

**KNOWLEDGE ATTITUDE AND PRACTICE OF HIV SELF
TESTING AMONG HEALTH WORKERS OF KAMPALA
INTERNATIONAL UNIVERSITY TEACHING
HOSPITAL BUSHYENI UGANDA**

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DECLARATION

“This research report is my original work and has not been presented for a degree in any other University or any other award.”

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Signature..... Date.....

SUPERVISORS' APPROVAL

I confirm that, the work presented in this report was carried out by the candidate under my supervision,

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KAMPALA INTERNATIONAL UNIVERSITY TEACHING HOSPITAL

Signature.....

A handwritten signature in blue ink, appearing to read 'Odong Richard Justin', written over a dotted line.

Date.....

07th/05/2018

DEDICATION

I dedicate this study to my Father Zuber Osman Elias my Mother Hanifa Mohammed Ali, my brother Jabir Zuber and my sisters Jamila, Mariam and my friend Suhail Shaffiq.

ACKNOWLEDGMENTS

The study was done at KIUTH in Ishaka Bushenyi.

I would like to thank the people who helped me during this study; however it is not possible to mention them all by name here.

Special mention to thank my supervisor Dr. Odong Richard Justin who was extremely supportive throughout the whole study.

I would like to thank my parents, brother, sisters and all my friends who helped me through this study.

Finally I would like to thank God Almighty for his blessings.

LIST OF TABLES

Table	Page
Table 4.1: Characteristics of the Study Respondents (n=292)	16
Table 4.2: Respondents Level of Knowledge on HIVST (n=292)	17
Table 4.3: Respondents Level of Positive Attitude towards HIVST	18
Table 4.4: Respondents Level of Practices towards HIVST	18

LIST OF FIGURES

Figure	Page
Figure 1: Conceptual Framework (Designed by researcher)	7

ABSTRACT

Background: Despite the many advancements made in health in the world, many countries continue to exhibit negative trends concerning the health of their people largely due to the AIDS pandemic. HIV Self-Testing (HIVST) is an essential component of an effective response to the AIDS pandemic worldwide. However, it has become increasingly apparent that workplace programmes on HIV have overlooked hospital workers even though they are too at risk of HIV infection both from occupational and non-occupational factors. Although they are at risk of HIV infection very few health personnel are aware of their HIV status and quite a limited number of them have been able to seek Voluntary Counseling and Testing services.

Methods: To achieve this, a hospital based cross – sectional study was carried out in KIUTH. The study subjects were different cadres of medically trained health providers including Doctors, Nurses, Clinical Officers, VCT counselors and other technical Pharmacist staff. Data was collected by use of a semi-structured self-administered questionnaire schedule. The questionnaire was administered to 292 study subjects. The data was analyzed using SPSS programme, correlation and OR were used to determine association between variables.

Results: The results indicated that half (52%) of health providers had utilized HIVST, but 60 % of them had been tested for HIV. VCT Counselors had utilized HIVST more than any other health worker, followed by doctors (65%). Pharmacists had utilized HIVST least (41%). The study also found that those with high level of positive attitudes towards HIVST utilization had a higher HIVST uptake compared to those with lower level of positive attitudes. Those with higher knowledge on HIVST also exhibited a higher rate HIVST uptake than those with relatively low level of knowledge.

Conclusion: In conclusion this study found gaps in knowledge on HIVST and attitudes / perception towards HIVST which needs to be addressed. In view of the above findings, it is recommended that Health care Providers should promote HIVST uptake and also need further training on HIVST to bridge the gaps identified on knowledge in this study.

TABLE OF CONTENTS

DECLARATION.....	I
DEDICATION.....	III
ACKNOWLEDGMENTS	IV
LIST OF TABLES	V
LIST OF FIGURES	VI
ABSTRACT.....	VII
LIST OF ABBREVIATIONS AND ACRONYMS	XII
OPERATIONAL DEFINITIONS	XIII
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 BACKGROUND	1
1.2 PROBLEM STATEMENT	3
1.3 OBJECTIVE OF THE STUDY	5
1.3.1 GENERAL OBJECTIVE.....	5
1.3.2 SPECIFIC OBJECTIVES	5
1.4 RESEARCH QUESTIONS	5

1.5 SIGNIFICANCE OF THE STUDY	5
1.6 SCOPE OF THE STUDY.....	6
1.6.1 GEOGRAPHICAL SCOPE.....	6
1.6.2 CONTENT SCOPE	6
1.6.3 TIME SCOPE.....	6
1.7 CONCEPTUAL FRAME WORK.....	7
1.7.1 DESCRIPTION OF CONCEPTUAL FRAMEWORK	7
LITERATURE REVIEW	8
2.1 IMPACT OF HIV ON HEALTH CARE WORKERS.....	8
2.2 INCREASING UPTAKE OF TESTING	9
2.3 BARRIERS TO TESTING	10
2.4 GLOBAL HTC POLICY	11
2.5 INFORMAL AND FORMAL SELF-TESTING AMONG HEALTH WORKERS	11
CHAPTER THREE.....	13
METHODOLOGY	13
3.1 STUDY DESIGN.....	13
3.2 STUDY POPULATION	13
3.2.1 INCLUSION CRITERIA	13

3.2.2 EXCLUSION CRITERIA.....	13
3.3 SAMPLE SIZE DETERMINATION.....	13
3.4 SAMPLING TECHNIQUE	13
3.5 DATA COLLECTION TOOLS	13
3. 6 VALIDITY AND RELIABILITY OF THE RESEARCH INSTRUMENTS.....	14
3.7 DATA ANALYSIS	14
3.8 ETHICAL CONSIDERATIONS.....	14
3.9 AUTONOMY AND INFORMED CONSENT	14
3.10 RISK AND BENEFITS	ERROR! BOOKMARK NOT DEFINED.
CHAPTER FOUR.....	16
RESULTS	16
4.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE STUDY POPULATION.....	16
4.2 LEVEL OF KNOWLEDGE ON HIVST	18
4.3 ATTITUDES AND PRACTICES OF HEALTH CARE WORKERS TOWARDS HIVST	18
CHAPTER FIVE	20
DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS	20
5.1 DISCUSSIONS.....	20

5.2 CONCLUSION	21
5.3 RECOMMENDATIONS.....	21
REFERENCES.....	22
APPENDICES	24
APPENDIX I: INTRODUCTION AND CONSENT	24
APPENDIX II: QUESTIONNAIRE	25
APPENDIX III: PROPOSED BUDGET	27
APPENDIX IV: WORK PLAN	27
APPENDIX V: LETTER OF INTRODCUTION FROM KIU	28
APPENDIX VI: MAP OF ISHAKA MUNICIPALITY SHOWING KAMPALA INTERNATIONAL UNIVERSITY-WESTERN CAMPUS.....	29

LIST OF ABBREVIATIONS AND ACRONYMS

AIDS:	Acquired Immunodeficiency Syndrome
ART:	Antiretroviral Therapy
BMS:	Bachelor of Medicine and Surgery
HCWs:	Health Care Workers
HIV:	Human Immunodeficiency Virus
HIVST:	HIV Self-Testing
HTC:	HIV Testing and Counseling
KIUTH:	Kampala International University Teaching Hospital
PEP:	Post Exposure Prophylaxis
STDs:	Sexually Transmitted Infections
TB:	Tuberculosis
UBOS:	Uganda Bureau of Statistics
UNAIDS:	United Nations Agency for International Development
VCT:	Voluntary Counseling and Testing
WHO:	World Health Organization

OPERATIONAL DEFINITIONS

Knowledge: The knowledge possessed by a community refers to their understanding of that topic. In this study, knowledge refers to the ability of the health workers to know what is involved in a HIVST process, its importance and where to uptake it.

Attitude: Attitude refers to feelings towards a subject and any preconceived ideas towards it. In this study, attitude refers to thoughts, intention, opinion, feelings and belief of the health workers about HIVST.

Practice: Practice refers to the ways in which knowledge and attitudes are demonstrated through actions. In this study, practice refers the uptake of HIVST by these health workers and issues related to the uptake.

Health Provider: Any medically trained person either male or female working permanently or temporarily in a Health Facility.

Hospital: A Health Facility offering full range of medical services; Out-Patient, In-Patient, and Surgical operative services.

Pharmacist Staff: Includes all other medically trained staff members e.g. Laboratory Technician/ Technologist, Physiotherapist, Radiographer, Nutritionist, Pharmaceutical Technologist, Dental Technician, Occupational Therapist, Public Health Officer or Technician etc.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

HIV self-testing is a process in which an individual collects his or her specimen, performs a test and interprets his or her own test result in private (Ministry of Health, 2016). HIVST transcends barriers such as stigma, lack of time and distance to health facilities or HTS centers. HIVST aims to make HIV testing more accessible to several under-served populations such as men, key populations including MSM and sex workers, and hence facilitates knowledge of HIV status (MOH, 2016).

Globally in 2009, there were an estimated 2.6 million people became newly infected with HIV where more than 5 million people are now receiving HIV treatment (UNAIDS, 2010). Ethiopia has one of the biggest shares of HIV epidemics in sub-Saharan Africa (UNAIDS, 2010).

Several research studies have found HIVST to be highly acceptable across diverse populations and settings, including the general population, men who have sex with men (MSM), sex workers, among others (MOH, 2016). In addition, evidence from other sub-Saharan African countries suggests that HIVST can; empower users, be cost-effective, and has potential to increase access to and uptake of HIV testing services, particularly among individuals who may not otherwise test (MOH, 2016).

A study conducted in Gondar, Ethiopia by (Young et al., 2007) on Antiretroviral post-exposure prophylaxis (PEP) for occupational HIV exposure also have shown the prevalence of needle stick and sharp injuries among HCWs 12 months preceding the survey was 106(30.8%), of which 58(54.7%) was reported by females and highest being in nurses however, early post-exposure prophylaxis (PEP) uptake was reported as being low (Young et al., 2007).

A study conducted in Kenya by Corbett et al 2007 on Health worker access to HIV/TB prevention, treatment and care services in Africa: situational analysis and mapping of routine and current best practices found that only 4% of HCWs accessed PEP following needle stick injuries (Corbett et al., 2007). Fear of disclosure and reluctance to test may be major obstacles to HCWs access to HIV testing and counseling (HTC) and other related services (Corbett et al., 2007). Being infected with HIV can be a source of personal and professional shame for a health worker, and may also invoke fear of losing

one's job and damaging future career prospects (Corbett et al., 2007). Regardless of the outcome, it has been documented that having HIV test can be stigmatizing, and health workers are sometimes assumed to be HIV-positive if they are known to have been tested (Corbett et al., 2007).

In Uganda, however, the degree of acceptability for HIVST is not yet known since such studies are still ongoing (MOH, 2016). Evidence from these will inform scale-up and the HTS program in general (MOH, 2016). Several possible models for availing HIV rapid tests for HIVST implementation have been recommended (MOH, 2016). These models vary in the amount of support that is provided (supervised or unsupervised), level of access (clinically restricted, semi-restricted, or open access) and how and where HIV rapid tests are distributed or performed (facility-based, community-based, or other settings following the HTS approaches (MOH, 2016).

In Uganda, HIVST should be performed under controlled settings such as research or demonstration projects using approved HIV rapid diagnostic tests that use either finger stick whole blood or oral fluid (mouth swab) under close supervision of the Ministry of Health until the MOH provides further guidelines (MOH, 2016). HIVST does not provide a diagnosis (MOH, 2016). All reactive (positive) self-test results should be confirmed using the approved National HIV testing algorithm (MOH, 2016). HIVST pilot projects should provide adequate information to individuals who test HIV-positive to ensure linkage to confirmatory testing, HIV care, and support (MOH, 2016). The Ministry of Health, upon availability of evidence will develop guidelines for delivery of HIVST (MOH, 2016).

1.2 PROBLEM STATEMENT

Health workers in sub-Saharan Africa are often at high risk from HIV infection both in their personal lives and because of occupational exposure (National AIDS Trust, 2008). However many health workers are currently reluctant to seek HIV testing and therefore do not access HIV treatment and prevention services (NAT, 2008).

There is also increasing evidence that self-testing is practiced among health workers. Reasons for self-testing are various and exploring how to better address concerns around access, privacy, confidentiality and quality of HIV testing and counselling for health workers should be explored to enable them to benefit from earlier diagnosis, treatment and care (NAT, 2008).

Until very recently, a cautionary approach to self-testing has been adopted in all countries (NAT, 2008). Though it is more than 20 years since the idea of self-testing was first considered, HIV self-testing continues to be a source of controversy and debate, many policymakers have reservations about the introduction of self-testing and it is not currently widely available (NAT, 2008).

Informal self-testing, usually conducted in secrecy, carries a number of potential risks: inaccurate results, unsafe disposal of sharps, limited or no access to counselling and inadequate onward referral for care (MOH, 2016). A well-implemented and regulated self-testing programme could be an effective way of maximizing HIV prevention and ensuring early entry into HIV care for health workers, potentially at a lower cost and with fewer human resource requirements than alternative approaches (MOH, 2016).

According to the ministry of health HIVST policy guidelines, In Uganda, HIVST should be performed under controlled settings such as research or demonstration projects using approved HIV rapid diagnostic tests that use either finger stick whole blood or oral fluid (mouth swab) under close supervision of the Ministry of Health until the MOH provides further guidelines (MOH, 2016). HIVST does not provide a diagnosis (MOH, 2016). All reactive (positive) self-test results should be confirmed using the approved National HIV testing algorithm (MOH, 2016). HIVST pilot projects should provide adequate information to individuals who test HIV-positive to ensure linkage to confirmatory testing, HIV care, and support the Ministry of Health, upon availability of evidence will develop guidelines for delivery of HIVST (MOH, 2016). Therefore research on knowledge attitude and practice towards HIVST among health

workers at KIUTH is needed to explore ways of supporting increased access to testing for health workers, since there is still paucity of data in relation to the research topic at KIUTH; which this study seeks to bridge.

1.3 OBJECTIVE OF THE STUDY

1.3.1 General objective

The broad objective of this study is to describe the knowledge, attitudes and practices of HIVST among health workers in KIUTH.

1.3.2 Specific Objectives

- I. To describe the knowledge of HIVST among health workers in KIUTH.
- II. To describe the attitude of HIVST among health workers in KIUTH.
- III. To describe the practices of HIVST among health workers in KIUTH.

1.4 RESEARCH QUESTIONS

- I. What is the knowledge of HIVST among health workers in KIUTH?
- II. What are the attitudes towards HIVST among health workers in KIUTH?
- III. What are the practices of HIVST among health workers in KIUTH?

1.5 SIGNIFICANCE OF THE STUDY

1. HIV self-testing (HIVST) is a critical strategy to reduce the rate of new HIV infections. Getting health workers to test for HIV is imperative to curb the spread in Uganda since this population contributes immensely to the epidemic.
2. It is envisaged that, the findings of this study will help health programme planners to review existing services so as to provide a health worker-friendly services and environment whereby health workers can comfortably be at ease to undergo VCT. Knowledge generated will help health training institutions to incorporate the findings of this study in their training curriculum, so that better pre and post-test counselling approaches could be adopted by the nurses who are majorly counsellors in Uganda.
3. The present study can act as reference material for further research in this area of HIVST

1.6 SCOPE OF THE STUDY

1.6.1 Geographical scope

The study was conducted in KIUTH. It is located in Igara county, in Bushenyi district, approximately 62 kilometres(39 mi), by road, west of Mbarara, the largest city in the sub-region. This is about 6 kilometres (4 mi), west of Bushenyi, the location of the district headquarters. The coordinates of ishaka are 0°32'42.0"s, 30°08'18.0"e (latitude:- 0.545006; longitude: 30.138343) (Google maps 2016).

Ishaka is a town in Igara County, in Bushenyi District. Together with the neighboring town of Bushenyi, it forms the Bushenyi-Ishaka Metropolitan Area. It is the largest metropolis in the district. The district headquarters are located in Bushenyi. Kampala International University, one of the thirty one (31) universities in the country maintains its Western Campus in Ishaka. This campus houses KIU's medical school (Anguyo 2013). In 2014, the national population census put the population of Bushenyi, including Ishaka, at 41,063 (UBOS 2014).

1.6.2 Content scope

The study was only limited in assessing knowledge, understand the attitudes and practices of HIVST among health workers in Kampala International University teaching Hospital Bushyeni Uganda

1.6.3 Time Scope

The research was done from February 2018 to April 2018.

1.7 CONCEPTUAL FRAME WORK

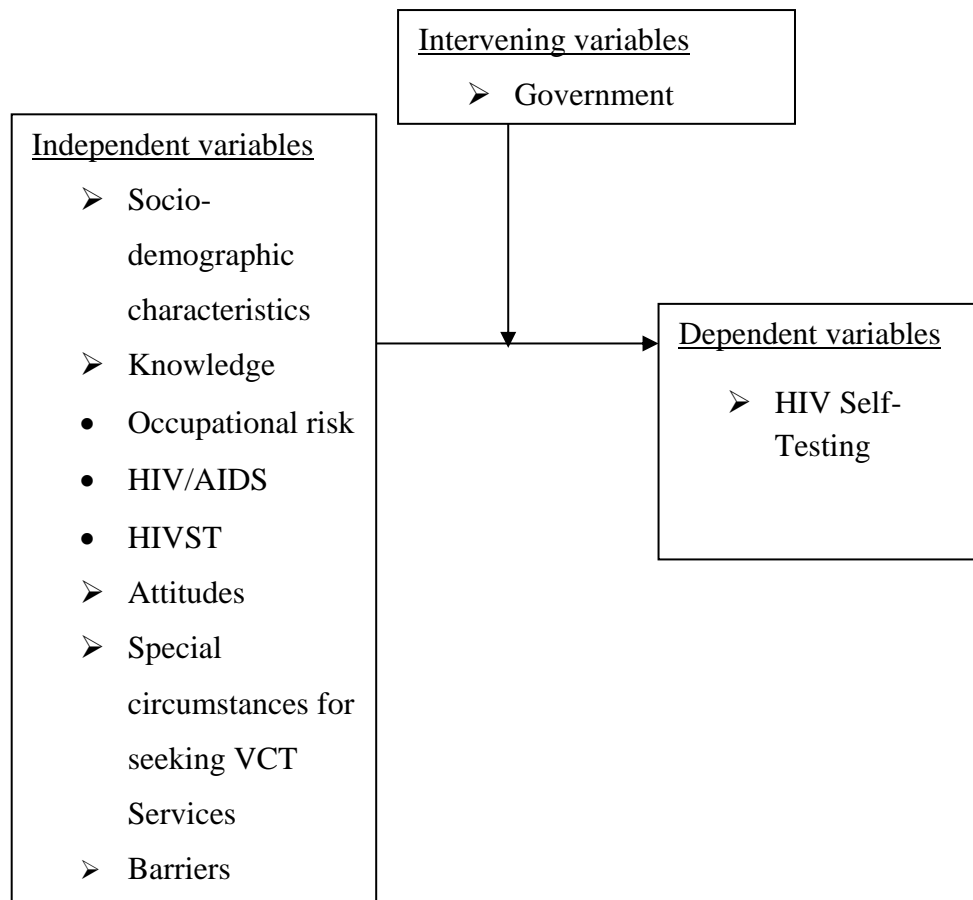


Figure 1: Conceptual Framework (Designed by researcher)

1.7.1 Description of conceptual Framework

Independent Variables: Socio-demographic characteristics: Sex, age, marital status, profession e.g. Doctor, Clinical officer, nurse, Pharmacist staff etc. Years worked; level of education, religion; department deployed. **Knowledge:** Protective equipment, P.E.P, Written guidelines; Source of HIV information; mode of transmission, ways of prevention. Availability, activity in a VCT centre; training on HIVST; National guidelines on HIV; accessibility to VCT services; Test results. **Attitudes:** Beliefs and feelings. **Special circumstances for seeking VCT services:** Premarital, married couples, pregnancy; people with STDs; after needle stick or cut with contaminated instrument; after caring for AIDS patients for long. **Barriers:** Fear, stigmatization, discrimination, lack of confidentiality, unreliable results, ignorance, delayed results.

CHAPTER TWO

LITERATURE REVIEW

2.1 IMPACT OF HIV ON HEALTH CARE WORKERS

According to a study done by World Health Organization (WHO) in 2009 in several African countries, data from Zimbabwe, Mozambique, Malawi, Kenya and Ethiopia indicate that 43% of deaths or medical retirement were suspected or known to be caused by HIV (WHO, 2009). The high rate of health workforce attrition in sub-Saharan Africa attributable to HIV of the health workforce implies low uptake of HIV services among this group (WHO, 2009). Health workers usually know where to access services, usually at their own workplaces (WHO, 2009). However, this knowledge is often not enough to promote widespread uptake of services among health workers (WHO, 2009). The general global trend towards liberalization of policies relating to the link between counselling and testing, and technological advances in HIV test kit development, indicate the need for further research and guidance on self-testing, as it is widely practiced in some settings and over-the-counter tests are available in a number of countries in sub-Saharan Africa, where high levels of interest and motivation for self-testing among health workers has been reported and informal self-testing already practiced (WHO, 2009).

Health workers may benefit in a number of ways from formalized self-testing, however there are concerns which also need to be addressed (WHO, 2009). Many health workers perceive benefits in self-testing due to their daily experience of HIV issues through testing and counseling and clinical care of patients, but are reluctant to seek testing for themselves because of fears confidentiality and stigma within their health services where they work (WHO, 2009). As it may be difficult to discourage informal self-testing, formalizing access to self-testing or improving conditions for accessing confidential and quality HIV testing could improve outcomes and minimize adverse consequences (WHO, 2009).

According to a study done by (De Walque in 2007) on 'How does the impact of an HIV/AIDS information campaigns vary with educational attainment? Evidence from rural Uganda', a key determinant of access to and comprehension of HIV/AIDS knowledge and information is education posits that education is negatively related to HIV infection rates and identifies various pathways through which education impacts

HIV/AIDS infection: the use of condoms, particularly during sex with non-regular partners; the use of HIV/AIDS facilities, particularly voluntary counseling and testing centers; and the empowerment of women to negotiate sex (De Walque, 2007)

Based on longitudinal data from a district in Southwestern Uganda, (De Walque, 2007) on his study of ‘How does the impact of an HIV/AIDS information campaigns vary with educational attainment? Evidence from rural Uganda’ shows that increased education attainment has large payoffs in terms of HIV/AIDS reduction (De Walque, 2007). In particular, in that study, after the introduction of HIV/AIDS information campaign in Southwestern Uganda, HIV/AIDS infections decreased by 6 % for individuals with primary education and 12 % for individuals with secondary education (De Walque, 2007).

2.2 INCREASING UPTAKE OF TESTING

According to a study done by (Corbett et al., 2007) on ‘Health worker access to HIV/TB prevention, treatment and care services in Africa: situational analysis and mapping of routine and current best practices’ , one of the major imperatives for increasing uptake of regular HIV testing is to protect HIV-positive health workers from their high risk of developing tuberculosis. TBHIV-related TB has a high mortality even when diagnosed, but can be prevented by early diagnosis of HIV infection followed by a combination of measures to reduce ongoing exposure to *Mycobacterium tuberculosis*, including provision of isoniazid preventive therapy and ART (Corbett et al., 2007).

(Corbett et al., in 2007) also on the above study stated that Institutional rates of *M. tuberculosis* transmission are high in high HIV-prevalence settings, and most TB in health workers is due to occupationally acquired infection is the employer’s responsibility to reduce this risk, and there are therefore ethical, personal and public health reasons to support access to HIV testing to prevent morbidity and mortality, and retain health workers within the workforce (Corbett et al., 2007).

According to a study stated by (Young et al., in 2007) on ‘Antiretroviral post-exposure prophylaxis (PEP) for occupational HIV exposure ‘, health workers are also at risk from occupational exposure to HIV through needle stick and other injuries/accidents, and early post exposure prophylaxis (PEP) is recommended however uptake of PEP is reported as being low (Young et al., 2007). A study in Kenya by (Taegtmeyer et al., in

2008) on 'Working with risk: occupational safety issues among healthcare workers in Kenya', found that only 4% of health workers accessed PEP following needle stick injuries and 'fear of testing' was cited as an important barrier to accessing PEP (Taegtmeier et al., 2008). Similarly, 'reluctance to test' was reported as a barrier to accessing PEP from a small study from Malawi by (Van et al., in 2007) on 'Maximizing Positive Synergies Collaborative Group. An assessment of interactions between global health initiatives and country health systems', (Van et al., in 2007) in that study stated that it is possible that greater access to self-testing could be an important factor to help health workers access (PEP) following occupational exposure (Van et al., 2007).

2.3 BARRIERS TO TESTING

According to a study done by (Namakhoma et al., in 2010) on 'Negotiating multiple barriers: health workers' access to counseling, testing and treatment in Malawi', stigma and fear of disclosure may be major obstacles to health worker access to HIV testing and counseling (HTC) and other HIV services.⁶ Being infected with HIV can be a source of personal and professional shame for a health worker, and may also invoke fear of losing one's job and damaging future career prospects (Namakhoma et al., 2010).

According to a study done by (Corbett et al., in 2007) on 'Health worker access to HIV/TB prevention, treatment and care services in Africa: situational analysis and mapping of routine and current best practices', to access HIV services, health workers may have to attend with the people that they serve, which may undermine the relationship of trust and authority that they have with clients. Furthermore, being tested and/or treated for HIV by a colleague might compromise confidentiality, and the service provider may also feel burdened by the knowledge of their colleague's HIV status (Corbett et al., 2007).

Corbett et al in the above study also stated that regardless of the outcome, it has been documented that having an HIV test can be stigmatizing, and health workers are sometimes assumed to be HIV positive if they are known to have been tested (Corbett et al., 2007). He further stated that, specific factors that may influence the uptake of HTC by health workers should be considered when developing services (Corbett et al., 2007).

2.4 GLOBAL HTC POLICY

A study done by (Branson et al., in 2009) on 'New directions for early HIV diagnosis. 18th meeting of the International Society for Sexually Transmitted Disease Research', found out that there has been a change in international policy away from recommendations that prioritized individualized in-depth counseling towards a simplified approach to support wider access to HIV testing linked to greater access to prevention and care including ART (Branson et al., 2009). Branson et al in that study stated that HTC policies have become increasingly public-health oriented, emphasizing the need for convenience, better integration into routine health services, and prioritizing wide coverage through sustainable strategies rather than in depth pre- and post-test counseling (Branson et al., 2009).

According to a study done by Pope et al in 2008 on 'A cluster-randomized trial of provider-initiated (opt-out) HIV counseling and testing of tuberculosis patients in South Africa', they stated that human rights dialogue has also changed the approach to HTC, from a cautionary position to an issue of right to access to HTC, treatment and care (Pope et al., 2008). Pope et al 2008 in that study further commented that with this shift has come an expanded range of HTC models (Pope et al., 2008).

2.5 INFORMAL AND FORMAL SELF-TESTING AMONG HEALTH WORKERS

According to a study done from 5 countries in sub Saharan Africa by (Corbett et al., in 2007) on 'Health worker access to HIV/TB prevention, treatment and care services in Africa: situational analysis and mapping of routine and current best practices', found out the following:

Informal HIV self-testing was reported as being high among health workers, with 41% reporting self-testing in Mozambique (Corbett et al., 2007).

Rates of reported informal self-testing vary widely across and within countries. Self-testing is not condoned in any health setting, and reported uptake of self-testing may therefore be underestimated (Corbett et al., 2007).

A few health workers who had self-tested expressed regret. Those who regretted their decision to self-test reported that they were unprepared to cope with the results (Corbett et al., 2007).

Reported disclosure following self-testing was high. In one study, 85% of those who self-tested reported that they had disclosed their results to at least one person. However, in the same study, many health workers said that they were not aware of the HIV status of their partners (Corbett et al., 2007).

Confirmation of self-test results is an important concern. Only 46% of health workers said that they had sought confirmatory testing, but the majority reported that the self-test was not their last HIV test (Corbett et al., 2007). This may imply that confirmatory or follow-up testing is generally conducted, but ensuring confirmation of a single self-test will be a major concern if self-testing is to be formally introduced (Corbett et al., 2007).

Rates of formal testing were also high among health workers and varied according to health worker discipline and type of health facility (Corbett et al., 2007). Uptake of testing may be influenced by access to HIV testing services, as the highest rates of HIV testing were in maternity centres where PITC is standard, whereas the lowest were in dispensaries without integrated HIV services (Corbett et al., 2007).

CHAPTER THREE

METHODOLOGY

3.1 Study Design

The study was a hospital based cross sectional, descriptive study to describe the knowledge, attitudes and practices of HIVST among health workers at KIUTH.

3.2 Study Population

All healthcare workers in KIUTH

3.3 Inclusion criteria

This study included all health workers.

3.4 Exclusion criteria

- I. Health workers on leave
- II. Health workers who refuse to consent

3.5 Sample size determination

Sample size was calculated according to M. Fishers formula.

$$N = \frac{Z^2 \cdot P \cdot Q}{D^2}$$

N=Desired sample size

Z=standard deviation at the desired degree of accuracy = 95%=1.96%

P= proportion of the population with the desired characteristics. If there is no measureable estimate we use 50%=0.5

$$Q = 1 - P$$

D=Acceptable level of error=5%=0.05

$$\text{Therefore } N = \frac{1.96^2 \cdot 0.5 \cdot (1-0.5)}{0.05^2} = 292$$

3.6 SAMPLING TECHNIQUE

Consecutive enrollment sampling technique was employed and then the identified subjects were provided with the questionnaires to fill.

3.7 DATA COLLECTION TOOLS

The tool for data collection was a semi- structured self –administered questionnaire schedule. To be able to collect the required data, questionnaire schedules were developed and administered to the respondents whereby, quantifiable demographic data and other study variables were collected.

3.8 VALIDITY AND RELIABILITY OF THE RESEARCH INSTRUMENTS

To obtain and maintain quality data, the research assistants were carefully selected. These comprised newly qualified clinical officers who had previous experience in data collection during their course. They were trained on how to administer the questionnaires, maintain confidentiality and observe medical ethics during data collection. The questionnaire was pre-tested before administration on health providers with similar characteristics in different health facilities to identify the validity of the self-administered questionnaire schedule. The research assistant was closely supervised throughout the data collection processes. The questionnaires were checked, counted and kept in safe custody for each day.

3.9 DATA ANALYSIS

Data was summarized using descriptive statistics and presented in frequency tables using Scientific Package for Social Science (SPSS) computer program.

3.10 ETHICAL CONSIDERATIONS

Identity of respondents was anonymous by ensuring names are not written on questionnaire schedules. Informed written consent was obtained from the respondents to ensure participation is voluntary. Clearance was sought from the KIUTH Institutional Review Ethical Committee and the Dean faculty of clinical medicine and dentistry.

3.11 AUTONOMY AND INFORMED CONSENT

Participation in the study was voluntary and participants were provided written informed consent only after being explained to the details of the study, and the benefits and risks of participate

3.12 RISK AND BENEFITS

That researcher had the duty to protect the participants and make sure that the benefit outweighs the risk. Participants were exposed to any physical activity that could cause harm to them, they were told of the benefit of the study and that there are no foreseeable risks associated with participation. However there was provision of debriefing, counseling and additional information. The researcher was available to answer any question during the data collection and also employed the service of a professional Guidance Counselor to provide free counseling services to any health worker who may experience emotional or psychological disturbance as a result of information. This was considered because some of the health workers may find issues around HIV self-testing

in the questionnaire sensitive. No health worker was expected to exhibit or reported any sort of emotional disturbance and the researcher expected not receive any call in that respect after the data is collected. The health workers were enthusiastic about the study as they demonstrated that they were familiar with such exercise.

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF RESULTS

4.1 Socio-Demographic Characteristics of the Study Population

Of those who participated, 108(37%) were nurses, 5(2%) were Pharmacist staff and 129(44%) were clinical officers. Doctors and VCT counselors were only 38(13%) and 12 (4%) respectively. This conforms to the normal 40% proportion of nurses against other health providers in any particular health facility set up. The dominant age group was between 20- 39 years with 187 (64%) respondents.

Majority of the respondents were either married or living with a partner 199 (68%) while only 1 (0.5%) were widows or widowers. Single respondents accounted for 85 (29%) of the respondents. Over 98% of the people participating in the study were Christians. Of the 292 respondents, 102 (35%) were Catholics, 184 (63%) were Protestants and 6 (2%) were Muslims. On the level of education, slightly above half of the participants 172 (59%) had attained a college diploma while 20 (7%) had a university degree and the other 99(34%) had college certificates.

The small difference in the respondents gender 1(6%) more males than females was not quite significant but reflects on the male gender dominance found in any working situations. The dominant age group 20- 39 yrs. reflects the youthful nature of the workers as found in majority of working environments. Health providers being people who are employed and in their reproductive age, majority are married as seen in this study. Over 98% of the respondents were Christians of either catholic or protestant religion; the two are the dominant religious groups in KIUTH.

Table 4.1: Characteristics of the Study Respondents (n=292)

BACKGROUND CHARACTERISTICS	Total n=292 (100%)
Occupational classification	
Doctors	38(13%)
Clinical officers	129(44%)
Nurses	108(37%)
Pharmacist	5(2%)
VCT Counsellors	12(4%)
Age distribution	
20-29 years	93(32%)
30 - 39 years	93(32%)
40 - 49 years	93(32%)
50 and above years	13(4%)
Highest level of Education	
College certificate	99(34%)
College diploma/higher Diploma	172(59%)
University Degree	21(7%)
Religion	
Catholic	102(35%)
Protestant	184(63%)
Muslim	6(2%)
Marital status	
Single	84(29%)
Married/living with partner	199(68%)
Separated/divorced	6(2%)
Widow/Widower	1(1%)

4.2 Level of knowledge on HIVST among HCW at KIUTH

Table 4.2 shows that, HIVST counselors and Doctors emerged with the highest score 12(100%) and 38(100%) on the level of knowledge followed by clinical officers with an average score of 126(98%). Those who scored least on knowledge were Pharmacists with an average score of 4(80%).

Table 4.2: Respondents Level of Knowledge on HIVST (n=292)

Category	Frequency (%)	Knowledge on HIVST	
		Yes Frequency (%)	No Frequency (%)
Doctors	38(13)	38(100%)	0(0%)
Clinical officers	129(44)	126(98%)	3(2%)
Nurses	108(37)	101(94%)	7(6%)
Pharmacist	5(2)	4(80%)	1(20%)
VCT Counsellors	12(4)	12(100%)	0(0%)

4.3 Attitudes of Health Care Workers towards HIVST

To assess this variable, the respondents were evaluated on four indicators for attitudes and an average score taken in respect of their occupational classification. The results showed that VCT counselors and Doctors had the highest score 12(100%) and 38(100%) respectively on positive attitudes towards HIVST. The Pharmacists emerged with the lowest score 4(80%) as shown in Table 4.3

Table 4.3: Respondents Level of Attitude towards HIVST at KIUTH.

Category	Frequency	Attitudes on HIVST	
		Positive attitudes towards HIVST Frequency (%)	Negative attitudes towards HIVST Frequency (%)
Doctors	38	38(100%)	0(0%)
Clinical officers	129	124(96%)	5(4%)
Nurses	108	104(97%)	4(3%)
Pharmacist	5	4(80%)	1(20%)
VCT Counsellors	12	12(100%)	0(0%)

4.4 Practices of Health Care workers towards HIVST

The indicators were to measure the level of practice towards HIVST. The results showed that VCT counselors and Doctors had the highest score 10(83%) and 31(81%) respectively on positive practice towards HIVST. The Pharmacists emerged with the lowest score 3(60%) as shown in Table 4.4.

Table 4.4: Respondents practices towards HIVST

Category	Frequency	Practices on HIVST	
		Positive practices towards HIVST Frequency (%)	Negative practices towards HIVST Frequency (%)
Doctors	38	31(81%)	7(19%)
Clinical Officers	129	100(77%)	29(33%)
Nurses	108	85(79%)	23(21%)
Pharmacists	5	3(60%)	2(40%)
VCT Counsellors	12	10(83%)	2(17%)

CHAPTER FIVE

DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

5.1 DISCUSSIONS

The main purpose of this study was to determine the level knowledge attitude and practice of HIV self-testing among health workers

This study found that, utilization of HIVST by health providers was affected by, level of knowledge on HIVST, the respondents level of education, attitudes and perceptions towards HIVST. The level of knowledge on HIVST among health workers varied along their specific occupational categories as demonstrated in this study. VCT Counselors and Doctors had the highest level of knowledge 12(100%) and 38(100%) respectively with the Pharmacist category emerging with least level of knowledge 4(80%) on HIVST. This clearly shows that there are gaps in knowledge on HIVST among the health providers which need to be addressed. The higher knowledge on HIVST demonstrated by Health providers in this study can be attributed to the health personnel's higher level of knowledge and exposure to VCT as compared to the general public. In a study on Knowledge, Attitudes and Practices (KAP) of Health Care Workers in Madagascar in July 2004, it was shown that scientific knowledge on HIV was poor among Healthcare Workers (Hentgenet al., 2007), these findings conform with the findings in this study which has revealed gaps in knowledge on HIV and VCT especially on the Pharmacist category of health providers

Attitudes and behavior is another major factor in acceptance of ones HIV/AIDS status and utilization of HIVST. This study found that positive attitude towards

HIV/AIDS and HIVST utilization was fair across the various cadres of health providers. However, the level of positive attitudes by some care providers for example Pharmacist personnel was relatively low 4(80%) compared to VCT Counsellors 12(100%), Doctors 38(100%), Nurses 104(97%), and Clinical Officers 124(96%); this is because pharmacy personnel rarely engage in clinical practice involving patients, hence they believe HIVST is relatively relevant to their field. This underlines the need to address the issues of attitudes towards HIV/ AIDS and HIVST utilization among these categories of health providers.

HIVST practice is a major factor in knowing and accepting one's HIV status, which is dependant on the level of knowledge and attitude towards HIVST. Positive practices

towards HIVST by Doctors and VCT counsellors were highest at 31(81%) and 10(83%) respectively, compared to Clinical officers 100(77%), Nurses 85(79%) and Pharmacists 3(60%). The high positive practice among doctors and VCT counsellors is due to their frequent engagement with patients in clinical practice, hence they consider HIVST as a playing a major role in knowing their HIV status. A lower positive practice is observed in pharmacists because they do not engage in clinical practice involving patients; hence they believe frequent HIVST does not play a major role in their field.

5.2 CONCLUSION

Demographically, In terms of their occupations, a good number of the respondents were nurses.

Generally, health providers demonstrated a fair knowledge on HIVST across board, but the fact that the Pharmacist category of health providers demonstrated a relatively limited knowledge level.

Positive attitude towards HIVST utilization among health providers was found to be satisfactory across board.

5.3 RECOMMENDATIONS

The gaps found in knowledge on HIVST can be addressed by KIUTH through health education on HIVST and provision of reading materials to health providers.

The negative behavior towards practicing HIVST can be addressed by KIUTH through education, development, motivation, and counselling.

The negative attitude on HIVST utilization by health providers as found in this study needs to be addressed by KIUTH through education and development of a workplace programs to improve positive attitude.

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APPENDICES

APPENDIX I: INTRODUCTION AND CONSENT

Hello. My name is AbdulkaderZuberOsman,I am a Student of Bachelor of medicine and surgery at Kampala International University, Faculty of Clinical Medicine and Dentistry. I'm carrying out a research on HIV self-testing KAP of health personnel. The Questionnaire addresses various issues regarding HIV self-testingutilization and constraints. You have been chosen as one of the participants of this study. Kindly assist me answering the questions as accurately as possible. Confidentiality of the information given will be highly maintained. It will be used for academic purposes only. Thank you for your cooperation.

Do you have any questions about the survey? May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED..... 1

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED ... 2 —END

APPENDIX II: QUESTIONNAIRE

KNOWLEDGE ATTITUDE AND PRACTICE OF HIV SELF TESTING AMONG HEALTH WORKERS OF KAMPALA INTERNATIONAL UNIVERSITY TEACHING HOSPITAL BUSHYENI UGANDA

SECTION A: RESPONDENT'S BACKGROUND CHARACTERISTICS

Interviewer Read: First I would like to ask you some questions about yourself?

1. Sex
 - a) Male b) Female
2. What is your date of birth?
 - a) Day b) Month c) Year
3. What is your Job? (Circle all that apply)
 - a) Medical Officer/ Pharmacist/ Dentist b) Clinical Officer c) Nurse (registered/ enrolled) d) VctCouncillor e) Pharmacist f) Administration/ Management g) Students h) Support Staff i) Others (specify)
4. In which department(s) are you currently working?
5. What is the highest level of education you have attained (Circle only one answer)
 - a) Primary b) Secondary c) Certificate d) Diploma/ higher diploma e) University degree f) Post graduate g) Others (specify)
6. What is your Religion? (Circle only one answer)
7. Catholic b) Protestant c) Muslim d) Traditionalist e) No religion/ none
8. What is your marital status? (Circle only one)
 - a) Married b) Not married but living with partner c) Single d) Separated e) Divorced f) Widow/ widower
9. If married (male) do you have more than one wife?
 - a) Yes b) No
10. If yes, how many?

If married (female) does your husband have more than one wife?
11. If yes, how many?
 - a) Yes b) No

SECTION B. KNOWLEDGE ON HIVST

1. Have you had of HIVST
 - a) Yes b) No

2. If **yes**, through which medium?
 - a) Electronic Mass media b) Friend c) Health worker d) Church/mosque e) Internet
 - f) Others specify
3. HIVST involves individual being tested on their own will?
 - a) Yes b) No c) Don't Know
4. HIVST is important to prevent HIV?
5. a) Yes b) No c) Don't Know
6. HIVST process involves pre-test counselling, testing and post-test counselling?
 - a) Yes b) No c) Don't Know
7. HIVST Involves confidentiality?
8. a) Yes b) No c) Don't Know

SECTION C: HIVST ATTITUDES

1. What reason will motivate you to do HIVST?
 - a) To get a job b) Overseas opportunity c) For marriage purpose d) During pregnancy
2. If there is cure for HIV
 - a) Yes b) No
3. Would you recommend it to friends and relatives?
 - a) Yes b) No
4. If I test positive for HIV after going for HIVST?
 - a) I will kill myself b) Disbelief the result c) Spread the virus to others d) I

SECTION D: HIVST PRACTICES

1. Have you ever tested for HIV before?
 - a) Yes b) No
2. Why did you decided to test?
 - a) Was sick b) had unprotected sex c) Raped d) had blood transfusion e) Cut with sharp object f) Just want to know my HIV status.
3. Why have you not tested?
 - a) Scared of positive result b) The test is expensive c) I am sure, I don't have HIV

Thank you for completing the questionnaire.

APPENDIX III: PROPOSED BUDGET

Research Item	Quantity	Unit cost (Ugshs)	Total (Ugshs)
Research assistants (Data collection and entry)	2	100,000	200,000
Stationary	1	-	45,000
Communication	2	10,000	20,000
Data analysis and report writing	1	100,000	100,000
Binding	4	2,000	4,000
Refreshments	20	2,000	40,000
Total	-	-	409,000

APPENDIX IV: WORK PLAN

Activities	February	March	April
Proposal development and approval by IREC			
Purchasing and preparing data collection equipment tools			
Recruiting and training of research assistants			
Pretesting and data collection			
Data analysis			
Dissemination of results			

ENDIX V: LETTER OF INTRODCUTION FROM KIU



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**OFFICE OF THE DEAN
FACULTY OF CLINICAL MEDICINE & DENTISTRY**

07/05/2018

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: ABDULKADER ZUBER OSMAN (BMS/0078/123/DF)

The above named person is a fifth year student at Kampala International University pursuing a Bachelor of Medicine, Bachelor of Surgery (MBChB) Programme.

He wishes to conduct his student research in your hospital.

Topic: Knowledge, attitude and practice of HIV self-testing among health workers of KIU-Teaching hospital

Supervisor: Dr. Odong Richard Justin

Any assistance given will be appreciated.

S-O. Akib
Dr. Akib Surat O
Deputy Executive Director/Assoc Dean (FCM & D)



"Exploring the Heights"

Assoc. Prof Ssebuufu Robinson, Dean (FCM & D) 0772 507248 email: rssebuufu@gmail.com
Dr. Akib Surat Associate Dean FCM & D) email: doctorakib@yahoo.com

APPENDIX VI: MAP OF ISHAKA MUNICIPALITY SHOWING KAMPALA INTERNATIONAL UNIVERSITY-WESTERN CAMPUS

