

KNOWLEDGE, UTILISATION, AND PREFERENCES OF REPRODUCTIVE
HEALTH SERVICES AMONG YOUTH WHOSE PARENTS ARE
RECEIVING CARE AT KNH; A COMPARATIVE CROSS-SECTIONAL
STUDY.

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A research dissertation submitted in partial fulfilment of the requirements for the Degree of
Master of Medicine in Obstetrics and Gynecology of the University of Nairobi

DECLARATION

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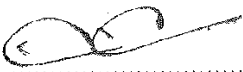

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS:	Acquired Immunodeficiency Syndrome
ART:	Antiretroviral Therapy
CCC:	Comprehensive Care Centre
DOPC:	Diabetic Outpatient Clinic
HIV:	Human Immunodeficiency Virus
KNH:	Kenyatta National Hospital
KOGS:	Kenyan Obstetric and Gynecological Society
MoH:	Ministry of Health
MOPC:	Medical Outpatient Clinic
NACC:	National AIDS Control Council
PLWHA:	People Living with HIV and AIDS
SPSS:	Statistical Package for Social Scientists
bvhSTI:	Sexually Transmitted Infections
UON:	University of Nairobi
VMMC:	Voluntary Medical Male Circumcision
WHO:	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Incidence: The frequency or the rate of occurrence of a disease or a medical condition

Adolescence: Transitional phase of growth and development between ages 10-19 years

Youth: Those persons between the ages of 15 and 24 years

Knowledge: The theoretical or practical understanding of a subject acquired through experience or education

Fishbowl technique of sampling: A type of random sampling

Reproductive Health Services: Preventive services on HIV, STI and Pregnancy

Known HIV status: Documented HIV status of parent or guardian for at least the past 3 months to the time of study

Preferences: A predilection toward one HIV, STI and Pregnancy prevention strategy over the others

Traditional Strategies: Abstinence, Being Faithful and Consistent and correct Condom use for HIV, STI and Pregnancy prevention

Novel Strategies: New strategies for HIV, STI and Pregnancy prevention like Voluntary Male Circumcision, Use of Spermicides, Contact Tracing and treatment etc.

Parents Receiving Care at KNH: Those parents, male or female, who received care at KNH during the study period and had youth between the age of 15-24 years. Not necessarily the biological parent.

LIST OF TABLES

Table 1: Independent variables for study objectives.....	13
Table 2. Sociodemographic characteristics of youths whose parents received HIV-related and non-HIV related care at KNH between August and September 2019	20
Table 3. Source of knowledge on HIV/STI/pregnancy prevention among youths of parents seeking HIV-related and non-HIV related care at KNH between August and September 2019	23
Table 4. Utilisation of preventive strategies among HIV, STI and pregnancy among sexually active youths whose parents sought HIV-related and non-HIV related care at KNH between August and September 2019.....	25
Table 5. Preferred strategies for HIV/STI/Pregnancy prevention and source of information among youths of parents seeking HIV-related and non-HIV related care at KNH between August and September 2019.....	26

LIST OF FIGURES

Figure 1. Conceptual framework7
Figure 2. Participant recruitment and study flow chart.....19

TABLE OF CONTENTS

DECLARATION	ii
FUNDING.....	v
LIST OF ABBREVIATIONS AND ACRONYMS	vi
OPERATIONAL DEFINITION OF TERMS	vii
LIST OF TABLES	viii
LIST OF FIGURES	ix
TABLE OF CONTENTS.....	x
ABSTRACT.....	xiii
CHAPTER ONE	1
1 INTRODUCTION	1
Background.....	1
CHAPTER TWO	2
2 LITERATURE REVIEW	2
Prevalence of STIs among Adolescents in Kenya.....	2
Early Pregnancy among Adolescents in Kenya.....	2
Risk Factors for HIV, STIs, and Early Pregnancies among the Youth in Kenya	3
Sexual Maturity	3
Risky Sexual Behavior	3
HIV/STI/Pregnancy Knowledge.....	4
HIV, STI and pregnancy prevention strategies and services	4
The HIV Status of Parents and Behavior of Youths.....	5
Sex and HIV Education Programs.....	6
Conceptual Framework.....	6
Narrative	6
Schematic	7
Study Rationale and Justification	7
Research Question	8
Objectives	8
Main Objective	8
Specific Objectives	8
CHAPTER TWO	9
3 METHODOLOGY	9

Study Design.....	9
Study Area Description	9
Study Population.....	9
Inclusion Criteria for Parents and Youth	10
Exclusion Criteria for Parents and Youth.....	10
Sample Size Determination	11
Sample Size Calculation	11
Sampling Procedure.....	11
Data Variables	12
Data Collection.....	13
Data Collection Tools.....	13
Reliability of Questionnaires	14
Validity of the Questionnaire.....	14
Data Quality Assurance	14
Data Collection Process.....	15
Data Analysis.....	15
Results Dissemination Plan	16
Strengths of the Study.....	16
Limitations of the Study	16
Ethical Considerations.....	17
Ethical Clearance.....	17
Informed Consent	18
Confidentiality	18
CHAPTER FOUR.....	19
4 RESULTS	19
Study Flowchart.....	19
Sociodemographic Characteristics	20
Knowledge of HIV, STI, and Prevention	21
Source of knowledge on HIV/STI/pregnancy prevention	22
Utilisation of HIV/SIT/Pregnancy Prevention.....	23
Preferred Strategies for HIV, STIs, and Pregnancy Prevention among youth whose parents sought HIV related and non-HIV related care at KNH.....	25
CHAPTER FIVE	27
5 DISCUSSION, CONCLUSION, AND RECOMMENDATIONS.....	27

Discussion.....	27
Conclusions	29
Recommendations	29
REFERENCES	30
APPENDICES	35
Appendix 1: Questionnaire	35
Appendix 2: Scoring System for Questionnaire	40
Appendix 3: Consent Form	41

ABSTRACT

Introduction: In Kenya, 13% of people living with HIV (PLWHA) in 2017 were youths aged 15-24 years. Youths also account for 39% of new HIV infections, while the prevalence of STI and unwanted pregnancies is estimated to be 27.1% and 18.0% respectively. Even though discrepancies in knowledge and utilization of HIV, STI, and pregnancy prevention strategies have been touted as a predictor for such outcomes, this area has not been studied sufficiently. For instance, even though the HIV status of parents has been reported to influence decision-making of youths, the level to which it influences knowledge of HIV, STI, and pregnancy prevention and preference and utilization of strategies for HIV, STI, and pregnancy prevention by youths is not well understood. Our aim will be to try and fill this knowledge gap.

Broad Objective: To compare the knowledge, utilization, and preferred strategies for HIV, STIs, and pregnancy prevention among youths whose parents are seeking HIV-related care and non-HIV related care at the Kenyatta National Hospital (KNH), Kenya.

Methodology: A cross-sectional study done between August and September 2019. 264 parents were screened (143 HIV negative and 121 living with HIV) yielded 188 youths (94 with HIV negative parents and 94 parents living with HIV) who were enrolled. Pre-tested questionnaires were used to capture data on the demographic characteristics of youths and parents, knowledge of HIV, STI, and pregnancy prevention strategies by youth, and preferred strategies for HIV, STI, and pregnancy prevention. The demographic characteristics of parents and youth were explored and crude and adjusted analyses using the Chi-square test and logistic regression done to evaluate the differences in knowledge, utilization, and preferences of HIV, STI, and pregnancy prevention strategies by youths with HIV negative and positive parents. The Statistical Package for Social Scientists (SPSS) version 21 was used for analysis at 95% confidence level.

Results: Most baseline characteristics of parents were similar between the two groups. Majority of the parents of the participating youth were 40 years or older (68% for HIV negative and 73% for parents living with HIV, and majority were females (82.9% and 87.2%, respectively). However, parents who were HIV positive were more likely to be employed (59.6% and 40.0%, $p < 0.01$). Slightly more than half of youths with HIV negative parents and parents living with HIV were male (55.3% and 52.1%,), while only 16.0% and 25.6% of youths with HIV negative parents and HIV positive parents respectively were age group 16-20

($p=0.02$) and had a secondary education. After adjusting for the age of youth, the education level of parents, and the education of youths, knowledge of HIV, STI, and pregnancy prevention was similar among youths with HIV negative and positive parents. The school was the commonest source of information (70.2% and 64.9% respectively) while the adjusted odds for sexual exposure was significantly lower among youths with HIV negative parents [AOR (95% CI) =0.35(0.13-0.94), $p=0.03$]. Condom use was modest (62.5% and 47.7%) and comparable between youths with HIV negative and positive parents. Abstinence, condoms, faithfulness were most preferred modes of HIV, STI, and pregnancy prevention irrespective of the HIV status of parents.

Conclusion: There was no association between HIV status of parents or guardians and the knowledge of HIV, STI, and pregnancy prevention by youth. The youth were more knowledgeable about the traditional strategies of HIV, STI and Pregnancy prevention as compared to the novel strategies and the level of knowledge was adequate and comparable between the two groups of youth. The utilization of the different strategies was comparable among the youth from both groups and the traditional strategies were more utilised as compared to the novel strategies. The youth preferred the traditional strategies, hospital and school as the source of information and services on HIV, STI and pregnancy prevention.

Recommendations: Since there is no difference in knowledge between youths with HIV negative parents and parent living with HIV, we should use the same approach but teach the youth more about the novel strategies, work on ensuring that the services are offered under one roof also known as combined strategy.

CHAPTER ONE

1 INTRODUCTION

Background

Recognized as a humans' disease in 1981 (1), Acquired Immune Deficiency Syndrome (AIDS) has ravaged millions of people globally for decades. Linked with Type 1 or 2 Human Immunodeficiency Virus (HIV-1 and HIV-2), it compromises the immune system of people, which predisposes them to opportunistic infections such as tuberculosis and pneumonia (2). In the last decade, there has been a shift in the incidence of HIV all over the world, with youths aged 15 to 24 years being the most affected group. In 2017, around 36.9 million individuals were living with HIV, 53% of who were residents of Eastern and Southern Africa (3). In the same year (2017), 590,000 adolescents (15-24 years) were infected with HIV (4). In South Africa, point prevalence as high as 10.2% has been reported among adolescents (5). In Kenya, 13% of People Living with HIV and AIDS (PLWHA) in 2017 were young (15-24 years). Even though the incidence of HIV dropped from 35,776 in 2015 to 17,667 in 2017 (51%) among young people, youth still account for 39% of new infections in Kenya (6).

Kenya has made significant strides in its fight against HIV infection. In 2017, ART coverage was at 75%. Its target of increasing the proportion of circumcised men (15-49 years) from 85% to 95% by 2014 via a Voluntary Medical Male Circumcision initiative was exceeded, while the percentage of youths with comprehensive knowledge on HIV increased from 51% in 2008 to 77% in 2014 (6). Even though the increased awareness of young people is notable, seemingly, it has not translated to substantial behavior change among youths in Kenya. Despite a high prevalence of HIV among young men and women, interest in HIV counselling and testing services remains suboptimal, according to "Kenya AIDS Response Progress Report 2018." Uptake of HIV Testing and Counselling Services nationally is (12.4%) with 46% of young women and 58% of young men aged 15-19 years having never been tested for HIV. Condom use among individuals with multiple sex partners is 43.9%, while the prevalence of teen pregnancy is 18% (6-8). To lower the incidence of HIV/STIs and pregnancies among Kenyan youths, there is a need for holistic interventions to increase awareness about the problem and put in place strategies that are acceptable by young people. Development of these programs needs a proper understanding of modifiable risk factors and knowledge of youths on the prevention of HIV, STIs, or pregnancy.

CHAPTER TWO

2 LITERATURE REVIEW

Prevalence of STIs among Adolescents in Kenya

Data from the WHO indicates that over 333 million new cases of curable sexually transmitted infections (STIs) are reported among youths globally (9). *Chlamydia trachomatis* is the most prevalent STI to date. Compared to gonorrhoea, for instance, Cheung *et al.*, (2015) reported a prevalence of 6.4% for Chlamydia among adolescents seeking treatment at a Child Protective Services Clinic in Texas, USA. The trend is the same in Africa. In Nairobi, Kenya, 1.1% of sex workers screened for STIs tested positive for Gonorrhoea. However, the prevalence of *Chlamydia* was almost three times higher in the same group (3.1%), which mirrors the results of Cheung and others (11). The asymptomatic nature of *Chlamydia* might be at play. Adolescents fail to detect the infection early and thus present with severe disease during a routine screening in clinics (12). Syphilis accounts for 1.8% of the cases of STIs among youths in Kenya (13). The prevalence of STIs in Kenya is 27.1%. Sexually active street kids (20-24) are most at risk (35%) (14).

In Kenya, the prevalence of STI among the youth is disproportionate with girls having a higher risk of infection than males. According to Winston *et al.* (2015), the tendency of girls to engage in transactional sex makes them candidates for STI infections. If such relationships involve the exchange of monetary items such as money or gifts, girls lose their power to negotiate for safe sex, which puts them at risk of infections (15). The risk of STI infection is even higher when there is an emotional connection between adolescent girls and boys (16). In this state, girls and boys consider sex an expression of their love for one another and therefore fail to use condoms while engaging in sex (15). In Mombasa, Kenya, condom use among adolescent girls or young women was 52% (17). However, most respondents used condoms as a reactive measure for preventing subsequent STI infection. In the study area, condom use was commonest among subjects with a previous STI infection.

Early Pregnancy among Adolescents in Kenya

According to the United Nations Population Fund (UNFPA), nearly 378,400 adolescent girls in Kenya aged between 10 and 14 years became pregnant between July 2016 and June 2017. Pregnancy-related to rape or forced sex account for up to 11% of these cases (18). However, in Kenya, the risky sexual behavior of youths has been linked with the rise in the incidence of

teen pregnancies (7). According to NACC, boys and girls nowadays attain sexual maturity at a young age. By the age of 15 years, boys and girls create relationships with the opposite sex that involve sex (6). The unmet need for contraceptives and inadequate education on sex and family planning often increase the risk of pregnancy. Nationally, the average age of the first pregnancy is 18 years. By age 20, around 46% of Kenyan women have at least one pregnancy (19).

Risk Factors for HIV, STIs, and Early Pregnancies among the Youth in Kenya

Sexual Maturity

A high proportion of the residents of many developing countries are youth (15-24 years). They are also the most affected groups by transmissible sexual diseases such as HIV and STIs for many reasons. Following years of research, many contributing factors have been proposed. According to Karmacharya *et al.* (2012), youths nowadays gain sexual maturity while young. This has seen a rise in the prevalence of teen sex worldwide and the ills associated with it. In Kenya, 2014, data indicate that 21% of males and 11% of females have engaged in sex at least once before the age of 15 (6). The prevalence is higher in South Africa with three out of every ten youths reporting to having engaged in sex before their fifteenth birthday (21). Unfortunately, the majority of these relationships are unprotected. Only 67.5% of adolescents use condoms consistently while having sex (22) mostly to prevent teen pregnancies (23). Most youths also often engage in sex with more than one partner at the same time usually before going for an HIV test. In Kenya, only 12.4% of adolescents sought HIV testing and counselling services in 2017 (6). According to Kembo (2012), such high-risk youth have 2.696 times the risk of contracting HIV and STI at a young age than those who use condoms consistently.

Risky Sexual Behavior

The risky behaviors of youths are associated with an increase in the incidence of new HIV and STI infections and unwanted pregnancies among 16 to 26-year-olds. In Kenya, the National AIDS Control Council (NACC) reported that 22% of males and 11% of female youths had their first sexual experience before their 15th birthday. According to Ruto (2009), two-thirds of these cases are a result of adventure or sexual exploitation, which brings about intergenerational sexual relationships, especially between older men and the young ladies. Moreover, in a study by Clark *et al.* (2010) in Kisumu, young people were more likely to engage in many short term relationships, which involve sex, as they transitioned to adulthood. The adverse effects of such bonds have been enumerated by numerous authors (27). However,

because of their naivety and association of sex with love (15), both boys and girls lack the power to negotiate for safe sex. This increases the risk of the contracting HIV/ STIs and unwanted pregnancies. Without contraception, the risk of getting pregnant during first or subsequent sexual activities is high (18,28). Studies have found an association between HIV/STI and pregnancy prevention awareness and the risk of high-risk behavior (29). This data is missing from the year 2017 in Kenya. Moreover, the role of parents in disseminating HIV/STI, and pregnancy-related knowledge and if HIV status of parents influence knowledge/ decision making of youths is poorly understood.

HIV/STI/Pregnancy Knowledge

The results of recent research studies have found a strong association between the knowledge of adolescents on HIV/STI/Pregnancy-related matters and their prevalence. In Busia in Kenya, for instance, Were (2007) demonstrated that adolescents with a low level of education were more likely to make poor decisions regarding sex. Well-educated girls were more likely to use contraceptives while having sex. This is laudable considering that most long-acting reversible contraceptives lower the risk of pregnancy by over 88% (30). Moreover, girls with poor knowledge were more susceptible to peer pressure from their peers on matters sex. This, according to Widman *et al.* (2016), increases the risk for adverse health outcomes that include unplanned pregnancy. To stop teen pregnancy, interventions that target such factors are needed. The known HIV, STI and pregnancy prevention include both old and novel strategies. Abstinence, being faithful to one faithful partner and consistent and correct condom use require serious behavior change for them to succeed. The youth still engage in sexual activity; all we need to do is to ask them to do it responsibly and minimize risks of acquiring HIV, STI and unplanned pregnancies. Novel strategies have helped to improve the gain on prevention. The decrease in IV drug use, pre and post-exposure prophylaxis, treatment of known positives, contact tracing and treatment, use of spermicides, prompt testing and treatment of STIs, use of emergency contraceptives and vaccination are novel strategies which have been shown to work.

HIV, STI and pregnancy prevention strategies and services

Several strategies and services have been offered to combat the spread of HIV, STI and the incidence of unplanned pregnancies among different populations. Both traditional and novel strategies and services have their advantages and disadvantages. For the youth, the approach does not have to be entirely similar to that offered to those above the youth age group. The youth are adventurous, like experimenting, and some of them might not be bold enough to seek

these services at the same hospitals where their parents seek care. Comprehensive risk reduction strategies which are community or school-based are more successful as compared to hospital-based approaches where services are segregated from each other(32–36). If these services are offered at the hospital, they should be provided under one roof of reproductive and sexual health services so that the youth do not have to visit several clinics in the same facility. This will make them youth friendly(37). The old and good ABC of HIV, STI and pregnancy prevention works but behavior modification and correct and consistent use of condoms is needed. It is clear that youth continue to have sex despite campaigns for abstinence. What we need to do is to teach them to have sex responsibly and reduce the risk of HIV, STI and unplanned pregnancy. Novel prevention services coupled with behavior change, have reduced the risks. Services like voluntary male medical circumcision, treatment of known positives, prevention of positives, contact tracing and treatment, provider-initiated testing and counselling, PEP and PreP, behavior modification campaigns to reduce IV drug abuse, vaccination, emergency and contraception, use of spermicides and diaphragms and vasectomies all help in either HIV or STI and unplanned pregnancy prevention.

The HIV Status of Parents and Behavior of Youths

The environment of the family has been found to influence the well-being of youths. According to Wu *et al.* (2008), abuse of alcohol and illicit drugs is common in homes where parents have life-limiting diseases such as HIV. These are significant determinants of high-risk behaviors that predisposes youths to HIV, STIs, and teen pregnancy (39). In such homes, HIV and AIDS is the main stressor that disrupts the routines of family members. Adolescents assume a parental role while young. This puts pressure on them and heightens the development of externalized behaviors for coping (38). Moreover, given the persistent stigma associated with HIV, adolescents raised with HIV positive parents tend to internalize their feelings (40). In a case study from Australia (Islam *et al.*, 2014), a young adolescent male attempted to hide the presence of HIV at home to gain acceptance from friends. However, whether HIV as a stressor for adolescents directly influences their sexual behavior is poorly understood. Existing information is from self-reports of parents, which are prone to bias. Moreover, whether adolescents with HIV positive parents versus HIV negative one are knowledgeable on HIV/STI/pregnancy and proactive in their prevention is poorly understood.

Sex and HIV Education Programs

The target for the Sustainable Development Goal 3.7 by the WHO is to ensure universal access to sexual and reproductive health-care services by residents of developing countries by 2030 (42). Primary health targets in the goal involve improving access to family planning information and education, and integration of reproductive health into the national strategies and programs of all developing countries. Youths are an essential target group here because of the rise in the incidence of unwanted pregnancies and HIV/STIs infections due to unprotected sex. In the US, youth-centred interventions for the prevention of HIV, STI, and early pregnancy have emphasized on behavioral change. Community and school-based approaches are effective than clinic and hospital-based ones. Programs like “Reach for Health-Community Youth Services” (43) and the “Human Sexuality – Values and Choices” (44) have induced effective behavioral change by reducing the risky sexual behavior of youths. These programs use a combined approach where, under one roof, youth are taught about HIV, STI, and pregnancy prevention and management. This is not the case in Kenya. HIV and contraceptive clinics are separate entities. Moreover, because these services are offered in hospitals where parents look for medical attention as well, adolescents tend to fear to go for HIV/STI and pregnancy prevention services at the same centers. This is a crucial barrier for youths that should be eliminated to lower the incidence of HIV/STI/pregnancy.

Conceptual Framework

Narrative

Social factors such as poverty, unemployment, school dropouts and societal beliefs which discriminate against any gender can affect the behavior of the youth in such a society. Social strife such as war, famines can also make the youth especially girls, more vulnerable to sexual harassment, exploitation and abuse. The environment where the youth lives also have an influence on their sexual behavior. Homelessness, informal settlements, single parenting, and being orphaned can expose the youth to risky sexual behavior and drug use. Finally, we think that HIV, STI and pregnancy awareness utilization and preferences on prevention strategies might be different among youth whose parents are known as HIV positive as compared to those whose parents are known as HIV negative.

Schematic

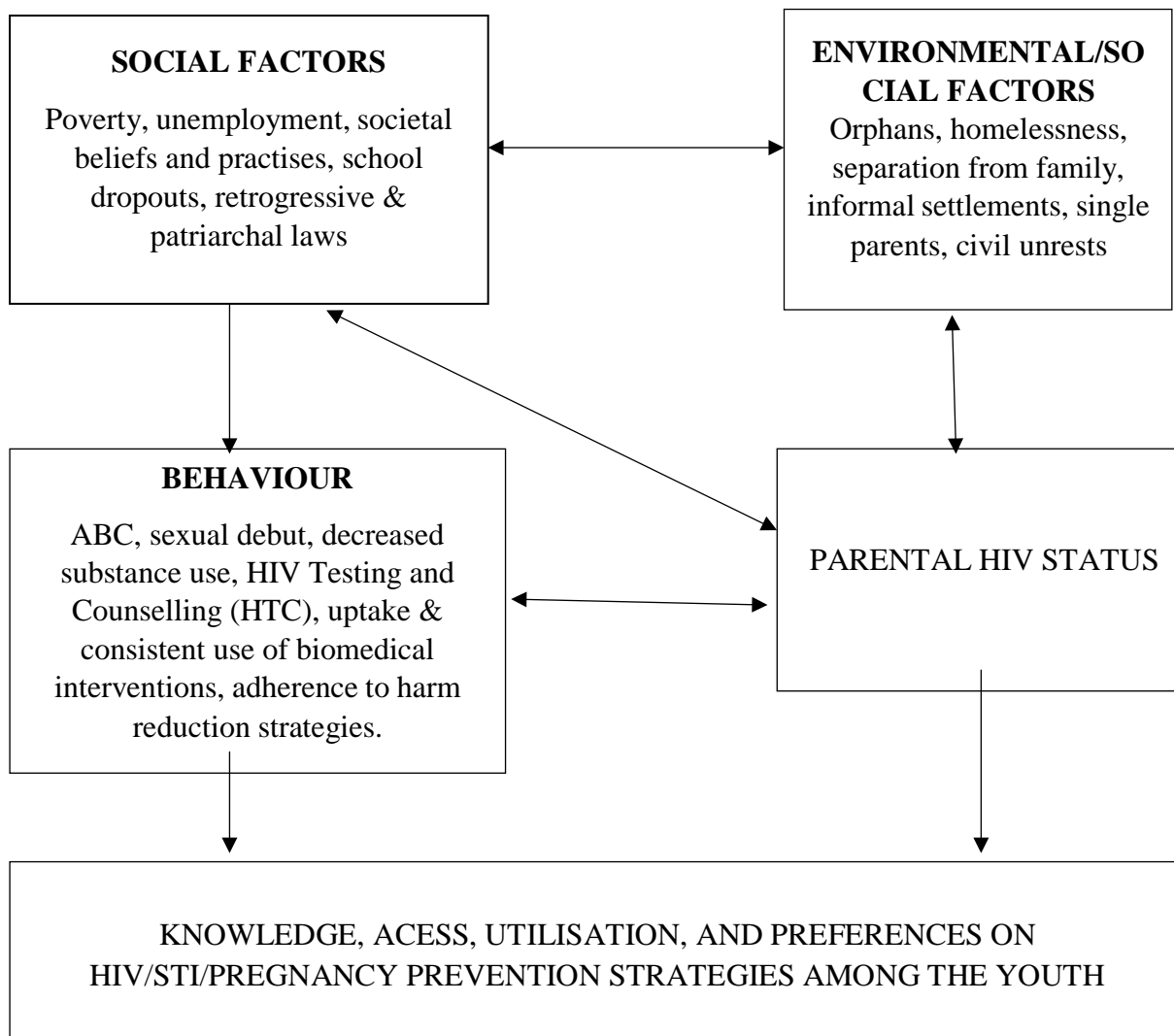


Figure 1. Conceptual framework

Study Rationale and Justification

In Kenya, several school and clinic-based programs such as Voluntary Counselling and Testing (VCT) services have been introduced to combat the spread of HIV and AIDS. Campaigns such as the “White Ribbon Alliance” have also been implemented to lower the incidence of early pregnancies among adolescents. Though these structural, behavioral, and biomedical interventions are effective, the prevalence of HIV among the youth (14-24 years old) was 17,667 in 2017. The prevalence of teen pregnancies was 18% in the same year, which is also high. The negligent behavior of youths has also been identified to be a risk factor (45). Pharr *et al.* (2017) suggested that such discrepancies might be a result of a lack of awareness by the youth and not negligence. However, the situation in Kenya is poorly understood. Data on the role of parents in spreading awareness about HIV/STI and unwanted pregnancy prevention and

if the HIV status of parents is a predictor for the knowledge of HIV, STI, and pregnancy prevention is poorly documented. We intend to fill the preceding gaps.

The results of this study will educate clinicians, public health professionals, and government on the status of HIV and STI knowledge and prevention among the youth. It will help in the formulation of policies around HIV and the youth and formulation of a youth-centred program that can improve awareness on HIV, STIs, and early pregnancies and lower high-risk behavior.

Research Question

What is the knowledge, utilization and preferences on HIV, STI and pregnancy prevention strategies among youth (15-24) whose parents are seeking out-patient health care at KNH?

Objectives

Main Objective

To compare the knowledge, utilization and preferences of HIV, STI and pregnancy prevention strategies by youths aged 15-24 years whose parents are seeking HIV-related versus non-HIV related out-patient healthcare at Kenyatta National Hospital (KNH).

Specific Objectives

1. To compare the knowledge of HIV, STI and pregnancy prevention strategies by youths (15-24 years) whose parents are seeking HIV-related versus non-HIV related out-patient healthcare at KNH
2. To compare the utilization of STI, HIV and pregnancy prevention strategies between youths (15-24 years) whose parents are seeking HIV-related versus non-HIV related out-patient healthcare at KNH?
3. To evaluate the preferred strategies for prevention of HIV, STI and pregnancy between youths (15-24 years) whose parents are seeking HIV-related versus non-HIV related out-patient healthcare at KNH.

CHAPTER TWO

3 METHODOLOGY

Study Design

A comparative cross-sectional study was done in Nairobi from June to September 2019. We recruited youths with HIV positive and negative parents and compared the knowledge on HIV, STI, pregnancy prevention and their preferred strategies using statistical methods.

Study Area Description

The study site was KNH in Kenya. Established in 1901, KNH is one of the oldest and largest hospitals in the entire East African Region. Even though conceptualized as a referral hospital, KNH operates contrary to the national referral guidelines by the ministry of health (MOH) provides. Every month, the hospital tends to over 42,000 individuals, most of whom do not have referral letters (97%-98%) from provincial hospitals, mission hospitals, and or private hospitals. At KNH, patients with life-limiting illnesses such as HIV&AIDS receive Antiretroviral Therapy (ART) from its comprehensive care Centre (CCC). The setting for this research study was at the CCC and the general outpatient clinics at KNH. At the CCC, about 250 HIV positive clients are seen every week. To prevent the spread of infectious diseases such as HIV and STIs, KNH has put in several measures that target adults and youths. To achieve universal testing of patients, for instance, it combines client-initiated voluntary counselling and testing (VCT) with provider-initiated testing and counselling for HIV.

Health professionals such as doctors can request for the HIV test as part of routine care of patients with symptoms of HIV. Patients who test positive are counselled and put on comprehensive treatment to improve the prognosis of HIV infections. Cohorts at risk of HIV infections such as Youths also have access to condoms and pre and post-exposure prophylaxis drugs (PrEP/PEP) that lower the risk of HIV and STIs. Finally, the hospital hosts frequent sensitization campaigns for youth adults in its various clinics on how to prevent HIV, STI, or pregnancy. The youth were recruited into the study after seeking consent from their parents who seek care at KNH. It was explained to parents that at no time their HIV status be disclosed to their children and confidentiality was upheld throughout the study period.

Study Population

Kenyan youths aged 15-24 years old whose parents seeking HIV and non-HIV-related health care services at KNH and provide informed consent for inclusion in the study.

Inclusion Criteria for Parents and Youth

Adults who are seeking HIV and non-HIV related healthcare services at KNH throughout the study was approached. However, to qualify for the study, they should have a documented known HIV status for at least three months before the study. They should also have youths (15-24 years) who are accessible and can answer questions about HIV/AIDS, STIs, and pregnancy. Parents were included in the criteria because we captured their sociodemographic data in the questionnaire. We access youth through their parents or phoned them and met for interviews. Youths who meet this threshold qualified:

- 1) Parents to have a documented known HIV status for at least three months before the study
- 2) Parents must have a youth aged between 15-24 years
- 3) Parent and youth live within a 50-kilometre radius of the KNH.
- 4) Offer signed informed consent (parents consented for youths below 18 years old).
- 5) Accessible on the phone and or physically during the study duration
- 6) Able to visit KNH or meet privately at home or their preferred venue

Exclusion Criteria for Parents and Youth

- 1) Parents seeking healthcare services at KNH but have an unknown HIV status
- 2) Parents with a known HIV status but do not have children aged 15-24
- 3) Parents who decline to disclose to us their HIV status
- 4) Youths who are too sick to administer questionnaire at the time of the study.

Sample Size Determination

Sample Size Calculation

We compared knowledge of HIV, STIs, or early pregnancies prevention between two independent groups of youths. The first group consisted of youths with parents with a known HIV positive status. The second group consisted of youths with parents with HIV negative status. A formula for comparative cross-sectional studies of two population proportions and binary outcomes by Hajian-Tilaki (2011) was used to calculate the sample size, n.

$$n = \frac{2 \left(z_{\frac{\alpha}{2}} + z_{\beta} \right)^2}{\sigma^2} \quad \sigma = \frac{p_1 - p_2}{\sqrt{p(1-p)}}$$

Where:

- n = sample size for each study group, σ = Effect size
- p1 = proportion of youths with sufficient knowledge and HIV positive parents/guardians
- p2 = proportion with of youths sufficient knowledge with HIV negative parents/guardians
- Z α = standard normal variate for 95% CI,
- Z β = standard normal variate for 80% power (0.84)

We used the following metrics to calculate the sample size (n):

- Z α = 1.96 at 95% confidence interval
- Z β = 0.84 at 80% power
- p1 = assumed 50% because of a lack of data
- p2 = 78.0% (46)

We needed to sample 78 youths in both groups (total sample size, n, should be 158). However, to cater for attrition, we adjusted the sample size by 20% (n=188). We used 20% because of the difficulty in getting the youth whose parents are HIV positive due to the stigma around it.

Sampling Procedure

The principal investigator approached HIV positive parents (men and women) who visited the KNH CCC for healthcare services during the study and objectives of the study discussed. HIV negative parents/guardians was recruited from the MOPC at KNH. Parents with youths aged 15 to 24 years old were identified, and permission to interview their children sought. After obtaining consent, youths were invited to a private area at KNH or a place of their preference

and interviews scheduled. However, for youths living within 50 kilometres from KNH but are uncomfortable coming to KNH, home visits were scheduled with the principle investigator and consent administered. In both arms, youths were recruited sequentially until we reached the sample size (94 youth per group). To prevent bias, only one youth was recruited per household. The fishbowl technique was used to recruit one youth in homes with two or more consenting youth. Briefly, unique numbers were written on strips of papers. The papers were tossed into a bowl, and one youth selected randomly by the principal investigator or research assistant.

Data Variables

The primary outcome variables were as follows: First, knowledge of HIV, STI, and pregnancy prevention strategies was evaluated. The knowledge of traditional strategies such as abstinence, condom use, and faithfulness and novel strategies such as scheduling regular HIV visits, Rx/TrAkP/PwP, decreased intravenous (IV) drug use, and use of pre-exposure prophylaxis (Prep) / Post exposure prophylaxis (PEP) were evaluated. The variables used to evaluate the utilization of HIV, pregnancy, and STI prevention strategies includes traditional ABCs and the adoption of novel strategies such as the Epill, intra uterine devices (IUDs), prompt HIV/STI testing, vaccination and contact tracing. The preference for traditional ABCs of HIV and STI prevention and pregnancy prevention strategies such as vasectomy, abstinence, and emergency contraception, and use of spermicides and diaphragms were also evaluate (Table 1 below).

Table 1: Dependent Variables

Dependent Variables	Categories
Knowledge of HIV, STI, and pregnancy prevention	Decreased IV drug use/Prep/PEP/Abstinence
	VMMC), Regular HIV tests, Being Faithful
	STI testing and Rx/TrAkP/PwP/Condom use
Utilization of HIV, STI, and pregnancy prevention strategies	VMMC/Condom use
	Contact tracing/Vaccination
	Prompt STI testing and Rx/Abstinence
	Emergency contraception. Epill, Intra uterine devices (IUD)
	Diaphragm/Spermicides/condom use
Preferred HIV, STI, and Pregnancy prevention strategies	Contact tracing/HIV testing and counselling (HTC)/Abstinence
	Decreased iv drug use/Being Faithful
	Prevention with Positives/Treatment As known Positive
	Condom use and abstinence
	Contact tracing/Vaccination
	Contraception-Emergency: IUD and E-pills
	Vasectomies/Diaphragms/Spermicides
	Natural methods of contraception

The socio-demographic outcomes of our respondents constituted our independent variables. The primary independent variable was known HIV status of parents or guardians. The age of participants, education level, and their gender were the other independent variables (Table 2).

Table 1: Independent variables for study objectives

Study Objective	Independent Variable	Categories
Knowledge of HIV, STI, and pregnancy prevention	Parent HIV status	HIV +/-
	Age of Youths	15-18
		19-21
		22-24
	Education level	Secondary
Tertiary		
Gender	Male/Female	
Strategies for the prevention of HIV, STIs, and pregnancy	Parent HIV status	HIV positive
		HIV negative
	Age of Youths	16-18
		19-21
		22-26
	Education level	Secondary
		Tertiary
	Gender of Youths	Male/Female

Data Collection

Data Collection Tools

We used an interviewer-administered study questionnaire to collect epidemiological data. The tool was organized into five sections and printed out for easier administration. The first section captured the socio-demographic data of our participants. It captured the sex, the education level, and the HIV status of the parents or guardians of our participants. The second evaluated the knowledge of our participants on HIV. Ten (10) closed-ended questions was used to test the level of knowledge of our participants on HIV transmission and prevention. Section three and four evaluated the knowledge of respondents on STI prevention/treatment and the prevention strategies for unplanned teen pregnancies. Like the first section, the second and third sections had closed-ended questions (yes/no) for easier scoring. Finally, section five evaluated the sexual behavior of our respondents. The number of sexual partners was evaluated. We also assessed the knowledge transfer and preferred source of information by our participants, to name a few. Open and closed-ended questions was used to collect data.

Reliability of Questionnaires

To ensure the accuracy of the data that we collect, we tested the validity and reliability of our questionnaire before data collection. To establish the reliability of questionnaires, the test-retest method was used (47). Before its use in the study, a pre-test phase was held with 40 youths. The youths were recruited randomly from within KNH, pre and post interviews (two weeks apart) held, and similarity between responses for quantitative data determined by calculating intra-class correlation coefficients (ICC). The Statistical Package for Scientists (SPSS) (21.0 for Windows, Armonk, NY: IBM Corporation) was used for analysis and results of quantitative variables interpreted as modest (0.30-0.69) and high (0.70--1.00). Categorical variables were analyzed using the Chi-square test and the Kappa statistic and interpreted as modest (0.61–0.80) and high (0.81–1.0). A K statistic value that is (0.0- 0.60) was considered poor and the variables modified before the definitive data collection process.

Validity of the Questionnaire

Face Validity technique (48) was used to check the validity of questionnaires. During the proposal development phase, printed copies of the questionnaire was shared with consultant doctors and epidemiologists at KNH for review. The reviewers were requested to check the structure of the questionnaire and its content and asked to offer their suggestions for improvements that should be done before the data collection. Moreover, to ensure the validity of our results, responses to our questions was closed-ended, which are easier to code and analyze. Furthermore, because closed ended questions limit anomalies such as non-response or missing data during the data collection process (49), they often enhance validity.

Data Quality Assurance

Training of research assistants is a recommended technique for ensuring the collection of high-quality data for research purposes (50). For data quality assurance, we adopted this strategy. Two research assistants (male and female) with a medical background were hired for the study. Before they were dispatched to the field, they underwent a rigorous training on research ethics and the essentials of good research data collection. This included how to maintain the confidentiality of participants, how to select suitable sites for interviews, and how to capture data accurately.

Data Collection Process

Before inclusion into the study, research assistants took participants through an informed consent process and one on one interviews scheduled using a pretested questionnaire (appendix 1). Our questionnaires were interviewer administered. In a secluded area of the home or an area of the interviewees choosing, the research assistant read questions, as they appear in the questionnaire and ticked or recorded the appropriate responses of study participants accurately. At all times confidentiality was adhered to and the HIV status of parents was not be disclosed to the youth. The youth was interviewed at a place of their choice so that they were comfortable as long as the place was within 50-kilometer radius from KNH. In the secluded places, the female and male research assistants chaperoned me for the female and male interviewees.

Data Analysis

Data was analyzed using IMBs Statistical Package for Social Scientists (SPSS) Software (version 21.0 for Windows, Armonk, NY: IBM Corporation). Categorical variables such as sex and education level of participants was transformed to proportions and displayed on charts. To determine the homogeneity of participants in study groups, Chi square test was used to compare demographic data at baseline. Odds ratios was analysed and confounding variables controlled during final analyses using a logistic regression model. To generate knowledge score for HIV, STIs, and unwanted pregnancy, all correct responses was assigned a score of 1 and all wrong responses a score of zero. An overall knowledge score was summed for HIV, STI, and pregnancy scores, scores converted to a percentage, and then categorized as $\geq 50\%$ to reflect being highly knowledgeable and $< 50\%$ as being poorly informed (51–53). The cut-off of 60% has been informed by several studies we have looked at which looked at knowledge among youth on HIV, STI and pregnancy prevention (54). The Chi square test was used to compare outcomes between study groups at 95% confidence interval. For our statistical analyses, a P value less than 0.05 ($P < 0.05$) was considered statically significant.

Youths were considered to be knowledgeable on HIV, STI, and pregnancy prevention at 50% cut-off cumulative percent score. Youths whose cumulative percent score were less than 50% were considered to have an inadequate knowledge of HIV, STI, and pregnancy prevention. The score of 50% was informed by the study we used to calculate our sample size by Omoigberale O I et al. on youth awareness on HIV and STI which clustered the knowledge into 3 clusters; Cluster 1 was a score less than 50%, cluster 2 was 50-74% and cluster 3 was 75% and above.

Cluster 2 and 3 were considered adequate knowledge. This above study has also been published on the WHO website thus we felt using this score was good.

Results Dissemination Plan

We intend to generate one or more original research publications for peer-reviewed journals of medicine. This will inform the scientific community on the status of HIV, STI, and pregnancy among youths aged 15-24 years old in Kenya. We also intend to present our finding in meetings and conferences organized by the department of Obstetrics and Gynecology at UoN, KNH, and by local institutions such as the Kenyan Obstetric and Gynecological Society (KOGS). For policy formulation and planning, data will be shared with the Ministry of Health in Kenya.

Strengths of the Study

This was the first study in Kenya to compare knowledge of HIV, STIs, and early pregnancy prevention between youths with HIV negative and HIV positive parents. We also evaluated the knowledge transfer and identified the sources from which Kenyan youth prefer to get information and services on HIV, STI and Pregnancy prevention. This data will help us formulate a youth-appealing model for preventing HIV, STI, and pregnancies.

Limitations of the Study

The recruitment and interview of participants took place in homes after contacting their parents/guardians from KNH. Therefore, we had a high risk of loss to follow up, which was a limitation for this study. To lower its effect, we adjusted our sample size by a factor of 20% to cater for loss to follow-up. We also asked for contact details of parents and schedule our interviews during the weekend or during the holidays when most children are at home. If necessary, respondents were invited to a private location at KNH to conduct our interviews. Second, because of the stigma associated with HIV infections, some women in the KNH outpatient clinic lied about their HIV status. To minimize bias, we reviewed the medical records of patients to ascertain their HIV status. Bias associated with poor response might be a limitation. To boost transparency, our interview sessions was one-on-one in a secluded area. We also stressed about confidentiality during our interviews and the HIV status of the parents was not disclosed to children. The home interviews were away from parents and guardians and the youth were assured of confidentiality. Finally, because recruitment was through living parents, homeless and orphaned youths due to HIV were left out of the study.

Ethical Considerations

Ethical Clearance

Ethical clearance was sought before the start of this study. The proposal was submitted to the Ethics Review Committee of KNH/UON for review and approval. Recommendations from the committee was addressed and clearance sought before we proceeded to collect data. The approval number of the study was P287/04/2019. Confidentiality was maintained at all levels and the HIV status of the parents was not revealed to the youth. The research assistants did not know the HIV status of the parents. Forms were coded using a special coding system and it is only the principal investigator who knew the HIV status of the parents.

Informed Consent

To uphold the autonomy of participants of our study, informed consent was sought before data collection. Printed informed consent forms in English or Kiswahili was availed to our participants for their perusal. Both consent forms were structured into sections that cover the aim of the study, expectations from participants, and risks and benefits of the study in a simple and easy to understand manner. Furthermore, our participants were allowed to read the forms by themselves. Those who could not read were allowed to choose a person of the liking to read the consent for them and then a question and answer session held between potential participants and a trained research assistant before the consenting process. At this stage, the assistant talked about voluntary participation of subjects and that participants could opt out of the study at any time without prejudice. Written consent was obtained from all participants aged 18-24 years old. Parents or guardians consented for teens who had not attained a legal age (15-17 years). The youth who participated in the study were reimbursed an airtime worth KSH 100 or KSH 200 transport back home if they came to a location away from home. The parents were not to be reimbursed any money. There is no foreseeable risk in participating in the study for both parents and their youth.

Confidentiality

To prevent stigma, we upheld the confidentiality of all study participants. Personal and identifying information such as the identification numbers and names of participants were not captured on the study questionnaire. Even though the names and or signatures of participants was captured on the consent forms, these were confidential documents. Only the principle investigator had access to signed consent forms. For safe storage, all forms were filed and locked in drawers. Second, research assistants completed an Advanced Health Research Ethics course before their deployment to the field. They were expected to maintain confidentiality.

CHAPTER FOUR

4 RESULTS

Study Flowchart

Between August and September 2019, 264 parents from whom 143 were HIV negative and 121 living with HIV were approached and screened for eligibility as shown in figure 1 below. Of the 143 HIV negative parents, 11 had not undergone formal HIV testing, while 20 did not have qualified youths (15-24 years) and were therefore excluded. Thus, we had a sample of 112 HIV negative women with 2.2 youths per household. However, in homes with multiple qualified youths, one was recruited using the fishbowl technique. Unique numbers were allotted to each qualified youth (15-24 years) and one drawn randomly from a pot. Of the 112 youths approached and informed, 94 consented. Eighteen were excluded for declining consent. Of the 121 parents with HIV, 13 did not have youths age 15-24 years (13) or declined participation (11) and were excluded. Thus, we had 97 qualified parents living with HIV with approximately 1.7 youths per household. One youth was selected per home using the fishbowl technique and potential participants informed about the study. Ninety-four youth consented for while three were excluded for declining participation. Subjects were interviewed and data analysed.

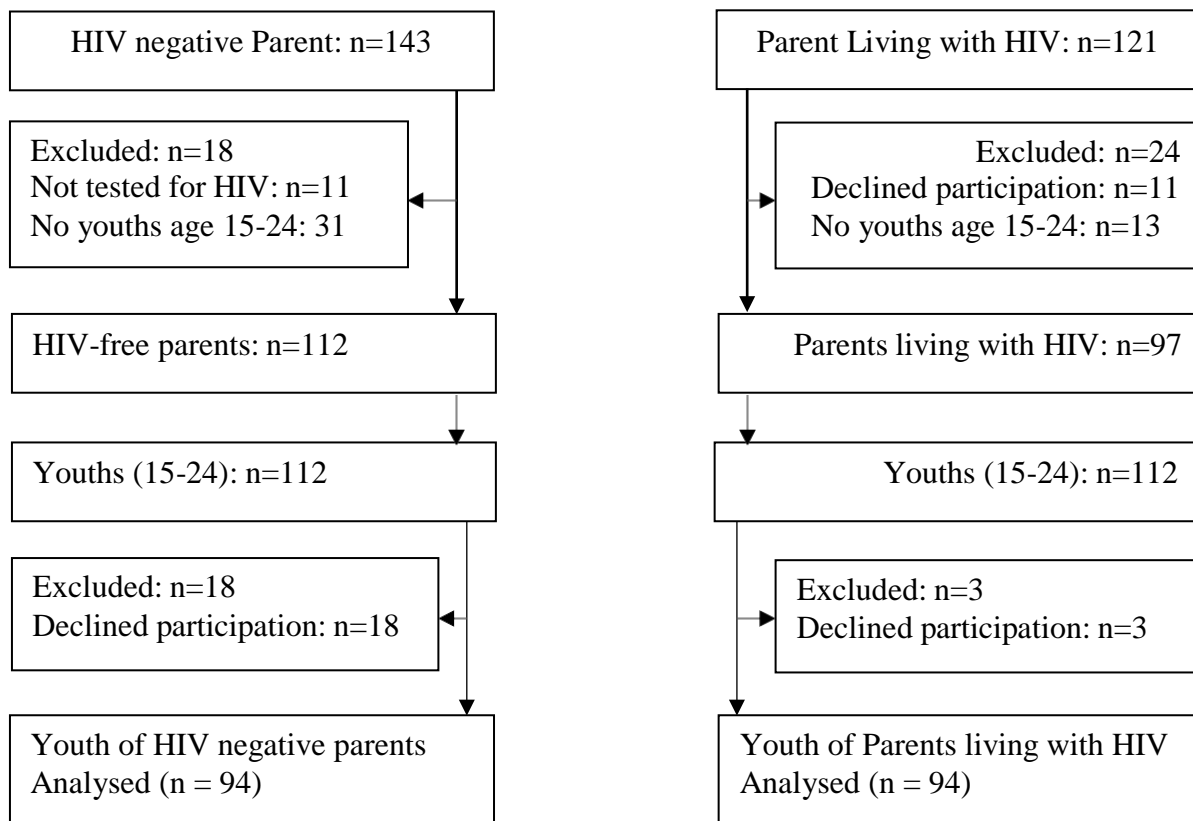


Figure 2. Participant recruitment and study flow chart

Sociodemographic Characteristics

The sociodemographic characteristics of youths and parents are presented in Table 1 below. The gender of youths of HIV negative and positive parents did not vary significantly ($p=0.66$). Majority of youths with HIV negative parents 53.3% (52/94) and parents living with HIV 52.1(49/94) were males. More youths with HIV negative parents were age group 15-20 years 61.7% (58/94) than those with parents living with HIV 47.9% (45/94) ($p=0.02$), while 23.6% more youth with a parent living with HIV had a tertiary level of education ($p<0.01$). Among youth with a secondary education, 25.2% more had HIV negative parents than parents living with HIV, even though the difference was not statistically significant ($p=0.72$). With dropouts as a reference, more parents living with HIV 66.1% (39/94) than HIV negative parents 21.4% (12/94) had a tertiary level education ($p<0.01$). Moreover, 19.6% more parents living with HIV than HIV negative parents had a form of employment (formal and self-employed) ($P<0.01$).

Table 2. Sociodemographic characteristics of youths whose parents received HIV-related and non-HIV related care at KNH between August and September 2019

		HIV Status of Parent		P
		Negative (N=94)	Positive (N=94)	
Gender of youths	Male	52 (55.3)	49 (52.1)	0.66
	Female	42 (44.7)	45 (47.9)	0.66
Age of youths	15-20	58 (61.7)	43 (45.7)	0.02
	21-24	36 (38.3)	51 (54.3)	0.02
Youth education level	Dropout	16 (17.0)	8 (8.6)	Ref
	Secondary	59 (62.8)	35 (37.6)	0.72
	Tertiary	19 (20.2)	50 (53.8)	<0.01
	Missing	0	1	
Age of parent	18-30	14 (14.9)	8 (8.5)	Ref
	31-40	15 (15.9)	17 (10.1)	0.22
	41+	64 (68.1)	69 (73.4)	0.17
Gender of parents	Male	16 (17.1)	12 (12.8)	0.41
	Females	78 (82.9)	82 (87.2)	0.41
Parent education level	Dropout	14 (25.0)	4 (6.8)	Ref
	Secondary	30 (53.6)	16 (27.1)	0.32
	Tertiary	12 (21.4)	39 (66.1)	<0.01
	Missing	38	35	
Parent employment status	Employed	36 (40.0)	53 (59.6)	<0.01
	Unemployed	54 (60.0)	36 (40.4)	<0.01
	Missing	4	5	

Knowledge of HIV, STI, and Prevention

Youths with parents living with HIV 83% (78/94) were more aware of HIV prevention strategies than youths with HIV negative parents did 69.1% (65/94). The odds of awareness was 0.45 times lower when youths had HIV negative parents than parents living with HIV. The traditional strategies for preventing HIV were known by youths with HIV negative (92.6%) and positive (98.9%) parents. However, the odds of awareness were significantly lower among youths with HIV negative parents by about 0.13 times ($P=0.03$). The knowledge of novel strategies for HIV prevention such as Prep/PEP and VMMC was high and comparable among youths with HIV negative parents (63.8%) and parents living with HIV (76.6%) ($P=0.05$). After adjusting for age of youths, education level of youths and parents, and the employment status of parent, knowledge of HIV prevention and strategies for prevention was similar.

The knowledge of STI prevention was slightly higher among youths whose parents were living with HIV 66.0% (62/94) than HIV negative 62.8% (59/94) even though the difference (3.2%) was not statistically significant. Most youths with HIV negative parents (83.0%) and parents living with HIV (86.2%) recognised traditional methods for STI prevention such as condom use, abstinence, and being faithful. The knowledge of novel strategies such as VMMC and vaccination was also adequate (86.2% and 87.2% respectively) and comparable between youths with HIV negative and positive parents as shown in table 2 below.

The odds of being knowledgeable on pregnancy prevention was 0.25 times lower when youths had HIV negative parents (73.4%) than HIV positive parents (91.5%), $p<0.01$. However, after adjusting for the age, educational level of parents and youths and employment status of parents the odds of being knowledgeable was lower among youths with HIV negative parents but not statistically significantly [$AOR=0.44(0.12-1.51)$, $p=0.51$]. The knowledge of traditional modes of pregnancy prevention was higher among youths with HIV negative parents (88.3%) than HIV positive parents (81.7%) but not statistically significantly [$AOR (95\% CI) =1.17 (0.26-2.9)$, $p=0.83$]. Knowledge of novel strategies for pregnancy prevention was 52.7% and 67.7% and did not differ by the HIV status of parents statistically significantly ($p=0.87$) (Table 2).

Table 2. Knowledge of HIV, STI and pregnancy prevention strategies among youths from parents seeking HIV-related and non-HIV related care at KNH between August and September 2019

	HIV Status of Parent		OR (95%CI)	P	AOR (95%CI)	P
	Negative N=94	Positive N=94				
HIV Prevention						
Knowledgeable	65 (69.1)	78 (83.0)	0.45 (0.22-0.92)	0.02	0.89 (0.29-2.71)	0.84
Poor knowledge	29 (30.9)	16 (17.0)	2.17 (1.08-4.35)	0.02	1.11 (0.36-3.39)	0.84
Strategy						
Traditional	87 (92.6)	93 (98.9)	0.13 (0.01-1.10)	0.03	0.84 (0.43-1.63)	0.50
Novel	60 (63.8)	72 (76.6)	0.53 (0.28-1.01)	0.05	0.69 (0.38-1.25)	0.22
STI prevention						
Knowledgeable	59 (62.8)	62 (66.0)	0.87 (0.47-1.58)	0.83	0.83 (0.32-2.12)	0.70
Poor knowledge	35 (37.2)	32 (34.0)	1.14 (0.63-2.08)	0.83	1.19 (0.47-3.03)	0.70
Strategies						
Traditional	78 (83.0)	81 (86.2)	0.78 (0.35-1.73)	0.60	0.53 (0.28-1.01)	0.50
Novel	81 (86.2)	82 (87.2)	0.91 (0.39-2.11)	0.82	0.94 (0.39-2.26)	0.89
Pregnancy Prev.						
Knowledgeable	69 (73.4)	86 (91.5)	0.25 (0.10-0.60)	<0.01	0.44 (0.12-1.51)	0.51
Poor knowledge	25 (26.6)	8 (8.5)	3.89 (1.65-9.17)	<0.01	2.26 (0.66-7.78)	0.19
Strategies						
Traditional	83 (88.3)	76 (81.7)	1.78 (0.79-4.02)	0.15	1.17 (0.26-2.9)	0.83
Novel	49 (52.7)	63 (67.7)	0.53 (0.29-0.96)	0.03	1.11(0.27-4.5)	0.87
Traditional:	Abstinence, condom use and Faithfulness					
Novel						
HIV:	ARVs, Prep/PEP, VMMC, HIV testing, Contact tracing, Treatment with positives, STI testing and treatment					
STI:	STI testing and vaccination, etc.					
Pregnancy:	Vasectomy, Spermicides					
OR: Odds Ratio AOR: Adjusted Odds ratio						

Source of knowledge on HIV/STI/pregnancy prevention

Sixty-six youths with HIV negative parents (70.2%) and 61 with parents living with HIV (64%) got knowledge of HIV prevention from school. More youths with HIV negative parents than positive received information from friends (22.3% versus 17.0%), hospital (26.6% versus 21.3%), and parents (23.4 versus 12.8%), even though the relationship was not statistically significant ($P>0.05$). The radio was a preferred source of information by 21.3% (20/94) of youth with HIV negative parents and 23.4% (22/94) HIV positive parents, but the 2.1% difference was not statistically significant ($P=0.15$). After adjusting for age, education and employment status, the source of knowledge was not statistically significantly different between youths with HIV negative and positive parents (Table 3 below).

Table 3. Source of knowledge on HIV/STI/pregnancy prevention among youths of parents seeking HIV-related and non-HIV related care at KNH between August and September 2019

	HIV Status		OR (95% CI)	P	AOR (95%CI)	P
	Neg. (94)	Pos. (94)				
Source of info						
Television	30 (31.9)	28 (29.3)	1.10 (0.59-2.05)	0.75	2.14 (0.73-6.28)	0.16
Radio	20 (21.3)	22 (23.4)	0.88 (0.44-1.75)	0.72	2.30 (0.73-7.78)	0.15
School	66 (70.2)	61 (64.9)	1.27 (0.69-2.35)	0.43	0.22 (0.07-0.69)	0.01
Friends	21 (22.3)	16 (17.0)	1.40 (0.67-2.89)	0.35	0.57 (0.17-1.88)	0.35
Hospital	25 (26.6)	20 (21.3)	1.34 (0.68-2.62)	0.39	0.84 (0.28-2.46)	0.75
Parents	22 (23.4)	12 (12.8)	2.08 (0.96-4.50)	0.05	0.49 (0.15-1.53)	0.22
Church	15 (16.0)	11 (11.7)	1.43 (0.62-3.30)	0.39	1.11 (0.27-4.500)	0.87
Boy/girl's group	5 (5.3)	4 (4.3)	1.26 (0.32-4.860)	0.73	0.18 (0.01-2.54)	0.20
Billboard	1 (1.1)	0 (0.0)	-	-	-	-
Internet	0 (0.0)	1 (1.1)	-	-	-	-

Key

OR: Odds Ratio

CI: Confidence Interval

P: P value

HIV: Human Immunodeficiency Virus

Utilisation of HIV/SIT/Pregnancy Prevention

More youths with HIV negative parents 59.6% (56/94) had engaged in sex than youths with HIV positive parents 47.8% (44/94) [OR=1.67 (0.93-2.98) p=0.07]. However, while engaging in sex, youths with HIV negative parents were 1.8 times likely to wear a condom consistently (p=0.13), with the male condom being more preferred by youths with HIV negative parents [OR=1.82(0.81-4.07) p=0.13]. Usage of the female condom was also higher among youths with HIV negative parents 11.4% (4/56) than HIV positive parents 9.2% (2/44), even though the odds of use was not statistically significantly different [OR=1.82(0.81-7.35) p=0.58]. More youths with HIV positive parents 85.7% (18/21) than HIV negative parents preferred buying condoms from the shop than from the hospital [OR=0.11 (0.02-0.44) p=0.01]. However, while more youths with HIV negative parents preferred sourcing condoms from public toilets than hospitals OR=2.4(0.71-8.02), the relationship was not statistically significant. After adjusting for confounders, sexual exposure varied significantly between youths with HIV negative and positive parents, with fewer youths with HIV negative parents having sex [AOR=0.35(0.13-0.94) p=0.03]. However, condom use and the source of condoms between youths with HIV negative and positive parents was comparable (p>0.05) (Table 4 below).

Majority of youth with HIV negative parents 80.9% (76/94) and HIV positive parent 84.0% (79/94) had undergone HIV testing. Even though the odds of testing were lower among youth with HIV negative parents, the relationships were not significant. Of the HIV tested youths, 53.9% (41/76) with HIV negative parents and 44.3% (35/94) with HIV positive parents were tested in Voluntary Counselling and Testing (VCT) centres ($p=0.26$), while 46.1% (35/76) and 54.4% (43/76) were tested in hospitals ($p=0.71$). After adjusting for the age of youths, educational level of youths and parents, and employment status of parents, HIV testing and site of HIV testing services were comparable (Table 4 below).

Abstinence was practiced by 40.4% (38/94) of youths with HIV negative parents and 53.2% (50/94) HIV positive parents. Even though the odds of abstinence were lower among youths with HIV negative parents, the difference was not significant. Uptake of the hepatitis B vaccine was lower among youths with HIV negative 8.6% (8/94) and positive parents 11.7% (11/94), while 14.9% (14/94) of youths with a HIV negative parent and 7.4% (7/94) of HIV positive parent had used oral contraceptive. Although the odds of contraceptive use were 2.1 times higher among youths with HIV negative parents, the HIV status of parents did not influence contraceptive use by youths (Table 4 below).

Table 4. Utilisation of preventive strategies among HIV, STI and pregnancy among sexually active youths whose parents sought HIV-related and non-HIV related care at KNH between August and September 2019

	HIV Status of Parent		OR (95% CI)	P	AOR (95% CI)	P
	Negative n=94	Positive n=94				
Engaged in sex	56 (59.6)	44 (47.8)	1.67 (0.93-2.98)	0.07	0.35 (0.13-0.94)	0.03
Condom use	35 (62.5)	21 (47.7)	1.82 (0.81-4.07)	0.13	0.50 (0.16-1.54)	0.23
Male	35 (62.5)	21 (47.7)	1.82 (0.81-4.07)	0.13	0.50 (0.16-1.54)	0.23
Female	4 (11.4)	2 (9.2)	1.82 (0.81-7.35)	0.58	0.66 (0.00-63.1)	0.87
Source						
Shop	14 (40.0)	18 (85.7)	0.11 (0.02-0.44)	0.01	1.73 (0.17-17)	0.63
Hospital	15 (42.9)	5 (23.8)	3.72 (0.67-52.1)	0.15	4.25 (0.24-73)	0.31
Friends	4 (11.4)	3 (14.3)	0.77 (0.15-3.85)	0.75	0.68 (0.0-19.9)	0.83
HIV testing	76 (80.9)	79 (84.0)	0.80 (0.37-1.70)	0.56	0.88 (0.26-2.9)	0.83
VCT	41 (53.9)	35 (44.3)	1.47 (0.78-2.77)	0.26	0.83 (0.33-2.1)	0.76
Hospital	35 (46.1)	43 (54.4)	0.71 (0.37-1.34)	0.26	0.71 (0.47-2.9)	0.76
Chief	0 (0.0)	1 (1.3)	-	-	-	-
Other strategies						
Abstinence	38 (40.4)	50 (53.2)	0.59 (0.33-1.06)	0.47	0.67 (0.41-1.21)	0.52
Faithfulness	27 (38.7)	25 (26.9)	1.09 (0.57-2.07)	0.77	0.89 (0.45-1.89)	0.62
Vaccination (Hep B)	8 (8.6)	11 (11.7)	0.70 (0.26-1.83)	0.46	0.52 (0.11-1.73)	0.75
Prep/PEP	3 (3.2)	1 (1.1)	3.06 (0.31-30.0)	0.31	2.71 (0.37-24.5)	0.46
Withdrawal	1 (0.0)	0 (0.0)	-	-	-	-
Oral contraceptives	14 (14.9)	7 (7.4)	2.17 (0.83-5.66)	0.10	2.32 (0.76-4.56)	0.23

Note:

VCT: Voluntary counselling and testing

PerP: Pre-exposure prophylaxis

PEP: Post exposure prophylaxis

OR: Odds Ratio

CI: Confidence Interval

P: P value

HIV: Human Immunodeficiency Virus

Preferred Strategies for HIV, STIs, and Pregnancy Prevention among youth whose parents sought HIV related and non-HIV related care at KNH

Traditional techniques for HIV prevention such as abstinence, condom use, and faithfulness were preferred by majority of youth with HIV negative parents (93.5%) and HIV positive parents (97.8%). However, only 5.4% and 4.4% of youth respectively preferred using novel strategies such as a Prep/PEP, VMMC, HIV testing, contact tracing, ARVs and STI treatment. Traditional strategies for STI prevention were preferred by most youths with HIV negative (95.1%) and positive (95.2) parents. Only 8.6% and 4.8% of youths preferred novel ones.

Traditional strategies for pregnancy prevention were the most preferred by youths with HIV negative (87.9%) and positive (81.3%) parents.

School was the preferred source of HIV/STI/Pregnancy prevention information and services by 47.9% (45/94) of youths with HIV negative parents and 57.4% (54/94) HIV positive parents. About 30.9% (30/94) and 19.1% (18/94) respectively preferred hospitals: OR=1.97(1.01-3.87) p=0.01, while the television was preferred by 24.5% (23/94) and 23.4% (22/94) of youths with HIV negative and positive parents. After adjusting for confounders, 3.5 time more youth with HIV negative parents preferred getting informed by their parents, p=0.04. Even though 3.3, 2.9, and 2.0 times more youths preferred being informed by the radio, friends, and the television, the relationship was not statistically significant (Table 5 below).

Table 5. Preferred strategies for HIV/STI/Pregnancy prevention and source of information among youths of parents seeking HIV-related and non-HIV related care at KNH between August and September 2019

	HIV status of parent		OR (95% CI)	P	AOR (95% CI)	P
	Neg. (N=93)	Pos. (N=91)				
HIV						
Traditional	87 (93.5)	89 (97.8)	0.32 (0.06-1.65)	0.15	0.37 (0.11-1.82)	0.18
Novel	5 (5.4)	4 (4.4)	1.26 (0.32-4.80)	0.73	1.34 (0.41-4.01)	0.63
STI						
Traditional	77 (95.1)	79 (95.2)	0.94 (0.17-21.9)	0.55	0.65 (0.71-18.2)	0.17
Novel	7 (8.6)	4 (4.8)	1.89 (0.56-6.76)	0.31	1.72 (0.61-6.76)	0.45
Pregnancy						
Traditional	80 (87.9)	74 (81.3)	1.67 (0.73-3.80)	0.21	1.52 (0.67-2.91)	0.34
Novel	6 (6.6)	7 (7.7)	0.84 (0.27-2.62)	0.77	0.67 (0.32-1.97)	0.63
Information						
Television	23 (24.5)	22 (23.4)	1.06 (0.54-2.07)	0.86	2.0 (0.47-8.73)	0.34
Radio	11 (11.7)	17 (18.1)	0.60 (0.26-1.36)	0.21	3.3 (0.85-12.8)	0.08
School	45 (47.9)	54 (57.4)	0.68 (0.38-1.20)	0.18	0.9 (0.39-2.26)	0.89
Friends	5 (5.3)	15 (16.0)	0.29 (0.10-0.85)	0.01	2.9 (0.62-14.1)	0.17
Hospital	30 (31.9)	18 (19.1)	1.97 (1.01-3.87)	0.04	0.5 (0.18-1.49)	0.22
Parents	12 (12.8)	28 (29.8)	0.34 (0.16-0.73)	<0.01	3.5 (1.03-12.0)	0.04
Youth group	2 (2.1)	1 (1.1)	2.02 (0.18-22.7)	0.56	0.0 (0.0-)	0.99
Internet	2 (2.1)	4 (4.3)	0.48 (0.08-2.73)	0.40	1.7 (0.14-21.0)	0.66

OR: Odds Ratio

CI: Confidence Interval

P: P value

HIV: Human Immunodeficiency Virus

AOR: Adjusted Odds Ratio

CHAPTER FIVE

5 DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Discussion

Our goal was to evaluate the knowledge, utilization and preferences on HIV, STI and pregnancy prevention strategies among youths of parents seeking HIV-related and non-HIV related care at KNH between August and September 2019. With the cumulative cut off score for knowledge set at 50%, approximately 69.1% and 83.0% of youths with HIV negative and positive parents were deemed to have good knowledge on HIV prevention. The 13.9% difference between youths was negligible after adjusting demographics such as the age of youths, employment status of parents, and the level of education of youths and parents. The knowledge of pregnancy prevention and STI prevention strategies was also high (over 50% cumulative score) and did not vary statistically after controlling for confounders. There was no association between the HIV status of parents and knowledge, utilization and preferences on HIV, STI and Pregnancy prevention.

Even though youths who live with HIV positive parents have been reported to have a higher risk of developing adverse psychological symptoms (55), HIV did not seem to influence the knowledge of youths on HIV, STI, and pregnancy. A possible explanation for this finding is that HIV positive parents are as likely as HIV negative parents to educate their children about HIV, STI, and pregnancy prevention. During in-depth qualitative interviews with youths and HIV positive mothers by Murphy et al. in the USA (56), 95% of parents talked about safe sex with their children. Regular discussions with youths have been found to delay onset of sexual activity and thus lower the risk of HIV and pregnancy (57). Moreover, because some youths might have not been aware of the HIV status of parents, we might have under estimated the effect parental HIV status has on knowledge. Finally, from our data, youths with HIV positive parents and parents living with HIV got information from school which is often universal.

The knowledge of traditional strategies for HIV, STI, and pregnancy prevention (abstinence, consistent and correct use of condoms, and being faithful to one faithful partner) was almost universal. Over 90% of youths with HIV positive and negative parents were aware of the traditional methods of ABCs. A similar finding has been reported in Uganda with over 95% of youths exhibiting good knowledge of HIV prevention (58). In the study by Rukundo et al, 65.7% of youths used condoms consistently. However, some misconceptions were identified

as barriers to adoption of HIV prevention strategies, especially the novel ones and thus the high incidence of HIV reported among the youth in Uganda. Moreover, as in our study, the knowledge of novel HIV/STI/pregnancy prevention strategies such as VMMC were good, but poorly adopted because the youth might have felt that these novel strategies like PreP or PEP only dealt with HIV acquisition but did not tackle the possibility of getting other STIs or becoming pregnant. In Nairobi, utilisation of novel strategies such as PreP/PEP ranged from 5.4% -8.6% among youths and the reason for this was concerns that they did not prevent pregnancy and other STIs.

Slightly more than half of youth (62.5%) used male condoms during sexual contact. Only 4.4% preferred using PreP/PeP as prevention for HIV. The situation is the same in North Africa. While studying the awareness and use of pre-exposure and post exposure prophylaxes among 800 Nigerian university students, Ajayi et al. reported that only 5.6% and 1.5% of university students had seen or used PEP and PreP, with access identified as a barrier to their utilisation and the fact that it did not prevent pregnancy or other STIs (59). In the United States, low adherence to PrEP emerged as a barrier for HIV prevention (60), while a poor understanding of the efficacy of PrEP in the context of HIV prevention was a barrier for its uptake (61).

The parental HIV status was not associated with knowledge, utilisation and preferences of HIV/STI/pregnancy prevention strategies by youths. Whenever having sex, our data indicated that a majority of youths with HIV positive and negative parents preferred using male condoms. In a review of the National HIV/AIDS and Reproductive Health Survey (NARHS) in Nigeria, Babatunde et al. (62) found no significant association between the HIV status of parents and communication about reproductive health services with children. Senafikish et al. reported similar results in a cross sectional study of 16-19 year old youth in Ethiopia (63). In our study, youths preferred to obtain reproductive health services from schools and hospitals because of their accessibility, trustworthiness, and provision of accurate and comprehensive information.

Conclusions

There was no association between HIV status of parents or guardians and the knowledge of HIV, STI, and pregnancy prevention by youth. The youth were more knowledgeable about the traditional strategies of HIV, STI and Pregnancy prevention as compared to the novel strategies and the level of knowledge was adequate and comparable between the two groups of youth. The utilization of the different strategies was comparable among the youth from both groups and the traditional strategies were more utilised as compared to the novel strategies. The youth preferred the traditional strategies, hospital and school as the source of information and services on HIV, STI and pregnancy prevention.

Recommendations

Since there is no difference on knowledge, utilization and preferences between the two groups, we should use the same approach but teach the youth more about the novel strategies, work on ensuring that the services are offered under one roof - also known as combined strategy.

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APPENDICES

Appendix 1: Questionnaire

HIV, STI, AND PREGNANCY PREVENTION STRATEGIES AMONG 16-26-YEAR-OLD
KENYAN YOUTHS WITH HIV POSITIVE PARENTS VERSUS HIV NEGATIVE
PARENTS – A COMPARATIVE CROSSSECTION STUDY

SECTION 1: SOCIODEMOGRAPHIC CHARACTERISTICS:

Study number.....

Age in years.....

Gender: Male Female

Education: Dropout Secondary: Tertiary:

Parent Education

Residence of parents _____

Employment status of parent Employed Unemployed

SECTION 2: AWARENESS OF HIV PREVENTION

Awareness of HIV prevention	True	False	DK	Score
1. You can get HIV by sharing a plate of food or glass of water with someone infected with HIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. You can contract HIV if they engage in anal sex with men	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Washing your private parts with soap or showering after having sex can prevent you from contracting HIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Pregnant women who are infected with HIV can only give birth to children with HIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. You can tell if somebody is infected with HIV by just looking at his or her face or body size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. There is a vaccine that can prevent people from contracting HIV from their partners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. You can contract HIV by deep kissing or putting your tongue the mouth of your boyfriend or girlfriend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. A woman cannot contract HIV if she has sex during her menstrual periods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. There is a condom for women that can protect men and women from contracting HIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. You will not get HIV if you are on drugs such as antibiotics while having sex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Having sex with more than one partner can increase you risk of getting HIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Taking a HIV test one week before having sex can prevent you from getting HIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. You can get HIV by swimming with or sitting in the same pool with a person who has HIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. You can get HIV by having oral sex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Using Vaseline on condoms lowers the risk of getting HIV while having sex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

TOTAL SCORE	
-------------	--

Adopted from (64). NB: Scores should be added after data collection.

SECTION 3: AWARENESS OF STI PREVENTION

Awareness of STIs & STI prevention	True	False	DK	Score
1. Genital herpes is an STI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Gonorrhoea is a treatable STI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Hepatitis B is caused by the HIV virus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Anal sex increase the risk of contracting STIs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Women who have STIs can transmit it to their babies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Condoms can protect people from getting STIs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. People must engage in vaginal sex to get STIs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. There is a vaccine for gonorrhoea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. There is a vaccine for Hepatitis B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. You can get an STI by sharing a towel by with a person with an STI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. People who've had STIs in the past cannot get STIs again	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. STIs are infections for adults only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Being faithful to your partner can prevent you from getting an STI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. Only rich people can afford vaccines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Bathing after sex can protect you from getting an STI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

TOTAL SCORE	
-------------	--

Adopted from (65)

SECTION 4: AWARENESS OF PREVENTION OF PREGNANCIES

Awareness of STIs & STI prevention	True	False	DK	Score
1. Pregnancy is acceptable for teens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. It is acceptable for young women to abort their babies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. A condom is a contraceptive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Bathing after having sex can prevent pregnancies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Girls cannot get pregnant during their periods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Condoms are for adults	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Girls who use contraceptives can avoid pregnancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. You cannot get pregnant during you first intercourse

TOTAL SCORE	
-------------	--

SECTION 4: BEHAVIOR AND RISK ANALYSIS

1) Have you ever had sex in your life? Yes No

If Yes, how many sexual partners have you had

2. Do you use a condom always? Yes No

If yes, where do you get the condom? Shop
Hospital
Friends
Other

3) Have you ever been tested for HIV? Yes No

If yes, where did you go for testing? VCT Hospital Other

4) Which preventive strategies for HIV do you know? Abstinence
Condoms
Faithfulness
Other

5) Which one would you prefer? Abstinence
Condoms
Faithfulness
Other

Why?.....
.....

6) Have you ever contracted an STI in your life? Yes No

If yes, which one.....

7) Do you know how to prevent getting STIs? Yes No

If yes, which are the best strategies? Abstinence
Condoms
Faithfulness
Other

8) Have you ever been involved in teenage pregnancy? Yes No

- 9) Is teenage pregnancy acceptable? Yes No
- 10) Would you abort or advocate for an abortion? Yes No
- 11) Which are the best ways for preventing pregnancy?
- Abstinence
- Condoms
- Faithfulness
- Other
- 12) Which one would you prefer?
- Abstinence
- Condoms
- Faithfulness
- Other

Why?.....

- 13) Where did you learn about HIV, STIs, and teen pregnancy prevention from?

- Television
- Radio
- School
- Friends
- Hospital
- Parents
- Church
- Other

- 14) Were you satisfied with the information you got? Yes No

Why?.....

- 15) Where would you prefer to get such information?

- Television
- Radio
- School
- Friends
- Hospital
- Parents
- Other

Why?.....

THANK YOU FOR YOUR TIME.

Appendix 2: Scoring System for Questionnaire

No	Section 1 (N=15)			Section 2 (N=15)			Section 3 (N=8)		
	True	False	DK	True	False	DK	True	False	DK
1	1	0	0	1	0	0	0	1	0
2	1	0	0	1	0	0	0	1	0
3	0	1	0	0	1	0	1	0	0
4	0	1	0	1	0	0	0	1	0
5	0	1	0	1	0	0	0	1	0
6	0	1	0	1	0	0	0	1	0
7	0	1	0	0	1	0	1	0	0
8	0	1	0	0	1	0	0	1	0
9	1	0	0	1	0	0	-	-	-
10	0	1	0	1	0	0	-	-	-
11	1	0	0	0	1	0	-	-	-
12	0	1	0	0	1	0	-	-	-
13	0	1	0	1	0	0	-	-	-
14	1	0	0	0	1	0	-	-	-
15	0	1	0	0	1	0	-	-	-
TOTAL	X/15			X/15			X/8		

Appendix 3: Consent Form

PARTICIPANTS INFORMATION/PARENT CONSENT FORM; ENGLISH LANGUAGE VERSION

TITLE: ACCESS AND UTILISATION OF REPRODUCTIVE HEALTH SERVICES AMONG YOUTH WHOSE PARENTS ARE RECEIVING CARE AT KNH; A CROSS-SECTIONAL STUDY.

INVESTIGATOR Dr Odhiambo Jack Osodo

Department of Obstetrics and Gynecology University of Nairobi

P.O Box 19676-00202, Nairobi, Kenya

Telephone Number: 0711 988 628

The Chairperson KNH-ERB

P.O Box 20723-00202, Nairobi, Kenya

Telephone number: 2726360/27263600 Ext 44102

Introduction

My name is Dr Odhiambo Jack Osodo. I am a postgraduate student in the department of Obstetrics and Gynecology at the University of Nairobi and I would like you to participate in this study. If you agree to join this study, you are required to sign a consent form and thereafter a questionnaire. The purpose of this consent form is to give you the information you will need to help you decide whether to be in the study. Please read this form carefully. You may ask questions about what we will ask you to do, the risks, the benefits and your rights as a volunteer or anything about the research or in this form that is not clear. When all your questions have been answered, you can decide whether to be in this study or not. This process is called “informed consent”

BACKGROUND INFORMATION.

In Kenya, the awareness of adolescents on HIV, STI, and teen pregnancy has increased to 77% from 51% in 2008. However, according to the National AIDS Control Council (NACC), youths account for 39% of new HIV infections in the country. The prevalence of STIs is 27.1%, while over 46% of adolescent women get at least one pregnancy by the age of 20 years. Even though the environment of homes is associated with the development of high-risk behavior by youth, association between the HIV status of parents and adoption of strategies for prevention of HIV, STI, and pregnancy by adolescents and young men and women has not been explored in Kenya

The KNH/UON Research and Ethics Board have given us permission to invite you and one of your children who is between 15-24 years to participate in this study.

Confidentiality

All information obtained from you as the parent was strictly confidential and will not be revealed to anyone, even your son or daughter who will subsequently be interviewed. The quality of care given to you in the hospital will not be compromised by your refusal to participate in this study. Participation in this study is voluntary (at your own will) and you are free not to participate or to withdraw at any time. About 188 youths was participating in the study. We will then subsequently administer a questionnaire to one of your sons or daughters and even at this point, confidentiality was upheld throughout and any information regarding your health status will not be disclosed to them.

BENEFITS AND RISKS

Benefits

This study will help us know and understand which strategies the youth prefer for prevention of STI, HIV and pregnancy and this can change policy. The youth who participate was reimbursed with KSH 100 of airtime or was given KSH 200 transport reimbursement back home if they were interviewed away from home.

Risks

There was no risk to you or your son or daughter in participating in the study.

Other information

If you have a problem that may be related to taking part in this research or any questions, you can contact Dr Odhiambo Jack Osodo on 0711 988 628 and I was glad to help where I can. If you have any questions about your rights as a research participant you may contact the chairperson of the Ethics Board on 2726300 ext. 44102

Signatures for Consent

The above information describing the research, its benefits, risks and procedures has been read to me and explained. All my questions have been answered to my satisfaction. I voluntarily agree to participate in this research study.

Name of

Parent _____ Date _____ Signature or thumb print of the parent _____

I certify that the nature and purpose, benefits and potential risks associated with participating in this research have been explained to the above volunteer.

Name of person obtaining the

consent _____ Signature of the person

obtaining the consent _____ Thank you for

agreeing to participate in this research.

MAELEZO KWA WAZAZI WASHIRIKI/ FOMU YA IDHINI

MABA YA UTAFITI: ULINGANISHI WA MBINU ZA KUZUIA MIMBA, MAAMBUKIZI YA ZINAA NA VIRUSI VYA UKIMWI KATI YA VIJANA AMBAO WAZAZI HUPATA HUDUMA KATIKA HOSPITALI YA KITAIFA YA KENYATTA.

Mtafiti: Daktari Odhiambo Jack Osodo

Idara ya Elimu-uzazi na Ukunga

Chuo kikuu cha Nairobi

S.L.P 19676-00202

NAIROBI, KENYA.

Nambari ya simu: 0711988628

Mwenyekiti wa Kamati ya Maadili Katika Hospitali ya kitaifa ya Kenyatta

S.L.P 20723-00202

NAIROBI, KENYA.

Nambari ya simu: 2726360/ 27263600 Ext 44102

UTANGULIZI: Jina langu ni Dkt Odhiambo Jack Osodo. Mimi ni mwanafunzi katika idara ya Elimu-uzazi na Ukunga katika chuo kikuu cha Nairobi. Ningependa kukushirikisha katika utafiti huu. Iwapo utakubali utahitajika kutia sahihi kwenye fomu ya idhini na hatimaye dodoso. Madhumuni ya fomu hii ni kupata idhini kwa kukueleza utakayohitaji kufahamu ili kukuwezesha kuamua iwapo utashiriki katika utafiti huu.

Tafadhali soma fomu hii kwa makini. Unaweza kuuliza maswali kuhusiana na yale utakayohitajika kufanya, hatari na faida za kushiriki, haki zako kama mshiriki pamoja na yoyote yanayohusiana na utafiti ama katika fomu ya idhini ambayo huenda hayaeleweki kwako. Baada ya maswali yako kujibiwa unaweza kuamua ikiwa utashiriki katika utafiti huu au la. Mchakato huu unaitwa idhini arifu.

USULI

Nchini Kenya utambuzi wa vijana (kuanzia kubalehe hadi miaka 18) wa virusi vya Ukimwi, maambukizi ya zinaa na mimba za mapema umeongezeka kwa asilimia 77 kutoka 55 mwaka wa 2008. Hata hivyo, kulingana na Baraza la kitaifa la Udhhibiti wa Ukimwi, asilimia 39 ya vijana ndio wenye maambukizi mapya ya virusi vya Ukimwi nchini. Maambukizi ya zinaa yako kwa asilimia 27 ilhali zaidi ya asilimia 46 ya vijana wa kike hupata mimba angalau mara moja kufikia umri wa miaka 20.

Japo mazingira ya nyumbani yanahusishwa na makuzi ya mienendo hatari ya vijana, mahusiano kati ya hali ya virusi vya ukimwi ya wazazi na kuchukuliwa kwa mikakati ya kuzuia

maambukizi ya zinaa, virusi vya Ukimwi na mimba za mapema kati ya vijana hayajachunguzwa humu nchini.

Kamati ya maadili na Utafiti ya Hospitali ya kitaifa ya Kenyatta imetuidhinisha kukualika wewe na mwanao mmoja mwenye umri wa kati ya miaka 15-24 kushiriki katika utafiti huu. Maelezo yote yanayotoka kwako yatawekwa siri na hayatatolewa kwa yeyote. Aidha maelezo ambayo mwanao tutakayemhoji pia yatawekwa siri. Thamani ya utunzaji unaopata hospitalini humu hautatiwa hatarini hata ukidinda kushiriki kwenye utafiti huu. Kushiriki kwako ni kwa hiari yako mwenyewe na uko huru kutoshiriki au kujiondoa wakati wowote. Kadiri ya vijana 188 watashirikishwa katika utafiti huu. Tutampa mwanao anayeshiriki dodoso. Katika kiwango hiki vilevile usiri utadumishwa kwa hiyo maelezo yanayohusiana na afya yako hayatatolewa kwao.

HATARI NA FAIDA

Faida

Utafiti huu utasaidia kujua na kuelewa ni mbinu zipi za kuzuia maambukizi ya zinaa, virusi vya ukimwi na mimba za mapema zinazopendelewa na vijana. Aidha maelezo haya yatachangia katika ukarabati wa sera iliyoko. Vijana watakaoshiriki katika utafiti huu watarejeshewa shilingi mia moja kwa ajili ya gharama ya muda wa maongezi ya simu au nauli ya kurejea nyumbani iwapo mahojiano yatakuwa yamefanyika mahali tofauti na nyumbani.

Hatari

Hamna hatari yoyote inayohusishwa na kushiriki kwako wala kwa mwanao katika utafiti huu.

Maelezo mengine

Iwapo una tatizo linalohusishwa na kushiriki katika utafiti huu au maswali zaidi unaweza kumpigia simu Dkt Odhiambo Jack Osodo; 0711988628 ambaye atafurahi kukusaidia panapohitajika na inavyowezekana. Ikiwa pia una maswali kuhusiana na utafiti huu au haki zako kama mshiriki katika utafiti unaweza kuwasiliana na mwenyekiti wa Kamati ya maadili kwa Nambari; 276300 ext 44102.

SAHIHI

Nimefahamishwa zaidi kuhusu utafiti huu, faida, hatari na michakato yote husika. Nimetosheka kwa maswali yangu yote kujibiwa kwa hivyo ninakubali kwa hiari yangu kushiriki katika utafiti huu.

Jina la mzazi:

.....Tarehe.....

Sahihi.....

Jina la kijana.....Tarehe.....

Sahihi:

Mtafiti

Ninathibitisha kuwa maelezo kuhusu aina, azma, faida, hatari na hatari zinazohusishwa na kushiriki katika utafiti huu yametolewa kwa mshiriki huyu.

.....

Mpokezi wa idhini.....sahihi.....

Asante kwa kushiriki katika utafiti huu.

**PARTICIPANTS INFORMATION/YOUTH CONSENT FORM; ENGLISH
LANGUAGE VERSION**

**TITLE: ACCESS AND UTILISATION OF REPRODUCTIVE HEALTH SERVICES
AMONG YOUTH WHOSE PARENTS ARE RECEIVING CARE AT KNH; A
CROSS-SECTIONAL STUDY.**

INVESTIGATOR Dr Odhiambo Jack Osodo
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P.O Box 19676-00202, Nairobi, Kenya
Telephone Number: 0711 988 628
The Chairperson KNH-ERB
P.O Box 20723-00202, Nairobi, Kenya
Telephone number: 2726360/27263600 Ext 44102

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Confidentiality

All information obtained from you was strictly confidential and will not be revealed to anyone. Your name will not be written on any of the forms, you was identified just by a unique code. The quality of care given to you in the hospital will not be compromised by your refusal to participate in this study. Participation in this study is voluntary (at your own will) and you are free not to participate or to withdraw at any time. About 188 youths was participating in the study. We will administer a questionnaire to you and even at this point, confidentiality was upheld throughout and any information regarding your health status will not be disclosed to anyone.

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This study will help us know and understand which strategies the youth prefer for prevention of STI, HIV and pregnancy and this can change policy. The youth who participate was reimbursed with KSh 100 of airtime or was given Ksh 200 transport reimbursement back home if they were interviewed away from home.

Risks

There was no risk to you in participating in the study.

Other information

If you have a problem that may be related to taking part in this research or any questions, you can contact Dr Odhiambo Jack Osodo on 0711 988 628 and I was glad to help where I can. If you have any questions about your rights as a research participant you may contact the chairperson of the Ethics Board on 2726300 ext. 44102

Signatures for Consent

The above information describing the research, its benefits, risks and procedures has been read to me and explained. All my questions have been answered to my satisfaction. I voluntarily agree to participate in this research study.

Name _____ of
Youth _____ Date _____ Signat
ure or thumb print of the parent _____

I certify that the nature and purpose, benefits and potential risks associated with participating in this research have been explained to the above volunteer.

Name of person obtaining the
consent _____ Signature of the person
obtaining the consent _____ Thank you for
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MAELEZO KWA VIJANA WASHIRIKI/ FOMU YA IDHINI

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Mtafiti: Daktari Odhiambo Jack Osodo

Idara ya Elimu-uzazi na Ukunga

Chuo kikuu cha Nairobi

S.L.P 19676-00202

NAIROBI, KENYA.

Nambari ya simu :0711988628

Mwenyekiti wa Kamati ya Maadili Katika Hospitali ya kitaifa ya Kenyatta na Chuo kikuu cha Nairobi

S.L.P 20723-00202

NAIROBI, KENYA.

Nambari ya simu: 2726360/ 27263600 Ext 44102

UTANGULIZI

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Tafadhali soma fomu hii kwa makini. Unaweza kuuliza maswali kuhusiana na yale utakayohitajika kufanya, hatari na faida za kushiriki, haki zako kama mshiriki pamoja na yoyote yanayohusiana na utafiti ama katika fomu ya idhini ambayo huenda hayaeleweki kwako. Baada ya maswali yako kujibiwa unaweza kuamua ikiwa utashiriki katika utafiti huu au la. Mchakato huu unaitwa „Idhini arifu.“

USULI

Nchini Kenya utambuzi wa vijana (kuanzia kubalehe hadi miaka 18) wa virusi vya Ukimwi, maambukizi ya zinaa na mimba za mapema umeongezeka kwa asilimia 77 kutoka 51 mwaka wa 2008. Hata hivyo, kulingana na Baraza la kitaifa la Udhhibiti wa Ukimwi, asilimia 39 ya vijana ndio wenye maambukizi mapya ya virusi vya Ukimwi nchini. Maambukizi ya zinaa yako kwa asilimia 27.1 ilhali zaidi ya asilimia 46 ya vijana wa kike hupata mimba angalau mara moja kufikia umri wa miaka 20.

Japo mazingira ya nyumbani yanahusishwa na makuzi ya mienendo hatari ya vijana, mahusiano kati ya hali ya virusi vya ukimwi ya wazazi na kuchukuliwa kwa mikakati ya kuzuia maambukizi ya zinaa, virusi vya Ukimwi na mimba za mapema kati ya vijana hayajachunguzwa humu nchini.

Kamati ya maadili na Utafiti ya Hospitali ya kitaifa ya Kenyatta na Chuo kikuu cha Nairobi imetuidhinisha kukualika wewe kijana mwenye umri wa kati ya miaka 15-24 kushiriki katika utafiti huu. Maelezo yote yanayotoka kwako yatawekwa siri na hayatatolewa kwa yeyote. Thamani ya utunzaji unaopata hospitalini humu hautatiwa mashakani hata ukidinda kushiriki kwenye utafiti huu. Kushiriki kwako ni kwa hiari yako mwenyewe na uko huru kutoshiriki au kujiondoa wakati wowote. Kadiri ya vijana 188 watashirikishwa katika utafiti huu. Tutakupa dodoso na katika kiwango hiki vilevile usiri utadumishwa kwa hiyo maelezo yanayohusiana na afya yako hayatatolewa kwa yeyote yule.

HATARI NA FAIDA

Faida

Utafiti huu utasaidia kujua na kuelewa ni mbinu zipi za kuzuia maambukizi ya zinaa, virusi vya ukimwi na mimba za mapema zinazopendelewa na vijana. Aidha maelezo haya yatachangia katika ukarabati wa sera iliyoko. Vijana watakaoshiriki katika utafiti huu watarejeshewa shilingi mia moja kwa ajili ya gharama ya muda wa maongezi ya simu au shilingi mia mbili nauli ya kurejea nyumbani iwapo mahojiano yatakuwa yamefanyika mahali tofauti na nyumbani.

Hatari

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Maelezo mengine

Iwapo una tatizo linalohusishwa na kushiriki katika utafiti huu au maswali zaidi unaweza kumpigia simu Dkt Odhiambo Jack Osodo; 0711988628 ambaye atafurahi kukusaidia panapohitajika na inavyowezekana. Ikiwa pia una maswali kuhusiana na utafiti huu au haki zako kama mshiriki katika utafiti unaweza kuwasiliana na mwenyekiti wa Kamati ya maadili kwa Nambari; 276300 ext 44102.

SAHIHI

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Jina la mzaziTarehe.....

Sahihi.....

Jina la kijana:Tarehe.....

Sahihi:

Mtafiti

Ninathibitisha kuwa maelezo kuhusu aina, azma, faida, hatari na hatari zinazohusishwa na kushiriki katika utafiti huu yametolewa kwa mshiriki huyu.

.....Tarehe.....

Jina la mpokea idhini..... sahihi.....

Asante kwa kushiriki katika utafiti huu.