

KNOWLEDGE AND PRACTICES ON SEXUALLY TRANSMITTED INFECTIONS

AMONG WOMEN OF REPRODUCTIVE AGE (18-45 YEARS OLD)

ATTENDING KAMPALA INTERNATIONAL

UNIVERSITY TEACHING

HOSPITAL

ABDUL KARIM NASSER

DCM/0047/143/DU

A RESEARCH REPORT SUBMITTED TO SCHOOL OF ALLIED HEALTH SCIENCES IN

PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF

DIPLOMA IN CLINICAL MEDICINE AND COMMUNITY HEALTH

AT KAMPALA INTERNATIONAL UNIVERSITY

WESTERN CAMPUS

JULY, 2017

DECLARATION

I Abdul Karim Nasser declare that the work presented in this report has not been presented either wholly or in parts for any other academic qualifications. All the work is original and all views expressed in are mine.

Abdul Karim Nasser

Researcher Signature Date

APPROVAL

I do recommend that the report be presented to faculty board for examination and approval as the student conducted this research under my supervision.

Signature.....

Date.....

DR SAMUEL KYALEMA

H.O.D Accident and Emergency Department

Kampala International University Teaching Hospital (K.I.U-TH)

DEDICATION

I dedicate this document to my beloved parents Mr. J.A Nasser and Mrs. SekinaBakhit for psychological, emotional, financial and moral support they accorded me without which this course and dissertation would have remained a dream.

I also dedicate it to my mentors DrMbarackKhalfan and Mr.Droma.J.Swaleh.

Lastly I dedicate it to all my teachers who have molded me in to what I am.

ACKNOWLEDGEMENT

First and foremost to almighty God (Allah) for giving me life and be among the few lucky ones to reach up to this level.

My sincere gratitude goes to my beloved family (J.A Nasser and SekinaBakhit); you are the greatest gift I will ever have, thank you for your support, prayers and encouragement. May the almighty God bless you.

My sincere appreciation and thanks goes to the management of Kampala International University for giving me a chance to undergo this noble training as a clinician,

Recorded appreciation to my supervisor DrSamuelKyalema for his tireless efforts, guidance, encouragement and dedication in making sure that I understand the research process well.

Heartfelt gratitude to my dear brothers(Anwar Nasser, Abdulwahab Nasser,BakhitAbdu, Hassan Yusuf, Miraj Abbas, Ahmad Khalfan, Khalid Khalfan and sisters(FauziaNasser,Zena.K.Bakhit, NusurahSwaleh) for your support, prayers and encouragement in making me pursue the course

My infinite gratitude to my mentors (Dr.MbarackKhalfan, Droma.J.Swaleh) and my dear friends EcoruIsaac, Adrole Hillary, Bakunzi David for your support, advise, motivation, prayers and encouragement.

A big thanks goes to the management Kampala International University- Teaching hospital (K.I.U-TH) forthe support and accepting me carry out the research.

To all who assisted me in one way or the other I say thank you may God bless you all.

TABLE OF CONTENTS

DECLARATION	ii
APPROVAL	iii
DEDICATION	iv
ACKNOWLEDGEMENT	v
OPERATIONAL DEFINITIONS	ix
CHAPTER ONE	1
Introduction	1
1.1 Background	1
1.2 Problem statement	3
1.3 Significance of the study	4
1.4 Objectives	4
1.4.1 Broad objective	4
1.4.2 Specific objectives	4
1.5 Research questions	4
1.6 Conceptual frame work.	5
1.7. SCOPE OF THE STUDY	6
1.7.1 Geographical scope	6
1.7.2 Content scope.....	6
1.7.3 Time scope.....	6
CHAPTER TWO	7
LITERATURE REVIEW	7
Introduction	7
Global Burden of STIs	7
Awareness and knowledge of STIs.....	8
Prevention of STIs	9
CHAPTER THREE.....	10
METHODOLOGY	10
3.0 Introduction.....	10
3.1 Study design.....	10
3.2 Study Area	10
3.3 Study population	11
3.4 Sample size determination	11

3.5. Sample techniques.....	12
3.6.1 Inclusion criteria.....	12
3.6.2 Exclusion criteria.....	12
3.7 Data collection method.....	12
3.8. Research instruments/tools	12
3.9 Data analysis method.....	12
3.10. Data presentation method	12
3.11. Ethical considerations.....	13
CHAPTER FOUR.....	14
Introduction	14
Results	14
CHARPTER FIVE.....	19
Introduction	19
Discussion.....	19
Awareness and knowledge of STIs.....	19
Preventive measures of STIs	20
Conclusion.....	21
Recommendations.....	21
REFERENCES	Error! Bookmark not defined.
Appendix I Consent form.....	25
Introduction	25
Appendix II Questionnaire	26
Part 1: Demographic Characteristics.....	26
Part 2: Knowledge on STI.....	26
Part 3: Practices Related to STI.....	27
Part 4: Preventive Measures of STI	28
Appendix III Work plan	29
Appendix IV Budget estimate.....	30
Appendix V: Map of the study area (Bushenyi-Uganda).....	31
APPENDIXVI: Map of IshakaBushenyi Municipality.....	32
APPENDIX VII: Introduction letter for data collection	33

ABBREVIATIONS

C.D.C	Center for Disease Control
G.U.D	Genital Ulcer Disease
H.O.D	Head of Department
HIV/AIDS	Human Immune Virus/ Acquired Immune Deficiency Syndrome
HPV	Human Papilloma Virus
K.I.U	Kampala International University
K.I.U-TH	Kampala International University-Teaching Hospital.
M.O.H	Ministry Of Health
MCH	Maternal Child Health
S.T.D	Sexual Transmitted Disease
S.T.I	Sexual Transmitted Infection
SDG	Sustainable Development Goal
UBOS	Uganda Bureau of Statistics
W.H.O	World Health Organization

OPERATIONAL DEFINITIONS

Knowledge: Understanding skill or information gained by a person through learning or experience.

Attitude: Feeling that influences ones' behaviour towards something.

Practice: Active involvement of an individual in doing things repeatedly to achieve a goal at the end.

Sexual transmitted infection: Are a group of diseases or infections that are spread through sexual intercourse and mainly affect the human reproductive tract.

ABSTRACT

BACKGROUND

Sexually transmitted infections (STIs) still stand as one of the commonest health problems affecting women of reproductive age. The knowledge and practices on STIs among susceptible populations such as women of reproductive age attending or visiting Kampala International University Teaching Hospital need to be established.

OBJECTIVE: The objective of this study was to determine the knowledge and practices related to sexual transmitted infections among women of reproductive age between 18-45 years attending K.I.U-TH.

METHODS: A cross-sectional study was conducted in March-April 2017 among women of reproductive age attending or visiting Kampala International University Teaching Hospital. Data was collected using a pre-tested, structured questionnaire. A total of 170 women were enrolled in this study. The collected data was analysed manually and results recorded. The result of the study was presented by tables and percentages.

RESULTS: Of the 170 volunteered female patients who participated in the study, 93(55%) had knowledge on STIs. The main source of information on STIs was dominantly from school 136(80%). 136(80%) believed that STIs are caused by virus and 127(75%) agreed that itching in the genital area is the major sign/symptom. 136(80%) believed that having unprotected sex is the major practice that can lead to STIs followed by having multiple partners. 161(95%) agreed that testing partner before intercourse, abstinence and regular medical checkup are the major preventive measures to STIs as 119(70%) agreed that STIs can lead to infertility and miscarriage.

CONCLUSION: Most of the participants knew about the causes, types, symptoms, predisposing factors and means of prevention of STIs, although a significant number did not know about the systemic effects or consequences of STIs to their body and some preventive measures.

Majority of the participants didn't follow the appropriate behaviour patterns despite being knowledgeable about the various methods of prevention of STIs. Intensive educational campaigns to communities by providing information about STIs ensuring that the participants know the causes, practices, complications and ways how STIs can be prevented.

CHAPTER ONE

Introduction

This chapter covers the background, problem statement, general objectives, specific objectives, research questions, scope and significance of the study.

1.1 Background

Sexually Transmitted Infections (STIs) are group of diseases that are spread through sexual intercourse and mainly affect the human reproductive tract. These communicable diseases affect the women more than the men due to their more exposed mucosa than the men. Adolescents and the young adult women are more susceptible to these infections due to the developmental transition changes. (WHO. Guide to essential practice 2008)

These infections are classified into three; sexually transmitted diseases which can be spread through unprotected sex with an infected person, endogenous infection which are acquired from the normal flora within the body especially when an individual's immunity is suppressed and lastly iatrogenic infections that are acquired from medical procedures but mainly occur due to carelessness and cross infections (Divya et al, 2008).

STIs are a common public health problem worldwide, with developing countries accounting for majority of cases. In 2008, the World Health Organization estimated that up to 499 million cases of curable STIs occurred that year, majority occurring in low income countries (WHO 2008).

Sexually transmitted Infections (STIs) according to some health care clinics are interchangeable with STDs; however, others believe that STIs are the precursor to STDs because they are caused by the same pathogens but are at a stage where no symptoms are present in the host (University of Alabama Student Health Center; University of Wisconsin [WIRE], 2010). In addition, STI is used as a more current term and may be less embarrassing to a Patient upon diagnosis compared to using the term disease (WIRE, 2010).

At least twenty diseases have been identified that are transmitted by sexual contact, the most common being HIV/AIDS, chlamydia, genital herpes, gonorrhea, syphilis and trichomoniasis. Infectious agents that cause STI can be classified as either viral, bacterial, protozoal or fungal (Hawkes's et al 2002).

Some of the most common STDs result from bacterial (chlamydia, gonorrhea, and syphilis) and viral (HIV/AIDS, herpes, hepatitis B, human papillomavirus or HPV) exposure.

In addition to bacterial and viral culprits, protozoa and fungi also cause STDs, including those that Cause trichomonas vaginitis and jock itch, respectively (Shim, 2011).

Sexually transmitted infections (STIs) are a key reproductive and public health concern, especially in the era of HIV/AIDS. The World Health Organization (WHO) estimates that approximately 448 million infections occur worldwide, and about 47% of them are among women [Geneva WHO 2013].

In Uganda, the prevalence of STIs among sexually active adolescents attending a health care clinic was found to be as high as 20.6% among females and 13.2% among males (RASSJO et al 2006). More recently, the national prevalence of syphilis was found to be 2%.

In Uganda, the prevalence of STIs among women of reproductive age increased from 22% in 2006 to 27% in 2011 [UBOS 2013].

The Uganda AIDS Indicator Survey conducted in 2011 provided a higher estimate of women in union with STIs, at 37%, a number that highlights the gravity of the situation in Uganda [MOH and ICF 2012]. It is particularly important to note that in Uganda and elsewhere in sub-Saharan Africa, for instance in Zambia and Rwanda, the level of new HIV infections is higher among persons in union than in those not in union [UBOS 2012]

According to USAID (2012), STDs pose a great threat to health in some areas of Uganda especially Bushenyi specifically to adolescents due to early age of first sexual intercourse and gap between knowledge and practice. Many women have vaginal discharge which they tend to consider normal and not as an indication of STDs. Young adolescents know almost nothing about STDs, though most Ugandans know the most common STDs and how they are transmitted, they know little about how to detect them, their treatment, and their possible effects on health. Many people know that condoms can prevent STDs; yet few men and women use them.

STIs can result in serious long term complications including pregnancy complications, fetal and neonatal demise, cancer, infertility, sexual dysfunction, and enhanced HIV transmission (Rizwan et al., 2015).

In addition, STIs have been shown to have serious physical, psychological and social consequence, negatively impacting on social and economic well-being of affected persons (seth et al., 2009).

Populations at risk include adolescents, sex workers and their clients, men who have sex with men, prisoners, truck drivers, fishing communities. Additionally, compared to men, women are at an increased risk of acquiring STIs, a fact attributed to gender inequity and biological predisposition (Mbonyi et al., 2012).

Despite efforts to control the spread of STIs, reports indicate an upward surge in the incidence of new cases. This situation is explained by a number of factors including, growing resistance to the common treatment regimens, lack of prioritization of management of STIs with the exception of HIV, STI surveillance, prevention and treatment programs are generally under staffed and poorly resourced undermining the quality of services rendered by most National programs (Aggarwal 2009).

In-addition to biomedical primary prevention strategies such as vaccines, circumcisions, behavioral interventions are a major component of Uganda's strategy towards STIs control in the country. Persistent high levels of STIs prevalence suggest that uptake of these interventions remains sub-optimal. To inform the design of effective behavioral preventive strategies, I conducted a cross sectional study to determine knowledge and practices related to sexually transmitted infections (STIs) among a high risk population, comprised of women of reproductive age attending Kampala International University Teaching Hospital (K.I.U-TH).

1.2 Problem statement

STIs still stand as one of the commonest health problems women of reproductive age suffer from, the burden of STIs continue to remain high in Uganda with country wide prevalence of 69% (JH-van de wijgert et al 2009), (Joint Clinical Research Centre Kampala- Uganda 2010). However studies about the prevalence awareness and attitudes of women in Ishaka-Bushenyi district is not known yet Maternal Child Health (MCH) strongly depend on reproductive health state of women of reproductive age as one of the pillars, hence success of reproductive health ensures a positive outcome of MCH aspect of the population of Uganda. However this remains a big barrier to achieve the target of Sustainable Development Goals (SDG), so the consequence of these STIs include neonatal diseases, infertility, social withdraw and increased mortality and morbidity.

Some intervention have been directed towards solving problems relating to STIs among women, and this has seen projects like women for health, reproductive health Uganda among others strengthened and integrate their programs. However most of these programs target people who are elite and of middle class with less emphasis drawn in moderately less developed areas whose composition has people earning less than a dollar per day, less formal education, and usually casual workers.

1.3 Significance of the study

The study shall establish the most common types of STIs, knowledge, attitude and practices of women of reproductive age living in Ishaka-Bushenyi district attending KIU-TH

It also identify factors predisposing women of reproductive age to STI in Ishaka-Bushenyi district attending KIU-TH and also attempt to raise awareness among policy makers and stakeholders in order to improve current intervention being laid

The study shall also refer those with signs and symptoms of STI for case management using syndromic approach at any point of case management in KIU-TH.

1.4 Objectives

1.4.1 Broad objective

To determine the knowledge and practices related to sexual transmitted infections among women of reproductive age between 18-45 years attending K.I.U-TH from February to April 2017.

1.4.2 Specific objectives

To assess knowledge of women of reproductive age between 18-45 years on Sexual Transmitted Infections attending K.I.U-TH from February to April 2017.

To identify the practices that predisposes women of reproductive age to Sexual transmitted infections.

To assess knowledge of women of reproductive age on possible preventive measures of S.T.I.

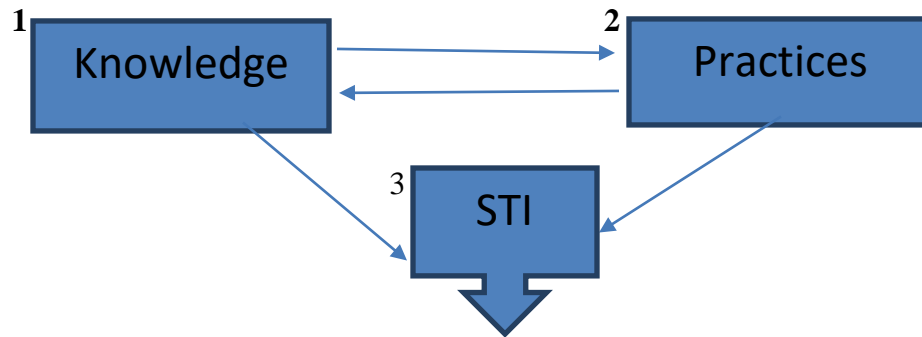
1.5 Research questions

What is the level of knowledge related to sexual transmitted infections among women of reproductive age attending Kampala International University Teaching Hospital (K.I.U-TH)?

What are the practices that predisposes women of reproductive age to Sexual Transmitted Infections (S.T.I)?

What are the possible preventive measures of Sexual transmitted infections among women of reproductive age?

1.6 Conceptual frame work.



Consequences

The conceptual frame work above has three (3) variables:

Knowledge; (these comprise of women of reproductive age who have heard about STI and its preventive measures. This can be through media, from the health unit from the friends). Knowledge about STIs will help to determine the level of practice of the prevention, hence reduction on the prevalence and incidences STI among reproductive women.

Practices; (comprises of those women who are practicing the preventive measures). These involves changes in life styles, personal hygiene, consulting a medical personnel etc. the practice can either be positive or negative depending on the attitude some people develop on knowledge about STI. This in turn affects the prevalence and incidences of STI among reproductive age.

STIs; (comprise of the various conditions that are grouped under sexually transmitted diseases, e.g. HIV, gonorrhea, syphilis, chlamydia. The prevalence and incidences of these diseases will either reduce or increase depending on the knowledge and practices of the various interventions put in place by the government. The high or low prevalence and incidences will therefore have either negative or positive consequences in the nation and as well globally.

1.7. SCOPE OF THE STUDY

1.7.1 Geographical scope

The study was conducted in KIU-TH which serves Ishaka - Bushenyi municipality and patients from within and without the region. The hospital is located in Bushenyi District formal called greater Bushenyi with the population of about 738553 inhabitants.

1.7.2 Content scope

The study only included knowledge and practices of STI among the women of reproductive age attending KIU-TH. This includes both good and bad practices.

1.7.3 Time scope

This research study was conducted within a period of 3 months starting from 1st February to 30th April 2017.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter covers the Global burden of STI, knowledge, practices and preventive measures to STI according to other research findings

Global Burden of STIs

Sexually transmitted infections (STIs) other than the human immune virus (HIV) are a major health problem affecting mostly young people, not only in the developing countries, but also in the developed countries. Studies have shown that diagnoses of STIs, especially syphilis, gonorrhea and Chlamydia have been reported in several western countries especially among teenagers 18-25 years old (Samkange-Zeeb, Spallek, & Zeeb, 2011).

Sexually transmitted infections (STIs) are a key reproductive and public health concern, especially in the era of HIV/AIDS. The World Health Organization (WHO) estimates that approximately 448 million infections occur worldwide, and about 47 % of them are among women [WHO, 2013].

STIs and their complications rank in the top five disease categories for which adults seek health care (WHO, 2011). The problem with most STIs is that they are asymptomatic (WHO, 2011). About 70% of women with gonococcal and chlamydia infections experience no symptoms at all and therefore STIs can thus be passed on unknowingly during unprotected sexual intercourse (WHO, 2011). The consequences of untreated STIs have adverse implications for reproductive and maternal health such as ectopic pregnancy, infertility, pelvic inflammatory disease and cervical cancer (WHO, 2011).

In Uganda, the prevalence of STIs among women of reproductive age increased from 22 % in 2006 to 27 % in 2011 [UBOS, 2013]. The prevalence of STIs among women in union increased from 23 % in 2006 to 27 % in 2011. Women in union in this case means women who are either married or cohabiting. The Uganda AIDS Indicator Survey conducted in 2011 provided a higher estimate of women in union with STIs, at 37 %, a number that highlights the gravity of the situation in Uganda [MOH and ICF, 2012].

Awareness and knowledge of STIs

In a study in rural North Vietnam, majority of females (15 to 49 years) examined were found lacking knowledge of STI. In this cross-sectional population-based study, about three-quarters of respondents did not know any symptom of STIs, one-half could not identify any cause of STIs and another one-half did not know that STIs can be prevented. Only one-third said that condom could be used to protect against STIs (Lan et al., 2009).

The researchers indicated that respondents were young unmarried and married women and concluded that low levels of knowledge of STIs were found among women of reproductive age in a rural district of Vietnam. In the same study proportions of unmarried and married women answered questions regarding STI knowledge (McLeroy, 2012). The most common signs of abnormal vaginal discharge, defined by the respondents, were odour and excessive amount (35.5% and 24.8% of responses respectively). Three-fourths of unmarried women did not know the common characteristics of abnormal vaginal discharge. Among suspected symptoms of STI, vaginal itching was the most frequently mentioned by the respondents (16%), followed by abnormal vaginal discharge (9.5%) (Oberhauser, 2011). Only 1.3% women considered urethral discharge in men as a suspected symptom of STI.

Similarly, low abdominal pain (in women), and dyspareunia or dysuria were rarely mentioned by the respondents; 73% married and 93% unmarried did not report knowledge of any symptom of STI (Agius, 2010). Only five percent of the women knew that the possible causes of STI were microorganisms. Bad hygiene and having sex during menstruation or soon after delivery were mentioned as "causes" of STI by 11.5% and 2.8% of women, respectively. Two-fifths of the women said STIs were caused by being unfaithful to your husband (Katusiime, 2014). Half of the respondents did not know any "cause" of STI. The proportions of respondents who correctly answered the question concerning STI transmissibility and the necessity of partner treatment were 76.5% and 55.9%, respectively (Lanet *al.*, 2009).

With regard to STI curability, 16.3% women considered gonorrhea and/or syphilis as curable diseases. Twenty one percent of the respondents mentioned HIV/AIDS as incurable while 14% women thought HIV/AIDS could be cured (Oladosu, 2005). Concerning sequel of untreated STI, the correct answer rates were very low while 59% of the women (54% married vs. 76% unmarried) did not know of any complication. There were significantly more unmarried than married women who were unaware that STI could be prevented. The results also demonstrated

significant differences in proportions of unmarried and married women who mentioned ways of STI prevention such as using condoms, avoiding injecting illicit drugs, and keeping good hygiene (Gottlieb et al., 2014).

Commonwealth Regional Health Community Secretariat (2011), states that in Zambia, knowledge of STI symptoms and treatment was also lacking. Some young people did not only identify gonorrhea, syphilis and several illnesses bearing local names, but also diarrhea and malaria as affecting the “private parts” In many settings, girls were especially poorly informed and had difficulty recognizing STI symptoms, especially in distinguishing between normal and abnormal vaginal discharge. Lack of education and young age might well play a role in STI knowledge levels (Annang, 2010).

Prevention of STIs

Ohene&Akoto (2008), have found that adolescents often experience feelings of guilt and shame when they realize that they have contracted an STI and many may not have acquired the skills needed for telling someone that they have a sexual health problem.

In a study on STIs and health seeking behavior among women in Accra, Adanu et al., (2008), found that only 35% of the women with STI symptoms sought and received care or advice. The study found that seeking care or advice was strongly associated with wealthy respondents who felt bothered or embarrassed by an offensive vaginal odor, for example. The challenge in STIs prevention is that a woman may know that her partner has several other sexual partners, she may be helpless. Asamoah-Odei (1996), reported that even when women knew their spouses had several partners, most lack the ability to negotiate for safer sex.

Summary of Literature Review

According to USAID (2012), STDs pose a great threat to health in some areas of Uganda especially Bushenyi specifically to adolescents due to early age of first sexual intercourse and gap between knowledge and practice. Many women have vaginal discharge which they tend to consider normal and not as an indication of STI. Young adolescents know almost nothing about STIs, though most Ugandans know the most common STIs and how they are transmitted, they know little about how to detect them, their treatment, and their possible effects on health. Many people know that condoms can prevent STIs; yet few men and women use them.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the methods of the study in the framework of study design, study area, study population, sample size determination, sampling method, inclusion and exclusion criteria, data collection procedure, data analysis, data presentation method and ethical considerations.

3.1 Study design

A descriptive based cross sectional study was carried out to assess the level of knowledge and practices related to STI among women of reproductive age between 18-45 years attending/visiting K.I.U-TH.

3.2 Study Area

The study was carried out in Kampala International University Teaching Hospital (K.I.U-TH) Located in Ishaka – Bushenyi, Western Uganda, and the institution is a private/public partnership, but is government aided because it is a training facility.

This is a well-established hospital with a good range of specialist departments and clinics, including General Surgery, Orthopedics, Obstetrics&Gynecology, Medicine, Ophthalmology, ENT, Dental Surgery, Pediatrics and Physiotherapy.

Bushenyi district is boarded by Kasese to the north, Kamwenge district and Ibanda district to the northwest, Mbarara district to the east, Ntungamo district to the south, Rukungiri to the southwest and Democratic republic of Congo to the west. Ishaka is 68km by road, northwest of Mbarara to the largest city in the sub region.

Bushenyi district is made up of Banyankole, Bakonjo, Banyoro, and Batoro. This make up a population of 738553 people and Runyankole is the language commonly spoken,

Its headquarters is in Bushenyi town. It is divided into counties, Igara where Ishaka is found, Ruhindi, Sheema, Bunyaruguru and Buhweju. It is further divided into 29 sub counties that include two councils Ishaka-Bushenyi and Kabwohe-Itendero town council lowest are cells or villages.

3.3 Study population

The study was done among women of reproductive age between the age of 18-45 years, both out patients and those who were admitted qualified for inclusion in the study. The hospital staffs as well as practicing medical students also qualified for inclusion in the study

3.4 Sample size determination

The study population involved women of reproductive age from 18-45 years. A total of 170 respondents were interviewed. Sample size was determined by using Fischer et al formula 1965,

i.e.

$$n = Z^2 pq / d^2 \quad \text{where}$$

n is the derived size of the population.

Z is the standard deviation at 95% of the degree of confidence which is 1.96

p is the estimated proportion of target population (15% of the national population of women of reproductive age 18-45 years old)

q is 1-p which gives the remaining population

d is the desired accuracy level (Precision standard error = 0.05)

$$z = 95\% = 1.96 \quad p = 15\% (0.15) \quad q = 1 - 0.15 = 0.85 \quad d = 0.05$$

$$n = (1.96)^2 \times 0.15 \times 0.85 / (0.05)^2 = 195.9216$$

$$n = n / 1 + n / N$$

$$n = 195 / 1 + 195 / 738553$$

$$n \text{ (sample size)} = 169$$

However sample size of 170 was used in case of a patient opts out

3.5. Sample techniques

Random sampling techniques were used to select the respondents in the area involved in the study. The population were listed and a number assigned to them in form of questionnaire starting from one onwards up to when a maximum of 170 respondents werereached. Participants were female between the ages of 18-45 years.

3.6.1 Inclusion criteria

All women of reproductive age between the ages of 18-45 years attending K.I.U-TH qualified for recruitment in the study.Both out patients and those who were admitted qualified for inclusion in the study. The hospital staffs as well as practicing medical students also qualified for inclusion in the study

3.6.2 Exclusion criteria

The study excluded medically ill women and all those below 18years as these cannot consent according to our law.

3.7 Data collection method

It's a systematic way of gathering information, which were relevant to the research purpose.

Data was collected using questionnaires which were filled by the respondents comprising of open ended questions.

The questionnaire were interpreted to or by the respondents. In this case the questionnaire was prepared in English with simple terminologies that could be understood by anyone in the community. The data collected included demographic characteristics, level of knowledge related STI and the practices that predisposes women of reproductive age to STI

3.8. Research instruments/tools

Tools used for data collection during research includes questionnaires; interviewing guides were used to record the necessary information.

3.9 Data analysis method

Questionnaires were checked for completeness immediately after administration by researcher and incomplete questionnaires were not analyzed. Data were analyzed manually and recorded.

3.10. Data presentation method

Data were presented in form of frequency tables and percentages.

3.11. Ethical considerations

A letter of introduction from the university was obtained from the administrator school of Allied health sciences and submitted to the ethical committee of KIU-TH for approval of carrying out of the research.

Before any data or information is given, informed consent were obtained. The participants were guaranteed confidentiality of the information they will give.

We seek verbal informed consents from the respondents before interviewing them and above all confidentiality was ensured at all stages of the study.

However the participants had a right to withdraw at any stage during the interview without any penalty.

The participants learned the use of the study and they were not paid for the participation.

CHAPTER FOUR

Introduction

This chapter is concerned with research findings presented according to the objectives. A total of one hundred and seventy (170) females attending KIU teaching hospital age between 18-45 years were included in the study

Results

Table 1: Socio-demographic characteristic, KIU Teaching hospital, Uganda, March 2017

Characteristics	No (%)
Age	
18-25	93(55%)
26-30	34(20%)
31-34	9(5%)
35-39	17(10%)
40-45	17(10%)
Marital status	
Single	85(50%)
Married	79(47%)
Divorced/Separated	3(1.5%)
Widowed	3(1.5%)
Religion	
Catholic	59(35%)
Protestants	53(31%)
Muslims	34(20%)
SDA	12(07%)
Others	12(07%)
Level of education	
University	85(50%)
Secondary	51(30%)
Primary	26(15%)
None	8(5%)
Occupation	
Student	76(45%)
House wife	51(30%)
Employed	26(15%)
Business	17(10%)

The demographic profiles of females involved in this study are shown in Table 1 above. Majority of the females 93(55%) were aged between 18 -25 years old followed by those aged 26-30 comprising 34(20%) while 35-39 and 40-45 shared 17(10%) and lastly 31-34 scored 9(5%) of the study group.

Of the 170 volunteered female patients who participated in the study, Majority of the participants were aged 18-25years93(55%),85(50%) percent of the ladies were single, 79(47%) were married and 6(3%) was shared equally by the widowed and divorced with the religious groupings having a fair distribution of respondents. At least majority of the respondents have reached university level 85(50%).Majority of the participants are students 76(45%) followed by housewife 51(30%).

Level of knowledge related to Sexual Transmitted Infections (objective one)

Table 2:Percentage of female with knowledge about STI attending KIU Teaching Hospital, Uganda, March 2017 (n=100).

Question	No (%)	
What are sexually transmitted infections?		
Defined Fully	93(55%)	
Defined Partially	51(30%)	
Don't know	26(15%)	
Have you ever heard about infections other than HIV that one can get through sex?		
Yes	161(95%)	
No	9(5%)	
From where have you received information on STI?	Yes	No
Friends	93(55%)	77(45%)
School	136(80%)	34(20%)
Television	68(40%)	102(60%)
Radio	85(50%)	85(50%)
Hospital	110(65%)	60(35%)
What are the causes of STI?		
Bacteria	102(60%)	68(40%)
Virus	136(80%)	34(20%)
Bad hygiene	42(25%)	128(75%)
Examples Sexually transmitted diseases?		
Chlamydia	51(30%)	119(70%)
Gonorrhea	119(70%)	51(30%)
Syphilis	136(80%)	34(20%)
HIV/AIDs	153(90%)	
Signs and symptoms of sexually transmitted diseases		
Abdominal pain	59(35%)	128(75%)
Discharge from the vulva	119(70%)	51(30%)
Rashes in the genital	119(70%)	51(30%)
Itching in the genital area	127(75%)	42(25%)
Don't know	9(5%)	
Complications of STI if un treated		
Infertility	119(70%)	51(30%)
Still birth	68(40%)	102(60%)
Miscarriage	119(70%)	51(30%)
Don't know	51(30%)	

Table 2 above shows the knowledge about Sexually Transmitted Infections. 93(55%) of the respondents fully knew the meaning of STI and 51(30%) partially knew the meaning of STI while 26(15%) never knew what STI mean. 136(80%) of the respondents believed that STIs are caused by Virus, 102(60%) believed that STIs are caused by bacteria whereas 42(25%) believed they are caused by bad hygiene and none of the respondents never knew at least one of the causes of STIs

The main source of information on STIs was dominantly from school 136(80%). 127(75%) gave itching in the genital area as clinical presentation of STI, 119(70%) thought that discharge from the vagina and rashes in the genitals were the manifestations of STI, 59(35%) responded that STI may present with abdominal pain and 9(05%) never knew any of the signs and symptoms of STI. 119(70%) of respondents knew that STI can lead to infertility and miscarriage, 68(40%) believed that STI can lead to still birth and 51(30%) never knew any of complications caused by STIs.

Table 3 shows Practices that predisposes women to STI (objective two)

Question	No (%)	
What do you think are the practices/behavior's that can lead to STI?	Yes	No
Unprotected sex	136(80%)	34(20%)
Multiple partners	119(70%)	51(30%)
Poor hygiene	42(25%)	128(75%)
Don't know	40(23%)	120(77%)
What will you do if you realize that have signs and symptoms of STI?		
Get treatment	136(80%)	34(20%)
Go to hospital	136(80%)	34(20%)
Get tested	85(50%)	85(50%)
Does having multiple partners lead to STI?		
Yes	119(70%)	
No	51(30%)	
What do you think you will do to prevent yourself from STI?		
Use condom	102(60%)	68(40%)
Being faithful to your partner	153(90%)	17(10%)
Abstinence	85(50%)	85(50%)
Keeping good hygiene	51(30%)	119(70%)

Table 3 above shows practices related to STI. 136(80%) of the respondents identified multiple partners to be the highest practice that could lead to STI, 119(70%) agreed that unprotected sex is another major practice, 42(25%) knew that poor hygiene as another practice that leads to STI whereas 40(23%) didn't know any practice leading to STI.

Table 4: Preventive measures to STI (objective three).

Percentage of female patients who gave selected response to questions regarding preventive measures of STI attending KIU-TH, Uganda, March 2017 (n=170).

Statement	Participant's Response No. and %		
	Agree	Disagree	Don't know
Use condom	153(90%)	17(10%)	00
Test your partner before intercourse	161(95%)	00	9(05%)
Being faithful to your partner	127(75%)	17(10%)	26(15%)
Abstinence	161(95%)	9(05%)	00
Regular medical check up	161(95%)	9(05%)	00
Prior information to youth before being sexually active	127(75%)	42(25%)	00
Good personal hygiene	120(70%)	30(17%)	22(13%)

The table above shows that 161(95%) agreed that testing partner before intercourse, abstinence and regular medical checkup are the major preventive measures to STIs, however 57(33%) of the respondents are unaware of the preventive measures.

CHAPTER FIVE

Introduction

This chapter covers the discussion of the results, conclusion derived and recommendations

Discussion

This sub chapter reviews the research question, methods employed and the results obtained. The chapter provides interpretation of the findings and explains their significance.

The findings of this study have been reported under three themes: Awareness and knowledge of STIs among women of reproductive age group, practices/factors that predisposes women to STIs, and knowledge on STIs prevention.

Awareness and knowledge of STIs

I carried out a cross sectional study to determine the knowledge, practices related to STIs in a high risk population of women of reproductive age attending KIU-TH. Consistent with previous studies, I found a high prevalence of STIs in this population despite being knowledgeable in terms of methods of transmission, causes, signs and symptoms as per table 1 above where 127(75%) gave itching in the genital area as clinical presentation of STI, 119(70%) thought that discharge from the vagina and rashes in the genitals were the manifestations of STIs, however levels of knowledge in terms of methods of prevention of the spread of STIs were modest, particularly so with respect to the current strategies being promoted by the Uganda National health programs.

There was still significant knowledge gap within the participants 51(30%) having no clue on the effects and complications of STIs on their health and body, this was in line with a similar study done in Katanga slum in Uganda which found about (40%) of the participants doesn't know the complications of STIs. This simply means that much of the health education talks address signs and symptoms, predisposing factors and prevention with less emphasis being put on the negative impact of STIs on one's health and body system.

According to the study the main source of information on STIs is from school, hospitals and the media 136(80%) Study findings suggest that respondents generally preferred the media as a source of information. These findings are consistent with findings from a study in Tanzania

(Tengia-Kessy&Kamugisa, 2009). In this study, young people preferred radio and TV as sources of information on STIs.

Majority of the participants have reached university level (50%), this has actually contributed on to their level of knowledge on STI.therefore sexual education on STIs in schools play a great role on the awareness and knowledge of STIs.This is consistent with findings from a study by Tangie-Kessy and Kamugisha (2006), in Tanzania to assess the levels of knowledge on STIs In that study they found that education influences knowledge and awareness of HIV/AIDS. Lan et al., (2009) report a similar finding in a study in Vietnam where about three quarters of respondents did not know any symptoms of STIs because they had very little or no education.

Practices and factors that predisposes women to STIs

From the study a small proportion of participants did not know anything regarding predisposing factors for STIs39(23%) with most mentioning multiple partners 119(70%) and unprotected sex 136(80%) as the major predisposing factors. This shows there is still some lack of knowledge on practices and behaviors that may lead women to STIs. This is in contrast to a study done by Arthur Mpimbazi et al 2010 in Katanga slum area in Kampala which found out most participants mentioning multiple partners (63.7%) and unprotected sex (50.7%) as the major predisposing factors of STIs.these findings therefore suggest that campaign effort by the health sector through government and non-governmental organizations has to an extent play role to sensitize the population on STIs through mass media and health talks at the various health centers

Preventive measures of STIs

Thisstudy found that majority of the participants are aware of the preventive measure to STIs with most mentioning Abstinence 161(95%), regular medical checkup 161(95%) and testing partner before intercourse 161(95%) as being the common methods of prevention among others. However 56(33%) of the respondents didn't know any of the preventive measures. And besides that though many mentioned condom use as one of the preventive measures, not everybody uses it regularly or know how to use it.Condom use by both males and females was unexpectedly low. This agrees with an earlier study done in Makerere University(yokohama conference 1994) where, despite having been educated about the condoms, only a small number used them regularly because they were 'cumbersome, messy, not acceptable morally, culturally and religiously. In Uganda the low percentage of those using condoms was ascribed to religion not allowing family planning: that children are gifts from God and should not be limited. The desire

to expand the clan, women being embarrassed and shy about suggesting use of condoms to their partners, myths and misconceptions about condom use, all limit the universal use of condoms 21. Therefore the health sector need to sensitize and educate the population more on STIs prevention especially Condom use.

Conclusion

Most of the participants knew about causes, types, symptoms, predisposing factors and means of prevention of STIs, although a significant number did not know about the systemic effects or consequences of STIs to their body and some preventive measures.

Majority of the participants didn't follow the appropriate behavior patterns despite being knowledgeable about the various methods of prevention of STIs.

Recommendations

There is need to organize a national capacity building programs in the identification of predisposing factors or practices and prevention of other STIs so that vulnerable women in this study can upgrade their knowledge and awareness of such infections.

There is need to introduce sexual education in schools to increase on STIs knowledge and awareness in terms of the predisposing factors, prevention and systemic effects to the body or complication of STIs. This is in accordance with the study as majority of the participants are still singles between 18-25years of age and are students, therefore they stand high risks of STIs.

There is need to understand the barriers to healthy practices despite being knowledgeable about them so as to enable proper interventions for sexual health among young women.

- Aggarwal A.K., Kaur M., Kumar R. (2009). *Community-based study of reproductive tract infections, including sexually transmitted infections, among the rural population of Punjab, India*. Indian Journal of Community Medicine. 34(4):359–361.
- Agius, P.A., Pitts, M.K., Smith, A., & Mitchell, A. (2010). *Sexual behavior and related knowledge among a representative sample of secondary school students between 1997 and 2008*. Australian and New Zealand Journal of Public Health, 3 (1):39–61.
- Andersson-Ellström, A., & Milsom, I. (2002). *Knowledge about prevention of sexually transmitted diseases: A longitudinal study of young women from 16-23 years of age*. Sexually Transmitted Infections, 78, 339-341. doi:10.1136/sti.78.5.339.
- Annang L., Walsemann, K.M., Maitra, D., & Kerr, J.C. (2010). *Does education matter? Awareness of school students on sexually transmitted infections (STIs) and their sexual behavior: Across-sectional study conducted in Pulau Pinang, Malaysia*. BMC Public Health. 78(5) pg.339.
- Arya O.P. (1968). *Attitudes of college students in East Africa to sexual activity and venereal diseases*. British Journal of Venereal Diseases. 1968;1 44:160–166.
- Centers for Disease Control and Prevention (CDC). (2010). *cervical cancer screening for women who attend STD clinics or have a history of STDs*. Pg. 350-360
- Centers for Disease Control and Prevention (CDC). (2010b). *STD Trends in the United States: 2010 National Data for Gonorrhea, Chlamydia, and Syphilis*. Retrieved. From cdc.gov: <http://www.cdc.gov/std/stats10/trends.htm>.
- Centers for Disease Control and Prevention (CDC). (2011c). *Sexually transmitted diseases*

surveillance 2010, STDs in adolescents & young adults. Retrieved from cdc.gov:<http://www.cdc.gov/std/stats10/adol.htm>.

Fontenot HB, George ER.(2014),*Sexually transmitted infections in pregnancy*.Nurs Womens Health. 2014 Feb-Mar;18(1):67–72.

Gottlieb S.L, Low N, Newman LM, Bolan G, Kamb M, Broutet N.(2014)*Toward global prevention of sexually transmitted infections (STIs): the need for STI vaccines. Vaccine.* 20;32(14):1527–1535.

Hawkes S, Morison L, Chakraborty J, Gausia K, Ahmed F, Islam SS. (2002). *Reproductive tract infections: prevalence and risk factors in rural Bangladesh*. Bulletin World Health Organ. ;80(3):180–188.

Katusiime C, Schlech WF, 3rd, Parkes-Ratanshi R, Sempa J, Kambugu A (2013). *Characteristics of Sexually Transmitted Infections among High-Risk HIV-Positive Patients Attending an Urban Clinic in Uganda*. J Int Assoc Provid AIDS Care.;21, (43).

Lan, P., T., Lundborg, C., S., Mogren, I., Phuc, H., D. & Chuc, N., T., K. (2009). *Lack of knowledge about sexually transmitted infections among women in North rural Vietnam*. BMC Infectious Diseases, 9(85).

McLeroy, K. R., Bibeau, D., Steckler, A., Glanz, K. (2012). *An ecological perspective on health promotion programmes*. *Health Education Quarterly*.9(17)pg 20-12.

Nzioka C. (2001). *Perspectives of adolescent boys on the risks of unwanted pregnancy and sexually transmitted infections: Kenya*. Reproductive Health Matters 9(17) 108-111.

Oberhauser A., M., Yeboah M. A. (2011). *Heavy burdens: Gendered livelihood strategies of porters in Accra, Ghana*. *Singapore Journal of Tropical Geography*.9(17)pg 10-4.

Ohene, S. & Akoto, I. O. (2008). *Factors associated with sexually transmitted infections among*

- young Ghanaian women. *Ghana Medical Journal*, 42(3), 96-100.
- Oladosu, M. (2005). *Consistent condom use dynamics among sex workers in Central America*. *Journal of Biosocial Science*, 37, 435-457.
- Rassjo E.B, Kambugu F., Tumwesigye M.N., Tenywa T., Darj E.(2006).*Prevalence of sexually transmitted infections among adolescents in Kampala, Uganda, and theoretical models for improving syndromic management*. *Journal of Adolescent Health*.38(3):213–221.
- Rizwan S, Rath RS, Vivek G,NitikaAnant G, Farhad A.(2015). *KAP Study on Sexually Transmitted Infections/ Reproductive Tract Infections (STIs/RTIs) among married women in rural Haryana*. *IndianDermatol Online J.PMC*. ;6(1):9–12.
- UBOS (2011). *AIDS survey. 2011*.
- UBOS (2011). *Uganda Demographics and Health Survey. 2011*.
- WHO (20013). *Global burden. Guidelines for management of STI 2013*.

Appendix I Consent form

Introduction: I am Abdul Karim Nassera student at Kampala International University doing Diploma in Clinical medicine. I am researching on knowledge and practices related to sexual transmitted infections among women of reproductive age between 18-45 years attending/visiting K.I.U-TH. Your participation is voluntary and the information you give is confidential. I hope that this information and the result will be used to increase the knowledge and reduce on practices related to STIs. Findings will provide a basis for the improvement of sexual education programs targeting teens and young adults especially women of reproductive age. Your contribution is highly appreciated.

Participant's Consent

The purpose of the study has been explained to me and I have understood this document so I am willing to participate in the study.

Thumbprint/signature of respondent..... Date.....

Signature of the Researcher..... Date.....

Appendix II Questionnaire

Part 1: Demographic Characteristics

1. Participants study number: Religion:

2. Age:

4. Marital status;

a). Single c). Married

b). Divorced/separated d). Widowed

5. Level of education [insert code in box]

a). None c). Primary

b). Secondary d). University/college

7. Occupation:

a). Housewife c). Employed

b). Business [specify] d). Student

8. Residence or address -----

Part 2: Knowledge on STI (please answer the following questions or tick where necessary)

1. What are sexually transmitted infections (STI)?

2. Have you ever heard about infections or diseases other than HIV that one can get through sex?

☐ Yes [Specify]

☐ No ☐ don't know

3. From where have you received information on sexually transmitted diseases?

(You can mark more than one alternative)

☐ Friends ☐ School/College

☐ Television ☐ Radio ☐ Hospital/Clinic

4. Please tell us what you think are possible "causes" of sexually transmitted infections

(You can mark more than one alternative)

☐ Bacteria ☐ Virus

☐ Bad hygiene of women ☐ don't know

5. Please choose which diseases are sexually transmitted diseases

Part 4: Preventive Measures of STI

For the question below, tick in the box of either agree, disagree, or don't know against the statement.

What does a person who doesn't want to become infected with STI do to prevent it?

Statement	Agree	Disagree	Don't know.
Use condoms			
Test your partner before intercourse			
Being faithful to your partner.			
Abstinence			
Regular medical checkup.			
Prior information to youth before being sexually active.			
Good personal hygiene			

**THANK YOU VERY MUCH FOR TAKING TIME TO ANSWER THESE QUESTIONS. WE
APPRECIATE YOUR SUPPORT AND PARTICIPATION IN THIS SURVEY!**

Appendix III Work plan

ACTIVITY	MONTHS					
	December	January	February	March	April	May
Proposal writing						
Approval of research proposal						
Data collection						
Data analysis						
Dissertation write up						
Handing in of dissertation						

Appendix IV Budget estimate

Item	Unit cost	Number of units	Amount
Transport	4000/=	5	20,000/=
Internet	1000/=	27	27,000/=
Printing	100/=	180	18,000/=
Type setting	200/=	180	36,000/=
Ream of paper	14000/=	1	14,000/=
Meals	3000/=	27	81,000/=
Total	22300/=	420	196,000/=

9



APPENDIX VII: Introduction letter for data collection