who test positive for HIV.

Also, by holding shaming and judgmental attitudes, health workers would be affirming their self-concepts by expressing their personal values (expressive function). With such values, health care workers may not utilize CT by believing that those with HIV and AIDS are those without the proper values such as those who are 'immoral'. Thus, utilising the services would be contradicting their belief that only those without proper values contract the virus. The ego- defensive function of attitudes would have similar effect as the adaptive function on the health workers.

Observing stigmatizing practices would play the adaptive and ego defensive functions. Health workers would be afraid of being subjected to similar practices. By having extreme fear of HIV, health care workers would be afraid of getting treated in the same manner. Having negative attitudes towards disclosure can be a reflection of negative attitudes such as stigma within society. So, such attitudes would play the same adaptive and ego-defensive functions. Health care workers would therefore consider different functions of such attitudes before making a decision about utilization of CT.

Although decisions about whether or not to utilize CT would be made at an individual level, such decisions would be molded by broader social forces as Talcott Parson postulated: having the personality system within the small-group system within the community system within the society (McClelland, 2000). Such social forces would include society's expectations that health workers should be good role models. Other social forces would include their working environment which would expose them to HIV. Such exposure would necessitate that the health workers should utilise PEP which has a component of CT that is offered for diagnostic purposes (see operational definitions, p.21). Attitudes held by the health workers would therefore play adaptive, self-expressive or ego defensive functions as they decide to utilise PEP. Following Robert Merton, it can be said that the consequences of holding such attitudes would be positively functional, dysfunctional or neither, depending on, among others, individual health workers and the context within which they work. Figure 1 presents the theoretical framework for the study.

Figure 1: Theoretical framework of relationship between attitudes and utilization of CT and PEP adapted from a Functional Approach to Attitudes.



Source: Theoretical Framework adapted from a Functional Approach to attitudes by Smith, Bruner and White (1956), Katz (1960) and McGuire (1969)

1.4 OPERATIONAL DEFINITIONS

1.4.1 Health care workers

In this study, health care workers refer to medical doctors, clinical officers, medical assistants, nursing and midwifery providers, laboratory technicians, radiographers, dental assistants, pharmacy assistants and Health Surveillance Assistants (HSAs). In the study, "health care workers" is used interchangeably with "health workers".

1.4.2 HIV Counselling and testing (CT)

In this study CT refers to all models of CT recognized by Malawi HIV/AIDS CT policy (2004). These are Voluntary Counselling and Testing (VCT), Routine Counselling and Testing (RCT) and Diagnostic Counselling and Testing (DCT).

Voluntary Counselling and Testing is a model of CT where one seeks to know his/her HIV status and without coercion or proxy proceeds to receive confidential counselling and testing for HIV. In this study, those who utilised CT because they just wanted to know their status were regarded to have utilised CT through the VCT model. Thus, of the many motivating factors for utilizing CT, "just wanting to know serostatus" was used as proxy VCT. The motivating factor was chosen as proxy because it was clear in showing that one utilised CT on voluntary basis.

Routine Counselling and Testing is a model of CT where the individual is counselled and tested routinely, and HIV counselling and testing is considered to be one of the routine interventions of the service being provided.

Diagnostic Counselling and Testing is a model of CT where the individual is tested for HIV as part of a diagnostic workup. This approach is used in such situations where HIV serostatus has a bearing on the treatment being provided or to be provided for the diagnosed condition.

1.4.3 Utilization of CT

Refers to an indication that one has gone through CT. In the study, respondents answered yes or no to a question about whether or not they had gone for counselling and testing. A health worker was deemed to have utilised CT if they said 'yes' to the question.

1.4.4 Occupational exposure

Refers to health care workers' exposure to HIV that occurs during the course of their duties. Aspects considered under the present study include needle stick injuries, body fluid splashes and cuts in the skin.

1.4.5 Post-exposure prophylaxis (PEP)

Medication given to health workers deemed to have been occupationally exposed to HIV. One continues on medication if tested HIV negative as part of PEP. Diagnostic HIV counselling and testing (CT) is therefore a component of PEP because HIV status has a bearing on whether or not one should continue or be started on PEP.

1.4.6 Willingness to utilise PEP

Refers to the intention expressed by a health worker to go through the PEP process including going through diagnostic couselling and testing (DCT) as part of PEP. The health workers were therefore expressing willingness to utilize DCT. PEP was included in this study because of the element of testing and counselling. As with CT in general, it was anticipated that attitudes would have a bearing on utilization of PEP because of the counselling and testing that is involved. The study focused on willingness to utilise PEP because it anticipated that not many health workers had actually utilised PEP as the service was relatively new.

1.4.7 Attitudes

In this study, attitudes refer to the following:

1.4.7.0 Judgmental attitudes

Refer to the view that people with HIV and AIDS are promiscuous and are getting punished by God.

1.4.7.1 Shaming attitudes

Refer to the view that PLHA or their relatives should be ashamed of being infected with and affected by HIV, respectively.

1.4.7.2 Attitude towards disclosure

Refers to willingness or unwillingness to tell supervisor about HIV status if tested positive, views on whether or not PLHA keep their status as a secret, whether or not the status of an HIV positive health worker should be made known to the public and whether or not a person should only tell others that they have HIV when they are sick.

1.4.7.3 Extreme fear of contagion

Refers to being afraid of the following: giving an injection to a person with HIV or AIDS, caring for a person with HIV or AIDS, dressing the wounds of a person with HIV or AIDS, putting a drip in someone who has signs of HIV infection, and performing surgical or invasive procedures on clients whose HIV status in not known.

1.4.8 Stigmatizing practices

Refer to giving less care/attention to patients, taking extra precaution in dealing with PLHA or those suspected of having HIV, requiring testing clients before surgery, using latex gloves for performing non-invasive procedures, testing clients without their consent, gossiping about a client and refusal to share utensils with PLHA.

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 Introduction

Studies reviewed were grouped into four categories. First were studies that focused on health workers' attitudes towards people living with HIV and AIDS (PLHA). Under this category, the review focused on judgmental attitudes, shaming attitudes and stigmatizing practices. Under the same category, the review also dwelt on studies focusing on health care workers' extreme fear of contagion and factors that promote or inhibit disclosure of HIV status.

The second category was that of studies on how negative attitudes affect utilization of HIV and AIDS services. Thirdly, literature on utilization of HIV and AIDS services by health care workers was reviewed. Finally, the review dwelt on studies that focused on the relationship between attitudes and utilization of HIV and AIDS services.

The researcher used a combination of different search terms to search relevant literature on the internet in relation to study objectives. The terms included counselling and testing, utilisation of couselling and testing, utilisation of post-exposure prophylaxis, HIV and

AIDS stigma, health workers' attitudes, barriers to couselling and testing, disclosure of HIV status, fear of HIV transmission, barriers to HIV disclosure, and relating attitudes and access. The same terms and study objectives were used to search for literature in the form of published and unpublished hard copies.

2.2 Search strategy

The researcher searched literature from: electronic data bases, hard copies (published and unpublished) and personal communication. The researcher employed the following search techniques and strategies to select literature relevant to study objectives:

- Electronic data bases and websites included: Pubmed and Medline, Google, Yahoo, Malawi HIV and AIDS Unit Website, Eldis, World Health Organisation website
- Chancellor College and Kamuzu College of Nursing Libraries
- Published and unpublished Literature from Research for Equity and Community Health (REACH) Trust.
- Personal communication with: Dr C. Kaponda, Director of Kamuzu College of Nursing Research Centre.

The researcher faced some challenges in searching literature mainly from electronic data bases. This was mainly due to problems with internet connections as the internet was in most cases very slow. Some journal articles were for sale which was another challenge. Under the prevailing circumstances the author feels the literature reviewed provided the context and background to the study.

2.3 Health workers' attitudes towards PLHA

Health workers' attitudes and practices towards PLHA is an area that has been extensively studied (Horsman and Sheeran, 1995). Most studies done on the topic conclude that health workers generally have negative attitudes and practices towards PLHA. First presented under this section is literature on judgmental and shaming attitudes as well as stigmatising practices.

2.3.0 Judgmental, shaming attitudes and stigmatizing practices

Many studies show that health care workers hold judgmental and shaming attitudes as well as stigmatizing practices. In a cross-sectional study by Reis et al (2005) amongst health care workers in Nigeria, 9% of the respondents refused admission of HIV patient, 59% agreed that people with HIV and AIDS should be on separate wards while 40% indicated that HIV positive health workers should not work in health care requiring patient contact.

In the same study, which used an interviewer- administered questionnaire in four Nigerian states and aimed at investigating health care professional practices and attitudes towards people with HIV/AIDS, 20% of respondents stated that many people with HIV

and AIDS behaved immorally and deserved the disease. With a sample of 1021 physicians, nurses and midwives, the study also found that health workers with less adequate training in HIV treatment and ethics were more likely to report negative attitudes towards PLHA. While the study might have succeeded in bringing out a picture of health workers' attitudes and practices towards PLHA in Nigeria, it only focused on three cadres of health workers.

Findings from Reis et al (2005) study in Nigeria are similar to what other investigators found out in other countries. In a study by Hentgen et al, (2002) in Madagascar 20% of respondents which included physicians, midwives, nurses, medical students and nursing auxiliaries indicated that AIDS patients should be isolated in quarantine. The study was aimed at assessing the feasibility of voluntary counselling and testing for HIV infection in antenatal care and used a self-administered questionnaire to collect data at Tamatave hospital and surrounding antenatal centres.

A cross sectional survey in Rwanda by Rahlenbeck (2004) found that male health workers and those who scored high on knowledge had more positive attitudes toward PLHA than did women and those with less knowledge. In the study of 350 health workers in six randomly selected rural and semi-rural communities, the investigator reported that men and younger respondents had better knowledge than women and older participants. By indicating gender differences in attitudes held as well as the influence of knowledge on attitudes, the study added value to literature on health workers' attitudes towards PLHA. The study however left out health workers from urban areas in the selection of its

respondents. Health workers from urban areas may hold different attitudes and express different practices towards PLHA as their socio-cultural and economic environments, which may inform their attitudes and practices, are different.

While most studies report negative attitudes amongst health workers, some studies show that health workers have positive attitudes towards care of patients with HIV. Mungherera et al (1997) study in Uganda found that health workers had more positive attitudes towards the care of patients with HIV disease. In the study which had physicians and nurses as respondents, 80% of physicians and 59% of nurses reported referring patients for counselling with a similar trend in referring patients for testing. The study was conducted amongst hospital-based health workers in Kampala. The study however only captured views of physicians and nurses, leaving out other health workers.

Walusimbi and Okonsky (2004) study also done in Uganda reported results similar to those of Mungherera et al (1997) study. In the study which set out to explore knowledge and attitudes of nurses and midwives at one hospital using a questionnaire, Walusimbi and Okonsky (2004) found that health workers had positive attitudes towards PLHA. This study was limited in that it only had nurses and midwives from one hospital as respondents. It can be said however that health workers in Uganda may be more likely to hold positive attitudes towards PLHA considering that the country took the lead amongst many countries in sensitizing people about HIV and AIDS. Such early sensitisation programmes might have influenced health workers' attitudes in the country. It is however

difficult to conclude that the studies reviewed are representative of Uganda as they were not based on population based samples.

In Malawi, very little is known about health workers' attitudes and practices towards PLHA from the perspective of health workers. Studies focusing on attitudes and practices of health workers' towards PLHA in Malawi are scarce. One study that had health care workers as respondents is a qualitative descriptive study done in two rural districts of Malawi by Talashek et al (2007). The study found that some health workers in Malawi held judgmental attitudes. The study used individual interviews, focus groups and unstructured observations. It reported that some health workers held the belief that AIDS patients brought the disease on themselves through immoral behaviour. Some of the health workers observed that "AIDS is common due to negligence and promiscuity" (Talashek et al 2007, p.46). The study investigators assert that judgmental attitudes by health care workers towards PLHA indirectly affected HIV prevention by health care workers themselves.

Although this study highlights attitudes held by health workers, the methodology employed makes generalization of its findings difficult. However, the study was one of the first to focus on health workers' attitudes from the perspective of health workers in Malawi. Also, the study points to the potential effect of judgmental attitudes amongst health workers in relation to HIV prevention amongst health care workers.

Although studies on health care workers' attitudes towards PLHA with health care workers as respondents are rare in Malawi, more is known on the attitudes and practices of health care workers from the perspective of other people. A qualitative study in selected districts by MANET (2003) with PLHA as respondents reported that PLHA frequently encountered poor attitudes and quality of care from health care workers providing care. The study, which used in-depth interviews and focus group discussions in selected districts of Malawi, recommended that health workers needed to be supported in their work places to improve their relationship with PLHA.

These findings are in contrast with what another qualitative study by Nyirenda et al (2006) found out. The study which investigated barriers and enablers to access and adherence to ART in Thyolo district found out that while PLHA experienced negative attitudes from the community, they (PLHA) reported that health workers were very supportive to people on ART. The differences in the findings may be due to the periods when the two studies were conducted. While the study by MANET was done in 2003, Nyirenda et al's study was done in 2005; by this time, health workers in Thyolo were more exposed to PLHA than health workers in other districts of Malawi due to the ART programme spearheaded by Medicines sans frontiers (MSF) in the district.

Thus, more people were accessing ART in Thyolo than in other districts of Phalombe, Lilongwe, and Mzimba where the MANET's (2003) study took place. This might have changed health care workers' attitudes in Thyolo as the disease might have been viewed as a less fatal one. Furthermore, the two studies asked different questions and focused on

different issues. While the MANET's (2003) study focused on PLHA in general, Nyirenda et al's (2006) study focused on PLHA who were either on ART or had dropped from the treatment.

Sanudi's (2003) study focusing on stigma experienced by TB patients in Lilongwe urban reported that 75% of respondents indicated that they were not subjected to stigmatizing attitudes. With at least 70% TB patients co-infected with HIV in Malawi, most of these patients might as well have had HIV. It appears therefore that patients, especially PLHA who are put on care, experience more positive attitudes than those who are not yet on care.

Studies show that gender plays a role in how stigmatizing practices are experienced by people as men and women experience practices differently according to specific social contexts (Nyirenda et al, 2006a). In some matrilineal societies (where a man moves to a woman's home when married) men may be chased away from homes when they fall sick as they no longer remain productive. On the other hand, men may run away from their wives and marry other women when the women fall sick. In societies where the woman follows the man for marriage, it is women who may be chased away when they fall sick or may run away and leave their sick husbands behind (Nyirenda et al, 2006b).

But in general, women tend to experience more stigmatizing practices than men, a view supported by other studies. For instance, Kalibala (2000) reported that in Zimbabwe, it was observed that HIV positive women, who disclosed the status to their husbands, were

chased away from their houses and were replaced by other wives. Some women were even beaten up. In Pakistan divorce and broken engagements appeared to occur more frequently among female T.B patients Liefooghe, 1998 cited in Sanudi, (2003), while in India Uplekar and Rangan, {1996 cited in Sanudi, (2003)} found out that society always rejected female T.B patients. The female patients received no support from their husbands and were often divorced or sent back to their natal homes.

Review of literature on health care workers' attitudes towards PLHA shows that a lot of studies have been done on the topic in other countries. In Malawi, little is known on the topic. Studies that touched on the topic in Malawi (e.g. Talashek et al, 2007) did so in passing as they had different aims altogether and the qualitative methods used made it difficult to generalize findings. This cross sectional study therefore filled this knowledge gap by describing health care workers' attitudes and practices towards PLHA with the former as respondents. In line with its aim, the study described the relationship between these attitudes and practices and health care workers' utilization of HIV and AIDS services particularly CT and PEP.

2.3.1 Extreme fear of contagion

World Health Organisation estimates that around 2.5% of HIV cases in health care workers around the world are a result of needle-stick injuries (WHO, 2002 cited in WHO, 2006). As patients often present with advanced disease, a high HIV viral load is likely and occupational injuries therefore carry a relevant risk of HIV transmission for health

care workers (Van Oosterhout 2007). Bearing this in mind, health care workers express great fear of contracting HIV through occupational exposure.

Walusimbi and Okonsky, (2004) in Uganda found that 47% of respondents (n=477) had great fear of contracting HIV. However, the investigators assert, knowledgeable respondents had less fear of contagion. The study which explored knowledge and attitudes of nurses and midwives at one hospital using a questionnaire, reports that respondents displayed positive attitudes towards patients with HIV and AIDS despite fear of contagion.

Another study by Dieleman et al (2007) conducted in Zambia explored the impact of HIV and AIDS on health workers and described their coping mechanisms. Using self administered questionnaires, in-depth interviews and focus group discussions, the study found that at least 76% of respondents were afraid of HIV infection in their work place.

In South Africa, Ncama (2000) study reported that trauma nurses perceived themselves to be at risk of acquiring HIV from their working environment despite the available precautionary measures. The qualitative study which aimed at exploring the fear of contracting HIV among trauma nurses in the province of Kwazulu-Natal found that needle stick injuries appeared to be the main concern for the nurses. In Malawi, findings from a study by Mondiwa and Hauck (2007) also showed midwives considering their occupational risk to be high. The qualitative study which described Malawian midwives'

perceptions of occupational risk to HIV infection also showed that the midwives considered their working environment to be that of fear.

Literature shows that health workers are generally afraid of contracting HIV through occupational exposure. It can be said that the fear expressed by health workers is sometimes reflected in how they handle patients. How patients, especially those with HIV and AIDS, are handled can be interpreted as stigmatizing attitudes by most patients. Following the functional approach to attitudes, health care workers expressing more fear in their interaction with PLHA may be less likely to utilize HIV and AIDS services for fear that they may be subjected to the same fear when tested HIV positive. Thus, such fear would be playing an adaptive function as explained in the theoretical framework.

2.3.2 Factors promoting or inhibiting disclosure of HIV status

Disclosure of secrets including HIV status, mostly takes place in a trusting environment (DeMatteo et al., 2002; Derlega and Barbee, 1998). A study by Derlega et al (2004) in USA found that privacy, self-blame and fear of rejection were some of the reasons why people chose not to disclose their status. The survey which examined the relative importance of reasons for HIV disclosure/nondisclosure amongst 145 men and women living with HIV and AIDS found that catharsis, a will to duty and having a close /supportive relationship were some of the reasons that influenced HIV disclosure.

The above findings by Derlega et al (2004) are similar to what Sethosa and Peltzer (2005) study found in South Africa. The study was aimed at evaluating HIV counselling

and testing, self disclosure, social support and sexual behaviour change among HIV reactive patients among rural sample of HIV reactive patients. According to the study, major reasons for not disclosing HIV status were: being afraid of negative reactions, fear of discrimination, fear of violence, and concerns about confidentiality. The results showed social support being significantly related to disclosure of HIV status. In Zimbabwe, Kalibala (2000) study showed that women who disclosed their HIV status to their husbands were chased away and replaced by other wives.

Chipeta (2008) reports that in Malawi, factors that may promote or inhibit disclosure of HIV status include cultural norms about HIV disclosure, HIV-related stigma, lack of confidentiality and gossip; availability of support; gender related power inequality; motherhood norms; implication of HIV disclosure on sex and procreation; HIV testing and disclosure context and health systems factors. In most cases, such factors make people to be reluctant to let other people know about their HIV status.

Factors that inhibit or facilitate HIV disclosure have been adequately covered in literature. One category of factors is that of negative attitudes and practices towards PLHA. Thus, stigmatizing practices, shaming attitudes and judgmental attitudes that PLHA are subjected to can make other people not to disclose their HIV status. People's attitudes towards disclosure of HIV status can therefore be a reflection of how prevalent negative attitudes and practices are in a society. People with negative attitudes towards disclosure can be said to be more likely to perceive negative attitudes and practices in society. Such people would be less likely to utilize HIV services such as CT for fear of

being subjected to the negative attitudes which they perceive. Such attitudes towards disclosure would be playing an adaptive function according to the theoretical framework for this study.

2.4 How negative attitudes and practices affect utilization of HIV and AIDS services

Many studies have documented how negative attitudes affect the use of HIV and AIDS services like CT. Such attitudes lead to delay in accessing CT, thereby leading to further transmission. They affect people's responses to CT and affect people's decisions to access care such as ART. The attitudes also affect the decision to disclose one's status which may lead people not to access care or to delay in accessing care (Chesney and Smith, 1999).

In a cross sectional survey by Ding et al (2005) among a probability sample of noninstitutionalised HIV-infected individuals and their main HIV care physicians in USA it was found that HIV-positive injecting drug users (IDU) had late access to ART. The investigators concluded that negative attitudes may lead to less than optimal care for IDUs and other marginalized populations. Similar findings are reported in a study by Varas-Diaz (2005) that employed qualitative methods. The study aimed at investigating the key role of social interaction in the process of stigmatization found out that stigmatizing attitudes resulted in PLHA not accessing health services.

In another study, Yang et al (2005) in Beijing, China, conducted in-depth interviews with key informants and reviewed existing legislation and policy. The study found that

stigmatising attitudes hindered PLHA from accessing health services and identified legislative and policy gaps that allowed such attitudes to occur in practice. Other studies show that some HIV-positive health workers remain in hiding when they perceive such stigmatizing attitudes (Dieleman et al., 2007; Baggaley et al., 1994).

Although negative attitudes and practices are known to militate against efforts to prevent the spread of HIV and AIDS, some studies show that such attitudes and practices can actually help to prevent the spread of HIV and AIDS. For instance, Konde-Lule (1995) reported that stigmatisation of PLHA and the distress resulting from many deaths in communities had made people to refrain from risky behaviour in Uganda. But more evidence shows that negative attitudes frustrate efforts to deal with HIV and AIDS than the evidence indicating otherwise (WHO, 2006). Moreover, controlling the spread of HIV through expression of negative attitudes would be an unwelcome approach as it would violate people's rights.

2.5 Utilisation of HIV and AIDS services by health workers

Studies report different levels of utilization of HIV and AIDS services such as condom use, testing and counselling, post-exposure prophylaxis and antiretroviral therapy. In Zambia, for instance, a study by Kiragu et al (2007) showed that most health workers did not utilize counselling and testing because they did not feel to be at risk. Using self administered questionnaires, the study, aimed at assessing HIV and AIDS risk-taking and status awareness amongst health workers in five urban hospitals in two provinces reported that only 33% of health workers had tested for HIV. This was despite their

greater level of education than the general public, and their greater risk of exposure occupationally.

The investigators concluded that although respondents were health workers, were in marital unions, and seen as being at lower risk, they needed to be targeted with behavioural change interventions. Although the study investigated the utilization of CT amongst health workers, it was only conducted in urban hospitals hence may not represent utilization of HIV services by health workers in rural areas.

Kiragu et al (2007) study findings were however supported by another study done in Zambia by Dieleman et al (2007). The latter study reported that HIV positive health workers remained in hiding by choosing not to talk about their illness hence suffered in silence. The study employed self administered questionnaires, in-depth interviews and focus group discussions as study methods. It can be said that HIV positive health workers remained in hiding for fear of negative responses, highlighted in this review, from fellow health workers and members of the general public. The use of several methods by the study enriched literature on health workers' attitudes to HIV/AIDS services in general and PLHA in particular.

Dieleman et al's (2007) study findings about most health workers remaining in hiding in Zambia and Kiragu et al's (2007) study results about most health workers' unwillingness to access HIV testing are similar to what Baggaley et al's (1994) study found out in that country at least thirteen years before. In their investigation of how HIV affected

counsellors in their personal and professional lives, Baggaley et al (1994) found that out of the 101 respondents, 72 were worried about their HIV status but only 24 had had a test while 53 did not want to know their status. The investigators concluded that counsellors, especially women needed support in dealing with personal sexual lives.

In investigating health workers' utilization of CT, however, the studies reviewed did not specify the models of CT under study. While people including health workers may be afraid to utilise CT because of negative attitudes and practices, such attitudes may have different effects on different models of testing. For instance, such attitudes and practices may affect utilization of VCT more than they may affect the utilization of diagnostic or routine CT. This study filled the knowledge gap.

Literature generally shows low utilization of PEP services in Africa. Although a large proportion of the world's HIV infected population lives in Sub Saharan Africa, only 4% of the world's cases of occupational HIV infection are reported from these regions. This is in contrast to the 4% of the world's HIV infected patients living in Western Europe and North America but with 90% of documented occupational HIV infections (Ippolito 1999; AIDS epidemic update 1999).

In Malawi, Van Oosterhout et al (2007) conducted a study aimed at evaluating HIV-PEP programme for occupational injuries and investigating the occurrence of occupational injuries, awareness and utilization of the programme in Queen Elizabeth Central Hospital. In-depth interviews with nurses and file reviews were the study methods. The study reported that of 29 clients who reported occupational injuries, 19 started PEP. It

was also found out that attendance of scheduled follow-up visits was poor, and few HIV test results after completion of PEP were obtained. Interviews with nurses revealed a high incidence of occupational injuries, but many did not report for advice about PEP; mostly because of unawareness of the programme and reluctance to be tested for HIV. Reluctance to test for HIV by the nurses could be a reflection of negative attitudes within the health system as many studies have reported (WHO, 2006).

2.6 Relationship between attitudes and utilization of HIV and AIDS services

This review has shown how negative attitudes can affect people's utilization of HIV services. Studies however have not described the relationship between health workers' attitudes and practices and their utilization of HIV services. One study (Kalichman and Simbayi, 2003) described a similar relationship amongst members of the general population in South Africa. The study conducted in South Africa examined the relation between HIV testing history, attitudes towards testing, and HIV stigmas in a black township in Cape Town. Using anonymous self administered venue intercept surveys at multiple community venues, the study with both men and women as respondents found that individuals who had not been tested for HIV and those tested but who did not know their results held significantly more negative testing attitudes than individuals who were tested, particularly people who knew their test results.

Compared to people who had been tested, individuals who were not tested for HIV demonstrated significantly greater AIDS related stigmas; ascribing greater shame, guilt, and social disapproval to people living with HIV. The study concluded that interventions

to reduce AIDS stigmas would probably decrease resistance to seeking VCT. Since no studies have described such a relationship amongst health workers, the present study filled this knowledge gap.

2.7 Major gaps in the literature reviewed

Most literature reviewed used cross sectional study designs and shared the weaknesses of all cross sectional studies. Cross-sectional designs do not always show clearly the direction of causal relationships. It is thus difficult to make causal inferences (Levin 2006; Singleton et al, 1993; Horsman and Sheeran, 1995). It is difficult, for instance to ascertain that particular negative attitudes are responsible for people not accessing particular HIV services. Also, results obtained through cross-sectional designs only provide a snap shot of the situation; thus, different results may be found if another timeframe is used (Levin 2006).

The other limitation is that surveys, which were used by most reviewed studies, are susceptible to reactivity; there is a tendency by respondents to give socially desirable answers to sensitive questions. Thus it can be said that the results obtained by most studies were based on reported and not observed behaviour. Consequently, measurement error may be produced by respondents' lack of truthfulness, misunderstanding of questions and inability to recall past events accurately and the instability of opinions and attitudes.

Also, a brief encounter during the administration of surveys does not provide a very good understanding of the context within which behaviour may be interpreted over an extended

period of time (Singleton et al, 1993). The other challenge with most of the literature reviewed is that the studies were not based on any theory. It was also difficult to make a comparative analysis of the studies because the tools used by the different studies were not standardised.

It can be said however that, not withstanding the short comings of the designs used by the studies, literature reviewed showed that health workers generally had poor attitudes towards PLHA. Literature also demonstrated that negative attitudes towards PLHA acted as a barrier to accessing HIV services such as counselling and testing. However, none of the reviewed studies set out to relate the attitudes held by health workers to utilization of HIV and AIDS services by the health workers. It is not that the studies failed to show such a relationship but that the studies were not aimed at doing that.

While sharing all weaknesses of cross sectional studies reported in literature, the present study was valuable for the following reasons: first, the study related attitudes to utilization of HIV and AIDS services. It is necessary to understand this relationship in order to carry out meaningful interventions. For instance, interventions aimed at encouraging health workers to access HIV services can only focus on negative attitudes such as stigma if it is found that people with stigmatizing attitudes are less likely to utilize HIV and AIDS services. This was in line with what Cohen and Trussell (1996) assert, that, to increase the likelihood of success, interventions need to be culturally appropriate and locally relevant, reflecting the social context within which they are

embedded. Thus, interventions should be designed with a clear idea of behaviors to be changed.

In describing this relationship, the study did not intend to show causality as the study design employed could not allow for that. Thus, the study did not set out to show whether or not negative attitudes prevented people from utilizing HIV and AIDS services. Instead, the study focused on whether or not people with negative attitudes are less likely to utilize HIV and AIDS services.

Secondly, unlike most studies reported in literature, this study was based on theory. The functionalist approach used however shares the weaknesses of the functionalist theory. One of the weaknesses is that the theory tends to explain the factors leading to a specific behaviour or action in retrospective terms; the theory is weak in predicting behaviour. In the present study however, the theory was used as both testing and holding of specific attitudes had already taken place. Thus, the theory was used to try and explain why health workers might have utilized the HIV and services or not. The study also managed to focus on more cadres of health care workers than most studies reported in literature. Finally, the study was one of the first to focus on health workers in Malawi, thus acted as a springboard for further research.

CHAPTER 3

3.0 METHODOLOGY

3.1 Introduction

The study was part of a larger research project investigating health care workers' access to HIV and AIDS prevention, treatment care and support services in Malawi. The larger project, funded by World Health Organisation (WHO) was implemented by Research for Equity and Community Health (REACH) Trust in collaboration with the Malawi Ministry of Health, Centres for Disease Control- Malawi and The Lighthouse Clinic in Lilongwe. The project was implemented in Nsanje, Blantyre, Thyolo, Machinga, Lilongwe, Mchinji, Salima, Mzimba and Nkhata-Bay districts. The study used qualitative methods (in-depth interviews) in Nsanje and Mchinji districts. Quantitative methods (structured questionnaires) were used to collect data from Blantyre, Thyolo, Machinga, Lilongwe, Mchinji, Salima, Mzimba and Nkhata-Bay districts.

While the larger study investigated health care workers' access to HIV and AIDS prevention, treatment care and support services in Malawi, this thesis had a different research question. It sought to describe the relationship between health workers' attitudes and practices and their utilization of HIV and AIDS services in Lilongwe district. The study used data from the larger study collected from Lilongwe district in May, 2007. The

thesis used only quantitative data. The research team had already collected qualitative data by the time the team reached Lilongwe so qualitative methods could not be used in Lilongwe. The researcher also felt that the quantitative data collected would still meet the objectives of the study. The researcher was amongst those that planned and implemented the larger survey. The research design presented below is therefore that of the larger study.

3.2 Study design

A cross-sectional design was used for the study. This is a design in which data on a sample or "cross section" of respondents chosen to represent a particular target population are gathered at essentially one point in time (Singleton et al, 1993). By "one point in time" is not meant that respondents are interviewed or that self administered questionnaires are collected simultaneously. Rather, the data are collected in as short a time as is feasible, say, two months.

3.2.0 Strengths of the cross-sectional design

A cross-sectional study design is less expensive as it takes a short time to implement. The design was therefore chosen considering the inadequate resources available. Since the sample for study is taken from the entire population, the design can estimate prevalence of outcome of interest (Levin 2006; Singleton et al, 1993). For instance health care workers holding particular attitudes and utilizing CT in Lilongwe district can be estimated.

According to Singleton et al (1993), "surveys offer the most effective means of social description and can provide extraordinarily detailed and precise information about large heterogeneous populations", p252. Further, surveys can cover wide ranging topics, a feat that can not be accomplished by other research approaches such as experiments. Thus, while an experiment usually will address only one research hypothesis, many research questions can be included in a single large-scale survey with data yielding unanticipated findings or new hypotheses. It was therefore possible in this study to cover questions on utilization of CT and PEP, and on health workers' attitudes. In interpreting the study findings however, some limitations of the cross-sectional design presented below, should be noted.

3.2.1 Limitations of the study design

Cross-sectional designs do not always show clearly the direction of casual relationships. It is thus difficult to make causal inferences (Levin 2006; Singleton et al, 1993) Thus, it is difficult using the study design to determine whether holding particular attitudes leads to health workers not utilizing CT or PEP, or vise versa. This study focused on whether or not people with negative attitudes are less likely to utilize CT and PEP. Unlike experiments which eliminate plausible rival explanations through randomization and other direct control procedures that hold extraneous variables constant, casual inferences from survey research are made with les confidence than inference from experimental and other longitudinal studies (Horsman and Sheeran, 1995; Singleton et al, 1993).

Also, results obtained through cross-sectional design only provide a snap shot of the situation; different results may be found if another timeframe is used (Levin 2006). Like

all surveys, the cross-sectional design, while flexible with respect to topics and purposes of research, is highly standardized. They are therefore less adaptable than experiments and other approaches in that it is difficult to change the course of the research after the study has begun.

The other limitation is that surveys are susceptible to reactivity; there is a tendency by respondents to give socially desirable answers to sensitive questions. Again, surveys rely almost exclusively on reports of behaviour rather than observations of behaviour. Consequently, measurement error may be produced by respondents' lack of truthfulness, misunderstanding of questions and inability to recall past events accurately and the instability of opinions and attitudes. The final limitation that can be cited is that the brief encounter during the administration of a survey does not provide a very good understanding of the context within which behaviour may be interpreted over an extended period of time (Singleton et al, 1993).

3.3 Study instruments

The survey used structured questionnaires to collect data from respondents. All categories of attitudes as defined by this study were included in the questionnaire. Most questions were adapted from a report by International Centre for Research on Women (Nyblade and Quarrie, 2006). The study questions had been tested amongst health workers in Tanzania and Ethiopia. The questions were adapted to health workers in the Malawian context by pre-testing the questionnaire at Mitundu Rural Hospital in Lilongwe, a health facility not included in the study. All cadres defined as health workers by this study were

targeted during pre-testing. The pre-testing happened during training of research assistants who participated in the revision of the questionnaire.

During revision of the questionnaire, attention was paid to, among other issues, response rate to sensitive questions, confusion as to the meaning of the questions as well as time taken to complete the interview. These were the measures taken to contribute to reliability and validity of the instrument. Use of the results from the study should bear this in mind.

This thesis was based on specific questions in the questionnaire which were as follows: question 4.5 on fear of HIV transmission, 4.8 on willingness to utilize PEP and 5.7 on utilization of CT. Other questions were 7.0 and 7.2 on attitudes towards PLHA, and 7.2.9, 7.3.1, 7.3.4 and 7.3.7 on disclosure (see appendix 1: questionnaire, p.91). The questions dealt with whether or not the respondents had utilized CT and whether or not they were willing to utilize PEP. The questions also focused on health workers attitudes towards PLHA and towards disclosure of HIV positive status.

3.4 Sampling

3.4.0 Sampling methodology

The determination of sample size presented in this section is that for the larger study upon which this thesis was based. The sample size for the survey was based on the fact that the survey intended to assess the coverage levels of accessing CT, PEP, or ART services. Hence, the following formula for calculating sample size for a single proportion

was used to derive a sample size of respondents taking into account the design effect of the three stage sampling methodology as follows:

$$n \geq \frac{k(p(1-p)z^2}{d^2}$$

Where:

n is the desired sample size

k is the design effect = 3 as there are 3 stages of sampling

p is proportion of the population having a particular characteristic of interest, in this case the proportion of health workers accessing the services. Since a single proportion is required, and that we did not know the level of access to services, we used a safety value of 0.5 or 50%

d is the precision (error margin), set at 5.5%

z is standard normal deviate normally set at 1.96 for the 95% confidence interval

With a level of precision of 5.5%, it was determined that 120 health workers would be selected from each of the 8 districts selected for the larger study. There was over sampling of respondents from Lilongwe district because the study team expected more health workers from the district. The other urban districts of Blantyre and Mzuzu were also over sampled. Thus, 200 health workers were sampled from Lilongwe district.

3.4.1 Sampling of health facilities and respondents from Lilongwe district

Since the first stage of sampling was that of districts and Lilongwe was already selected, this section will dwell on the second and third stages of sampling; namely, the sampling

of health facilities and respondents from the facilities, respectively. In the second stage of sampling, five health facilities were selected from Lilongwe district stratified by ownership; that is, Government or Christian Health Association of Malawi (CHAM).

Government facilities were grouped into two, namely; urban hospitals and rural hospitals/health centres whereas CHAM facilities were grouped into one category. Two facilities were randomly selected from a list of CHAM facilities that were providing CT and/or ART at the time of the study. Government facilities were also randomly selected. Guided by this consideration, the following health facilities were selected for the study, as captured below (Table 1).

TABLE 1: HEALTH FACILITIES SELECTED FOR THE STUDY

Government facilities	**CHAM facilities**
Kamuzu Central Hospital	Likuni Mission Hospital
Kabudula Rural hospital	Nkhoma Mission Hospital
Nathenje Health Centre	

Kamuzu Central Hospital (KCH) is from the urban area while Kabudula Rural Hospital and Nathenje Health Centre are from the rural area.

The third level of sampling was the selection of health workers for interviews after stratifying by cadre. Health workers were listed according to cadre and then according to gender and were randomly selected from each cadre. The number of health workers selected was proportional to the number of health workers in that cadre. The sampling frame for the study included all health workers as defined by this study.

3.4.2 Identification of subjects

Identification and recruitment of persons to be interviewed was facilitated through close collaboration with people in charge of the health facilities. The number of health workers sampled from the selected health facilities was proportional to the total number of health workers from the selected facilities. To recruit subjects from the selected health facilities, the researcher obtained the number of health workers at that particular facility for each cadre from which respondents were selected using systematic random sampling. The selected respondents were approached with the facilitation of someone assigned by the director of the health facilities. After identifying the subjects, consent was negotiated with the prospective respondents.[1]

3.5 Data collection

Questionnaires were filled out by enumerators in face-to-face interviews with respondents. This was advantageous in many ways. According to Shingleton et al (1993), face-to-face interviews ensure a high response rate. This is possible because of the attractiveness of being interviewed and the difficulty of turning down a request presented in person. The response rate is also increased as the importance and credibility of the research are conveyed best by a face-to-face interviewer who can show identification and credentials (Shingleton et al, 1993). A high response rate makes less bias to be introduced into the data as a result of nonparticipation of sampled persons.

The use of face-to-face interviewers in this research proved very helpful as most respondents were reached after making several appointments with them considering their

[1] See section 3.6: ethical considerations, for details on how consent was negotiated.

busy schedules in a context where health care workers are in short supply. However, despite making several attempts to schedule interviews with some health workers, it was not possible to conduct the interviews. Such health workers were either too busy attending to patients or were out to participate in training and other workshops and meetings on the days of interviews.

The face-to face interview was also applied because most interviews lasted for at least one hour. Considering their busy schedules and sheer unwillingness by some respondents to participate in the survey, they would not take that much time to fill out the questionnaire. The face-to-face interviewing also accorded the opportunity to the enumerators to clarify some questions in cases where the respondents did not understand. Furthermore, interviewers easily utilized the question format in which certain questions were skipped when not applicable to particular respondents, a format that would easily confuse respondents if the questionnaires were to be self-administered. This could not be possible in self-administered questionnaires where questions requiring clarification may just be skipped (Shingleton et al, 1993).

One limitation of the face-to-face interview method is the difficulty of locating respondents when the interviewer first calls. In case of health workers, most of them were either busy with patients or were on another (night) shift when first visited during the day. Some interviews were actually conducted during the night to target health workers on the night shifts.

The other limitation of the method is the bias that may be introduced into the data by the interviewers. For instance, they may fail to follow the instructions for filling out the questionnaires or may suggest answers to respondents. Bias may also be introduced through the reaction of the respondent to the interviewer's gender, tribe, and manner of dress or personality (Shingleton et al, 1993). These challenges were anticipated and addressed during training of the enumerators.

A survey team of 8 people was formulated. Out of the eight, two team members, including the researcher, supervised the team. Apart from doing supervision, the supervisors also collected data. All enumerators held a first degree from the University of Malawi and had experience in conducting social research. Alongside the supervisors, the enumerators were trained for 10 days in the survey methodology, social research ethics, and administration of survey tools. The study team was also trained in basic knowledge about ART, CT and PEP.

3.6 Ethical considerations for projects involving human subjects

To ensure adherence to research ethical standards, the study was approved by the National Health Sciences Research Committee. Before recruitment of study participants, all study staff were trained in study protocols and measures to protect the rights of human subjects. The research team has extensive field experience conducting quantitative and qualitative research in HIV and hence is experienced and understands the need for sensitivity and confidentiality.

The study team explained the purpose of the study and informed the participants that participation was voluntary. Throughout the conduct of the research, investigators and study team ensured that the rights of all individuals involved in the research were protected. Names or other personal information were not attached to the data collected thereby ensuring anonymity of respondents. Respondents were told that the information they provided would not be linked to any particular health care worker and shared with their employers. Only the researchers had access to the data.

The team also explained what participation in the research entailed to any potential subjects. Efforts were made to ensure that respondents were not in any way forced to talk about their HIV status. Respondents were informed through the consent form which they signed; that they were free to withdraw from the interview at any point during the interview (see appendix 2: consent form, p108). The researchers informed respondents that they were also free to decline from answering any questions that they did not want to answer.

They were also informed that withdrawing from the interview or declining to answer some questions had no negative consequences for the health care worker involved. They were however told about the benefits of the research; that the findings would help in the improvement of health service delivery to health care workers in Malawi. Interviews for the study were conducted at a private place convenient to the respondents. Only individuals who understood this information and gave their informed consent to participate were recruited into the study.

3.7 Data processing and Analysis

Data entry and cleaning was done in Epi Info version 6d. Check code programmes were built to reduce data entry errors. Further consistency checks were done before data analysis. Analysis was guided by the study objectives. Descriptive statistics on utilization of CT, willingness to utilise PEP, attitudes and practices as well as demographic characteristics of sampled population were done using both Epi Info version 6d and Statistical Package for Social Scientists (SPSS) version 11.

Associations between utilization of CT and willingness to utilise PEP as dependent variables, and socio-demographics, attitudes and practices as independent variables were assessed using Pearson's Chi-square or Fisher's Exact tests.

The chi square measures association between nominal variables and was appropriate for this thesis because all variables were nominal. A p value of less than 0.05 was regarded statistically significant.

CHAPTER 4

4.0 STUDY RESULTS

4.1.0 Introduction

This section presents the study results. First, the respondents' socio- demographics will be presented followed by health care workers' attitudes and practices and their utilization of CT and willingness to utilise PEP.

4.2.0 Socio-demographics

Out of the 200 sampled health workers, 165 responded, representing 82.5% response rate. Most of those that did not respond were too busy to attend to an interview while some could not be traced. About six out of ten were nurses while around one out of ten were clinical officers. Sixteen in every one hundred were HSAs (Table 2).

TABLE 2: CADRE OF HEALTH CARE WORKERS

CADRE	FREQUENCY	PERCENT
HSA	26	16.0
Medical officer	3	2.0
Medical assistant	1	1.0
Nurse	96	59.0
Lab technician	4	2.0
Clinical officer	20	12.0
Dental assistant	7	4.0
Radiographer	4	2.0
Pharmacy assistant	3	2.0
Total	**165**	**100.0**

About two thirds of respondents were female and slightly over one third in age category 31-40. Close to three quarters were married and slightly less than half had MSCE (Table 3).

TABLE 3: DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

VARIABLES	**FREQUENCY**	PERCENT
SEX		
Female	110	67.0
AGE		
20-30 years	44	27.0
31-40	61	37.0
41-50	42	25.0
51 and older	18	11.0
EDUCATION		
Primary school	5	3.0
Junior certificate	21	14.0
MSCE	65	45.0
College certificate	38	26.0
Non-degree university studies	6	4.0
University degree studies	11	8.0
MARITAL STATUS		
Never married	22	13.0
Married	121	73.0
Widowed	16	10.0
Others	6	4.0

4.3.1 Health workers' attitudes towards PLHA and their utilisation of CT

In table 4 below, the proportion of those who agreed with specific attitude statements and utilized CT is compared with those who disagreed and utilized CT. The results showed that there were no significant differences between health workers with negative attitudes and those with positive attitudes in utilization of CT. Results however suggest that health workers who disagreed with the first three attitude statements about judgment were more likely to utilise CT than those who agreed, while those who agreed with next attitude statements about shame were more likely to utilise CT than those who disagreed.

TABLE 4: HEALTH WORKERS' ATTITUDES TOWARDS PLHA AND THEIR UTILISATION OF CT (N=159)

Attitude	Frequency Agree	% Agree and tested	Frequency Disagree	% Disagree and tested	Chi-square	P value
HIV and AIDS is punishment from God	24	70.8	135	82.2	1.684	0.261
It is promiscuous men that have HIV in our community	46	78.3	113	81.4	0.207	0.663
It is promiscuous women that have HIV in our community	44	79.5	115	80.9	0.036	0.827
You would feel ashamed if you were infected with HIV	37	83.8	122	79.5	0.331	0.643
You would feel ashamed if someone in your family were infected with HIV	20	90	139	79.1	1.315	0.369
People with HIV should be ashamed of themselves	9	88.9	150	80	0.427	1.000
People with HIV are responsible for their situation	13	84.6	146	80.1	0.153	1.000

4.3.2 Health workers' attitudes towards PLHA and their utilisation of VCT

Table 5 below compares the proportion of health workers who agreed with specific attitude statements and utilized VCT and those who disagreed and utilized VCT. Results showed no significant differences between health workers with negative attitudes and those with positive attitudes in utilization of VCT. It can be noticed however that health workers who disagreed with the first three attitude statements (on judgment) were more likely to utilise VCT than those who agreed with the statements.

TABLE 5: HEALTH WORKERS' ATTITUDES TOWARDS PLHA AND THEIR UTILISATION OF VCT (N=130)

Attitude	Frequency Agree	% Agree and utilised VCT	Frequency Disagree	% Disagree and utilised VCT	Chi-square	P value
HIV and AIDS is punishment from God	16	37.5	114	52.6	1.285	0.295
It is promiscuous men that have HIV in our community	36	50	94	51.1	0.012	1.000
It is promiscuous women that have HIV in our community	35	42.9	95	53.7	1.200	0.325
You would feel ashamed if you were infected with HIV	31	54.8	99	49.5	0.270	0.682
You would feel ashamed if someone in your family were infected with HIV	18	44.4	112	51.8	0.334	0.618
People with HIV should be ashamed of themselves	7	14.3	123	52.8	3.940	0.060
People with HIV are responsible for their situation	11	54.5	119	50.4	0.069	1.000

Health workers' attitudes towards PLHA and their willingness to utilise PEP

In table 6 below, the proportion of health workers who agreed with specific attitude statements and expressed willingness to utilise PEP is compared with those who disagreed and expressed willingness to utilise PEP. Results show no significant differences between health workers with negative attitudes and those with positive attitudes in willingness to utilise PEP. However, results show that those who disagreed with the first three attitude statements (on judgment) were more likely to be willing to utilise PEP. Those who agreed with the rest of attitudes (on shame), were more likely to be willing to utilise PEP.

TABLE 6: HEALTH WORKERS' ATTITUDES TOWARDS PLHA AND THEIR WILLINGNESS TO UTILISE PEP (N=148)

Attitude	Frequency Agree	% Agree and willing	Frequency Disagree	% Disagree and willing	Chi-square	P value
HIV and AIDS is punishment from God	21	71.4	127	80.3	1.567	0.457
It is promiscuous men that have HIV in our community	43	76.7	105	80.0	0.202	0.904
It is promiscuous women that have HIV in our community	42	76.2	106	80.2	0.298	0.862
You would feel ashamed if you were infected with HIV	31	87.1	117	76.9	2.807	0.246
You would feel ashamed if someone in your family were infected with HIV	17	82.4	131	78.6	1.294	0.524
People with HIV should be ashamed of themselves	8	100	140	77.9	2.241	0.326
People with HIV are responsible for their situation	13	92.3	135	77.8	2.496	0.287

4.4.1 Health workers' observed practices towards PLHA and their utilisation of CT

In table 7, the proportion of health workers who observed stigmatising practices and utilized CT is compared with those who did not observe the practices and utilized CT. Results show that, in utilization of CT, there were no significant differences between health workers who observed the practices and those who did not, except for the first two practices with p=0.009 and p=0.004, respectively.

TABLE 7: PRACTICES OBSERVED BY HEALTH WORKERS AND THEIR UTILISATION OF CT (N=159)

Observed practice	Frequency Observed	% Observed and tested	Frequency Not Observed	% Not observed and tested	Chi-square	P Value
PLHA receiving less care/attention than other patients	20	90.0	137	80.3	9.411	0.009
Extra precautions taken in the sterilization of instruments used on HIV-positive patients	22	77.3	124	84.7	11.925	0.004
Requiring some clients to be tested for HIV before scheduling surgery	73	83.6	74	78.4	0.879	0.644
Using latex gloves for performing non-invasive exams on clients	46	82.6	108	79.6	0.183	0.912
Testing a client for HIV without his/her consent	36	80.6	120	80.8	0.374	0.829
Health workers gossiping about a client's status	55	80.0	101	81.2	0.405	0.817

4.4.2 Health workers' observed practices and their utilisation of VCT

Table 8 compares the proportion of health workers who observed stigmatising practices and utilized VCT with the proportion of those who did not observe the practices and utilized VCT. Results show no significant differences between health workers who observed the practices and those who did not observe the practices, in utilization of VCT.

TABLE 8: PRACTICES OBSERVED BY HEALTH WORKERS AND THEIR UTILISATION OF VCT (N=130)

Observed practice	**Frequency Observed**	**% Observed and utilised VCT**	**Frequency Not Observed**	**% Not observed and utilised VCT**	**Chi-square**	P Value
PLHA receiving less care/attention than other patients	18	50.0	112	50.9	0.005	1.000
Extra precautions taken in the sterilization of instruments used on HIV-positive patients	17	52.9	106	51.9	1.465	0.481
Requiring some clients to be tested for HIV before scheduling surgery	60	53.3	61	47.5	0.495	0.789
Using latex gloves for performing non-invasive exams on clients	38	63.2	88	45.5	3.329	0.189
Testing a client for HIV without his/her consent	29	44.8	99	51.5	2.371	0.306
Health workers gossiping about a client's status	46	47.8	82	51.2	2.105	0.349

4.4.3 Health workers' observed practices towards PLHA and their willingness to utilise PEP.

In table 9, the proportion of health workers who observed stigmatising practices and were willing to utilise PEP is compared with those who did not observe the practices and were willing to utilise PEP. In willingness to utilise PEP, there were no significant differences between health workers who observed the practices and those who did not.

TABLE 9: PRACTICES OBSERVED BY HEALTH WORKERS AND THEIR WILLINGNESS TO UTILISE PEP (N=148)

Observed practice	Frequency observed	% Observed and willing	Frequency not observed	% Not observed and willing	Chi-square	P Value
PLHA receiving less care/attention than other patients	20	80.0	126	78.6	2.369	0.668
Extra precautions taken in the sterilization of instruments used on HIV-positive patients	20	75.0	116	79.3	1.436	0.838
Requiring some clients to be tested for HIV before scheduling surgery	67	79.1	72	76.4	3.450	0.`485
Using latex gloves for performing non-invasive exams on clients	41	87.8	102	74.5	4.655	0.325
Testing a client for HIV without his/her consent	20	80.0	126	78.6	7.748	0.101
Health workers gossiping about a client's status	50	88.0	95	73.7	7.012	0.135

4.5.1 Health workers' attitudes towards HIV disclosure and their utilisation of CT

In table 10, the proportion of health workers who had negative attitudes towards HIV disclosure and utilized CT is compared with the proportion of those with positive attitudes who utilized CT. Results show no significant differences between health workers with negative attitudes towards HIV disclosure and those with positive attitudes towards disclosure, in relation to utilization of CT.

TABLE 10: HEALTH WORKERS' ATTITUDES TOWARDS DISCLOSURE OF HIV STATUS AND THEIR UTILISATION OF CT

Attitude	Frequency Yes	% Yes and utilised	Frequency No	% No and utilised	Chi-square	P Value
If you tested HIV positive today would you disclose your status to your supervisor? (N=157)	129	78.3	28	89.3	1.754	0.294
Do you think that people with HIV/AIDS generally keep their status as a secret? (N=158)	126	78.6	32	87.5	1.290	0.325
If a health worker is HIV positive, should this information be available to the general public? (N=160)	25	64.0	135	83.0	4.741	0.053
A person should only tell others that they have HIV/AIDS when they are sick (N=151)	19	78.9	132	80.3	0.019	1.000

4.5.2 Health workers' attitudes towards HIV disclosure and their utilisation of VCT

The proportion of health workers with negative attitudes towards HIV disclosure who utilized VCT is compared with the proportion of those with positive attitudes towards HIV disclosure who utilized VCT (Table 11). There were no significant differences between health workers with negative attitudes and those with positive attitudes in utilization of VCT.

TABLE 11: HEALTH WORKERS' ATTITUDES TOWARDS DISCLOSURE OF HIV STATUS AND THEIR UTILISATION OF VCT

Attitude	Frequency Yes	% Yes and utilised	Frequency No	% No utilised	Chi-square	P Value
If you tested HIV positive today would you disclose your status to your supervisor? (N=128)	104	51.0	24	54.2	0.080	0.824
Do you think that people with HIV/AIDS generally keep their status as a secret? (N=129)	100	52.0	29	44.8	0.463	0.533
If a health worker is HIV positive, should this information be available to the general public? (N=130)	17	58.8	113	49.6	0.508	0.605
A person should only tell others that they have HIV/AIDS when they are sick (N=123)	15	46.7	108	52.8	0.197	0.785

4.5.3 Health workers' attitudes towards HIV disclosure and their willingness to utilise PEP

Table 12 compares the proportion of health workers with negative attitudes towards HIV disclosure who expressed willingness to utilise PEP with those with positive attitudes who were willing to utilise PEP. Results show that, in willingness to utilise PEP, there were no significant differences between health workers with negative attitudes towards HIV disclosure and those with positive attitudes towards HIV disclosure, except for the second attitude statement (p=0.0458).

TABLE 12: HEALTH WORKERS' ATTITUDES TOWARDS DISCLOSURE OF HIV STATUS AND THEIR WILLINGNESS TO UTILISE PEP

Attitude	Frequency Yes	% Yes and willing	Frequency No	% No and willing	Chi-square	P Value
If you tested HIV positive today would you disclose your status to your supervisor? (N=146)	118	78.0	28	82.1	0.442	0.802
Do you think that people with HIV/AIDS generally keep their status as a secret? (N=147)	115	80.9	32	71.9	1.562	0.0458
If a health worker is HIV positive, should this information be available to the general public? (N=149)	25	76.0	124	79.0	2.021	0.364
A person should only tell others that they have HIV/AIDS when they are sick (N=140)	14	78.6	126	78.6	0.018	0.991

4.6.1 Health workers' fear of HIV transmission and their utilisation of CT

In the assessment of health workers' fear of HIV transmission when performing different tasks and their utilization of CT, the proportion of those afraid of HIV transmission who utilized CT was, except for the last task, generally lower than the proportion of those not afraid of HIV transmission who utilized CT (Table 13). The results suggest that health workers afraid of HIV transmission were less likely to utilise CT. The differences were, however, not statistically significant.

TABLE 13: HEALTH WORKERS' VIEWS ON FEAR OF HIV TRANSMISSION AND THEIR UTILISATION OF CT (N=157)

Task performed	Frequency Afraid	% Afraid and tested	Frequency Not afraid	% Not afraid and tested	Chi-square	P Value
Giving an injection to a person with HIV or AIDS	58	77.6	99	81.8	0.413	0.539
Caring for a person with HIV or AIDS	41	70.7	116	83.6	3.176	0.108
Dressing wounds of a person with HIV or AIDS	56	73.2	101	84.2	2.723	0.142
Putting a drip in someone with signs of HIV infection	53	71.7	104	84.6	3.697	0.060
Performing surgical or invasive procedures on clients whose HIV status in unknown	73	80.8	84	79.8	0.028	1.000

4.6.2 Health workers' fear of HIV transmission and their utilisation of VCT

In the assessment of health workers' fear of HIV transmission in performing different tasks and their utilisation of VCT, the proportion of those afraid of HIV transmission who utilized VCT was generally lower than that of health workers not afraid of HIV transmission who utilized VCT, though the differences were not statistically significant (Table 14). The results suggest that health workers afraid of HIV transmission are less likely to utilise VCT.

TABLE 14: HEALTH WORKERS' VIEWS ON FEAR OF HIV TRANSMISSION AND THEIR UTILISATION OF VCT (N=128)

TASK PERFORMED	Frequency Afraid	% Afraid and utilized VCT	Frequency Not afraid	% Not afraid and utilized VCT	Chi-square	P Value
Giving an injection to a person with HIV or AIDS	48	47.9	80	52.5	0.252	0.715
Caring for a person with HIV or AIDS	33	42.4	95	53.7	1.242	0.315
Dressing wounds of a person with HIV or AIDS	44	47.7	84	52.4	0.250	0.710
Putting a drip in someone with signs of HIV infection	42	45.2	86	53.5	0.768	0.453
Performing surgical or invasive procedures on clients whose HIV status in unknown	62	46.8	66	54.5	0.772	0.479

4.6.3 Health workers' fear of HIV transmission and their willingness to utilise PEP

Results show that the proportion of health workers afraid of HIV transmission and willing to utilise PEP was greater that the proportion of those who were not afraid and willing to utilise PEP (Table 15). The results suggest that fear of HIV transmission made health workers more willing to utilise PEP. However, the differences were not significant.

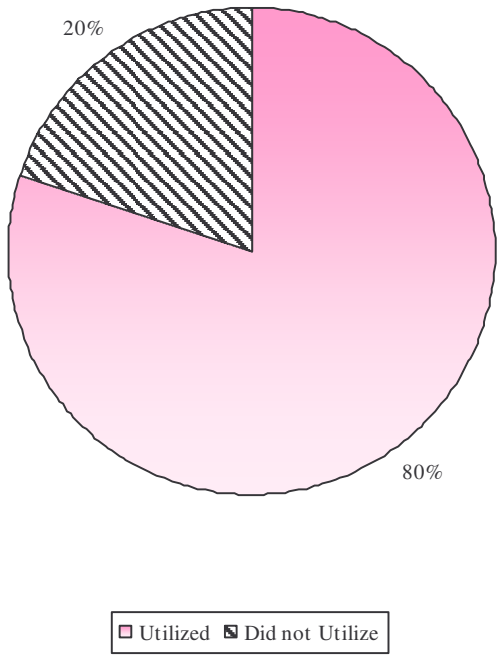
TABLE 15: HEALTH WORKERS' VIEWS ON FEAR OF HIV TRANSMISSION AND THEIR WILLINGNESS TO UTILISE PEP (N=147)

Task performed	Frequency Afraid	% Afraid and willing	Frequency Not afraid	% Not afraid and willing	Chi-square	P Value
Giving an injection to a person with HIV or AIDS	57	84.2	90	74.4	3.359	0.186
Caring for a person with HIV or AIDS	40	85.0	107	75.7	5.652	0.059
Dressing wounds of a person with HIV or AIDS	55	80.0	92	77.2	0.704	0.703
Putting a drip in someone with signs of HIV infection	52	80.8	95	76.8	1.258	0.533
Performing surgical or invasive procedures on clients whose HIV status in unknown	73	83.6	74	73.0	4.052	0.132

4.7.0 Health workers' utilization of CT

The study found that eight in every ten of health workers had utilized CT at the time of the study (Figure 2).

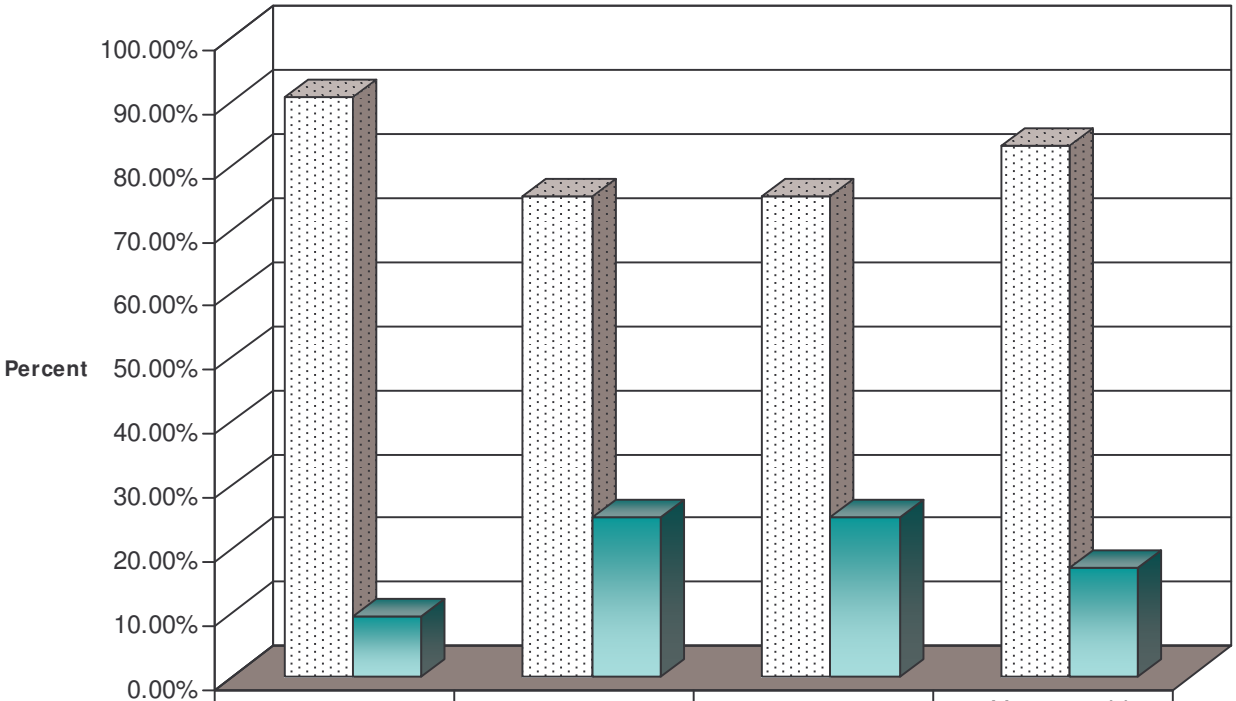
Figure 2: Health Workers'uitilization of CT (N=160)



4.7.1 Utilisation of CT by age group

Findings on utilization of CT by age group are presented in figure 3. The differences in utilization by age group were not significant. Nine in every ten in the 20-30 years age group reported they utilized CT while slightly over eight in every ten in 51 years and older age group reported they utilized CT.

Figure 3: Health Workers' utilization of CT by Age Group

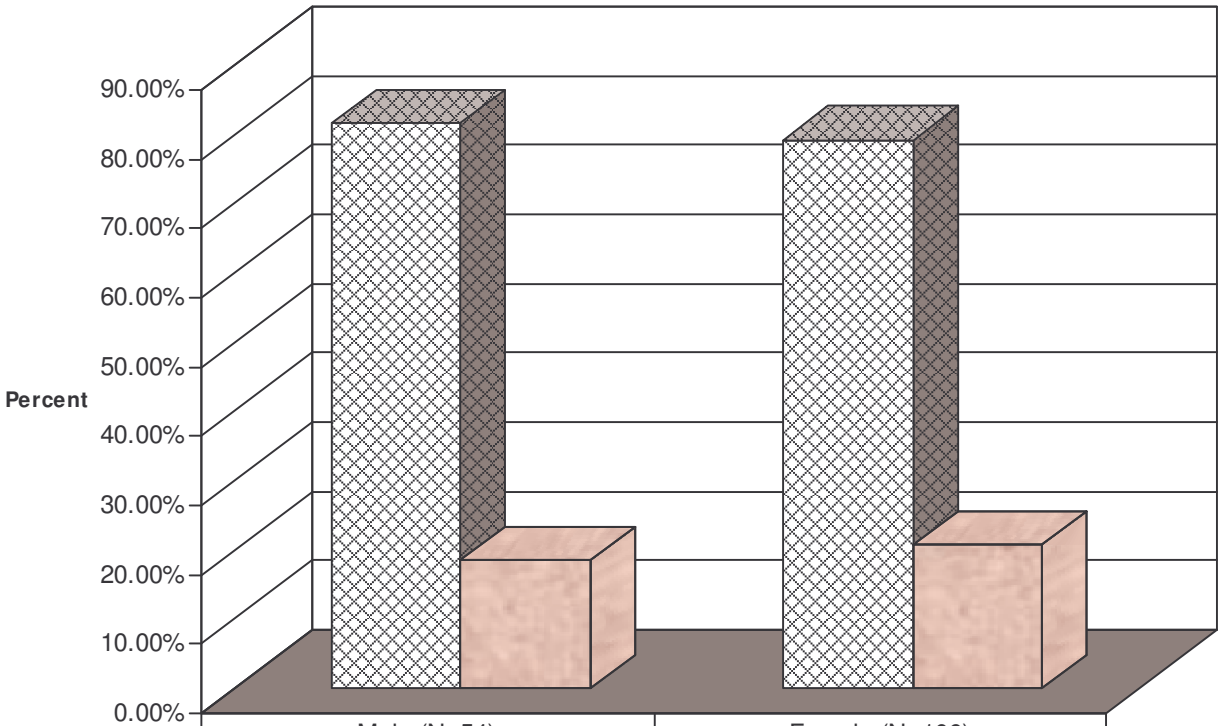


	20-30 Years (N=42)	31-40 Years (N=60)	41-50 Years (N=40)	51 Years or older (N=18)
Utilized	90.50%	75%	75%	83%
Did not utilize	9.50%	25%	25%	17%

4.7.2 Utilisation of CT by Gender

Findings on utilization of CT by gender are presented in figure 4. The differences in utilization by gender were not statistically significant. Amongst male respondents, slightly over eight in every ten utilized CT and slightly under eight in every ten utilized CT amongst female respondents. Percentages show that utilization of CT was similar amongst male and female health care workers.

Figure 4: Health Workers' utilization of CT by Gender

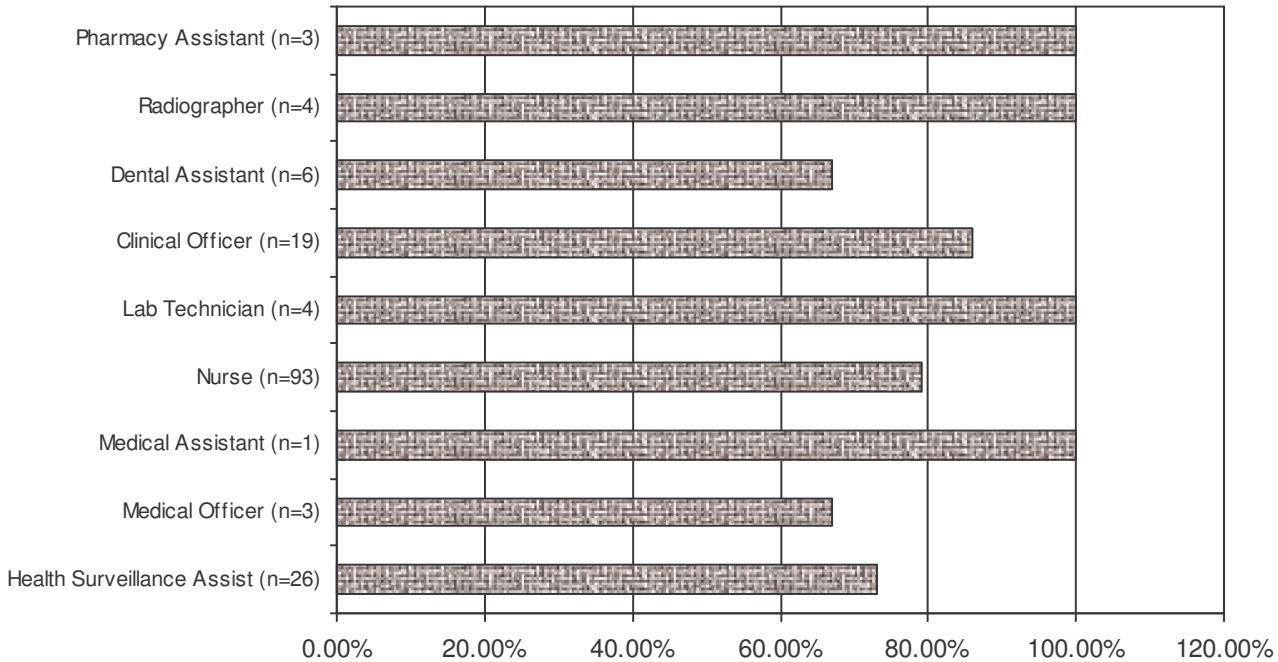


	Male (N=54)	Female (N=106)
Utilized	81.50%	79%
Did not Utilize	18.50%	21%

4.7.3 Utilisation of CT by cadre

Findings on utilization of CT by cadre are presented in figure 5. There was high utilisation of CT amongst all cadres. All laboratory technicians, radiographers, pharmacy assistants and one medical assistant interviewed reported they utilized CT. Differences in utilization by cadre were not significant.

Figure 5: Health Workers' utilization of CT by Cadre



	Health Surveillance	Medical Officer (n=3)	Medical Assistant (n=1)	Nurse (n=93)	Lab Technician	Clinical Officer (n=19)	Dental Assistant (n=6)	Radiographer (n=4)	Pharmacy Assista
Utilized	73.00%	67%	100%	79.00%	100.00	86.00%	67.00%	100.00	100%

Percent

4.7.4 Health workers' motivation for utilising CT

Factors that motivated health workers to utilise CT are presented in Table 16. Slightly more than half mentioned "just wanting to know serostatus" as motivation for testing. The study regarded this motivating factor as a proxy for VCT.

TABLE 16: FACTORS THAT MOTIVATED HEALTH WORKERS TO UTILISE CT (N=130)

Motivating Factor	Frequency	Percent*
Your partner's/spouse sexual behaviours.	7	5.0
Your partner (former or current) is sick or died.	2	2.0
Partner or one of sexual partners has HIV	0	0
Your own sexual behaviour	3	2.0
You had a blood transfusion.	10	8.0
You are taking care of people with HIV/AIDS.	1	o.8
Occupational exposure	28	22.0
Ill health	12	9.0
Referral test (routine)	5	4.0
Just wanting to know serostatus	66	51.0
Premarital testing/ to have children.	18	14.0
You are planning for the future.	5	4.0
Want to be a Role model	2	2.0

* Since the question allowed for multiple responses, each percentage is based on the total of 130 respondents

4.7.5 Health workers' utilisation of CT by health facility

Table 17 presents results on health workers' utilisation of CT by health facility. Eight in every ten utilised CT at KCH. Slightly over eight in every ten utilised CT at Likuni Hospital. The differences in utilization of CT by health facility were not significant. Utilisation of CT was however high at all health facilities.

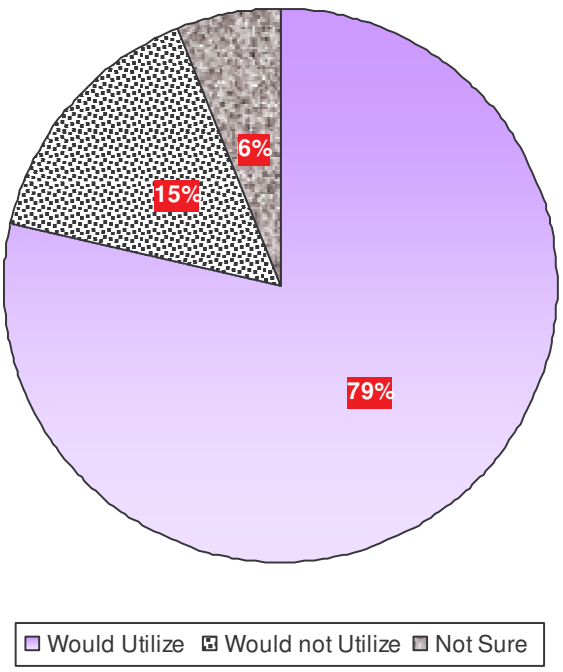
TABLE 17: HEALTH WORKERS' UTILISATION OF CT BY HEALTH FACILITY (n=160)

Health Facility	Utilised CT		Did not Utilise CT	
	Number	Percent	Number	Percent
Kabudula	6	75.0	2	25.0
Kamuzu Central Hospital (KCH)	75	80.0	19	20.0
Likuni	25	83.0	5	17.0
Nathenje	5	71.0	2	29.0
Nkhoma	17	81.0	4	19.0

4.8.0 Health workers' willingness to utilize PEP

The study found that slightly fewer than eight in every ten health workers were willing to utilise PEP after occupational exposure (Figure 6). Results showed that some 33% (n=163) had experienced an occupational injury 12 months preceding the study. Needle sticks were the most commonly reported injuries with 74% (n=49) reporting the injury followed by 20% and 6% who reported body fluid splashes and cut in the skin, respectively. Of the 33% (n=163) who experienced an occupational injury in the 12 months preceding the study, only seven (around 13%) utilised PEP after exposure.

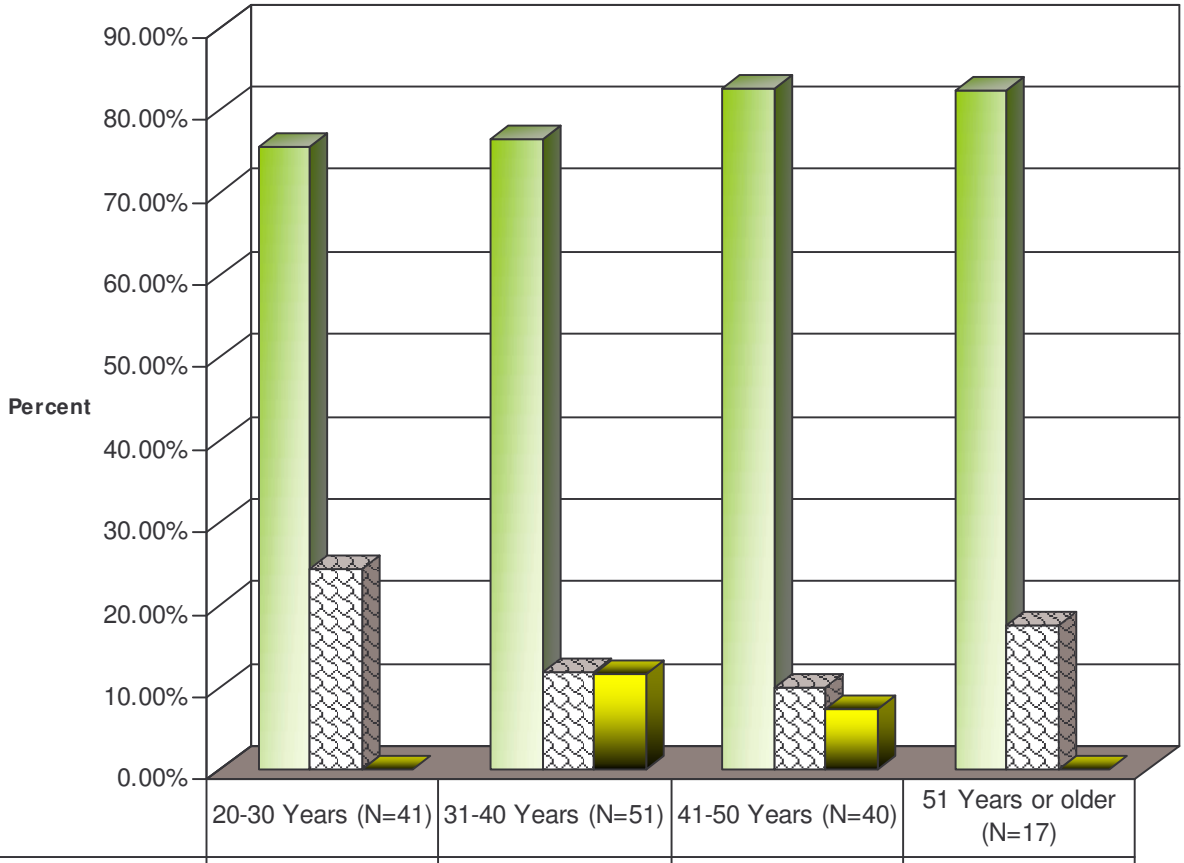
Figure 6: Health Workers that would Utilize PEP after Injury (N=149)



4.8.1 Willingness to utilise PEP by age group

There was high willingness to utilise PEP amongst all age groups with more than three quarters of respondents in each age group expressing willingness to utilise the service (Figure 7). The differences amongst the different groups were however not significant.

Figure 7: Health Workers' Willingness to utilise PEP by Age Group

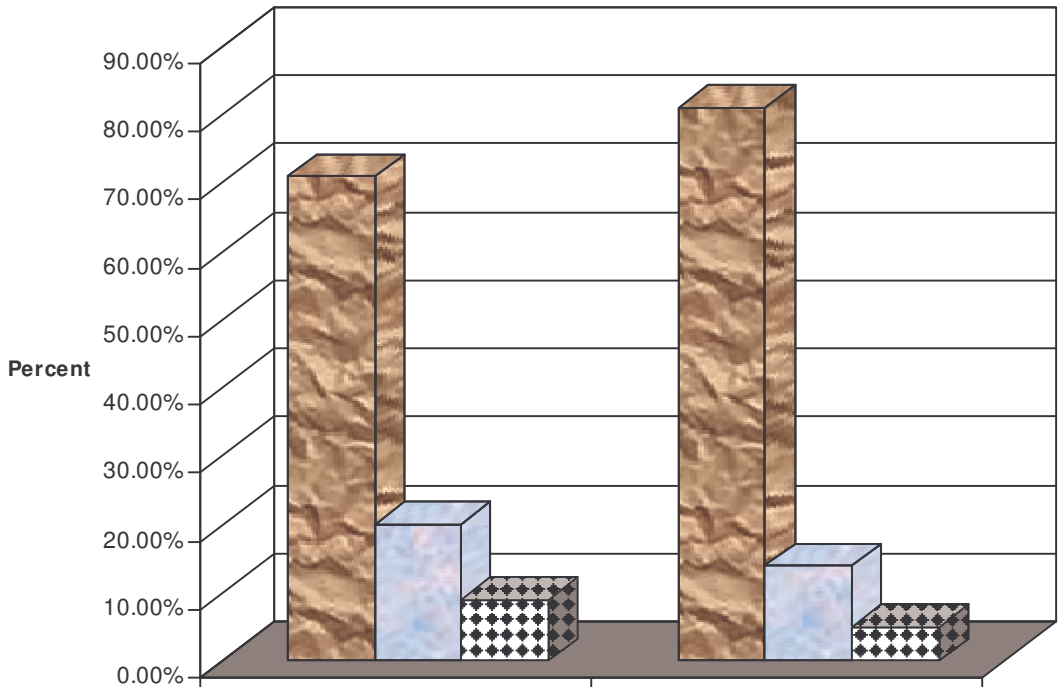


	20-30 Years (N=41)	31-40 Years (N=51)	41-50 Years (N=40)	51 Years or older (N=17)
Would Utilize	75.60%	77%	83%	82%
Would not Utilize	24.40%	12%	10%	18%
Not Sure	0	11.60%	7.50%	0

4.8.2 Willingness to utilize PEP by Gender

Findings on willingness to utilize PEP by gender are presented in figure 8. Differences in willingness to utilise PEP by gender were not significant. Percentages however show that this willingness was similar. Slightly over seven in every ten amongst males expressed willingness to utilize PEP while slightly over eight out of ten expressed willingness to utilize PEP amongst females.

Figure 8: Health Workers' willingness to utilise PEP by Gender

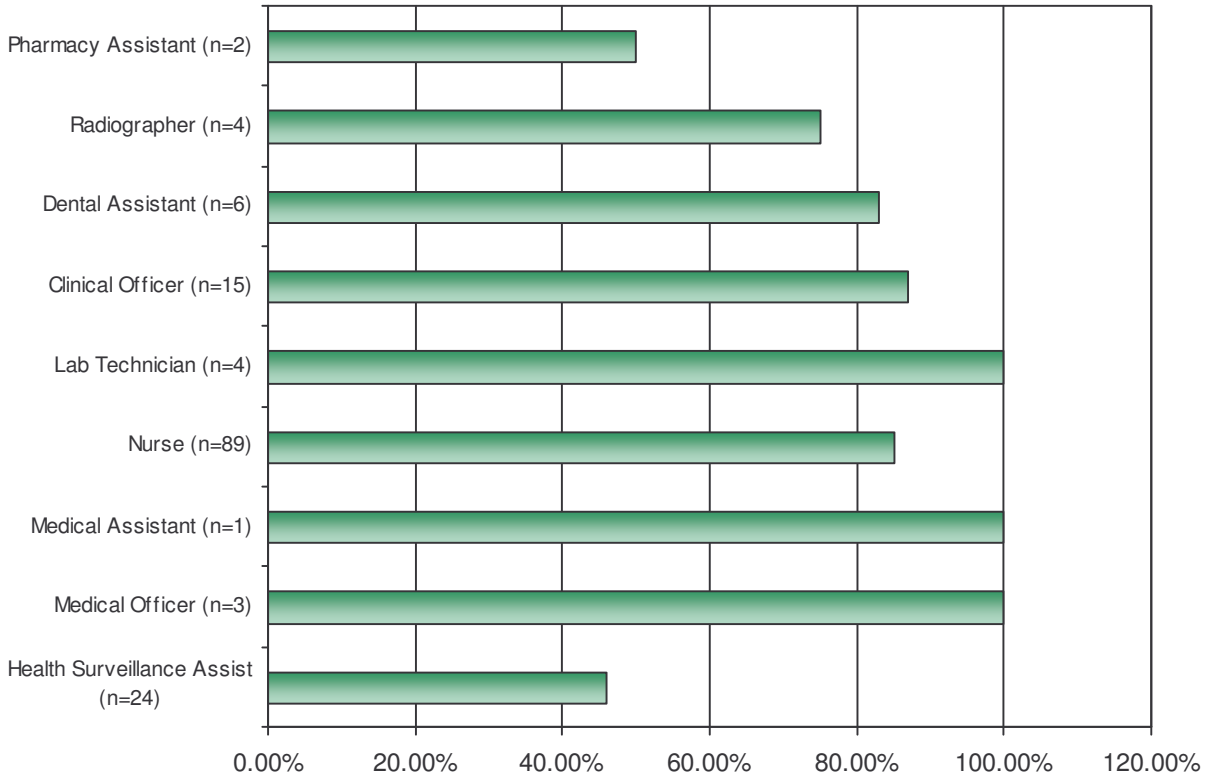


	Males (N=46)	Females (N=103)
Would Utilize	71.00%	81%
Would not Utilize	20.00%	14%
Not Sure would Utilize	9%	5%

4.8.3 Willingness to utilise PEP by cadre

Findings on willingness to utilize PEP by cadre are presented in figure 9. Except for HSAs, over half of respondents in each cadre expressed willingness to utilise PEP. The differences in this willingness amongst the cadres were not significant.

Figure 9: Health Workers' Willingness to utilise PEP by Cadre



	Health Surveillance	Medical Officer (n=3)	Medical Assistant (n=1)	Nurse (n=89)	Lab Technician	Clinical Officer (n=15)	Dental Assistant (n=6)	Radiographer (n=4)	Pharmacy Assista
Would Utilize	46.00%	100%	100%	85%	100%	87%	83%	75%	50%

Percent

4.9 Summary of Results

Results show that some health workers held judgmental and shaming attitudes towards PLHA, observed negative practices, had negative attitudes towards disclosure of HIV positive status and expressed fear of HIV transmission. Most health workers indicated they had utilized CT and were willing to utilise CT at the time of the study. The study results suggest that judgmental attitudes made health workers less likely to utilise CT in general and VCT in particular. Such attitudes also made health workers less likely to express willingness to utilise PEP. Results further suggest that observing stigmatising practices and having negative attitudes towards HIV disclosure had less influence on utilization of CT, VCT and willingness to utilise PEP. However, fear of HIV transmission appeared to have an effect on utilization of CT, VCT and willingness to utilise PEP.

CHAPTER 5

5.0 DISCUSSION OF RESULTS

5.1 Attitudes towards PLHA and utilisation of CT and PEP

The study found that health workers in Lilongwe held attitudes similar to those found in other studies as highlighted in the literature review (Reis et al, 2005; Hentgen et al, 2002). The results suggest that judgmental attitudes held by health workers toward PLHA may affect the health workers' utilization of CT, VCT and PEP. This is in line with what was anticipated in the theoretical framework; that judgmental attitudes would play an adaptive, self-expressive and ego-defensive function. However, shaming attitudes appeared not to have the effect similar to that of judgmental attitudes. The reason for this could be that shaming attitudes had non-functional consequences. The results suggest that holding shaming attitudes does not necessarily make health workers less likely to utilise CT, VCT and PEP.

The other finding from the study is that some health workers still held shaming and judgmental attitudes even after testing for HIV. Since the study did not find out whether or not health workers tested positive or negative, it is more likely that most health workers with such attitudes had tested negative. Informed by the functional approach to attitudes, the HIV negative health workers might have been expressing their values

(expressive function) by holding such attitudes; that PLHA are those without the right morals.

5.2 Observed practices and utilisation of CT and PEP

Results showed that some health workers observed stigmatizing practices amongst fellow health workers. The results however suggest that observing stigmatizing practices towards PLHA did not make health care workers less likely to utilise CT and PEP. This is in contrast with the widely held view that health workers underutilize HIV and AIDS services such as CT for fear of negative attitudes such as stigma (WHO, 2006; Kalichman and Simbayi 2003; Paxton, 2002).

The study anticipated that observing negative attitudes would make health workers less likely to utilise CT (adaptive function of attitudes) in order to avoid actions that bring about pain.

It could be that, in deciding whether or not to utilise CT- despite observing stigmatising practices- health workers might have considered the broader social factors as Talcott Parson postulated: having the personality system within the small-group system within the community system within the society (Mitchell 1970). Thus, while such health workers had the liberty to act as individuals and shun away from HIV and AIDS services in order to avoid the stigmatising practices, they might have considered what was going on in the health system. For instance, the care for the carer programme by Ministry of Health and the *Mnzake ndi Nnzake* Peer Group Intervention for HIV Prevention Research

Project by Kamuzu College of Nursing (Norr et al, 2007) might have influenced the health workers' decisions. The two work place programmes encourage health workers to go for testing and to be leaders in fighting HIV and AIDS. Under such circumstances, intervening variables may render attitudes to have non-functional consequences following Robert Merton (McClelland, 2000). One of the weaknesses of the functionalist theory is that intervening variables can influence the outcome.

The methodology employed might have also influenced the results. Of major concern was the social desirability bias where people give responses which they think the interviewer would like to hear. Health workers might have lied in reporting high rates of utilising HIV and AIDS services and the nature of attitudes and practices they held or observed.

5.3 Attitudes towards HIV disclosure and utilisation of CT and PEP

Negative attitudes towards disclosure may indicate that the person with such attitudes observes or perceives negative attitudes within a particular society. It was anticipated by the study that health workers with such negative attitudes would be less likely to utilize CT and PEP, thus having effects similar to stigmatising practices covered in section 5.1 above. The study findings suggested that although health workers had negative attitudes towards disclosure, thus perceiving negative attitudes and practices in society, the likelihood was still there that such people would utilize the services. There is need to encourage programmes aimed at alleviating negative attitudes and practices in society.

Programmes aimed at addressing health workers' perceptions of such attitudes and practices should also be encouraged.

5.4 Fear of HIV transmission and utilisation of CT and PEP

The study found that fear of HIV transmission made health workers less likely to utilise CT and VCT, and more likely to express willingness to utilise PEP. The low likelihood of utilizing CT and VCT is in line with what was anticipated in the theoretical framework; that health workers would be less likely to utilise the services in order to avoid having the same fear projected on them if tested HIV positive. The high likelihood of willingness to utilise PEP is however contrary to what was anticipated in the theoretical framework. Instead of being afraid of the CT which is part of PEP, as anticipated by the study, health workers expressed willingness to utilise the PEP. It seems health workers were more interested in protecting themselves in the event of an occupational exposure than in getting preoccupied with what the process of utilizing PEP would entail such as the inclusion of CT. Such willingness to utilise PEP might also reflect the little knowledge health workers had about PEP; being unaware that PEP involves CT.

It can be said that the fear that health workers have is normal considering that HIV and AIDS is considered as a fatal disease. But extreme and unjustified fear reflects negative attitudes such as stigma towards PLHA (Herek and Capitanio, 1998) and may be regarded as stigmatizing by the patients. Thus, while the health workers may be expressing such fear out of the desire to protect themselves, patients may take the health workers' actions as stigmatizing.

5.5 Utilization of CT

There was high utilization of CT amongst health workers in Lilongwe. Results from the other seven districts of the larger study[2] show similar results. These findings are similar to what Makombe et al, (2007) found about utilization of ART by health workers in Malawi. Makombe et al, (2007) report that, proportionate to the number of health workers in Malawi, more health workers were accessing ART than the general population. Health workers accessing these services will have healthy lives and help to reduce workload in the health sector.

Some professionals in the health sector[3] however argue that reports of high utilization of CT amongst health workers are due to social desirability bias; health workers' responses were those the health workers thought the researchers wanted to hear. The professionals argue that health workers consider themselves as helpers of the sick, thus do not regard seeking care as their priority such that they seek care very late when their health conditions are out of hand. Views expressed by such professionals are supported by other studies outside Malawi. For instance, Kiragu et al (2006) study in Zambia found that only 33% of health workers indicated they had tested for HIV. Further research is therefore required to determine the extent to which health workers utilize CT. Such research should employ designs that capture actual behaviour rather than relying on reported behaviour.

[2] Refer to Chapter 3 (methodology) where it is explained that apart from Lilongwe, the study was conducted in seven other districts.
[3] Personal communication with Dr C. Kaponda, Director of Kamuzu College of Nursing Research Centre, University of Malawi.

No significant differences were observed in utilisation of CT between male and female health workers. However, data from Ministry of health show more women than men utilizing CT in the general population (MoH 2006) although data from MACRO shows more boys than girls utilizing CT in Malawi (Makwiza et al 2006). In general however, more females than males utilize CT in Malawi. Considering that more women than men are infected with HIV in Malawi (MoH, 2006) it is encouraging that more women should be accessing CT in the country in order for them to benefit from care and support services such as ART.

It should be noted that most respondents in the study were nurses and the nursing profession is dominated by women in Malawi. Since the nurses are in constant touch with patients, they are more vulnerable to contracting HIV through occupational exposure. Underutilization of CT amongst female health workers would therefore defeat the purpose of improving access to CT by health workers.

While more women than men access counselling and testing in Malawi, the situation is different in other countries. For instance, a study in Kenya showed that despite being more vulnerable, women were underrepresented in HIV counselling and testing sites in all settings in Kenya (Taegtmeyer, 2006). Another study in South Africa showed that while the majority of African women appeared to accept HIV testing; only a proportion (59%-61%) returned for results (Coovadia, 2000). Even amongst health workers, studies in countries like Zambia show that female health workers face challenges to access counselling and testing (Kiragu et al, 2006).

There was no significant difference in utilisation of CT amongst the different cadres. Utilisation of CT was however high amongst all cadres with more than 60% of health workers utilizing CT amongst each cadre. Results showed high utilisation of CT amongst respondents of 20-40 years age group. It is encouraging to note that more health workers of this age group were utilizing CT because they are the sexually active groups mostly infected with HIV. The findings are similar to results of the Malawi Testing Week (MoH, 2006), where high access to CT was reported amongst people of 15-35 years age group. No significant differences in utilization of CT by health facility were observed. It is encouraging that health workers from rural health facilities such as Kabudula Rural Hospital utilise CT just like their counterparts from urban facilities like Kamuzu Central Hospital as members of the general population from rural areas are reported to face challenges in accessing health services for HIV and AIDS and Tuberculosis (Makwiza, et al, 2006; Nyirenda, et al 2006b; Nhlema-Simwaka, et al 2006). Utilization of CT was also similar amongst health workers from CHAM and government health facilities. This could be due to workplace programmes in both CHAM and government health facilities which encourage health workers to utilise HIV and AIDS services including CT.

Results suggest that utilization of CT is likely to be high when it is offered through different models rather than VCT alone. Health workers should be encouraged not to wait for diagnostic and routine CT. This would help them to access HIV and AIDS care and support at an earlier stage.

5.6 Utilisation of PEP

Most health care workers expressed willingness to utilise PEP. It was however clear from the results that PEP was a relatively new service amongst most health workers in Malawi. The study also showed that some health workers worked in a very stressful environment which was exacerbated by HIV and AIDS. Some health workers felt very vulnerable to contracting HIV in their workplace and expressed such fears openly. This is consistent with other studies which showed that health workers in Malawi were afraid of contracting HIV in the workplace (CRHCS, 2004).

Although some health care workers in the present study (33 %, N=163), experienced an occupational injury in the 12 months preceding the study, only seven of them (around 13%) utilised PEP after exposure. It can be said therefore that although the health workers expressed willingness to utilise PEP, few of them utilized the service when it was offered to them. These findings are similar to what Van Oosterhout, (2007) found in a study at the Queen Elizabeth Central Hospital where few nurses sought PEP after a needle stick injury. Most of those who did not utilise PEP after injury indicated that they were not aware about the service while some were afraid of an HIV test.

There is need not only to make PEP services available to health workers but also to raise awareness about such a service amongst health workers. There is also need to supply adequate materials necessary for health workers to protect themselves and provide high quality services. Some studies have found lack of materials to be associated with poor treatment or inadequate service provided to patients (Lindelow and Sernnels, 2006).

Health workers require constant supply of necessary materials to protect themselves from new risks as well as their clients. This will ensure effective infection prevention programmes.

Study results show no significant difference in willingness to utilise PEP by age, gender or cadre. But the results show low willingness to utilise PEP amongst HSAs. This may reflect little knowledge about PEP amongst HSAs. Although most HSAs are involved in community health work with little direct contact with patients, some have direct contact with patients working as CT and TB counsellors. HSAs also provide immunization some of which involves injections; a procedure that may expose them to blood infected with HIV. This calls for the need to involve all cadres in infection prevention programmes because many workers not directly in contact with patients have some risk of occupational-related infection (Talaskek et al, 2007).

5.7 Limitations and Strengths of the study

Methods and design for this study were in part influenced by logistical and budgetary constraints of conducting the research. Given the sensitive nature of discussing HIV-related issues, we anticipated that some participants might choose not to participate in the research due to discomfort or personal experiences or might not feel comfortable answering all questions honestly and openly. This was a possible source of bias in the study. The study tried to address this by using an experienced field research team with extensive experience conducting multi-method research, including building trust with study participants. As such, the study managed to obtain a high response rate. However,

questions that directly sought respondents' attitudes and their utilization of CT and PEP might not have elicited the correct responses since people often give responses which they think are the 'correct' ones.

The cross-sectional nature of the study design should be taken into account when evaluating the findings; no cause and effect can be ascertained from the study. A longitudinal study could have been a stronger research design. Such a design was however not feasible considering the circumstances under which the research was done as it was a design already predetermined. Although the researcher was part of the study team, he had less control on the design. But assuming resources were at the researcher's disposal, time would have been another limiting factor since longitudinal studies take time to undertake.

It should also be noted that the study may not be representative of health workers from Lilongwe district and a number of factors contributed to this. In calculating the sample size, the study did not obtain the total number of health workers from Lilongwe district on which to base the sampling calculations. Such a list was not available at the time of the study. The sampling frames obtained from the health facilities might therefore, not have been complete. The study tried to address the challenge of unreliable sampling frames by removing names of those that had died or had moved out of the facility for one reason or another. Eventually, the sampling frames comprised of health workers who were present at the health facilities at the time of the study. This was done with the help

of the health facilities-in-charge and departmental heads such as matrons in case of bigger hospitals.

Apart from HSAs, the study focused on technical health workers only, excluding other people working within the health facilities who also have direct interaction with patients. For instance, hospital cleaners are also vulnerable to HIV infection through occupational exposure as they are responsible for the disposal of rubbish including needle sticks. Cleaners and other junior hospital staff members are also susceptible to contracting HIV through sexual contact as they tend to have multiple relationships with their seniors in order to supplement their little salaries. Such cadres were however not included in the study as the larger study focused on cadres thought to be crucial in providing HIV and AIDS services such as ART and CT.

Like all surveys, this study relied almost exclusively on reports of behaviour rather than observations of behaviour. The respondents might have lied in their responses or might have given answers which they thought the study team was looking for. Due to the small numbers involved, analysis of health workers' attitudes by gender, cadre, or age group would not be done.

Despite the methodological challenges pointed out, the study was one of the first in Malawi to relate health workers' attitudes and practices to utilization of HIV and AIDS services. It is necessary to understand this relationship in order to carry out meaningful interventions. For instance, interventions aimed at encouraging health workers to access

HIV services can only focus on negative attitudes and practices if it is found that people with such attitudes are less likely to utilize HIV and AIDS services. This was in line with what Cohen and Trussell (1996) assert, that, to increase the likelihood of success, interventions need to be culturally appropriate and locally relevant, reflecting the social context within which they are embedded. Thus, interventions should be designed with a clear idea of behaviors to be changed. This study therefore acted as a springboard for further research in this area. Future research should try to employ longitudinal designs and triangulate methodologies, something which was not possible under present circumstances.

5.8 Conclusion

It can be said that the study managed to describe health workers' attitudes and observed practices towards PLHA. The study also described health workers' attitudes towards disclosure of HIV status as well as their views on fear of HIV transmission. Furthermore, it managed to describe health workers' utilization of CT and willingness to utilise PEP.

Most health workers had utilized CT at the time of the study and were willing to utilise PEP. One possible explanation for the high rates of utilization reported could be the different CT models that the health workers used. High utilization of the HIV and AIDS services reported by the health workers should however be regarded with caution as the study design gave room for social desirability bias.

The study found that while judgmental attitudes and fear of HIV transmission had an effect on utilization of CT and PEP, shaming attitudes, observing stigmatising practices and having negative attitudes towards HIV disclosure did not make health workers less likely to utilise CT and PEP. There is room for improvement in describing this relationship. Further research using longitudinal designs and larger sample size with a triangulation of methodologies is recommended to confirm the relationship that has been described by this study.

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Appendix 1:Questionnaire for Health care workers

QUESTIONNAIRE FOR HEALTH WORKERS

Q1.1 Interview ID

Q1.2 Interviewer ID

Q1.3 Respondent ID

Q1.4 District of the health facility

Q1.5 Name of the health facility

Q1.6 Date of the interview

Q1.7 Time of interview

Notes of the interviewer on the condition of the interview

2.0 SOCIO-DEMOGRAPHICS

2.1	Respondent sex	1. Male 2. Female	
2.2	Age (Years on your last birthday)		
2.3	Marital status	1. Never Married 4. Separated 2. Married 3. Widowed 5. Divorced	
2.4	What is your highest level of education?	1. Primary school 5. University studies (without a degree) 2. J.C.E 3. MSCE 6. University studies (with a degree) 4. College Certificate	
2.5	Cadre	1. HSA 4. Nurse 2. Medical Officer 5. Lab tech 3. Medical Assistant 6. Clinical Officer 7. Dental Assistant 8. Radiographer 9. Pharmacy Assistant	
2.6	Do you currently work here on a full- time basis, part-time or Voluntary?	1. Full-time 3. Voluntary 2. Part-time 4. Other (Sp)_____	
2.7	In which department/section do you work?	_____	
2.8	Have you ever had training on the following regarding HIV and AIDS? *(Circle all that apply).*	1. HIV Testing and counselling 2. Cotramoxazole Preventive Therapy (CPT) 3. Opportunistic Infection (OI) management 4. Antiretroviral Therapy (ART) 5. Post Exposure Prophylaxis (PEP) 6. Other (Sp) _____	

3.0 KNOWLEDGE, ATTITUDES, PERCEPTIONS AND PRACTICE CONCERNING HIV/ AIDS

3.1	What do you feel is the most common mode of transmission of HIV amongst health care workers in Malawi?	1. Transfusion of blood infected with HIV 2. Occupational exposure 3. Unprotected Sexual contact 4. Sharing of utensils with an individual infected with HIV 5. Using same toilet with one infected with HIV 6. Others(Sp)_____	
3.2	Which cadre do you think is more likely to contract HIV through sexual contact?	1. Nurses 6. HSAs 2. Clinical Officers 7. Radiographers 3. Surgeons 8. Patient attendant 4. Lab tech 9. None 5. Dentist 10. Other (Sp)	
3.2.1	Why do you say so?		
3.3	How would you rate the effectiveness of the following HIV prevention methods? *(Rank the methods according to their effectiveness. 1=Least effective; 2=effective; 3= most effective)*	1. Consistent and proper use of condoms	
		2. Being faithful to one partner	
		3. Abstinence	
		4.Preventing occupational exposure to health workers	
3.3.1	Of the above listed, which do you feel is the most effective HIV prevention method?	_____	

4.0 OCCUPATIONAL EXPOSURE AND POST EXPOSURE PROPHYLAXIS

The following questions are on your opinions, knowledge, understanding and experiences on PEP, occupational risk exposure to HIV and universal precautions.

4.1	Do you feel health workers are at risk of contracting HIV in their work place?	1. Yes **(Go to 4.2)** 2. No	
4.1.1	Explain your answer? _____ _____ _____		
4.2	Do you think there are some health workers who are at more risk of contracting HIV through occupational exposure than others?	1. Yes **(Go to 4.2.2)** 2. No	
4.2.1	Give reasons for your answer? _____ _____ _____		
4.2.2	Who among HCW is more likely to contract HIV through occupational exposure? ***(Circle all that apply)***	1. Nurses 2. Clinical Officers 3. Surgeons 4. Lab tech 5. Dentist 6. HSA 7. Radiographer 8. Patient/ward attendants 9. None 10. Other (Sp)_____	
4.2.3	Why do you say so? _____ _____ _____		
4.3	Which section/department do you consider put health workers at the most risk of exposure to HIV?	1. Labour wards 2. Theatre 3. Out patient department 4. Emergency 5. Paediatric 6. Dental 7. Surgical ward 8. Other (Sp)_____	
4.4	Are health care workers at this health facility afraid of getting accidental injuries while at work?	1. Yes 2. No	
4.4.1	Explain your answer above? _____ _____		

	_____			
4.5	In terms of fear of HIV transmission, what would you say about the following? *(1= I have fear of HIV transmission, 2= I do not have fear of HIV transmission)*	1.Fear	2. Do not fear	
4.5.1	Giving an injection to a person with HIV or AIDS			
4.5.2	Caring for a person with HIV and AIDS			
4.5.3	Dressing the wounds of a person with HIV and AIDS			
4.5.4	Putting a drip in someone who has signs of HIV infection			
4.5.5	Performing surgical or invasive procedures on clients whose HIV status is unknown			
4.6	Are you aware of any health worker(s) who have experienced occupational injury(s) in the past twelve months?	1. Yes	2. No (***Go to 4.7***)	
4.6.1	What were the circumstances of the injury/injuries? ***(Circle all that apply.)***	1. Cleaning the ward 2. Performing an operation 3. Disposing waste 4. Taking a blood sample 5. Taking other sample (ie body fluids) 6. Assisting child birth 7. Dressing wound 8. Giving an injection 9.Other (Sp)_____		
4.6.2	What action did the health worker take due to the injury? ***(Circle all that apply.)***	1. No action 2.Squeezing blood 3. Cleaned the affected area 4. Reported the injury _____ 5. Accessed CT 6. Accessed PEP 7. Other (sp)		
4.7	Have you ever experienced an injury/injuries while performing your duties in the past 12 months?	1. Yes	2. No **(Go to 4.8)**	
4.7.1	What was the type of the injury?	1. Needle stick 2. Cut in the skin 3. Body fluid splashes 4. Other (sp) _____		
4.7.2	What were the circumstances of the injury? ***(Circle all that apply.)***	1. Cleaning the ward 2. Performing an operation 3. Disposing waste 4. Taking a blood sample 5. Taking other sample (ie body fluids, tissue)		

		6. Assisting child birth 7. Dressing a wound 8. Giving an injection 9. Other (Sp)_____	
4.7.3	What action did you take when you experienced the injury? **(*Check all that apply).***	1. No action 5. Accessed CT 2. Squeezing blood 6. Accessed PEP **(Go 4.9)** 3. Cleaned the affected area 7. Other (sp) _____ 4. Reported the injury _____	
4.8	If you experienced an occupational injury, would you access PEP?	1. Yes **(Go to 4.9)** 2. No 3. Not sure **(Go to 4.9)**	
4.8.1	Why would you not access PEP?	1. Does not know PEP ***(PROBE)*** **(Go to 4.11)** 2. Not available at health facility 3. Fear of side effects 4. Other (Sp) _____	
4.9	What challenges do health care workers face when they want to access PEP? ***(Check all that apply)***	1. Lack of confidentiality 2 Unavailability of test kits 3.Unavailability of PEP 4.Lack of knowledge about PEP 5.Side effects 6. Lack of knowledge of where to access PEP 7. Lack of compensation 8. Stigma 9. Discrimination 10. I do not know 11. Other (Sp)_____	
4.9.1	What is PEP used for?	1. Prevention/prophylaxis 2. Cure for HIV and AIDS 3. Other (Sp)_____	
4.9.2	Who is eligible for PEP? _____ _____ _____		
4.9.3	For how long is PEP taken?	_____	
4.9.4	In your opinion how effective is PEP?	1.Not effective 2.Effective 3.Very effective	

4.9.5	Explain your answer above _____ _____ _____				
4.10	Do you have PEP at this facility?	1. Yes	2. No	3. I don't know	
4.11	Do you practice the following as you work	1. Always	2. Sometimes	3. Never	
4.11.1	Wear gloves				
4.11.2	Washing hands with soap when attending to a patient				
4.11.3	Putting on an apron				
4.11.4	Putting on goggles				
4.11.5	Putting on a mask				
4.11.6	Wiping hands with spirit				
4.11.7	Sterilising instruments after use				
4.11.8	Using safety boxes				
4.11.9	Putting on closed shoes				
4.12	What challenges do you face in practicing what we have just discussed above (wearing mask, goggles etc)				

5.0 QUESTIONS ON HIV/AIDS COUNSELLING AND TESTING (HCT)

The following questions are about your opinions and or experiences on HIV counselling and testing.

5.1	Do you think it is easy or difficult for HCW to go for HCT than it is for other people?	1. Easy 2. Difficult 3. Not sure	
5.1.1	Why do you say so? _____ _____		
5.2	Do you know any HCW who has gone for HIV testing	1. Yes 2. No (***Go to 5.3***)	
5.2.1	What were the reasons for testing?	1.Ill health 6.Occupational Exposure 2. Partner/spouse sick or died 7. Just to know 3. Diagnostic purpose 8.Other (sp)_____ 4. PMTCT 5. Risky sexual behaviour	
5.3	Which cadre is manning the counselling and testing centre at this health facility?	1. Clinical Officer 2.Nurse 3. HSA 4. Other (Sp)_____	

5.4	As a health care worker which cadre would you prefer to counsel and test you?	1. HSA 2. Medical Officer /Doctor 3. Medical Assistant 4. Nurse 5. Lab tech 6. Clinical Officer 7. Other (Sp) _____	
5.5	Are there any challenges that HCW face to access HCT?	1. Yes 2. No **(Go to 5.6)**	
5.5.1	What are the challenges HCW face to access CT?	1. Lack of confidentiality 2. Fear of Stigma 3. Poor staff attitudes 4. Long distance to HTC sites 5. Unavailability of kits 6. Long waiting time 7. Other (Sp)_____	
5.6	Do HCW conduct self HIV testing?	1. Yes 2. No **(Go to 5.7)** **3. Not sure (Go 5.7)**	
5.6.1	Why do HCW self test?	1. In need of confidentiality 2. Afraid of Stigma 3. Have access to test kits 4. Other (Sp)_____	
5.7	Have you ever had an HIV testing and counselling?	1. Yes **(*Go to 5.8*)** 2. No	
5.7.1	Why is it so? ***(GO TO SECTION 6.11)***	1. Always busy 2. Afraid of a positive result 3. Confidentiality not guaranteed 4. Afraid of being a failed role model 5. Not ready 6. Not necessary 7. I am healthy 8.Other (Sp)_____	
5.8	What motivated you to seek an HIV test? **(*Circle all that apply*)**	1. Your partner's/spouse sexual behaviours. 2. Your partner (former or current) is sick or died. 3. Partner or one of sexual partners has HIV 4. Your own sexual behaviour 5. You had a blood transfusion. 6. You are taking care of people with HIV/AIDS. 7. Occupational exposure 8. Ill health 9. Referral test (routine) 10. Just wanting to know serostatus 11. Premarital testing/ to have children. 12. You are planning for the future. 13. Want to be a Role model 14. Other(Sp)_____	
5.9	How many times have you had an HIV test?	1. Once 2. Twice 3. Thrice 4. More than three times	
5.10	Why answer above?	1. Doubted first results so wanted to confirm	

		2. I was prayed for so I wanted to check my serostatus 3. Told by the one who conducted the test 4. Occupational Exposure 5. Other (Sp) _____	

6.0 EXPERIENCES ON TESTING AND COUNSELLING

The following questions are on your experiences about what happened when you had a test; starting from where you went, who conducted the test, how it took place, how you found out the results, and what happened afterwards?

6.1	Where did you have the latest test?	1. At this health facility 2. At a different public health facility 3. At a private health facility 4. Stand alone counselling and testing centre 5. Other (Sp)_____	
6.2	What made you choose the facility where you accessed HTC?	1. Confidentiality is respected 2. Closest facility 3. Given preferential services 4. Better quality of services 5. Other (Sp)_____	
6.3	Who conducted the test?	1. Health surveillance assistant 2. Another health worker (Sp)_____ 3. Self test **(Go to 6.5)** 4. Don't know 5. Other (Sp)_____	
6.4	Do you feel that he/she has kept the confidentiality about your results?	1. Yes 2. No 3. Not sure	
6.4.1	Explain the answer above _____ _____		
6.5	Have you ever told any one your HIV test result?	1. Yes ***(Go to 6.7)*** 2. No	
6.6	Why have you not disclosed your HIV test result? (***Go to 6.9***)	1. Afraid of stigma 2. Afraid of discrimination 3. Afraid of gossip 4. Doesn't see any reason to disclose 5. Maintain confidentiality 6. Other (Sp)_____	
6.7	To whom did you disclose your test results?	1. Spouse/partner 4. Friend	

	(***Circle all that apply)***	2. Parent 5. Supervisor/boss 3. Child 6.Religious Leader 7. Other (Sp) _____	
6.8	Why did you disclose your result to the person(s) indicated above?	1. Spouse/partner_____ _____ 2. Parent_____ _____ 3. Child_____ _____ 4. Friend_____ _____ 5. Supervisor/boss _____ _____ 6. Religious Leader_____ _____ 7. Other (Sp)_____ _____	
6.9	Did you face any challenges in accessing HIV counselling and testing?	1. Yes 2. No ***(Go to 6.14)***	
6.10	What were the challenges? (***Check all that apply***) (***Go to 6.14)***	1. Discouragement from spouse 2. I was afraid before the test 3. Distance to the facility 4. Transport cost 5. Long waiting time 6. Attitude of HCW conducting the test 7. Others (Sp)_____	
6.11	If you got tested for HIV, would you share your results with someone?	1. Yes 2. No ***(Go to 6.13***)	
6.12	With whom would you share your results? ***(Circle all that apply)*** ***(Go to 6.14)***	1. Spouse/partner 4. Friend 2. Parent 5. Supervisor/boss 3.Child 6.Religious Leader 7. Other (Sp)_____	
6.13	Why wouldn't you share results with others? ***(Circle all that apply.)***	1. Partner would be shattered/angry 2. Fear of neglect 3. Fear of verbal abuse 4. Fear of being physically abused	

		5. Fear of death 6. I would not receive any care and support 7. People would think I am immoral 8. Other (Sp)_____	
6.14	Do HCW whose HIV positive status is known face any problems because of their status?	1. Yes 2. No **(Go to Section 7)**	
6.15	What are some of the problems that HCW face because of their HIV/AIDS status? _____ _____ _____		

7.0 DISCLOSURE, STIGMA AND DISCRIMINATION

I would like to ask you some questions on how you view people living with HIV/AIDS and their access to health services.

7.1 QUESTIONS FOR VALUES (SHAME, BLAME AND JUDGMENT)

	Indicate whether you agree or not with the following statements	1. Agree	2 Disagree	
7.1.1	HIV is punishment from God			
7.1.2	It is promiscuous men that have HIV in our community			
7.1.3	It is promiscuous women that have HIV in our community			
7.1.4	You would feel ashamed if you was infected with HIV			
7.1.5	You would feel ashamed if someone in your family was infected with HIV			
7.1.6	People with HIV should be ashamed of themselves			
7.1.7	People with HIV are responsible for their situation			

7.2 QUESTIONS ON ENACTED STIGMA

	In the past 12 months, have you seen or observed the following happen at this health facility because a client was known to have or was suspected of having HIV/AIDS?	1. Yes	2. No	3. Don't know	
7.2.1	Receiving less care/attention than other patients				
7.2.2	Extra precautions taken in the sterilization of instruments used on HIV-positive patients				
7.2.3	Requiring some clients to be tested for HIV before scheduling surgery				
7.2.4	Using latex gloves for performing non-invasive exams on clients				

7.2.5	Testing a client for HIV without his/her consent				
7.2.6	Health workers gossiping about a client's status.				
7.2.7	Would you share utensils with a co- worker who is HIV positive?	1.Yes	2. No		
7.2.8	Should a health worker who is HIV positive be allowed any of the following?				
7.2.8.1	Sent for training	1. Yes	2. No		
7.2.8.1.1	Give reasons for your answer_____ _____				
7.2.8.2	Promotion	1. Yes	2.No		
7.2.8.2.1	Give reasons for your answer_____ _____				
7.2.8.3	Continue Working	1. Yes	2.No		
7.2.8.3.1	Give reasons for your answer_____ _____				
7.2.9	If you tested positive today would you disclose your status to your supervisor?	1.Yes	2. No		
7.2.9.1	Give reasons for your answer_____ _____				

7.3 QUESTIONS ON DISCLOSURE

7.3.1	Do you think that people living with HIV/AIDS generally keep their status a secret?	1. Yes 2. No	
7.3.2	Do you know of a health worker who is living with HIV or AIDS?	1. Yes 2. No***(Go to Q7.3.4)***	
7.3.3	How did you know he/she is living with HIV or AIDS? ***(Circle all that apply)***	1. The infected person told me him/herself 2. Family member of infected person told me 3. I am the one who conducted the test 4. Appearance 5. General gossip/rumours 6. From a health worker where the person tested 7. Read from his/her hospital file 8. The one who conducted the testing told me 9. Explicit disclosure to work mates 10. Implicitly with their access to ART 11. A member of a PLWA support group	

		12. Other (Sp)_____	
7.3.4	If a Health Worker is HIV positive, should this information be available to the general public?	1. Yes ***(Go to Q7.3.6)*** 2. No	
7.3.5	Give reason? ***(Circle all that apply.)***	1. Personal issue 2. That person would be isolated/neglected/avoided if others found out 3. No one would care for the person if others found out 4. Patients would shun his/her services 5. Fear of gossip	
7.3.6	If made available to the general public, why? ***(Circle all that apply.)***	1. This person is a threat to others 2. Person could infect patients 3.This person needs the care and support of the community 4.This person gives lesson to others 5. Other (Sp)_____	
7.3.7	**Please answer whether you agree or disagree** A person should only tell others that they have HIV/AIDS when they are sick?	1. Agree 2. Disagree	

8. GENERAL QUESTIONS ON ART

I would like to ask you questions concerning ARV drugs.

8.1	Why do people take ARVs?	1. To cure AIDS 3. It is an HIV/AIDS prophylaxis 2. To boost Immunity 4. Other (Sp)_____	
8.2	Do ARVs have side effects?	1. Yes 2. No ***(Go to 8.4)***	
8.3	What side effects do ARVs have? ***(Circle all that apply.)***	1. Nausea 3. Oedema 2. Skin rash 4. Mental disturbances 5.Jaundice 6. Numbness 7.Other (Sp) _____	
8.4	Who is eligible to take ARVs? _____ _____ _____		
8.5	Do you know any health care workers taking these drugs?	1. Yes 2. No **(Go to 8.8 if HIV + If not go to 8.18)**	

8.6	Where are they taking the drugs?	1. This facility 2. Another facility 3. Don't know	
8.7	Have there been any changes to the health status to the health care worker on ART?	1. No change 3. Cured 2. Has gained weight 4. Other (Sp)_____	

If participant has disclosed HIV-positive status under the previous sections, then it would be possible to explore his/her individual experience

Since you have mentioned that you are HIV positive, I am going to ask you some questions about treatment.

8.8	Are you on ART?	1. Yes 2. No ***(Go to Q8.14)***	
8.9	Where do you go to access the treatment?	1. Same site where I work 2. Private site 3. Different public facility 4. Other (Sp)_____	
8.10	Why did you choose to go there?	1. To be anonymous 3. Afraid of stigma 2. Quality of service 4. Short distance 5. Others (Sp)_____	
8.11	What were the reasons that made you to access ART?	1. Was very sick 2. Motivated by fellow health care workers on ART 3. Advised by doctor 4. Other (Sp) _____	
8.12	Are there particular problems that you face in accessing ART?	1. Yes 2. No ***(Go to Q8.17)***	
8.13	What is the gravest problem you face in accessing ART? **(Go to 8.17)**	1. Lack of confidentiality 5. Distance 2. Stigma 6. lack of nutritious food 3. Discrimination 7. Other(Sp)_____ 4. Quality of services _____	
8.14	Why have you not started taking ART? ***(Circle all that apply.)***	1. Not yet eligible 2. Eligible but afraid of side effects 3. Services are not available here 4. Fear of Stigma 5. Other (Sp)_____	
8.15	Do you have plans of starting ART in future?	1. Yes 2. No	
8.16	Explain your answer above?_____ _____		
8.17	What type of care and support are you accessing from this health facility with your condition?	_____ _____	
8.18	What are the barriers in general that health workers face when they want to access ART? ***(Circle all that apply.)***	1. Lack of confidentiality 4. Discrimination 2. Side effects 5. None 3. Stigma 6. Other(Sp)_____	

8.19	What do you think could be done in order for more health workers to access ART? (Possible interventions/activities to encourage health workers to access ART)_____ _____		
8.20	Are there home based care programmes for HIV/AIDS where health workers are members?	1. Yes 2.No 3. Don't know	
8.21	Have you ever heard about care for the carer policy?	1. Yes 2. No	

NOTES

7.2 APPENDIX 2: Consent Form for Health Care Workers

I am..... I work with REACH Trust. The REACH Trust in Collaboration with the Ministry of Health is conducting a study on health care workers' access to HIV and AIDS services encompassing prevention, treatment, care and support. We are also interested in learning from you strategies that might be effective in encouraging more health care workers to access these services. The findings from the study will be used to inform interventions to try enhancing health workers' access to HIV and AIDS services.

I would like to ask you to take part in the study by according me an interview with you. The interview will take 45-60 minutes. Let me inform you that there may be psychological risks arising from your participation in this study. For instance, you may feel depressed during or after the interview. If you feel uncomfortable to participate in this study due to personal experiences or other reasons, I suggest that you should not participate. In case you choose to participate, I ask you to withdraw from the interview at any time during the interview if you feel uncomfortable to continue answering questions. There are also no right or wrong answers and you are free not to answer questions that you think can bring discomfort to you.

Let me inform you, however, that the information you can give could be very helpful in making HIV/AIDS services more accessible to health workers in Malawi. I would also like to inform you that the information you give will only be used for purposes of this study and will be treated confidentially.

Do you have any questions for me?

Thank you.

Consent given: Yes (Signature).....

No