IMPACT OF COMMUNITY STRATEGY ON UPTAKE OF REPRODUCTIVE TRACT INFECTIONS HEALTH SERVICES AMONG YOUNG STREET FEMALES IN UASIN GISHU COUNTY, KENYA.

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APRIL, 2023

DECLARATION

This thesis is my original work and has not been presented for a degree in any other University

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DEDICATION

I dedicate this thesis to my dear son Leo Lino whose love, moral support and understanding motivated me and made my study a success. More dedication goes to my parents; Daniel and Bernardette for their prayers, financial and moral support; my brother, sister and well wishers for their constant prayers and support. My dedication also goes to street families who face various challenges in the street.

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LIST OF ABBREVIATIONS

AIDS:	Acquired Immunodeficiency Syndrome
Ca:	Candida albicans
CDC:	Center for Disease Control
CI:	Confidence Interval
CO2:	Carbon dioxide
CT:	Chlamydia trachomatis
FGDs:	Focused Group Discussions
HIV:	Human Immunodeficiency Disease
HPV:	Human Papilloma Virus
HSV:	Herpes Simplex Virus
IBM:	International Business Machine
KI:	Key Informant
MOH:	Ministry of Health
NG:	Neisseria gonorrhoeae
PID:	Pelvic Inflammatory Infections
RTIs:	Reproductive Tract Infection
SPSS:	Statistical Package for Social Sciences
SRH:	Sexual Reproductive Health
STD:	Sexually Transmitted Diseases
STI:	Sexually transmitted infections
TV:	Trichomonas vaginalis
UNESCO:	United Nations Organization for Education, Science and Culture

UNFPA:	United Nations Population Fund
USAID:	United State International Agency
WHO:	World Health Organization
YSF:	Young Street Females

OPERATIONAL DEFINITIONS

Street children: Any girl or boy, for whom the street in the widest sense of the word, including unoccupied dwellings and wasteland has become his or her habitual abode and/or source of livelihood; and who is inadequately protected, supervised, or directed by responsible adults.

Vaginal swabs: A test performed on women's genitals which involves the collection of vaginal secretions using a cotton swab for lab analysis.

Guardian: A person in charge or with the responsibility of taking care of the street children/families. In case of those with families, the parent will be the guardian to the eligible participant.

Pathogenic microorganism: Any microorganism capable of injuring its host either by competing for metabolic resources, destroying its cells or tissues, or secreting toxins. These organisms include; viruses, bacteria, fungi, protozoa, mycobacteria and some helminths.

Young Street female: A woman aged 10-24 years whom the street in the widest sense of the word, including unoccupied dwellings and wasteland has become his or herhabitual abode and/or source of livelihood; and who is inadequately protected, supervised, or directed by responsible adults.

‘of the street young females’: Are street females aged 10-24 years who permanently live on thestreet without a family network.

‘on the street young females’: Are street females aged 10-24 years who work on the streets as their only means of getting money or getting refuge during the day but return to some form of family at night.

Syndromic screening: This involves identification of signs and symptoms pointing to reproductive tract infections

Strategy: This is a plan aimed at achieving one or more goals within a context of a given constrainsand limited resources. This will involve screening and referral of YSF for RTI treatment.

Community: A specific group of people, usually living in a defined geographical area, who share common values, norms, culture and customs, and are arranged in a social structure according to relationships, which the community has collectively developed over a period of time.

Community strategy: is the mechanism through which households and communities strengthen their role in health and health-related development by increasing their knowledge, skills and participation.

Early treatment seeking: Seeking health care services at the onset of symptoms

ABSTRACT

Reproductive tract pathogenic microorganisms are one of the major causes of adverse health outcomes among women in both developed and developing countries. Documented research reports that, despite the current intervention of establishing a dedicated clinic for this demographic, the uptake of reproductive health treatments among young street females (YSF) in Eldoret municipality is quite low. Community strategy as an intervention has been proven to be effective for the uptake of other reproductive health services but there is little information regarding its impacts on reproductive tract infections health service uptake among YSF in Eldoret municipality. The current study aimed to assess health-seeking behaviors and the impact of a community strategy on YSF's use of reproductive health care. A pretest-post-test quasi experimental with a qualitative and quantitative approach was applied among the YSF aged 10-24 years. The study used structured questionnaires and keyinformant interviews to collect data from the respondents. Vaginal swabs and blood samples were obtained from the respondents and taken to Moi Teaching and Referral Hospital laboratory for identification of pathogenic microorganisms. Data were analyzed using IBM SPSS V.26. The strength of the relationship between variables was tested using logistic regression. Community strategy which was the study intervention composed of health education, syndromic screening, and referrals to the health facility. Tables, charts, and graphs are used to present descriptive statistics. A total of 77 young street females from Eldoret municipality participated in the study. The respondents aged less than 15 years were ten (13%) while those who were aged more than twenty years were (62%). A significantly higher proportion of respondents reportedly sought treatment for RTI following the roll out of the intervention (68.1%) when compared to those who sought treatment at the pre-intervention phase (63.0%) difference: 5.1% (95 confidence interval (CI) 5.0% -39.2%), $z = 2.534$, $p = 0.011$). The implementation of the community strategy package revealed a positive outcome as it contributed to increased knowledge and uptake of health care services. The study also revealed *T. vaginalis* and *T. Pallidum* as the key pathogenic colonizers. The study recommended the integration of the community strategy package in policies that seek to improve the health care of young street females in Eldoret municipality. The study recommends the adoption of the community strategy as an intervention to increase the uptake of RTIs health services and promotion of the reproductive health of YSF.

CHAPTER ONE: INTRODUCTION

1.1 Background

A considerable proportion of Kenyans suffer from one of the world's greatest preventable burdens of disease, such as sexually transmitted illnesses. Reproductive tract infections (RTIs) are endemic in developing countries and bring about a health burden on women. If untreated, RTIs can lead to adverse health outcomes such as infertility, ectopic pregnancy, and increased vulnerability to the transmission of HIV. They are also associated with adverse pregnancy outcomes. Reproductive tract infections encompass three types of infections including Sexually transmitted infections; infections that result from the overgrowth of organisms normally present in the reproductive tract (Wójkowska-Mach *et al.,* 2021), and infections associated with inadequate prevention practices by healthcare providers when carrying out procedures including abortion and insertion of intra uterine devices (Manzoor *et al,* 2020).

A community health strategy is a successful way to improve health while also contributing to overall socioeconomic development. The best way to address health determinants is to use integrated approaches that involve people's active engagement, particularly at the community level. (Ministry of Health (MOH), 2014). Community strategies such as using some community referral/outreach persons have been found to act as a catalyst and change agent that enables individuals to take responsibility and control matters regarding their health improvement. The community strategy's overall purpose is to improve community access to health care to increase production and, as a result, reduce poverty, hunger, and child and maternal fatalities, as well as improve

educational achievement at all stages of life.

In underdeveloped nations, reproductive tract infections (RTIs) are common and have been linked to health problems. RTIs have been associated with undesirable pregnancy consequences. RTIs comprise sexually transmitted infections (STI), infections resulting from the overgrowth of reproductive tract normal flora (Wójkowska-Mach *et al.*, 2021), and infections related to inadequate prevention practices during abortion and insertion of intrauterine devices (Manzoor *et al*, 2020). Research shows that Kenya and India have high rates of RTI's ranging between 52% and 92% (Verma & Sood, 2016).

Young females living in the streets are highly exposed to sexual and reproductive health problems. Their vulnerability is heightened by their limited understanding of adolescent-associated changes, inadequate empowerment in making healthy choices, and inability to access appropriate services (Goldblatt *et al.*, 2015). The community strategy package that the study employed consisted of site visits, syndromic screenings, referrals of suspected cases, and counseling.

1.2 Statement of the problem

Street children face various health problems such as reproductive tract infections influenced by rape, inaccessibility to reproductive health knowledge, and health care services (Tsehay & Wassie, 2013). Research shows that most community health strategies targeting female populations in various settings have demonstrated effective ways of reproductive health care service uptake, health improvement, and the general well-being

of women. Despite this, there is still no adequate evidence of community strategy for the uptake of RTI health care service for the population most at risk, thus the continuous prevalence of low uptake of health care services (Dhana *et al.*, 2014).

Despite the intervention of free medical care services for street children by a dedicated clinic in Eldoret municipality, young street females' health care service uptake is still deficient (KI). A recent study done to determine the prevalence of RTIs among YSF in Eldoret municipality revealed high rates (15%) of RTIs, which is higher compared to the national level (6%) (Winston *et al*., 2015; Kenya National Bureau of Statistics, 2014). Even with the extensive application of community strategy to improve reproductive health in Kenya since its inception in 2007, little research has been done toinvestigate the impacts of this intervention to increase the uptake of RTIs health care services among YSF in Eldoret town. Additionally, there is little information regarding the distribution of reproductive infections among young street females, their knowledge of RTIs, and their health-seeking behaviour. Therefore, the study seeks to fill this gap to promote the reproductive health of young street females by empowering them to stay healthy, make healthy decisions, and strengthen linkages between them and the health facility.

The RTIs have been shown to enhance HIV transmission and the morbidities associated with death (Manzoor et al, 2020). Ignorance of RTIs among YSF leaves them at high risk of HIV/AIDS. This will hinder the world goal of ending the AIDS epidemic by 2030 through the prevention of new cases of HIV among adolescent girls and young women in Kenya (WHO, 2015). Moreover, it will frustrate efforts made to manage STIs in an urban

setting in Kenya (Oino & Sorre, 2013).

1.3 Justification of the study

Control of RTIs at a community level could be very challenging; therefore, there is a need to identify Strategies that could significantly influence the burden of the disease. These strategies are those that aim at improving access to testing and treatment for those who are at high risk of infection, as well as screening, partner identification and treatment, and primary preventive actions (Shaw *et al.*, 2012). Research on RTIs has been focused on other special populations like female sex workers and pregnant women but few have focused on young street females (Maina *et al.*,2016).

Access and utilization of various reproductive health treatments by vulnerable populations have been found to increase when a community strategy is used. (Denno *et al.*, 2015). Therefore, the study intends to apply this intervention to increase the uptake of RTIs care services among the YSF in the Eldoret municipality. Young Street females generally tend to be invisible in most studies on street children, yet they are more at risk for various health problems than their male counterparts due to vulnerability differences. The harshness and hostility of the street environment are more pronounced among street females (Tsehay & Wassie, 2013). Currently, Eldoret is one of the fastest-growing cosmopolitan towns in Kenya. With its growth, the municipality of Eldoret is experiencing a surge of young street females (Sober *et al.*, 2014).

Data on RTIs and health-seeking trends among young street females are vital in

developing any intervention program. The study described the distribution of various reproductive tract infection-causing microorganisms among the street female, determined health-seeking behaviour regarding RTIs, and the effects of employing a community strategy in the uptake of RTIs health care services. The study's findings will help formulate recommendations that will boost SDG goal three's achievement of ending the AIDS epidemic and communicable diseases by 2030.

1.4 Research questions

i. What are the health-seeking behaviours of young street females for RTIs in Eldoret municipality?
ii. What effect does a community strategy package have on RTI health care services uptakeamong young street females in Eldoret municipality?
iii. What factors are associated with health-seeking behaviour for RTIs among Young street females after the community strategy package in Eldoret municipality?
iv. What is the prevalence of key pathogenic colonizers of the reproductive tract among young street femalesin Eldoret municipality?

1.5 Objectives

1.5.1 Broad Objective

To evaluate the impact of community strategy package on uptake of RTIs health care services among young street females in Eldoret municipality.

1.5.2 Specific Objective

i. To examine the health-seeking behaviour of young street females for RTIs in Eldoret municipality.
ii. To evaluate the effect of the community strategy package on the uptake of RTIs health servicesamong the young street females in Eldoret municipality.
iii. To determine factors associated with health-seeking behaviour for RTIs among young street females after community strategy package in Eldoret municipality.
iv. To determine the prevalence of key pathogenic colonizers of the reproductive tract among young streetfemales in Eldoret municipality.

1.6 Hypothesis

The intervention (community strategy package) has no significant influence on the uptake of RTIs health services amongthe young street females in Eldoret municipality

1.7 Significance of the study

The study results may inform the policy and stakeholders on ways to improve community health strategies to enhance the reproductive health of young street females in Eldoret municipality. The findings may also provide insight into the burden of RTIs in these marginalized and vulnerable groups. In addition, the data obtained may be used to model appropriate approaches and interventions aimed at enhancing the utilization of reproductive health services among street females in the study area and elsewhere.

1.8 Limitations of the study

The current study is not without limitations. The infections that were reported could have occurred before the time of the study and the dependent variables that were used to assess the associations may have changed over time. This represents a potential confounder in the relationships. Noteworthy is the decrease in the number of participants after the intervention. This decreased the power of the study hence limiting the generalization of the study findings.

1.9 Conceptual framework

The conceptual framework depicting the many inter-relationships between the variables in the study is shown in figure 1.1. The dependent variable is the uptake of RTI health care services. The low uptake of RTIs health care services may be influenced by factors including facility factors: healthcare provider's attitude, affordability, and distance, among others. Socio-demographic characteristics, including age, economic status, and education level of the respondent, may influence health-seeking behaviuor hence the uptake of RTIs health care services. Individual factors such as knowledge of RTIs, awareness of the availability of services, and attitude towards health care services may influence the uptake of services positively or negatively. The introduction of an intervention, a community strategy package, may enhance the uptake of RTIs services by the respondents.

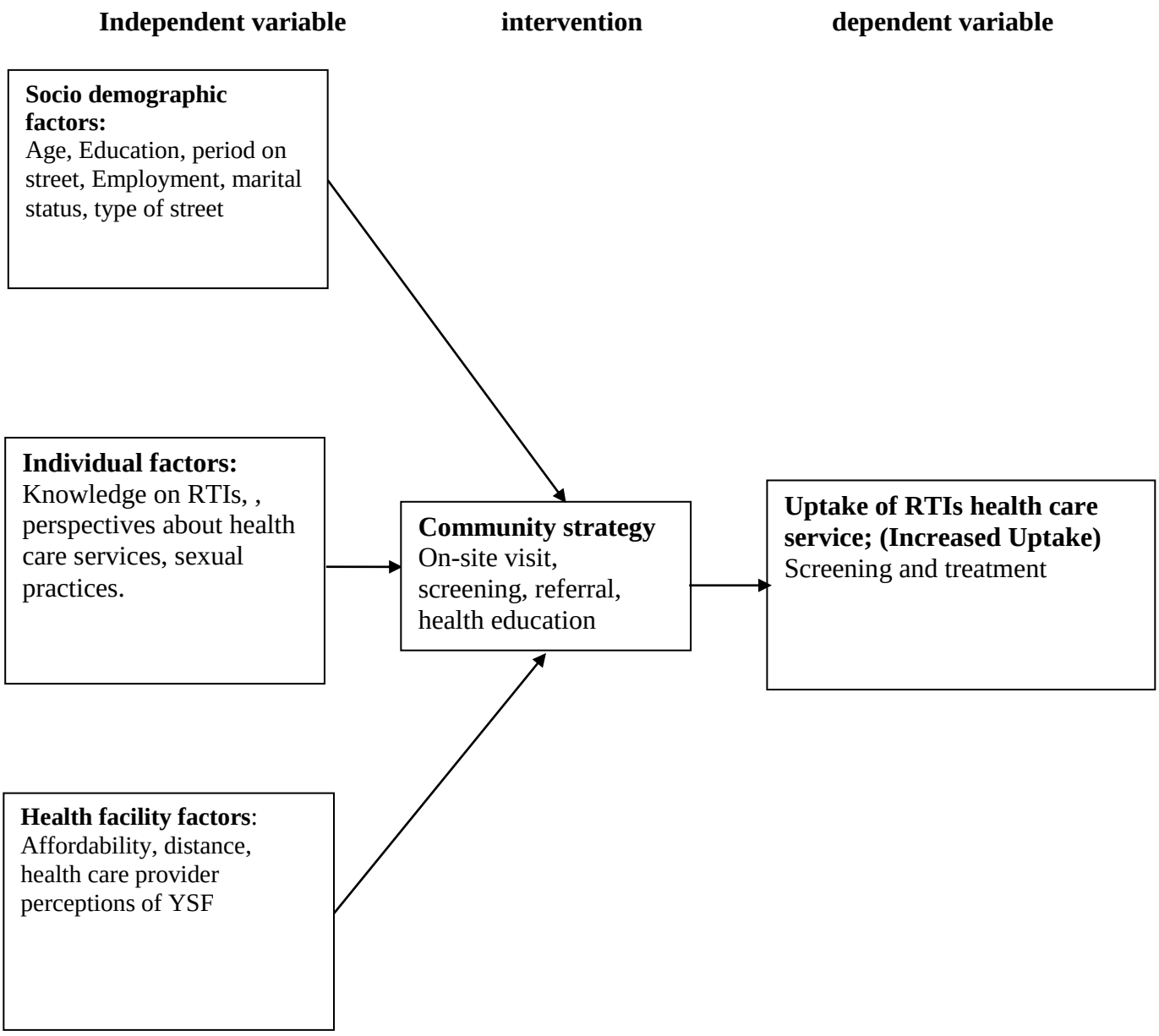

Figure 1. 1: Conceptual framework (Source: Tsehay & Wassie, 2013)

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter provides an empirical literature review on sexual reproductive health. It has been structured to be consistent with the study objectives and the layout of the conceptual framework.

2.2: Street Children

Street children live or work on the streets with or without any linkages to their families. These groups are the most disadvantaged as they are vulnerable to various issues such as sexual abuse, economic exploitation, and death (Street children of hope, 2017). Documenting the actual number of street children has met many challenges arising due to the contestation of defining the term "Street children" and the continuous movement of street children from one place to another. Despite this, studies have estimated the street children population to be approximately 150 million worldwide, with the majority being from developing countries (Wachira *et al*., 2015).

The emergence of the street population is influenced by several factors from their home, including poverty, violence, death of a parent /guardian, drug and alcohol abuse, wars, family separation or breakdown, and natural disasters. Street children are usually categorized into those that permanently live on the street without a family network, usually referred to as 'of the street' and thoseworking on the streets as their only source of livelihood or finding refuge during the day but return to some sort of family at night also referred to as 'on the street' (UNESCO, 2017).

The struggle for survival has turned street children into scavengers, beggars, and hawkers in the slums, and polluted globally. They are all at risk of various issues, but the magnitude of these problems is more among those sleeping and living in areas such as railway stations, bridges, streets, and gutters, whereas some may secure small jobs like shoe-shining or market-selling jobs to survive, many have been found to have; died on the pavement, turned to victims of drugs, gang rivalry, and reproductive health disease. There is no state provision for these children, only non- government organizations who try to implement some street children. They have no prospect of education and so no possibility of securing a job or providing for any children, they may have in the future. People ignore factors that drive children to the street, label them as dirty vermin, thieves, killers, and pick-pocketers, and accordingly treat them with apathy or revulsion (Gikinya, 2018). RTIs of significant public health importance include; Trichomoniasis, Chlamydia, Candidiasis, Gonorrhea, HPV, Syphilis, and HSV.

2.2 Street children in Kenya

In Kenya, a recent rise in the population of street children in urban centers is one of the most significant challenges to the urbanization process (Sorre & Oino, 2013). The number of street children seems to be increasing at an alarming rate (from a few hundred in 1969 to a recent estimate of 250 000) despite the government's efforts to remove them from the streets and rehabilitate them. They have no permanent place to stay, no educational facilities, and no facilities for hygiene which puts their health at risk (Wachira *et al.*, 2015).

Charitable institutions and community-based organizations have continued to partner with the government to improve the livelihood of street families and relocate them. Despite these concerted efforts, the number of street children is on the rise in most towns in the country. Eldoret municipality being among the fastest developing cities in East Africa is struggling with substantial street children. In Kenya, economic factors have been identified as the major push factor for children to the streets (Kipyego, 2015). A study to investigate factors associated with an increasing population of YSF in Uganda showed that the highest number of street children was in the age group 9-12 years, and they were represented by 36.67%, followed by those aged 5-8 years who were 34.4% (Adikini, 2013). Another study done in Eldoret indicated that the street children found in the streets of Eldoret were between the age of 5 to 25 years.

2.3 Street Children and Reproductive Health

Studies have indicated that Sexual and Reproductive Health (SRH) needs are largely unmet despite the increasing evidence that such ignorance can endanger young people's health and impending welfare. Inadequate access to information, services, and resources is brought about by the fact that health care services are hardly designed precisely to meet their needs. In addition, health workers infrequently get specialist training in matters relevant to them (Brhane *et al.*, 2014).

Young street females are vulnerable to sexual and reproductive health complications on a day-to-day basis due to their living conditions. Reports indicate that this population becomes sexually active earlier than the other groups of adolescents. A study done in Eldoret to assess the sexual practices of street children reported that street children start

to engage in sexual acts as young as five years (Embleton *et al.*, 2015). In addition, they have multiple sexual partners and are likely to be compelled into sexual relations to safeguard their existence. The use of protection (condoms) is inconsistent, and they get insufficient information about sexuality (Brhane *et al.*, 2014). According to the information given by a key informant who works with the street families in Eldoret, YSF in Eldoret municipality usually makes their own choices regarding their reproductive health care (KI).

A study done among street children in Addis Ababa found that unprotected sex is common among street children. It further indicated that STIs, especially HIV, among this group, were 10–25 times higher than their counterparts (Habtamu & Adamu, 2013). According to Embleton and colleagues (2015), the gender difference is a factor in the number of new STI infectionsamong young people aged 15–24, where females are 50 % more likely to acquire RTIs than their male peers. On investigating knowledge and practices of HIV/AIDS among street children in Kenyan, a study revealed that rape and gang rapes of females are used as a form of punishment or initiation (wachira *et al.* 2015).

In Eldoret town, street girls were used as sexual objects by the boys and seemed to be unable to make choices regarding having sex with street-based boys (Winston *et al.*, 2015). Sexual abuse is shared in Kenya and the Philippines; the study reported that some youths are abused at shelters (USAID, 2017).

2.4 Community strategy in Kenya

The World health congregation of 1974, after noting the discrepancy in health services between countries, resolved to explore possible mechanisms that would realize optimum equity in the health sector across nations. This resolve later gave birth to the Alma Ata conference of 1978 which focused on primary health care (WHO, 2017). In the forum, it was emphasized that the main social intention of the World Health Organization and governments should ensure attain health for all citizens of the world by the year 2000. Kenya is a signatory to the Alma-Ata Declaration of 1978, which sought to improve her health outcomes.

In so doing, the Ministry of Public Health and Sanitation, through its National Health Sector Strategic Plan II (NHSSP II)-2005, emphasized promoting individual and community health. To achieve the Alma Ata declaration, NHSSP II focused on strengthening health services through several strategies. One such strategy is the "Community Health Strategy," which was launched in 2006 to deliver the Kenya Essential Package for Health (KEPH) defined in the NHSSP II (Olayo *et al.,* 2014). The KEPH established a six-level model of health service provision, with level 1 being the Community Unit and level 6 the referral hospitals.

Community Health Strategy plan acknowledges that communities are the basic unit in providing affordable, equitable, and effective healthcare. In this strategy, the households and communities take an active role in progressive health and health-related issues. Through the Community Health Strategy, households are empowered to take charge of

improving their health given that the household is at the foundation of affordable, equitable, and effective health care (Kwasira *et al.*, 2015). The goal of the community strategy is to augment community admittance to healthcare to curb child and maternal deaths, improve productivity and reduce poverty.

The long-term goal is to improve socio-economic development at all stages of life. The proponents of community health strategy further posit that it targets arrest challenges associated with capacity building of community health extension workers (CHEWs) and community health workers (CHW) at the community level. Also, the approach strengthens health facility-community linkages and sensitizes the communities of their rights to health services. According to the KEPH, norms, and standards for health service delivery, level 1 health services should embrace preventive and simple curative health care (Masaba *et al.*, 2020).

Even though the community health strategy package is instrumental in areas with inadequate or no access to healthcare facilities (Olayo *et al*., 2014), it has its weaknesses. Critics are concerned about the functions an individual CHW can effectively carry out. They assert that most CHW have limited educational backgrounds and limited understanding of the social, political, economic, and cultural dynamics of society. Some have little knowledge regarding the health needs of the community and the geographical distribution of the population in their jurisdiction. In their study, Hill *et al.* (2016) reported that there is little scientific evidence regarding the optimal number of functions and tasks a CHW can perform.

In addition, it is argued that no one person can implement all the activities as laid out in the Alma Ata declaration. Based on the objectives of the community strategy package, services provided by CHWS are expected to be more appropriate to the health needs of the local populations. However, the use, efficiency, performance, and reliability of the CHW program as it is in the Community Health Strategy in Kenya is still a global debate. Therefore, it is timely to assess the uptake of reproductive health services for reproductive tract infections.

2.5 Components of community health strategy package

The Kenyan Community Health Strategy (CHS), established in 2006, introduced a six-level model of health service provision, with level 1 being the Community Unit and level 6 being referral hospitals. The model is presently restructured under the latest Kenya Health Sector Strategic and Investment Plan (KHSSP) into a five-life cycle cohort model; This is designed to fit into the devolved four-tier health services delivery approach. Level 1 is where the community health strategy package applies. The package comprises the households, community health committee, community resource persons, community health extension workers, and health facilities (McCollum *et al.*, 2016).

The community resource individuals include the CHWs, opinion leaders, and other structures like women and youth groups. The Community health extension workers are connected to the catchments of the health facilities**.** All these components **a**re interlinked in a model where a level one community health care unit serves a local population of 5,000 people assisted by 50 CHW. The community identifies the CHW to provide level 1

service to about 20 households within the locality. The CHW is a community resource person trained and supported by community health extension workers based at level 2 and 3 hospitals (Olayo *et al.,* 2014).

2.6 Philosophy of community health strategy package in Kenya

Kenya, a signatory member of the UN, is committed to achieving sustainable development goal three targets to achieve good health for all world citizens by the year 2030. The development agenda defines the need to attain Universal Health Coverage that includes access to quality and affordable health services, financial risk protection, vaccines, and medicines for all. Globally, the community health approach has been recognized as a practical pathway for achieving Universal Health Coverage and addressing the heavy burden of disease (Cometto *et al.,* 2018).

As a global society in Kenya, community health approaches have been recognized to deliver health for all. Naturally, the current health situation in the country necessitates the adoption of such a strategy to bring services to the household level and reverse the declining trends in health indicators. Based on this background, the community health package in Kenya is based on the Primary Health Care (PHC) concept. This concept focuses on equity, community participation, inter-sectoral action, appropriate technology, and a decentralized role played by the health system. The concept further recognizes that the health facilities at levels 2 and 3 can significantly improve service delivery by working closely with catchment communities.

Various committees in the community are instrumental as they form a framework that links service delivery at the household level (MOH, 2007a) to the health facilities at levels 2 and 3; This will provide an opportunity to generate informed dialogue between the health system and the community, create demand for quality services on the part of the community, and enhance their responsibility for action for health at level 1 (MOH,2007b).

2.7 Success and challenges of community health strategy packages

Studies have revealed that the community health strategy has significantly reversed the negative health indicators observed before implementing the program (Wang *et al*., 2018; Perry *et al.*, 2014: Druetz *et al.*, 2015). The approaches used are significant as they involve community participation in health services, especially at level 1. This puts the community at the foundation of quality, affordable, and equitable health care. It has been further observed that the communities have significant access to health care as evidenced by improved childhood immunization coverage, reduction of HIV-related stigma, and increased uptake of ante-natal care. There are also proper linkages between the health facilities and the community as the health centers register a higher number of people seeking health services, unlike before.

In Kenya, the CHS strategy has been used to strengthen and motivate the utilization of primary health care among women. CHWs have been said to be an integral part of community mobilization towards the uptake of services regarding FP, nutrition support for women and newborns, management for hemorrhage, sepsis, and reduction of unsafe

abortion in the community. A systematic review done to assess the influence of CHS on PHC, community health, and client satisfaction showed a significance in increased immunization uptake and positive outcomes regarding respiratory infections and malaria compared to areas without the CHS intervention (Buong *et al.*,2013).

Community-based interventions have been proven to increase the uptake of various reproductive health services such as skilled facility delivery services, and contraceptives are resource-constrained. A study to determine the effectiveness of CHS in the uptake of servicesin rural western Kenya revealed that there' was a significant increase in uptake of FANC among women after the introduction of CHW intervention (Akinyi *et al.*, 2015). Community intervention can promote prevention and utilization of RTI services by promoting peer education, advocacy, supporting and participation in outreach services, and referring clients to health care services. Facility-based approaches are more effective in the uptake of reproductive health care services when combined with community-based approaches for young people (Denno *et al.*, 2015).

Critics have, however, painted the strategy as having some weaknesses. They posit that there is a need to harmonize the pieces of training to ensure that all components of community strategy are included. Currently, the CHWs undergo different training modules based on their particular project needs (Bakibinga et al., 2017). Although the CHWs are voluntary, they have their expectations regarding rewards and incentives from the program, resulting in lower working morale and a reduced retention rate (Mbugua, 2014). There have been reported insufficient resources, for example, facilities such as

bicycles, CHW KITs, and IEC materials. Such facilities are critical for the implementation of the strategy.

Some regions have experienced a high turnover of CHWs due to low motivation due to insufficient supportive supervision, lack of incentives and recognition, and inadequate materials (Mbugua, 2014). Furthermore, the capacity of human resources to execute all necessary functions at the community level has been questioned. It is asserted that most of the CHW have little knowledge and understanding of the community's geo-political, social, economic, and cultural dynamics. These factors, according to the authors, influence the health needs of the population. Other critics have pointed out that it is not viable that one person can perform all the activities laid out in the vision of Alma Ata declaration to improve daily life and bring health care to all people (WHO, 2022).

2.8 Implementation of community strategy package for health

The development of primary health care triggered by the declaration of Alma-Ata in 1978 (WHO, 1978) has led to the implementation of strategies aimed at achieving a balanced health scheme (Rasanathan *et al*, 2020). The international community has provided equal access to high and quality health services to their citizens through the community health package approach (WHO, 2017). For example, in Ireland, community health workers provide both curative and preventive care services at the local level. They work in a defined geographical area, and their training at the university focuses on community-related health services. In the United Kingdom, there are several community health workers. Nonetheless, the concept of the primary health care teams providing

comprehensive and high-quality care remains a contentious issue for community health workers in the United Kingdom.

In Finland, community health nurses are concerned with curative and preventive care in a defined geographical area. However, unlike some of the highlighted countries, Finnish community health workers make considerably fewer home visits. There is a clear distinction between public health nurses and community nurses in the USA, where public health nurses focus on the communities. They provide several programs for various patients and employ public health nurses, community health nurses, and specialty nurses. However, as the total population is not entitled to either Medicaid or Medicare, the services of community nurses are not equitable or accessible to all, which contradicts the WHO (1978) health for all.

In Kenya, following the revision of the 2006 strategy driven by the devolution of health services, county governments are responsible for delivering health services and implementing health programs, including community health (McCollum *et al.*, 2018). A survey carried out in 2018 showed there were 6,087 Community Units against the expected 10,375 community units; this implies that by then, the coverage of community health services in Kenya was 59%. Seven counties (Isiolo, Kitui, Nyeri, Tharaka Nithi, Kakamega, Homabay, and Siaya) were above 90 % coverage. Nineteen counties were reported to be at a coverage range of 50% to 89%, and eighteen counties were at coverage below 50%. The lowest coverage was reported in Mombasa, Laikipia, Nandi, and Wajir counties, 17%. Despite Kenyan progress in the implementation of community strategy,

there is still a gap in human resources in this sector. For instance, regarding the community health personnel, it was documented that Kenya has 1,569 community health assistants compared to the expected 10,379. On community health volunteers, the country currently has 86,025 out of an expected 103,783, giving a gap of 17,763 (17%).

2.9 Reproductive tract pathogenic microorganisms

2.9.1 *Trichomonas vaginalis*

Trichomonas vaginalis is the most common non-viral sexually transmitted infection globally, and it's the causative agent of the disease *Trichomoniasis* (Kissinger, 2015; Mavedzenge *et al*., 2010). The *T. vaginalis* is a flagellated parasitic protozoan and is usually amoeboid in shape. It is extra-cellular to genitourinary epithelium exhibiting an anaerobic lifestyle and can colonize mucosal epithelial surfaces (Van der pol, 2016). It is one of the most preventable and curable STIs, but if untreated, the infections could lead to long-term consequences, such as PID, preterm births, or low-birth-weight infants. In addition, the infection increases the risk of HIV transmission (Ginocchio *et al.*, 2013). *T vaginalis* is sexually transmitted among humans, the only known host (Kissinger, 2015). Women with Symptomatic *T. vaginalis* experience symptoms of infection such as; green-yellow and frothy vaginal discharge, vaginal itching, and vaginal odour.

2.9.2 *Neisseria gonorrhoea*

Neisseria gonorrhoea sometimes referred to as the gonococcus (GC), is a Gram-negative diplococci and is the causative agent of gonorrhea. It is usually sexually transmitted and, in other cases, can be passed to a child from the mother during birth (Ali *et al.*, 2016). The

organism can move to the usually sterile upper genital area, bring about complicated gonococcal infection (CGI), or invade the bloodstream to cause disseminated gonococcal infection. Gonococcal can cause various infections, including acute urethritis, cervicitis, proctitis, or pharyngitis (Brunner *et al.*, 2014). Gonorrhoea has been reported to enhance the transmission of HIV, and therefore its proper treatment is a significant strategy in HIV prevention (Okonkwo, 2014).

2.9.3 *Treponema pallidum*

Treponema pallidum is a causative agent of Syphilis, a multistage infectious disease usually transmitted through contact with active lesions of a sexual partner or from an infected pregnant woman to her foetus (Stamm, 2010). The genus Treponema belongs to the order spirochaetales, consisting of spiral-shaped pathogenic bacteria. The *T. pallidum* enters through intact or abraded skin or mucous membrane and multiplies at the entry site; this spirochete may usually cause painless ulcers in approximately three weeks (range 9–90 days) post-exposure; this is the first stage of syphilis. When not stopped by treatment spreads systemically and may cause signs and symptoms; this is the second stage of syphilis. The infection can go to the third stage (the tertiary stage), 3–30 years later. Symptoms are chronic manifestations of disease, including gummata (chronic granulomas in any tissue) and cardiovascular or neurological signs and symptoms.

2.9.4 Herpes Simplex Virus

This virus is the causative agent of herpes infection. HSV virus consists of two types: HSV type-1 and HSV type- 2 (Kukhanova *et al*., 2014). HSV-1 can cause genital herpes, but it

more commonly causes infections of the mouth and lips, so-called "fever blisters." Transmission of HSV mostly occurs from asymptomatic carriers of the virus through oral-genital or genital-genital contact (Biškup *et al.*, 2015). HSV -1 has been the most prevalent as it establishes latent infection but reactivates, causing cutaneous or genital herpes, conjunctivitis, keratitis, encephalitis, or eczema herpeticum. HSV often co-infects HIV-infected patients, complicating the treatment of AIDS. HSV-1 might also be involved in the pathogenesis of multiple sclerosis and result in male infertility (CDC, 2016). HSV-2 infection has been proven to be an independent cofactor of HIV sexual transmission (LeGoff *et al.,* 2014).

2.9.2 Human papilloma virus

It commonly causes sexually transmitted infections (STI), affecting both men and women (Delany-Moretlwe *et al*., 2013). HPV are small, double-stranded DNA viruses that infect the epithelium. Most HPV types infect the cutaneous epithelium and can cause common skin warts. HPV is a well-established cause of cervical cancer, and there is growing evidence of HPV being a relevant factor in other anogenital cancers, that is, cancer of; the anus, vulva, vagina, and penis, and head and neck cancers (Bruni *et al.*, 2017). Cervical cancer is the third commonest cancer and the fourth leading cause of cancer deaths in women worldwide. The Incubation period for genital Warts is usually three weeks to 8 months, while cervical cancer is up to 20 years. Transmission is usually through sexual contact or skin-to-skin contact (Masika *et al.*, 2016).

2.10: Factors affecting utilization of reproductive health care services

Despite the high prevalence rates of RTIs among young people, the utilization of health care servicesin terms of treatment and screening is still very low (Mhaskar and Nagarkar, 2015). Several studies have classified factors influencing the utilization of RTIs health care services into four different categories. First, are the social and cultural factors. These include aspects related to barriers to seeking health care services, such as fear, feeling shame, stigmatization, negative attitudes towards the health care services, perception towards the RTIs, and lack of independent decision-making among women. Second, are environmental factors that influence the uptake of health care services. Such factors include lack of knowledge, ignorance, accessibility to health centers, and illiteracy among the patients (Carrie et al, 2017). Third, the economic factors, include treatment costs and the poor economic level of the patients/respondents. Finally, factors related to health facilities. Such factors include but are not limited to lack of patient privacy, quality, and gender of the healthcare providers.

Studies done in South Africa reported that the low uptake of reproductive health care services among young people was associated with the location of health care facilities, unfriendly health care providers, lack of privacy in the health facilities, and long and inconvenient hours. In Uganda,a study among women in the slum reported that a lack of awareness of reproductive health care services and poor knowledge of the impacts of RTIs largely contributed to poor uptake of reproductivehealth care services (Nawagi *et al.*, 2016). A study done in Nakuru County revealed that demographic factors such as age, sex level of education, and awareness of reproductive health care services, as well as lack of RH

services in health facilities, had a significant impact on the uptake of reproductive health care services (Ontiri, 2015).

2.11 Diagnosis of pathogenic microorganisms

The various tests that can be used in the diagnosis of pathogenic microorganisms include Microscopy, Culture, and Serological test. The specimens collected for diagnosis using microscopy, in women, include urine, vaginal swabs, and cervical swabs (Maina *et al.*, 2016). A swab is used to collect material from the vaginal fornix and placed into a small amount, 0.5 to 1.0 ml, of normal saline. A drop of the saline preparation is placed on a slide and viewed under a microscope. Wet mount microscopy has the advantage of providing immediate results at a point-of-care test (Hobbs & Sena, 2013; Van Der Pol, 2016). This type of diagnosis can be used for microorganisms such as *Trichonomas Vaginalis* and *Neisseria gonorrhoea.*

For culture diagnosis, the specimen is inoculated onto non-selective nutrient agar and on selective agar containing antimicrobial agents that inhibit the growth of commensal organisms. The inoculated plates are then incubated at 35°C to 37°C, and routine inspection is done for signs of microbial growth. When growth is visible, gram staining will then be done to determine gram reactions. Its sensitivity ranges from 85 to 95%. This procedure will be used for microorganisms such as Chlamydia, Candida, and *Neisseria gonorrhea* (Verma & Sood, 2016). The serological test involves blood tests that look for antibodies in the blood. Different types of serologic tests can diagnose various disease conditions (Reynolds, 2011). Antigen-antibody reactions are used to ascertain pathogens' presence or

absence (Waters *et al.*, 2010).

2.12 Implications of pathogenic microorganisms.

The consequences of RTI vary from mild to severe, including stigmatization, mucosal ulceration producing local discomfort and pain during intercourse, reproductive impairment, domestic abuse, and abandonment. RTIs have been highly associated with significant health issues, including;transmission of HIV; Pregnancy-related complications such as pregnancy wastage, low birthweight babies, ectopic pregnancy, and chronic pain; congenital infections such as Pelvic Inflammatory Disease (PID), which can develop leading to infertility, cervical cancer, and menstrual disturbances (Wójkowska-Mach *et al.*, 2021).

Early detection and treatment of RTIs can prevent complications and minimize the severity of long-term consequences, but despite this, RTIs are reported to remain still undiagnosed and untreated (Ratnaprabha *et al.*, 2015). Despite its enormous implications for women's health, the degree to which The local and international health community has neglected RTIs is alarming (Ortayli *et al.*, 2014). Organisms in the vaginal tract may ascend to the cervical, especially during sexual intercourse, and may likely cause reproductive tract infections there (Tsevat *et al.*, 2017).

The RTIs focused in this study are asymptomatic, which results in delayed diagnosis and treatment; this increases the potential spread of infections and the complications associated. Some RTIs have been shown to heighten the possibility of adverse pregnancy

consequences for both the mother and the child, increasing maternal and infant mortality rates. In addition, acquiring RTIs early increases the likelihood of recurrent infection, which can aggravate long-term consequences such as fallopian tube damage resulting from PID, poor pregnancy outcomes, psychological effects, and cervical cancer. This will affect the future of the YSF by incapacitating them in terms of catering to their families. This will negatively affect the economic growth of their community (Ikeako *et al.*, 2014).

2.13 Summary of literature review

Most of a developing nation's fast-expanding urban centers are feeling the effects of the street children phenomena as they get worse. According to a review of the literature, some unfavorable traditional practices, such as forced marriages and female genital mutilation, as well as the HIV/AIDS epidemic that affects families are some of the reasons for street children, in addition to general poverty, loss of family ties (due to polygamy, the separation between parents), and general poverty. The children's living conditions are worse in the streets since they have no place to live, no food, and no protection. They eventually turn to juvenile criminality to support themselves, upsetting society. To find a long-term solution for the roadway, more thorough research is needed, and all parties involved should pool their resources.

In contrast to normal kids, street kids have different childhood on the streets. They are exposed to an unsafe physical and social environment on the streets at a young age. Three categories of issues might be distinguished among them: social, physical, and

psychological. Poverty, illiteracy, prejudice against them, a lack of resources, a hostile environment, and stigmatization are some of the societal issues. Physical concerns include things like inadequate nutrition, issues with sexual and reproductive health, as well as frequent illnesses and injuries. These social and physical issues result in psychological or mental issues including a tumultuous history, a transient lifestyle, poor mental health, and substance abuse.

2.14 Gaps in research

Generally, several studies have been done to shed light on the plight of street families and their reproductive health. Many issues affecting young street females have been well documented. There is evidence of low utilization of health care services among young street females due to factors ranging from individual factors, and health facility factors among others. Despite the availability of information on the reproductive health status of young street females and the uptake of health services, few studies have recommended suitable interventions that can be used to solve these problems. Community strategy is effective in several health problems but still, there's inadequate information on how this intervention can affect the uptake of reproductive health services among young street females. The study, therefore, seeks to breach the gap by formulating an effective intervention with the element of community strategy.

CHAPTER THREE: MATERIALS AND METHODS

3.1 Research design

The current mixed methods study utilized a pretest-posttest quasi-experimental study design Like a true experiment, a pretest-posttest quasi-experimental study design aims to establish a cause-and-effect relationship between an independent and dependent variable. However, unlike a true experiment, a pretest-posttest quasi-experimental study design does not rely on random assignment. Instead, subjects are assigned to groups based on non-random criteria. The pretest-posttest quasi-experimental study design is a useful tool in situations where true experiments cannot be used for ethical or practical reasons (Handley et al, 2018). Figure 3.1 illustrates the pretest-posttest quasi-experimental study design. In this design, the intervention is introduced at a single point in time to one or more sites, for which there is also a pretest and posttest evaluation period. The pre-post differences between these two sites are then compared. In practice, interventions using this design are often delivered at a higher level, such as to entire communities or organizations. In this design, the investigators identify additional site(s) that are similar to the intervention site to serve as a comparison/control group (Phan & Ngu, 2017).

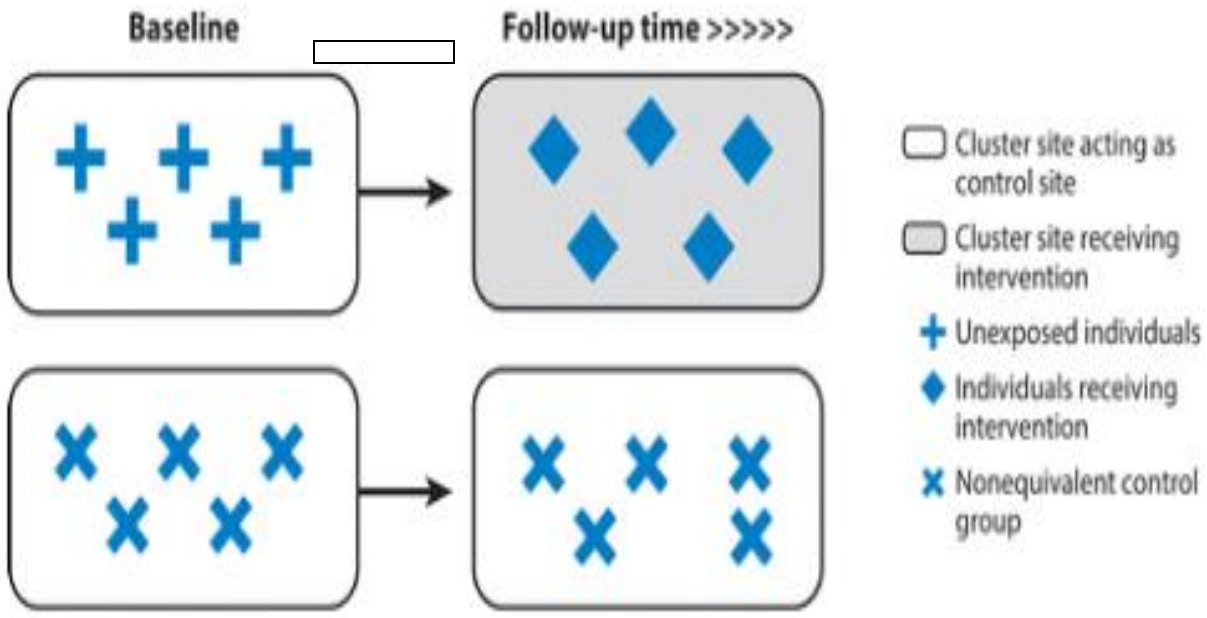

Figure 3.1 An illustration of quasi-experimental design (pre-post study design) (Handley et al, 2018)

After the survey, an intervention of a community strategy was administered to the study participants (APPENDIX I). This involved using an existing street outreach person who undertook on-site visits to perform RTI syndromic screening among YSF, refer positive cases to the health facility, and give individual counseling after the screening process. A follow-up was done after six months to determine the impact of the intervention on the uptake of RTI health care services among the respondents. Quantitative and qualitative assessment of healthcare-seeking behavior was done. Determination factors influencing uptake of health care services after the community strategy was carried out and critical pathogenic microorganisms colonizing the reproductive tract among the respondents.

3.2 Measurement of variables

The independent variables in this study were age, education level, occupation, marital status, type of street, knowledge of RTIs, the period spent in the street, health-seeking

behavior, and health facility factors such as distance, affordability, and health care perspectives on the reproductive health of street children. The intervention was a community strategy that involved screening, referrals, and individual counseling. The dependent variable was health-seeking behaviour.

3.3 Study area

The study was conducted in Eldoret municipality (Appendix 7), a rapidly growing cosmopolitan town in western Kenya with an estimated population of 428,000, making it Kenya's fifth largest town. It is situated at 0.52° North latitude, 35.28° East longitude, and 2116 meters above sea level. It serves as the capital of Uasin Gishu County. About fifty-one percent (51.8%) of the population live under the poverty line, exceeding the national average of 47.2% (Embleton *et al.*, 2015).

3.4 Study population

The study population was young street females who; spent both nights and days in the street (‘of the street) and those spending days only (‘on the street’). Street children in the municipality of Eldoret exist in small communities/homes called barracks/bases. Purposive sampling was used to select the study population in these barracks. A total of nine barracks were identified with a female population, as shown in figure 3.1;

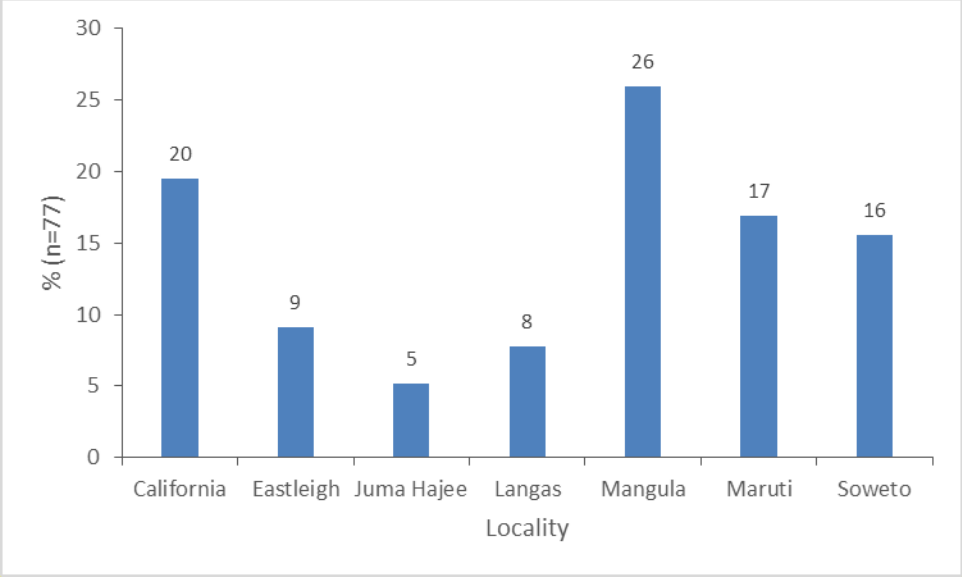

Figure 3.2: Population distribution of street females

3.4 Inclusion and exclusion criteria

3.4.1 Inclusion criteria

Eligible respondents for the study were young street females between the ages of 10-24 years who had spent at least two months in the streets and could consent or assent to participate in the study.

3.4.2 Exclusion criteria

The study excluded young street females who were mentally unstable and eligible but notwilling to consent to the study.

3.5 Sampling design

Purposive sampling was used to recruit the respondents in the study, particularly for the key informant interviews. The informants were selected based on their knowledge and experience of the subject matter of the study. The informants were recruited in the study

until information saturation was attained in the interviews.

For the quantitative data collection, a census was done such that all YSF in the study sites were targeted for enrolment in the study. This sampling design enabled the study to maximize the number of participants. Street outreach workers were involved in the identification

3.7 Data collection tools and methods

Two categories of instruments were used in this study, and these included; questionnaires and a key informant guide.

3.7.1 Questionnaires

A questionnaire was administered to the respondents to determine the health-seeking behaviour of the street girls, factors associated with RTIs, and factors influencing the uptake of health care services. The questionnaire consists of three different sections; the first segment was used to collect the socio-demographic data of the respondent, and the second section examined the respondent's health-seeking behaviour. The third section captured the factors influencing the uptake of services after the intervention. The questionnaires were interview administered.

3.7.2 Key informant guide

Critical informant schedules were conducted with persons in charge of street children in Eldoret municipalityand the health caregivers at the dedicated clinic. This enabled the study to capture information on the health-seeking behaviour among street girls and

challenges in the uptake of health care services.

3.8 Laboratory analysis of microorganisms

The respondents were brought to Uasin Gishu County hospital, where the vaginal samples were obtained and taken to the lab for analysis. Health care personnel were involved in getting swabs and blood samples from the respondents. Samples of vaginal swabs were collected using sterile swab sticks. The swab sticks were immediately placed in their casings and labeled appropriately. Specimens were stored in appropriate storage media.

3.8.1 Microscopy

A microscopy examination was carried out on the vaginal swab specimen by adding normal saline onto the swab sticks and placing a drop on a glass slide for viewing under the microscope to check for pus cells, epithelial cells, or yeast cells.

3.8.2 Culture

Study specimens were inoculated on nutrient agar and incubated for 24 hours at 37^{0c}. Thereafter, bacterial suspensions were prepared using Mueller Hinton broth and standardized to McFarland's standard (Acharya, 2016). This was done using single colonies, where a sterile wire loop was used to pick one colony, then dipped into 4-5ml of Mueller-Hinton broth compared with McFarlands standard. The bacterial suspension was then inoculated onto Nutrient Agar plates using a sterile cotton swab and incubated for 24 hours. Isolation of microorganisms was done by carrying out a subculture in respective

selective media and incubating at 37^{o}C for 24 hours. Selective media inhibits the growth of other microorganisms allowing the growth of specific microorganisms of interest.

Identification of microorganisms was done via colony formation and colour. Gram staining was done, after which the morphologies of the organisms were observed under the microscope. A further biochemical test, the catalase test, was done to aid in ascertaining specific microorganisms. Identification of microorganisms based on cultural, microscopic, and biochemical characteristics was then determined.

3.8.3 Rapid test

A rapid test was done using a blood sample, where centrifugation of blood was done to isolate serum for testing for the presence of *Treponema pallidum*, HPV, and HSV**.** The serum was then placed in the ELISA plates containing specific antigens. The occurrence of agglutination signified the presence of the antibodies against the pathogen but the lack of agglutination meant the absenceof the antibodies against the pathogen.

3.9 Pre-testing of instruments

A pre-test was carried out in Kitale town to test if the research instruments met the study's objectives. This enabled the study to know if the questions were consistent and whether the question's meaning was the same for all. The town has similar characteristics to Eldoret municipality in terms of ethnicity, cultural practices, and socio-economic activities. Necessary adjustments were then made in preparation for the study data collection exercise.

3.10 Validity and Reliability

Validity was ensured in various ways for the study. It involved an expert review of the three instruments (questionnaires, KII schedules, and lab analytical tests) conducted before the study's commencement to ensure content validity. Furthermore, it was assured that all of the questions in the instrument were clear, that they were appropriately categorized according to the subject, and that the instructions were simple to follow. Research assistants were given standardized training to ensure that they grasped the study's operational definitions and that they consistently asked questions.

3.11 Data analysis and presentation

Data were entered and analyzed using SPSS software version 21. Descriptive statistics (percentages, mean, and frequencies) are presented in tables, charts, and graphs. For the analytical methods, regression analysis was done to assess associations between the variables in the study. For the qualitative portion of the study, the data collected from the informant guide (KII) and semi-structured interviews were analyzed using content analysis which involved identifying, coding, and categorizing the content of the data into patterns/themes. The most common narratives were then quoted.

3.12 Ethical considerations

Ethical approval was obtained from Mount Kenya University's ethical review committee (Appendix 10) and National Commission for Science, Technology, and Innovation (NACOSTI) (Appendix 8). After that, Permission was also obtained from

institutions/persons in charge of child services and those organizations taking care of street children. The study sought permission to use laboratory facilities from the Uasin Gishu County Hospital management. Further, written consent was obtained from the participants. Respondents participated voluntarily without any form of coercion**.** Confidentiality was guaranteed by not indicating participant details in the data collection tool and KII guide. Those found with RTIs were referred to the hospital for treatment or advised to seek medical attention. In addition, the study liaised with the organizations working with street families to ensure that those found with infection got treatment. Confidentiality was guaranteed by interviewing the respondents privately, and none of their personal information was recorded.

CHAPTER FOUR: RESULTS

4.0 Introduction

This chapter presents the results of the study based on research objectives. Primary data was collected through researcher-administered questionnaires and interview schedules for the key informants. Data were collected in two phases, namely pre-intervention and post-intervention phases. The first phase was baseline information, while the second phase of data collection was carried out after implementing some interventions for four months. The results are presented based on the phases and a comparison of the two phases to establishing any significant differences.

4.1 Summary of the study process

Figure 4.1 shows the summary of the study process. From March to September 2019, 100 eligible young street females aged 10-24 years in Eldoret municipality were assessed for recruitment. A total of 23 women were excluded as they did not consent to the study while the rest consented.

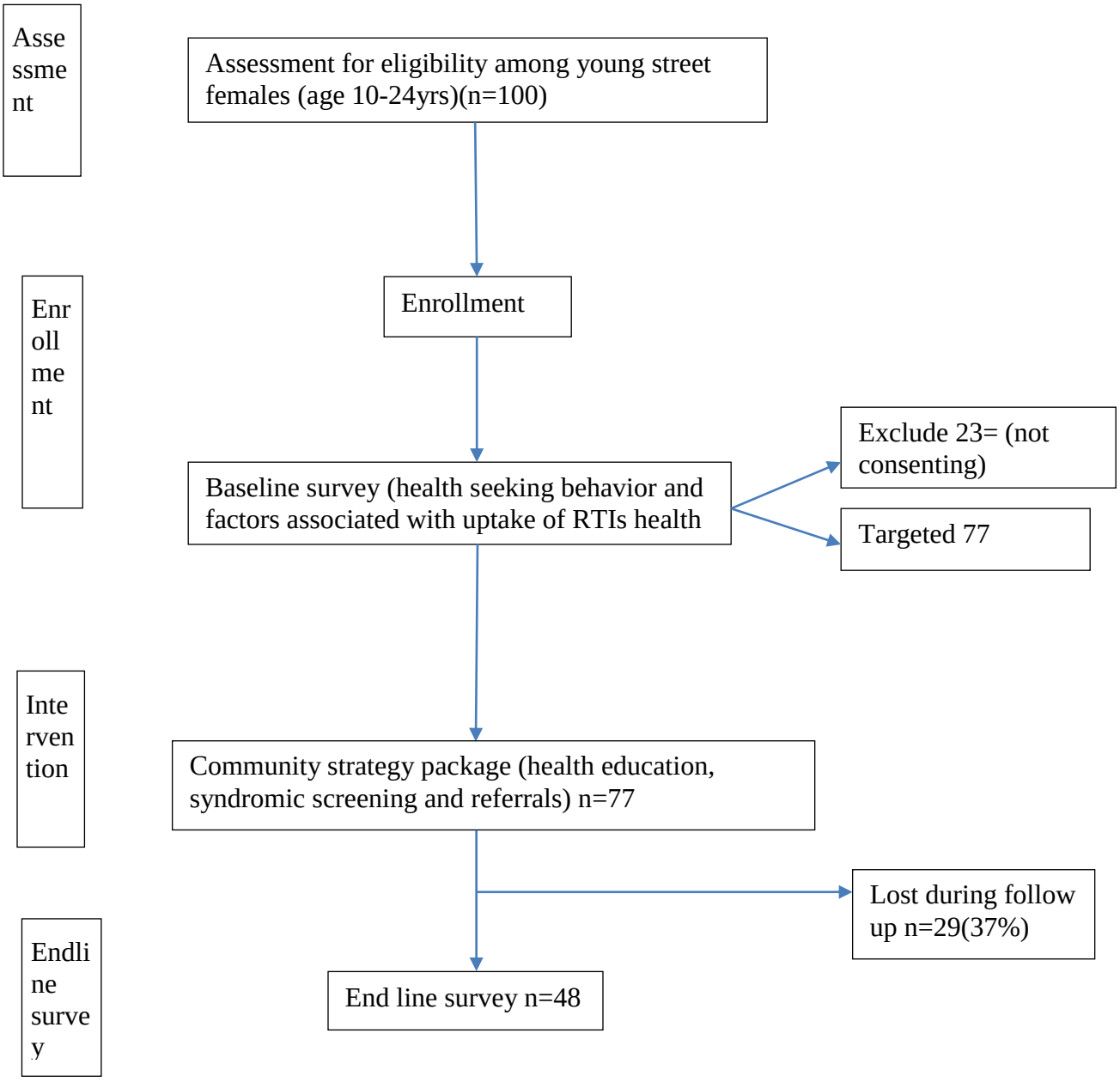

Figure 4. 1: Summary of study process flow chart: Consort flow diagram

4.2 Characteristics of the respondents

Table 4.1 shows the socio-demographic characteristics of the study. The age of respondents was grouped into three categories: those age between 13 and 16 years, 17 to 20 years, and those aged 21 years and above. Those aged between 13 and 16 years were 15.6%, those between 17 and 20 years were 28.6%, and those aged 21 and 24 years were 55.8%. A majority of the young street girls were married (53.2%), while only 44.2% were not married. Most (53.2%) of the young females on the street were already married whilst at a very tender age. Most of the study participants reported that they had attained primary school education (61, 79.2%). Most of the study participants were unemployed (73, 94.8%). Mangula had the highest number of respondents (26.0%).

A majority of the respondents reported that they resided '*On the street'* (48,62.3%) while only 29(37.7 %) were residing *'of the street*.' Most of the respondents 26 (89.3%), mentioned that if '*of the street',* they all went back to rented houses after the day's activities; this was followed by those in guardian homes and the welfare home at 2 (7.1%) and 1 (3.6%) respectively. With regards to the duration on the street, 26 respondents (33.8%) indicated that they had stayed on the street for 2 years or less while 20 respondents (26.0%) had stayed on the street for two to five years. The rest (40.3%), had been in the streets for five years or more.

Table 4. 1: socio demographic characteristics of the respondents

Characteristic	Number (n=77)	Percentage (%)
Age (years)		
13 – 16	12	15.6
17 – 20	22	28.6
21 – 24	43	55.8
Marital status		
Divorced	2	2.6
Single	34	44.2
Married	41	53.2
Education		
No formal education	5	6.5
Primary school	61	79.2
Secondary school	11	14.3
Occupation		
Unemployed	73	94.8
Self employed	3	3.9
Employed	1	1.3
Locality		
Mangula	20	26.0
California	15	19.5
Maruti	13	16.9
Soweto	12	15.6
Eastleigh	7	9.1
Langas	6	7.8
Juma Hajee	4	5.2
Residency		
On street	48	62.3
Off street	29	37.7
Place of residency		
Welfare homes	1	3.6
Rented house	26	89.3
Parent/guardian home	2	7.1
Length of stay in the streets (years)		
0 -2	26	33.8
3 – 5	20	26.0
≥ 5	31	40.3

4.3 The Health seeking behaviour of young street females on RTIs

4.3.1 Attributes related to reproductive tract illnesses

Table 4.2 shows the attributes related to reproductive tract illnesses (RTI) and the study participants' health-seeking behaviours. A majority of the respondents had heard of RTI (62, 80.5%), while a majority (65%) reported having ever experienced RTI in their lifetime.

Table 4. 2: Attributes related to health-seeking behaviours on RTIs.

Characteristic	Number (n=77)	%
Heard of RTIs		
No	15	19.5
Yes	62	80.5
Source of information on RTI		
Radio &TV	2	2.7
Health promotion educators	22	29.7
Friends, colleagues, and family members	47	63.5
Teachers	2	2.7
Self/Self-taught	1	1.4
Ever experienced any reproductive tract illness		
Yes	50	64.9
No	27	35.1
Sought treatment (n=50)		
No	14	28.0
Yes	36	72.0
Time of seeking treatment (days post-onset of symptoms) (n=36)		
More than one day later	33	91.7
The next day	2	5.5
The same day	1	2.8
Disease stage at the time of seeking treatment (n=36)		
In the severe stage of the disease	21	58.3
In the early stages and the onset of symptoms	15	41.6
Place of seeking treatment (n=36)		
Traditional healers	3	8.3
Pharmacy	15	41.7
Hospital/Health facility	18	50.0

4.3.2 Sexual practices associated with RTIs

Table 4.3 shows the sexual practices and related characteristics of the respondents concerning RTIs. The respondents' median age at sexual debut was 13 (12 – 15) years. Approximately 35 (46%) respondents had their first sexual encounter between 13-15years. The reported number of sex partners included one (46, 60%). Most respondents said they did not use condoms when having sex with their partners (47, 61%). The most (75%) mentioned reasons for not using a condom included trust in the partner.

Table 4. 3: Sexual practices and related characteristics

Characteristic	Number (n=77)	%
Uses alcohol/drugs		
No	42	54.5
Yes	35	45.5
Age of sex debut (years)		
≤ 12	25	32.5
13 – 15	35	45.5
16 – 17	11	14.3
≥ 18	6	7.8
Number of sexual partners		
More than two	13	16.9
Two	18	23.4
One	46	59.7
Partner uses a condom		
No	47	61.0
Yes	30	39.0
Frequency of condom use (n=30)		
Almost every time	19	24.7
Every time	11	14.3
Reasons for not using a condom (n=47)		
Partner dislikes the condom	13	27.7
Trust	35	74.5
Unavailability	1	2.1

4.3.3 Health systems attributes

Table 4.4 shows the health systems attributes. According to the results, most (73, 95%) of the respondents reported in the affirmative on being asked if they were able to access healthcare services in healthcare facilities. The majority of the study participants (72, 94%) responded positively on enquiring if they found the treatment given at the helpful health facility. Asked about the level of satisfaction with the behaviour and accountability of health service providers, 58 respondents (75.3%) were satisfied, 17 (22.1%) were dissatisfied and 2 (2.6%) respondents were not sure.

Those who opined that the dignity and respect given by healthcare providers (HCP) while receiving care were 'low' and 'high' were 12 (16%) and 64 (83%) respectively. The length to the nearest health facility ranged from a minimum of 1 km to a maximum of 7 km, with the mean ± sd distancebeing 5.6 ± 1.05 km. Of those who resided within a span of less than 5 km from the nearest health facility eleven (14%), while nine respondents lived within a distance of 7km from the nearest health facility (12%). On explorations of selected attributes related to access to health services, it was found that most of the study participants were not able to afford health care services (72, 94%). This was emphasized by one of the key informants who mentioned:

"Most of the street females fear the cost of the medical services and run to herbalists for solutions. They do not understand that health facility treatment is the best in curing RTIs. They need to know that prompt treatment can help them avoid serious complications. However, I am glad that a few of them understand the importance of our health service and are always visiting our health facilities." (Healthcare Staff)

Table 4. 4: Health systems attributes

Characteristic	Number (n=77)	%
Able to access healthcare services in healthcare facilities		
No	4	5.2
Yes	73	94.8
Opinion on the usefulness of the treatment given at HF		
No	5	6.5
Yes	72	93.5
Level of satisfaction with the behaviour and accountabilityof health service providers		
Dissatisfied	17	22.1
Don't know/Not sure	2	2.6
Satisfied	58	75.3
Dignity and respect were given by HCP while receiving care		
Low	12	15.6
Don't know/Not sure	1	1.3
High	64	83.1
Timeliness of the services provided promptly at HF		
Rarely	1	1.3
Sometimes	24	31.2
Most of the time	50	64.9
Always	2	2.6
Level of importance with the behaviours of HCP		
Not important	15	19.5
Don't know/Not sure	4	5.2
Very important	58	75.3
Level of importance with the physical environment of HF(Attractiveness and convenience)		
Not important	15	19.5
Don't know/Not sure	3	3.9
Very important	59	76.6
Always	2	2.6
Affords health care services		
No	72	93.5
Yes	5	6.5
Distance to the nearest health facility (km)		
< 5	11	14.3
5	11	14.3
6	46	59.7
≥7	9	11.7

4.4 Factors associated with RTIs among young street females

4.4.1 Socio-demographic factors associated with reproductive tract illnesses among the youngstreet females

Table 4.5 are the results of the relationship between the RTIs and socio-demographic characteristics. Participants who had ever experienced any RTI were significantly older (mean ± standard error (se): 21.0 ± 0.48 years versus 18.9 ± 0.66 years respectively, p=0.014). Participants who were aged 17-20 years were about 69% less likely to report having had RTI compared to those of 21-24 years (odds ratio (OR) (95% confidence interval (CI) 0.308 (0.082-0.805),p=0.003). Respondents who had no more than primary school education had higher odds of reporting having had an RTI (OR (95% CI), p-value: 18.0(1.242- 260.918), *p=0.036* and 11.647 (2.279-59.517), *p=0.001,* respectively). One of the Key Informants stated:

"It is important to acknowledge that the level of education among these street females plays a big role. You find that some of them are school dropouts and therefore have a better understanding of RTIs, from symptoms to the required medication. This helps in ensuring that they also educate their peers, especially those who have not gone to school." (Healthcare Staff)

A significantly higher proportion of married respondents reported having had an RTI in their lifetime (19.5% versus 80.5%, respectively). Married respondents had about five-fold higher odds of reporting having had an RTI (OR 4.610 (95% CI 1.675 - 12.687), *p=0.002*). Having stayed on the streets for more than one year was associated with higher odds of having RTI (OR 11.136 (95% CI 1.228 - 101.026), *p=0.018*). Other socio-

demographic variables, including occupation, residency status, and locality, were not significantly associated with a lifetime prevalence of RTI.

Table 4. 5: Relationship between RTIs and socio-demographic factors

Variable	Ever had RTI Yes [n (%)]	No [n (%)]	OR (95% CI)	P-value
Age (years)				
13 – 16	6(50.0)	6(50.0)	0.284(0.071-1.214)	*0.087*
16 – 19	9(40.9)	13(59.1)	0.308(0.082-0.805)	*0.003*
20 – 24	34(79.1)	9(20.9)	Ref	
Education level				
None	4(80.0)	1(20.0)	18.000(1.242-260.918)	*0.036*
primary school	44(72.1)	17(27.9)	11.647(2.279-59.517)	*0.001*
Secondary school	2(18.2)	9(81.8)	Ref	
Residency status				
on street	6(85.7)	1(14.3)	3.545(0.404-31.108)	*0.411*
of street	44(62.9)	26(37.1)	Ref	
Marital status				
Married	33(80.5)	8(19.5)	4.610(1.675-12.687)	*0.002*
Not married	17(47.2)	19(52.8)	Ref	
Duration on the street				
More than 1 year	49(69.0)	22(31.0)	11.136(1.228-101.026)	*0.018*
≤ 1year	1(16.7)	5(83.3)	REF	
Occupation				
Employed	3(75.0)	1(25.0)	1.660(0.164-16.775)	*0.665*
Unemployed	47(64.4)	26(35.6)	Ref	

4.4.2 Risky sexual practices associated with RTIs

Table 4.6 shows the association between the lifetime prevalence of RTI and risky sexual practices. The results revealed that age of sex debut was not statistically significantly associated with reporting everexperiencing any reproductive tract illness among the study participants (MEAN ± SE age at first sexual encounter: 13.6 ± 0.41 years for those who had ever experienced any RTI against 14.0 ±0.43 years for those who had never experienced any RTI, P=0.555). The odds of lifetime prevalence of RTI were about five timeshigher in respondents who reported that they used alcohol and/or other drugs (OR (95%CI) 4.833(1.663-14.049), p=0.003).

The odds of lifetime prevalence of RTI were approximately three-fold higher among street women who stated that their partner did not always use a condom when having sex (OR 2.917 (95% CI 1.105 - 7.699), p=0.028). These results of the analysis of age at initiation of sex and lifetimeprevalence of RTI showed that there was an inverse relation between age at initiation of sex and the proportion of respondents reporting to have ever had RTI with early sex debut (≤ 12 years) being associated with significantly higher odds of lifetime prevalence of RTI when compared to late sex debut (≥ 16 years) (OR 12.308 (95% CI 1.388 - 109.097), p=0.012) the relationship was not significant Similarly, no statistically significant associations were recorded between lifetime prevalence of RTI and the number of sexual partners.

Table 4. 6: Relationship between risky sexual practices and RTIs

Variable	Ever had RTI		OR (95% CI)	*P-value*
	Yes (%)	No (%)		
Uses alcohol/drugs				
Yes	29(82.9)	6(17.1)	4.833(1.663-14.049)	*0.003*
No	21(50.0)	21(50.0)	Ref	
Age at sex debut				
≥ 16	16(94.1)	1(5.9)	12.308(1.388-109.097)	*0.012*
13 – 15	21(56.8)	16(43.2)	1.010(0.353-2.885)	*0.986*
≤ 12	13(56.5)	10(43.5)	Ref	
No of sexual partners				
More than one	25(80.6)	6(19.4)	3.500(1.209-10.135)	*0.018*
One	25(54.3)	21(45.7)	Ref	
Partner uses a condom				
No	35(74.5)	12(25.5)	2.917(1.105-7.699)	*0.028*
Yes	15(50.0)	15(50.0)	Ref	
Frequency of condom use				
Almost every time	12(63.2)	7(36.8)	0.980(0.210-4.579)	*0.979*
Every time	7(63.6)	4(36.4)	Ref	

4.5 Effectives of community strategy package on uptake of RTI health services (screening & treatment)

4.5.1: Assessment of the socio-demographic characteristics of the study participants at baseline and end-line

Table 4.7 shows the findings of an assessment of the socio-demographic characteristics of the studyparticipants at the two observation points (pre-intervention and post-intervention phases). The age of the study participants did not differ significantly during the pre-intervention and post-intervention phase (mean ± standard error (se): 20.2 ± 0.40 years and 20.8 ± 0.50 yearsrespectively, p= 0.358). Marital status and level of education did not differ significantly among the study participants recruited in the pre-intervention and

post-intervention phases of the research (z= -1.033, p = 0.302 and z = -1.386, p = 0.166, respectively). In both phases of the study, a vast majority of the enrolled YSF were unemployed, and there was no significant difference in the proportions (pre-intervention 94.8%, post-intervention 85.4%, z = 1.802, p = 0.072). Place of residence and the period the respondents had been on the street were not significantly different in the pre-intervention and post-intervention groups (z= 1.572, p = 0.116, and p = 0.262, respectively).

There was no significant variation in the ages of the respondents who were recruited in the pre-intervention phase and post-intervention phase (20.2 (95% confidence interval (CI) 19.4 - 21.0) years and 20.8 (95% CI 19.8 - 21.8) years, respectively**,** p=0.855). In the pre-intervention phase, the proportion of the respondents aged between 13 – 15 years, 16 - 19 years, and 20 years or more were 13.0%, 24.7%, and 62.3%, respectively. The corresponding proportions during the post-intervention phase were 8.3%, 29.2%, and 62.5% (Figure 4.6). There was no statistically significant difference in the distribution of the respondents by these age categories (p=0.671).

Table 4. 7: Socio-demographic characteristics of the study participants at baselineand end-line assessment

	Phase						
	Pre-intervention		**Post-intervention**				
Attribute	**N**	**%**	**n**	**%**	**% Diff (95% CI)**	**Z**	***p-value***
Age ((mean ± standard error (se)) years)	20.2 ± 0.40		20.8 ± 0.50		-0.59 (-1.86 - 0.68)		0.358
Age (years)							
13 – 16	12	16.7	8	15.6	-1.1 (-17.6-12.5)	-0.341	0.623
17 – 20	22	45.8	22	28.6	17.3 (-12.5-25.4)	0.380	0.646
21 – 24	43	37.5	18	55.8	18.3 (-12.5-27.9)	0.323	0.532
Marital status							
Not married	36	46.8	27	56.3	9.5 (-8.5-27.5)	1.033	0.302
Married	41	53.2	21	43.8	-9.5 (-27.5-8.5)	-1.033	0.302
Level of Education							
Primary/No formal education	66	85.7	45	93.8	8.0 (-3.3-19.4)	1.386	0.166
Secondary/Tertiary	11	14.3	3	6.3	-8.0 (-19.4-3.3)	-1.386	0.166
Occupation							
Employed	4	5.2	7	14.6	9.4 (-0.8-19.6)	1.802	0.072
Unemployed	73	94.8	41	85.4	-9.4 (-19.6-0.8)	-1.802	0.072
Residence							
On Street	7	9.1	9	18.8	9.7 (-2.4-21.7)	1.572	0.116
Of Street	70	90.9	39	81.3	-9.7 (-21.7-2.4)	-1.572	0.116
Duration on the street (years)							
> 5	26	33.8	17	30.4	3.4 (-3.3-12.1)	2.134	0.176
3 – 5	20	26.0	13	19.8	6.2(-8.1-11.9)	4.378	0.497
0-2	31	40.3	18	36.4	-3.9 (-7.4-8.1)	-3.110	0.381

4.5.2 Assessment of the effectiveness of community strategy package on health seeking behaviour of the respondents

Table 4.8 shows the evaluation of the effectiveness of the community strategy package on the health-seeking behaviour of the respondents. Awareness of RTI increased significantly following the implementation of the community strategy package, with the proportion of respondents who had heard of RTI increasing from 80.5% during the pre-intervention phase to 97.9% during the post-intervention phase (difference: 17.4% (95 CI 5.4% - 29.4%), z = 2.832, p=0.005).

A significantly higher proportion of respondents reportedly first sought treatment for RTI at a health facility after the implementation of the community strategy package (97.1%) when compared to the proportion of respondents who first sought treatment at a health facility in the pre-intervention phase (51.0%) (difference: 46.1%(95 CI 26.3% - 66.0%), z = 4.558, p <0.001). Early seeking of treatment (same or next day) improved significantly after the introduction of the intervention; 72.0% and 94.1% of the respondents sought treatment early during the pre-intervention and post-intervention phase respectively (difference: 22.1% (95 CI 5.0% -39.2%), z = 2.534, p = 0.011).

The proportion of respondents who reported seeking treatment at the advanced stage of disease (‘*In serious stage of disease and its symptoms*’) reduced by 73.9% (95% CI 52.2% - 95.6%) followingthe introduction of the community strategy package (z = 6.678, p<0.001).

Table 4. 8: Assessment of the effectiveness of the community strategy package on the health-seeking behaviour of the respondents

	Phase						
	Pre-intervention		Post-intervention				
Attribute	**N**	**%**	**n**	**%**	**% Diff (95 CI)**	**z**	**P-value**
Heard of RTI							
Yes	62	80.5	47	97.9	17.4 (5.4-29.4)	2.832	***0.005***
No	15	19.5	1	2.1	-17.4 (-29.4--5.4)	-2.832	***0.005***
Sought treatment							
Yes	49	63.0	33	68.1	-0.9 (-7.6-5.7)	-0.278	***0.781***
No	1	2.0	1	2.9	0.9 (-5.7-7.6)	0.278	***0.781***
Time of seeking treatment							
Same/next day	36	72.0	32	94.1	22.1 (5.0 - 39.2)	2.534	***0.011***
More than one day later	14	28.0	2	5.9	-22.1 (-39.2-5.0)	-2.534	***0.011***
Disease stage at the time of seeking treatment							
In the serious stage of the disease	39	79.6	2	5.7	-73.9 (-95.6-52.2)	-6.678	***<0.001***
In the early stages and onset of symptoms mild	10	20.4	33	94.3	73.9 (52.2-95.6)	6.678	***<0.001***
point of seeking treatment							
Hospital/ health facility	25	51.0	34	97.1	46.1 (26.3-66.0)	4.558	***<0.001***
Other	24	49.0	1	2.9	-46.1 (-66.0--26.3)	-4.558	***<0.001***
Stage of treatment | Course of treatment							
To recover	20	40.8	33	94.3	53.5 (32.5-74.4)	5.007	***<0.001***
Relieve the symptoms | Not complete course of treatment	29	59.2	2	5.7	-53.5 (-74.4--32.5)	-5.007	***<0.001***

4.6 Factors associated with uptake of RTIs health services among young street females after community strategy package

4.6.1 Socio-demographic factors and uptake of RTIs health services

Table 4.9 are results of the assessment of sociodemographic factors and uptake of RTIs health services. Marital status was significantly predictive of the treatment-seeking behaviour for RTI.

Table 4. 9: Assessment of sociodemographic factors and uptake of RTIs health services

Variable	Sought treatment		OR (95% CI)	P-value
	Yes [n(%)]	No [n(%)]		
Age (years)				
Mean ± se	21.4 ± 1.18	21.1 ± 1.16		0.891
17 -20	6(75.0)	2(25.0)	6.000(0.335-107.420)	0.201
13 – 16	14(60.9)	9(39.1)	3.111(0.245-39.540)	0.364
21 -24	1(33.3)	2(66.7)	Ref	
Marital status				
Single	16(84.2)	3(15.8)	10.667(2.080-54.711)	0.002
Married	5(33.3)	10(66.7)	Ref	
Level of Education				
Primary/No formal education	20(62.5)	12(37.5)	1.667(0.095-29.182)	0.724
Secondary +	1(50.0)	1(50.0)	Ref	
Residency status				
on street	4(57.1)	3(42.9)	0.784(0.145-4.244)	0.778
of street	17(63.0)	10(37.0)	Ref	
Duration on the street				
more than 1 year	21(63.6)	12(36.4)	0.364(0.232-0.571)	0.382
≤ 1year	0(0.0)	1(100.0)	Ref	
Occupation				
Employed	1(25.0)	3(75.0)	0.167(0.015-1.814)	0.274
Unemployed	20(66.7)	10(33.3)	Ref	

4.6.2 Sexual attributes and uptake of RTIs health services

Table 4.10 shows the relationship between post-intervention health-seeking behaviour and selected behavioural risk factors. It was revealed that none of the assessed attributes had a significant relationship with the health-seeking behaviour of the study participants.

Table 4. 10: Assessment of sexual attributes and uptake of RTIs health services

Variable	Sought treatment		OR (95% CI)	P-value
	Yes [n(%)]	No [n(%)]		
No of sexual partners				
One	15(55.6)	12(44.4)	0.208(0.022-1.975)	0.210
More than one	6(85.7)	1(14.3)	Ref	
Uses alcohol/drugs				
Yes	17(58.6)	12(41.4)	0.354(0.035-3.577)	0.627
No	4(80.0)	1(20.0)	Ref	
Age at sex debut (years)				
≤ 12	13(68.4)	6(31.6)	0.684(0.504-0.929)	0.998
13 – 15	7(50.0)	7(50.0)	0.500(0.296-0.844)	0.991
≥ 16	1(100.0)	0(0.0)	Ref	
Partner uses a condom				
Yes	0(0.0)	1(100.0)	2.750(1.751-4.319)	0.382
No	21(63.6)	12(36.4)	Ref	

4.7 Pathogenic colonizers of the reproductive tract among young street females

Figure 4.2 shows the distribution of pathogenic colonizers of the reproductive tract. Out of the 48 study participants examined, 25 were positive for at least one of the pathogens investigated in the current research (prevalence of 52.1%, 95% CI 38.3% - 65.5%). Further, poly-infections were detected in four study participants (prevalence of 8.3%, 95% CI 3.3% - 19.6%). The most frequently detected pathogen was *T. vaginalis* (prevalence of 16.7%, 95% CI 8.7% - 29.6%). The least reported pathogen was HSV (4 cases, prevalence of 8.3%, 95% CI 3.3% - 19.6%).

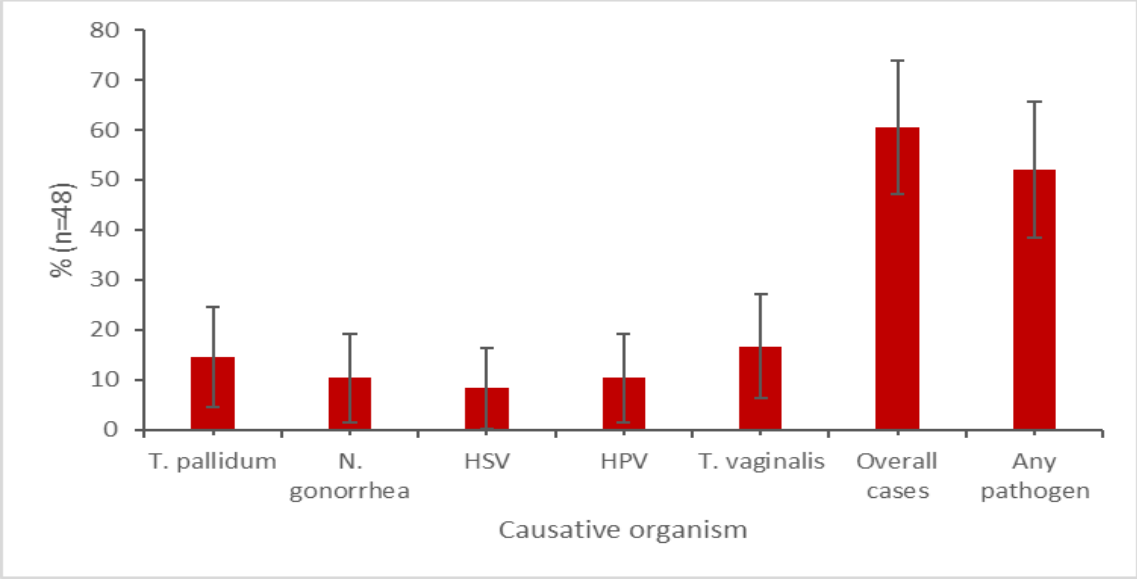

Figure 4. 2: Distribution of pathogenic colonizers of the reproductive tract (bars represent 95% confidence intervals)

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

The current research demonstrated a substantial burden of reproductive tract infections among the YSF residing in the study area**.** The study also highlighted key modifiable factors that are associated with the lifetime prevalence of RTI.

5.1 Discussion

5.1.1 Socio-demographic characteristics of the respondents

Most (56%) of the respondents were married. These findings are higher when compared to the 27.7% of respondents who reported being married in a study done among street youth in Addis Ababa and 23.3% in Southern Ethiopia (Habtamu & Adamu, 2013; Wakgari *et al.* 2020). This may be due to the study procedure and the difference in the socio-demographic characteristics of the study participants.

Street children have poor access to basic needs, including education (Najla *et al.*, 2020). Approximately 66.2% of the study participants had not gone to school or dropped out of primary school. This perhaps is because their families lack enough money to support them through the school period. These results agree with a study done by Cumber and colleagues (2015) among street families in Africa, where 70% had primary school education levels. Similar results have been reported in a study done by Habtamu (2013), where over 77% of street-connected females had dropped out of primary schools. However, the study findings contradict another study done in Ethiopia, where only 45%

of the study participants had managed to enroll for basic education but dropped out (Brhane *et al*., 2014).

The findings of this study showed that the majority (92.3%) of respondents reported that they resided '*Of Street*' with their place of retreat after the day's activities being at "bases." This finding reflects a similar scenario to the study by Habtamu and Adamu (2013), where most (73.2%) of the respondents were *of the street.* However, it contradicts the results shown by the study done by Chimdessa and Cheire (2018) in Ethiopia, which showed that most of the respondents were '*on the street.'*

Long periods of staying on the streets expose young street females to various reproductive health challenges, including a high incidence of RTIs. An overwhelming majority (75.3%) of participants in this study reported that they had been on the street for a period exceeding one year. This is very similar to the study findings in Ethiopia, where 75.1% of the respondents had been on the street for one year or above (Habtamu and Adamu, 2013). Similarly, a study done in Accra showed that about 88% of the respondents affirmed to have been on the street for over a year at the time of the survey (Asante *et al.*, 2014).

The most common informal occupation for children living on the streets is daily labor. (Habtamu and Arimnda, 2016). Most (75%) of the study participants were unemployed. This report contradicts that of the study done in Ethiopia, which showed that an overwhelming number (94.1%) of the respondents were engaged in an income-generating

activity ranging from occasional jobs, hairdressing, commercial sex work, message conveying or even stealing (Habtamu and Adamu, 2013), shoe shining, cleaning shops, begging, collecting garbage and collecting plastic bottles for recycling (Cumber *et al.* 2015). Desmenu *et al.* (2018) concluded that street youth were involved in petty trading, crime, and vendor jobs, among others, as a source of survival.

5.1.2 The Health seeking behaviour of young street females on RTIs

Health-seeking behaviour has been a behavioural risk factor that can influence the transmission of RTIs (Desmennu *et al.*, 2018). A majority of the respondents (89.6%) had some information about RTIs. This finding is similar to Lundesburg *et al.* (2014) among women in the United States, where they found that two-thirds of the respondents had information on RTIs. In another study in southern Ethiopia, 86.7% of the respondents were found to have had information on RTIs before the time of the study (Wakgari *et al.*, 2020). Studies have shown that having connections with guardians/parents/caregivers is associated with youth seeking information regarding RTI (Barman-Adhikar *et al.* (2016); Currie *et al.* 2017).

Most (62.3%) participants mentioned the sources of information to be friends, colleagues, and family, followed by health educators, who were mentioned by nearly a third of the respondents. This finding is in line with the study done by Desmennu and colleagues among street youth, where the results revealed that the young street females had much information regarding RTIs, but they could not identify the various types of these infections (Desmennu *et al.*, 2018). Nielsen and colleagues concluded that despite women

having heard about RTIs, they still demonstrated a poor understanding of the complications and how to manage the problem. (Nielsen *et al*., 2016). However, the study findings contrast with the findings stated by Cumber *et al* (2015), who investigated the health profile of the street population and concluded that the level of RTI information was very low. The difference may be attributed to the different socio-economic characteristics and study locations.

The findings showed that most (62.3%) of the respondents had experienced at least one or more RTIs in their lifetime. This finding was very high compared with a study done in Gondar city, which reported that only 24% of homeless street youth had experienced RTIs (Brhane *et al.,* 2014); This is perhaps because these environmental conditions groups present differences in the level of vulnerability.

Of the group that had ever experienced RTIs, approximately 81.3% of the respondents had sought treatment for the illness. These findings are higher than those found in southern Ethiopia(Wakgari *et al.,* 2020). This might be due to the unavailability of clinics dedicated to street families. Additionally, of the group that had sought treatment, the majority nearly three quarters had gone for medical check-ups after two or more days post-commencement of symptoms, followed by 25.6% who visitedhealth facilities on the same day of symptom manifestation.

On the stages of the disease at the time of seeking treatment, a majority (74.4%) of the respondents sought treatment at the advanced stages of the disease. Similar results were

reported in Punjab where more than 80% of the study subjects sought early treatment for RTIs (Mamta & Kaur, 2014). Half of the respondents mentioned the main place of seeking treatment were health facilities, followed by pharmacies. This is similar to the study done in Nigeria, where it was found that most respondents had their main place of care as health facilities (Denno *et al.,* 2015). The findings contrast with that of another study done in Ibadan by Desmenu *et al.,* 2018 where most respondents affirmed to have used traditional medicine instead of going to the health facility.Another contrast is seen in Wakgari *et al.* (2020) findings, where approximately 61.14% of the respondents indicated not having visited a health facility when infected by RTIs. The possible explanation for this difference might be due to perceived discrimination by health care providers as reported in the two studies and lack of accessibility to treatment centers, as earlier mentioned in Ibadan (Desmenu *et al.,* 2018).

On the assessment of completion of the prescribed course of treatment, approximately 27% of the respondents did not complete their prescription, while a third completed the prescription to relieve the symptoms, with the rest completing the course of recovery treatment.

5.1.3 Factors associated with uptake of RTIs health care services among young street females

The study investigated various sexual practices and other related attributes among the respondents, and it was found that most (54.5%) of the respondents did not use alcohol. On the contrary, several studies have demonstrated that alcohol consumption increases

the likelihood of risky sexual behaviour (Wells *et al.*, 2010; Asante *et al*., 2014). The median (interquartile) age range at sex debut was 14 years, while 47.9% of respondents had their first sexual encounter between thirteen and fifteen years. These findings are almost similar to those of Cumber *et al*. (2016) in Cameroon, where the age at sexual debut was 12 years. Another study was done by Winston *et al.* (2016) also revealed the age range at sex debut to be between 13-16 among street-connected youths in western Kenya. Moreover, a study done in Kumasi showed that the sex debut among street youth was 15 (12-14) (Onyango *et al.*, 2015). This finding is much higher than other studies with ages between 8-14 years (Embleton *et al*., 2015; Cumber *et al*., 2015). The difference may have been due to the selection criteria where male respondents had been included in the two contrasting studies.

The study showed that most (60.4%) of the respondents reported having one sex partner. The findings are similar to those of Asante *et al.* (2014) and Chimdessa *et al*. (2017). However, they contrast with the study done by Winston *et al.* (2015), in which most respondents reported having had more than one partner. Perhaps the difference could be attributed to the dissimilarities in the inclusion criteria deployed in recruiting participants in the two studies, with Winston *et al.* (2015) recruiting males while the current study focused exclusively on females.

On investigation of the frequency of condom use, most respondents (61.1%) reported that they did not use condoms when having sex with their partners. These results are similar to studies conducted in Ghana and Vietnam among street-connected youth, where 78.9%

and 51.9% reported not using a condom during intercourse (Asante *et al*., 2014); Ngoc Do *et al*., 2020). This scenario perhaps is brought about by the fact that having sex on the street provides difficulties for negotiating condom use among females and exposes them to violence (Strathdee *et al.*, 2015) and that some believe that they do not enjoy having sex with condoms (Desmennu *et al.*, 2018). This increases the vulnerability to RTI (Strathdee *et al.,* 2015).

In determining the reason for not using a condom during intercourse by the respondent, it was revealed that the primary reason was the trust of their partners followed by the idea of the partner disliking the use of condoms during intercourse. A study in Ethiopia found that partner interest was commonly considered when it came to issues of condom use (Chimdessa & Cheire, 2018). Another study in Bangladesh found that none of the respondents used condoms (Uddin *et al.* 2014).

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5.1.4 Health facility attributes

The study showed that most (97.4%) of the respondents reported being asked if they could access healthcare services in the affirmative. These findings are similar to those presented by Muriithi (2018) where most respondents reported accessing healthcare facilities in Mathare constituency, Kenya. This, however, differs from the study done by Amoah and colleagues (2017), where they documented that the street-connected youth in Kumasi Ghana had limited access to healthcare services due to inadequate health facilities.

On inquiring about the kind of reception they were given at the hospital by the healthcare staff, most (92.3%) of the respondents reported having had a good experience or having been received well at the health facilities. This contrasts with the study done by Gayapersad and colleagues (2020), which reported that the health care provider has discriminated against children in street situations regarding access to medical treatment and other health issues in western Kenya.

The majority (94%) of the study participants responded positively on enquiring if they found the treatment given at the health facility useful. When asked about the level of satisfaction with the behaviour and accountability of health service providers, the study findings showed that 71.8% of the respondents reported their level of satisfaction as either much or very much. This finding agrees with a study done in Ethiopia where a high number of respondents were satisfied with the health care provider's behaviour and perception (Asamrew *et al.*, 2020).

Dignity and respect have been shown as a prerequisite for providing healthcare and serve as a basis for all other aspects of treatment (Berghout *et al*., 2015). A majority (79.5%) of the respondents opined that the dignity and respect given by healthcare providers while receiving the care was enough. These findings contrast that of Cumber and colleagues (2015) who reported that street families faced stigmatization from the health care providers. Perhaps this is because the welfare management has put much effort into health promotion programs among health care providers in the health facilities to improve

the perception and attitude towards the street families when they seek health care services.

Approximately 64.9% of the interviewed young street females opined that the healthcare services were provided promptly. The level of importance attached to the behaviours of HCP towards YSF seeking services was ranked very high by 83.1% of the participants. This result is in concordance with those of a study done among street children in Peshawar, Pakistan, which reported that the bad attitude of health care workers was a key influencer of the health-seeking behaviour of the study participants (Ahsan *et al*., 2021). In addition, the importance of the physical environment of the health facility, including its attractiveness and convenience of access,was ranked to be very important by about 75.3% of the respondents. Ndugga *et al*. (2016) reported that the ease and convenience of access, including distance to a health facility, did not impede seeking reproductive healthcare services, contrary to the current study's findings. This is possibly a reflection of the differences in the attributes of the study participants of the two studies.

On explorations of selected attributes related to access to health services, the study revealed that most (72%) of the study participants could not afford health care services. This finding concurs with a study conducted in Thika, Kenya, which showed that many youths avoided utilizing these services because they could not afford them (Obonyo, 2013). Approximately 71.4% of the respondents lived six kilometres or more from the nearest health facility, indicating how access to health care was a challenge. These findings agree with those of the study on the level of young people's sexual and

reproductive health services utilization and its associated factors among young people in Awabel District in Ethiopia that point outdistance as a key barrier when it comes to the access and utilization of health care services (Ayehu *et al*., 2016).

5.1.5 Factors associated with reproductive tract illnesses among the young street females

The findings on the analysis of the association between ever contracting STI and socio-demographic characteristics showed that the age of the respondent was a significant predictor of the lifetime prevalence of STI with those who reported having ever experienced any RTI being significantly older than their colleagues who said on the contrary ($p<0.05$). Indeed, the study participants who were aged between sixteen and nineteen years were about 80% less likely to report having had STI in their lifetime when compared to those aged between twenty and 24 years (odds ratio (OR) (95% CI) 0.216 (0.070-0.671), $p<0.05$). This finding agrees with the results reported by Morris and Rushwan (2015) in their study, where they found that the prevalence of RTIs was higher among young females aged between 20—24 years old, followed by those between 15-19 years. This could perhaps be attributed to the fact that participants in the lower group may not have had sex at all or had had sex less frequently compared to their older counterparts.

Having gone to school was found to be significantly associated with developing one or more reproductive tract infections among young street females in education (OR (95% CI), 11.647 (2.279-59.517), $p<0.05$. This finding supports the study done by Mensch *et*

al. (2020), which found that women's autonomy is developed through education, which improves their standing within the family, allows them to act on health information, and increases their use of health services (Lindsay *et al*., 2008; Mensch *et al.*, 2020).

The marital status of the respondents was found to be significantly associated with contracting reproductive tract infections (OR 4.610 (95% CI 1.675 - 12.687), $p<0.05$). This finding is in line with that of a study done in Nepal, which found that marital status impacted an individual's ability to operate in their environment and is a risk factor for vulnerability to RTIs (Sangeeta, 2013).

Although our study demonstrated no significant association between residence (of street and on-street), research conducted among homeless youth in Los Angeles, California by Barman-Adhikar *et al.* (2016) found that living *on the street* was associated with a high prevalence of RTIs amongst street children. The most probable explanation for the discrepancies in the results of the two studies is that the latter study was conducted in a developed country while our research was conducted in a third-world nation.

Alcohol use among young street females was found to be significantly associated with RTIs (OR 4.833 (95% CI 1.663-14.049), $p<0.05$). This agrees with a study done in Ethiopia where Substance abuse, including alcohol use, was discovered to be a factor in Ethiopian street children's vulnerability to STI (Chimdessa *et al*., 2017).

5.1.6 Effectiveness of community strategy package on uptake of RTI health services

There was a significant positive change in the level of awareness among YSF, as seen with the remarkable increase among thoserespondents who had ever heard of STIs as compared with the pre-intervention level increasing from 80.5% during the pre-intervention phase to 97.9% during the post-intervention phase ($p<0.05$). This could be attributed to the individual health education and counseling during the intervention.

Lack of information among YSFs about RTIs regarding early sign detection, the predisposing factors, andhow to prevent them from contracting such infections can expose them to RTIs. These findings present a picture similar to a study done by Mandalazi (2013), which stated that street children have a significantly lower level of accurate information on HIV and AIDS and other STIs, especially on the mode of transmission and prevention measures. Few respondents were able to confirm whether they had ever contracted an STI due to the lack of knowledge of the symptoms of STIs (Mandalazi, 2013). The observed results could be attributed, at least in part, to the intervention put in place as part of the study.

A systematic review of health-seeking behaviours in resource-constrained nations indicated that health education effectively increases knowledge and uptake of reproductive health care services among women in resource-constrained settings (Sarkar et *al.,* 2015). There was a tremendous improvement in the respondents' health-seeking behaviour after implementing the community strategy package. After the intervention, 97.1% of the participants indicated that they sought treatment for RTIs compared to 51%

at the pre-intervention level. This can be attributed to the awareness created during the health education exercise, which was part of the community strategy package. These findings agree with the studies done by Pourreza and colleagues (2009), Denno *et al.* (2014), and Samiksha *et al*. (2010).

A high proportion of participants would seek treatment at the onset of the infection after the intervention compared to the pre-intervention phase (16% increment). This could be attributed to the community strategy package, which included health education based on the recognition of infection symptoms and referral to the health facilities for treatment. The number of respondents who would seek treatment at the advanced stages of the disease significantly reduced to lower levels from 79.6% to 5.7% ($p=0.001$).

Most of the respondents (98%) reported not seeking health care services early instead of waiting till the disease got to the advanced stage compared to the figures at the pre-intervention phase. This perhaps is due to individual counseling and health education on the complications associated with the advanced stages of these infections, which was part of the community health strategy package. These findings are similar to the study done by Samiksha *et al.* (2010), which indicated a substantial increase in the number of women seeking earlytreatment of RTIs at the onset of symptoms. Health education equips women with knowledge on how to identify symptoms associated with RTIs, and in addition, it informs them of the consequencesof these infections if not treated (Samiksha *et al.,* 2010). In addition, health education demystifies the stigma associated with RTIs hence the increase in uptake of RTIs health care services (Gupta *et al.,* 2015).

The study respondents were eight times more likely to visit health facilities as their main place of care after implementing the community strategy package compared to baseline levels. Moreover, the respondents were nine times more likely to visit the health facility to recover than their perceptions at the pre-intervention stage. This phenomenon can perhaps be attributed to the health education and the referrals carried out during the onsite/home visitsto the street females. Similar findings were recorded after-home visits and health educationinterventions on the uptake of maternal and child health care services during a study done in India (Gilmore and McAuliffe, 2013).

5.1.7 Factors associated with health-seeking behaviour for RTIs among young street females after community strategy package

Regarding the factors associated with health-seeking behaviour for RTIs among the young street females after the community strategy package, the study focused on the relationship between the post-intervention health-seeking behaviour and both selected socio-demographic and behavioural risk factors. The study findings revealed marital status as the only demographic factor that was significantly predictive of the treatment-seeking behaviour for RTI, with unmarried females having higher odds of seeking treatment when compared to their married counterparts. They had about five-fold higher odds of reporting having had an RTI in their lifetime (OR 4.610 (95% CI 1.675 - 12.687), $p<0.05$).

This finding concurs with the study on health care seeking behaviour in Telangana (Reddy *et al.,* 2020) and the study on demographic factors as correlates of the health-

seeking behaviour of the people of Oyo State, Nigeria (Adaramaji & Tijani, 2014) that also found statistical significance between marital status and healthcare-seeking behaviour. Another study carried out in Kampala showed that street young adults' marital status in conjugal relationships was 2.50 times more likely to use SRH services than street young adults in non-conjugal relationships (Bwambale *et al.,* 2021).

On the relationship between post-intervention health-seeking behaviour and selected behavioural risk factors, the study findings revealed that none of the assessed attributes had a significant relationship with the health-seeking behaviour of the study participants. These findings contradict the study findings on behavioural risk factors for sexually transmitted infections and health-seeking behaviour of street youths in Ibadan, Nigeria that found statistical significance between health-seeking behaviour and the use of condoms and alcohol (Desmennu *et al.,* 2018).

5.1.8 Pathogenic colonizers of the reproductive tract among young street females

The female reproductive tract microenvironment includes metabolites, microorganisms, and immune components, and the balance of the interactions plays a critical role in maintaining the female reproductive tract's health and homeostasis. The study findings revealed that most of the participants (52%) were positive for at least one pathogen. The most frequently detected pathogen was *Trichomonas vaginalis,* followed by *Treponema pallidum,* while the least reported pathogen was Herpes simplex virus. The high *Trichomonas vaginalis* prevalence findings concur with the study by Riley *et al.* (2015), which identified high *Trichomonas vaginalis* prevalence among homeless and unstably

housed females.

The prevalence of *Trichomonas vaginalis* in this study was, however lower compared to a previous study conducted in Ndola Zambia, the *Trichomonas vaginalis* prevalence among street-connected women was 33.2% (De Waaij *et al.*, 2017), while in Manado Indonesia, the prevalence among street-connected women who were recruited were 22.6% (Mawu *et al.,* 2011). The difference could be attributed to the difference in the geographical location of the studies as the prevalence of *Trichomonas vaginalis* has been reported to vary in different countries (Kissinger, 2015).

Apart from *Trichomonas vaginalis,* the other pathogens detected among the participants include; *Treponema pallidum, Neisseria gonorrhoea,* Human papillomavirus, and Herpes simplex virus. The finding is consistent with findings from other studies on similarly vulnerable populations, including the prevalence of sexually transmitted infections in street-connected adolescents in western Kenya (Winston *et al.,* 2015).

5.2 Conclusions

i. The study has concluded that there is a high prevalence of RTIs with evidence of poor health-seeking behavior characterized by low uptake of RTIs health services. The majority of the respondents had sought treatment after two or more days post-commencement of symptoms.

ii. After implementing the community strategy package, the study concluded a tremendous improvement in the respondents' health-seeking behaviour due to the awareness created during the implementation of the intervention. The study also

concluded that there was more commitment to seeking treatment early at the onset of theinfection after the intervention than in the pre-intervention phase. At the same time, respondents were more likely to visit health facilities as their first point of care after implementing the community strategy package compared to baseline levels.

iii. Under the objective on factors associated uptake of health services for RTIs after the community strategy package, the study concluded that marital status was the critical demographic factor that was significantly predictive of the treatment-seeking behaviour for RTI. Unmarried YSF were more likely to go for treatment as compared to those who were married.

iv. Finally, on the pathogenic colonizers of the reproductive tract, the study concluded that *T. vaginalis* and *T. pallidum* were the key pathogenic colonizers.

5.3 Recommendations

1. Given the low uptake of RTIs health services, the study recommends that Eldoret municipality health management team and the county executive committees should formulate interventions that can improve the health-seeking behaviour of YSF.
2. Considering the effect the community strategy package had on the general health-seeking behaviour of YSF, the Eldoret municipality health management team and partners should adopt the community strategy intervention to improve the health-seeking behaviours of young street females and their uptake of RTIs health services in Eldoret Municipality.

3. There is a need to explore the potentiality of unmarried young females as a peer-to-peer catalyst of positive change to the uptake of RTIs health services.
4. Regular free reproductive health check-up services should be conducted on young street females for early diagnosis and treatment of RTIs to reduce the prevalence of pathogenic microorganisms among this group.

5.4 Recommendations for further research

i. To determine the health-seeking behaviour of adults living on streets on RTIs to cater to their reproductive health care needs.
ii. To determine the impact of using unmarried young street females to improve health-seeking behaviour on RTIs among YSF.
iii. To determine the uptake of RTIs health services among young street females on RTIs in other areas for comparison purposes.

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APPENDICES

APPENDIX 1: SECTION A: SOCIO-DEMOGRAPHIC FACTORS

1. What is your Age? ……..
2. What is your marital status: 1) Single 2)Married 3)Divored
3. Gender 1) Female 2) male
4. Education level 1) primary school 2) Secondary school 3) None
5. What is your residency status 1) of street 2) on street
6. If of Street, where do you go back to after the day's activity 1) welfare homes 2) parent/guardian home 3) bases 4) rented house
7. How long have you been on the street? 1) two months 2) 1 year 3) more than 1 year.

SECTION B: Health seeking behaviour

8. Have you heard of RTIs? 1) Yes 2) No
9. If yes, where did you hear it from? 1) Newspapers and magazine 2) Radio &TV 3) By health promotion educators 4) By Friends, colleague and family members 5) others specify…….
10. Have you experienced any reproductive tract illness? 1)yes 2) No…if No, go to question 16
11. Have you attempted to treat your illness? 1)Yes 2) No
12. How many days after the onset of disease symptoms did you get care from a provider? 1)The same day 2) the next day 3) More than one day later 4) Never

13. At what stage of your disease have you gone to a provider? 1)In early stages and onset of symptoms mild 2) Incidence of disease and its symptoms 3) in serious stage of disease
14. Where did you go to treatment in the first step? 1) Hospital/ health facility 2) Pharmacy 3) Traditional healers 4) I have not referred to any of the above and self-treatment

15. Until what step of treatment have you completed your course of treatment according to provider opinion? 1)To recover 2) to relieve the symptoms 3) do not complete my course of treatment

SECTION C: Health facility factors

16. Are you able to access health care services in health care facilities? 1)Yes 2) No
17. Have you ever had experience of care reception from the health care centers? (Clinic, emergency room, doctor's office, hospital, health centers) 1) Yes 2) No.
18. Was the usage of health services for the treatment of your disease useful in your opinion? 1)Yes 2) No
19. How satisfied are you with the behavior and accountability of health service providers? 1) Very much 2) Much 3) Somewhat 4) Low 5) Very low
20. How much maintained is your dignity and respect, as receiving care from health care providers? 1) Very much 2) Much 3) Somewhat 4) Low 5) Very low
21. Have you received your needed care at the right time, when you visited to health care centers? 1) Always 2) Most of the time 3) Sometimes 4) Rarely

22. How important are the behaviors of health care providers in your assessment of the services that you received? 1) Very much 2) Much 3) Somewhat 4) Low 5) Very low

23. How important are Physical environment of care providers' centers, their Attractiveness and convenience in your assessment of the services that you received? 1) Very much 2) Much 3) Somewhat 4) Low 5) Very low.

24. Are you able to afford your needed health care? 1) yes 2) No

25. What is the distance of the nearest health facility? .....

SECTION D: Risky Sexual practices

26. Do you use alcohol/drugs? 1)Yes 2) No

27. What was your age when you had your first sexual intercourse? .....

28. How Many sexual partners do you have? 1) One 2) two 3) More than two

29. During sexual intercourse does your sexual partner use a condom?? 1)Yes 2) No

30. If yes, how often? 1) Every time 2) Almost every time 3) Never

31. f no, why? 1) Partner dislikes the condom 2) lack of availability 3) Lack of affordability 5) Trust 6) Others ……

APPENDIX 2: KEY INFORMANT GUIDE

A: Health care staff (persons in charge)

1. Do you offer RTI treatment services to street females in your facility?
2. What are the factors that influence uptake of RTI management services among street females in your facility?
3. In your opinion, what perception do the health care staffs have towards young street females' reproductive health care?
4. What is the health seeking behavior of young street female in Eldoret town from your own observation?
5. What is the current RTIs situation among young street females in Eldoret town?
6. How do you regard street females' knowledge about RTIs?
7. Which is the most common RTIs among young street females

B: welfare persons

1. What is the health seeking behavior among young street females in Eldoret town?
2. What factors do you associate with RTIs among young street females?
3. How do street females get information regarding RTIs?
4. In your opinion, how is the street females' access to health care services like in health facilities in Eldoret town?
5. What are the health care providers' perceptions towards street females in Eldoret town?

6. What do you think should be done in order to improve management of RTIs among street females in Eldoret town?

APPENDIX 3: INFORMED CONSENT FORM FOR THE PARTICIPANT

My name is Ms MaritimViolet, I am a PhD student from Kenyatta University. I am conducting a study on "**Impact of Community Strategy on Uptake of Reproductive Tract Infections Health Services among Young Street Females in Eldoret Municipality, Kenya.**". The information will be used by the County health department to improve the provision of health care services for management of RTIs in the municipality of Eldoret as well as in other Kenyan regions.

VOLUNTARY PARTICIPATION

Participation in this study will require that I ask you some questions in order asses the occurrence and management of puerperal sepsis.

You have the right to refuse participation in this study. You will get the same care and medical treatment whether you agree to participate in the study or not and your decision will not change the care you will receive from the clinic today or that you will get from any other time.

Please remember that participation in the study is voluntary. You may ask questions related to the study at any time.

You may refuse to respond to any question and you may stop an interview at any time. You may also stop being in the study at any time without any consequences to the services you receive from this clinic or any other organization now or in the future.

DISCOMFORT AND RISKS

Some of the questions you will be asked may be embarrassing or make you uncomfortable. If this happens, you may refuse to answer these question if you so choose. You may also stop the interview at any time. The interview may take approximately twenty minutes.

BENEFITS

Your participation in this study will help us learn how to provide effective prevention and management services that can improve the health of women and reduce the risk of RTIs. You will also benefit from being screened for the condition and if you are found to have a problem you will be referred for treatment at the rafikiz reproductive health clinic at the MTRH.

REWARD

There may be no direct benefit if you agree to participate in the study, however, the research findings will help to shape up future interventions that will potentially help improve health of women.

CONFIDENTIALITY

All the interviews will be conducted privately within the clinic. Your name will not be recorded on the questionnaire. Filled questionnaires will be kept in a secure cabinet for safe keeping at Kenyatta University. Privacy will be maintained in the whole process.

CONTACTS INFORMATION

If you have any question about your rights as a research volunteer, you may contact

Dr. Anthony wanyoro – 0722747903

Dr. Jackim Nyamari-0722589335

Ethical Review Committee Secretariat –MKU ERC, P.O BOX 342-01000, THIKA.

PARTICIPANT'S STATEMENT

The above information above regarding my participation in the study has been made clear to me. I have been given a chance to ask questions which, have been answered to my satisfaction. Am voluntarily participating in this study. I understand that my records will be kept private and that I can leave the study at any time. I understand that i will still get the same care and medical treatment whether I decide to leave the study or not and my decision will not change the care i will receive from the clinical today or that i will get from any other clinic at any other time.

Name of participant.....

_____ _____

Signature or Thumbprint Date

Investigator's statement

I, the undersigned, have explained to the volunteer in a language s/he understands, the procedures to be followed in the study and the risks and benefits involved.

Name of interviewer .....

_____ _____

Interviewer signature Date

APPENDIX 4: Consent form-swahili version

FOMU YA IDHINI YA MSHIRIKI

Jina langu ni Ms MaritimViolet, mimi ni mwanafunzi wa PhD kutoka Chuo Kikuu cha Kenyatta. Ni kufanya utafiti kuhusu "Athari za mkakati wa jamii juu ya matumizi ya huduma za afya ya maambukizi ya njia ya uzazi miongoni mwa wanawake vijana mitaani katika Manispaa ya Eldoret, Kenya.". Taarifa itatumika kwa Idara ya afya ya kaunti ili kuboresha utoaji wa huduma za afya kwa ajili ya usimamizi wa RTIs katika Manispaa ya Eldoret vile vile kama ilivyo katika mikoa mingine ya Kenya.

USHIRIKI WA HIARI

Kushiriki katika utafiti huu itahitaji kwamba ninawaomba baadhi maswali katika utaratibu punda tukio na usimamizi wa sepsisi puerperal. Una haki ya kukataa kushiriki katika utafiti huu. Utapata huduma sawa na matibabu kama unakubali kushiriki katika utafiti au la na uamuzi wako itakuwa mabadiliko ya utunzaji utapokea kutoka kliniki ya leo au kwamba unaweza kupata kutoka wakati wowote. Tafadhali kumbuka kwamba ushiriki katika utafiti ni hiari. Unaweza kuuliza maswali kuhusiana na kujifunza kwa wakati wowote. Unaweza kukataa kujibu swali lolote na inaweza kuacha mahojiano wakati wowote. Unaweza pia kuwacha kuwa katika masomo wakati wowote bila ya matokeo yoyote kwa huduma unaweza kupokea kutoka kliniki hii au taasisi nyingine yoyote sasa au siku zijazo.

USUMBUFU NA HATARI

Baadhi ya maswali utaulizwa kuwa aibu au uwe na wasiwasi. Kama hii hutokea, anaweza kukataa kujibu maswali haya kama hivyo kuchagua. Unaweza pia kuwacha mahojiano wakati wowote. Mahojiano inaweza kuchukua takribani dakika ishirini.

FAIDA

Ushiriki wenu katika utafiti huu itasaidia sisi kujifunza jinsi ya kutoa kinga bora na usimamizi wa huduma hiyo unaweza kuboresha afya ya wanawake na kupunguza hatari ya RTIs. Unaweza pia kunufaika kutoka kuwa visas kwa hali na kama umepata kuwa tatizo utakuwa inajulikana kwa ajili ya matibabu katika kliniki ya afya ya uzazi ya rafikiz katika MTRH ya.

ZAWADI

Kunaweza kuwa hakuna faida ya moja kwa moja kama unakubali kushiriki katika utafiti, hata hivyo, matokeo ya utafiti utasaidia umbo juu afua kwamba uwezekano kusaidia kuboresha afya ya wanawake.

USIRI

Mahojiano yote hiyo itaendeshwa kwa faragha ndani ya kliniki. Jina lako itakuwa kumbukumbu katika hojaji. Dodoso kujazwa yatawekwa katika Baraza la mawaziri salama kwa ajili ya kuweka salama katika Chuo Kikuu cha Kenyatta. Faragha itakuwa kutunzwa katika mchakato mzima.

WAWASILIANI

Taarifa kama una swali lolote kuhusu haki zako kama utafiti kujitolea, unaweza kuwasiliana

Dk. Anthony wanyoro – 0722747903

Dk. Jackim Nyamari –0722589335

kimaadili kupitia kamati ya sekretarieti – MKU ERC, P.O BOX 342-01000, THIKA.

TAARIFA YA MSHIRIKI

Taarifa hapo juu juu kuhusu ushiriki wangu katika utafiti umefanyika wazi kwangu. Mimi wamepewa nafasi ya kuuliza maswali ambayo, akajibu kwa kuridhika yangu. Ni kwa hiari yao kushiriki katika utafiti huu. Ninaelewa kwamba kumbukumbu yangu yatahifadhiwa binafsi na kwamba anaweza kuondoka kujifunza wakati wowote. Nafahamu kwamba mimi bado kupata huduma sawa na matibabu kama kuamua kuacha masomo au la na uamuzi wangu itakuwa mabadiliko ya huduma itakuwa kupokea kutoka leo kliniki au kwamba mimi kupata kutoka kliniki nyingine wakati mwingine wowote.

Jina la mshiriki.....

Saini au taarifa Thumbprint……. Tarehe …….

TAARIFA YA MCHUNGUZI

Mchunguzi mimi, nimeeleza mshiriki namna ya kujitolea katika lugha anayeelewa, taratibu za kufuatwa katika utafiti na hatari na faida kushiriki.

Jina la mhojaji.....

Sahihi ya mhojaji……Tarehe…….

APPENDIX 5: Assent form for underage participants

Guardians' Statement

The above information regarding the participation of ..... in the study is clear to me. I have given been given a chance to ask questions and my questions have been answered to my satisfaction. I understand that the records will be kept private and that my ..... can leave the study at any time. I understand that she will get the same care and medical treatment whether she decides to leave the study or not and their decision will not change the care they will receive from the clinic today or that she will get from any other clinic at any other time.

Name of the guardian.....

....

Signature/thumb print Date

UNDERAGE ASSENT

The above information regarding my participation in the study is clear to me. I have been given a chance to ask question and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my records will be kept private and that I can leave the study at any time. I understand that I will still get the same care and medical treatment whether I decide to leave the study or not and my decision will not change the care I will receive from the clinic today or that I will get from any other clinic at any other time.

Name of underage .....

....

Signature/Thumb print Date

INVESTIGATOR'S STATEMENT

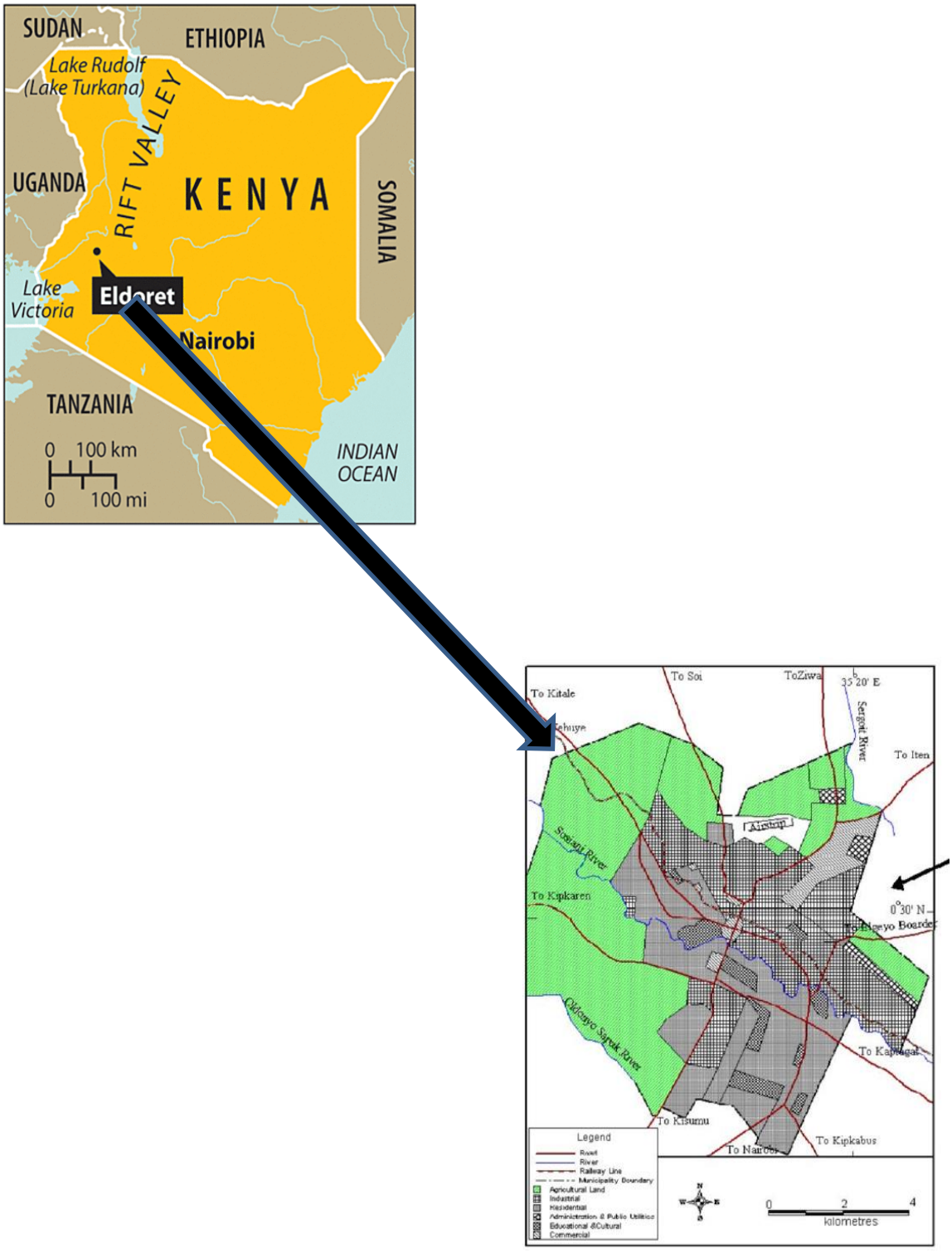
I the undersigned, have explained to the volunteer in a language she understands, the procedures to be followed in the study and the risks and the benefits involved.

Name of Interviewer .....

....

Interviewer signature

APPENDIX 6: MAP OF ELDORET



Source: google maps

APPENDIX 7: UNIVERSITY RESEARCH APPROVAL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 21st May, 2018

TO: Maritim V. Chepchichir
C/o Department of Population & Reproductive Health
KENYATTA UNIVERSITY

REF: Q97/31186/15

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that the Graduate School Board at its meeting 9th May, 2018 approved your Ph.D. Research Proposal **entitled "Impact of Community Strategy on Uptake of Reproductive Tract Infections Health Services among Young Street Females in Eldoret Municipality, Kenya".**

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking Forms per semester. The form has been developed to replace the progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

By copy of this letter, the Registrar (Academic) is hereby requested to grant you substantive registration for your Ph.D. studies.

Thank you.

REUBEN MUKIUKI
FOR: DEAN, GRADUATE SCHOOL

c.c. Registrar (Academic) Att; Mr. Likam
Chairman, Department of Population & Reproductive Health

Supervisors:

1. Dr. Anthony Wanyoro
C/o Department of Obstetrics & Gynecology
KENYATTA UNIVERSITY

2. Dr. John Maingi
C/o Department of Microbiology
KENYATTA UNIVERSITY

3. Dr. Jackim Nyamari
C/o Department of Environmental & Occupational Health
KENYATTA UNIVERSITY

APPENDIX 8: NACOSTI RESEARCH AUTHORIZATION

NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

Telephone: 254-20-2213471,
2241349,3310571,2219420
Fax: 254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref No. **NACOSTI/P/19/2257/24313**

Date: **14th January, 2019**

Maritim Violet Chepchirchir
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Impact of community strategy package on uptake of reproductive health care services among young street females inn Eldoret Municipality, Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Uasin Gishu County** for the period ending **14th January, 2020.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Uasin Gishu County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

COUNTY COMMISSIONER
UASIN GISHU COUNTY
aeli 2019

Copy to:

The County Commissioner
Uasin Gishu County

APPROVED
COUNTY DIRECTOR CLINICAL
24 JAN 2019

The County Director of Education

Proceed
FOR COUNTY DIRECTOR OF EDUCATION
UASIN GISHU COUNTY
Box 9843, ELDORET
+27 212 053-2063242

APPENDIX 9: RESEARCH INTRODUCTORY LETTER

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: Q97/31186/15

Date: 21st May, 2018

The Director General,
National Commission for Science, Technology & Innovation,
P.O. Box 30623-00100,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MARITIM V. CHEPCHIRCHIR - REG. NO. Q97/31186/15

I write to introduce Chepchirchir who is a Postgraduate Student of this University. The student is registered for a Ph.D. degree programme in the **Department of Population & Reproductive Health in the School of Public Health.**

Chepchirchir intends to conduct research for Ph.D. thesis entitled, **"Impact of Community Strategy on Uptake of Reproductive Tract Infections Health Services among Young Street Females in Eldoret Municipality, Kenya".**

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

RM/cao

APPENDIX 10: ETHICS REVIEW COMMITTEE APPROVAL

Mount Kenya University

DECEMBER 20, 2018

Ref. No. MKU/ERC/1094

CERTIFICATE OF ETHICAL CLEARANCE

This is to certify that the proposal titled **"IMPACT OF COMMUNITY STRATEGY ON UPTAKE OF REPRODUCTIVE TRACT INFECTIONS HEALTH SERVICES AMONG YOUNG STREET FEMALES IN ELDORET MUNICIPALITY, KENYA"** Whose Principal Investigator is Ms Violet Chepchirchir Maritim has been reviewed by Mount Kenya University Ethics Review Committee (ERC), and found to adequately address all ethical concerns.

Dr. Francis W. Makokha
Secretary, Mount Kenya University ERC

Sign: _____ **Date:** 21·12·2018

Prof. Francis W. Muregi
Chairman, Mount Kenya University ERC

Sign: _____ **Date:** 21/12/2018

The Chairman
Mount Kenya University
Ethics Review Committee