DETERMINANTS OF INTENTION TO PROCURE UNSAFE ABORTION AMONG ADOLESCENTS SEEKING YOUTH-FRIENDLY SERVICES IN HOMABAY COUNTY, KENYA

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A Thesis Submitted in Partial Fulfillment of the Requirement for the Award of the Degree of Master of Science in Advanced Nursing Practice (Community Health and Primary Care) of Masinde Muliro University of Science and Technology

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DECLARATION

This dissertation is my primary work which has been worked out with no other than indicated sources and has not been used elsewhere for a degree or any other award.

Signature…….. Date…….

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HNR/G/48/15

CERTIFICATION

The undersigned certify they have read and hereby recommend for acceptance of Masinde Muliro University of Science and Technology a thesis entitled **"Determinants of Intention to Procure Unsafe Abortion among Adolescents Seeking Youth-Friendly Services in Homa Bay County, Kenya."**

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DEDICATION

I commit this thesis to all the young girls and young women who have experienced stigmatization, discrimination, and have been denied services because they were seeking reproductive health services.

ACKNOWLEDGEMENTS

First, and foremost, l'm indebted to my supervisors, Dr. Damaris Ochanda together with Mr. John Arudo for their well thought advice, immense guidance, encouragement, and support throughout this study. My sincere appreciation goes to Mr. Willbroad Omondi the research assistants, community health volunteers, facility in charges and study participants in Homabay county hospital, Makongeni, Marindi, Port Florence, Nyalkinyi, Samari medical center, Rachuonyo sub-county, Matata hospital, Godber Health Center, Simbiri Health Center, Ober health center, Kojwach Medical center, Rangwe sub-county hospital, Ogongo sub-county hospital, Janeiro Nursing Home, Ndhiwa sub-county Hospital, Oridi Health Center, Kwamo Health Center, Bora Bora medical clinic, Osani community hospital, Port Florence Ndhiwa, Mbita sub-county hospital, Viajenco, Kirindo Health Center, Med 25, Rachuonyo South sub-county hospital, Chuowe Dispensary, Miriu Health center, Sydo plus medical clinic and Suba sub-county hospital for having voluntarily accepted to take part in this study. My earnest admiration too is put forth to my household for their cheer, unlimited support and for providing an enabling environment for me to complete this thesis. Thanks everyone and may God's blessings be upon each one of you.

ABSTRACT

In general, 15% of all unsafe abortion globally occurs among adolescents below 20 years old. In Kenya, out of the 35% maternal deaths occurring as a result of abortion, the adolescents contribute 17%. Furthermore, Homa-Bay County is one among the 15 highest burden counties contributing 97% of maternal deaths in Kenya. In spite of, the global attention towards the sexual reproductive health and welfare of adolescents, scanty information on their experience and understanding of their intention to procure unsafe abortion, especially, those ages 10-14 years still exist. This inquiry aims to determine, determinants of intention to procure unsafe abortion among adolescents seeking youth friendly services in Homa-Bay County, Kenya. The specific objectives in the study are ; to assess the effects of adolescents' perceived susceptibility consequences to intention to procure unsafe abortion, determine the influence of adolescent's perceived severity consequences to intention to procure unsafe abortion, examine adolescent perceived barriers to intention to procure unsafe abortion and evaluate the influence of health system factors on intention to procure unsafe abortion. The researcher conducted a cross-sectional analytical research from April-June 2020, in 30 Youth Friendly Facilities (19 private and 16 public) in Homa-Bay County, Kenya. Cumulatively, 297 adolescents were interviewed using a structured questionnaire, out of this, 54% were pregnant at the time and 46% were previously pregnant. Statistical Analysis System (SAS) for Windows version 9.2 was used for data analysis, and Bi-variate Logistic Regression analysis was used, Independent variables with p value ≤ 0.05 were included in the multi-variable logistic regression model to assess determinants of intention to procure unsafe abortion after controlling the other factors using odds ratio (OR). Findings show that, only five determinants indicated significance to intention to procure unsafe abortion; knowledge of pregnancy within the 1st three months was a positive predictor of intention to procure unsafe abortion (OR: 11.8; 95% CI: 1.334 – 24.917; $p < 0.0001$).While, perceived self-efficacy (OR: 0.003; 95% CI: < 0.0001 – 0.031; $p < 0.0001$), barriers (OR: 0.04; 95% CI: 0.006 - 0.254; $p < 0.0001$) to abortion, consideration that waiting time to receive care was short (OR: 0.052; 95% CI: 0.003 – 0.918; $p = 0.020$) and being nulliparous (OR: 0.064; 95% CI: 0.005 – 0.918; $p = 0.028$) were negatively associated with intention to procure unsafe abortion. The findings will help the county and other similar counties in adopting policies and programs that are friendly and can address determinants of intention to procure unsafe abortion among adolescents. The research recommends a well-structured information delivery system on Adolescents Sexual Health and abortion at an early age, a strong family support system and an empowered male partner to ease disclosure. Finally a responsive and segmentation free health system.

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
BCS	Balance Counseling Strategy
CAC	Comprehensive Abortion Care
CHV	Community Health Volunteers
CPR	Contraceptive Prevalence Rate.
FIGO	Federation of Gynecology and Obstetrics
FP	Family Planning
HCW	Health Care Workers
HCIDP	Homa Bay County Integrated Development Plan
HIV	Human Immunodeficiency Virus
ICM	International Confederation of midwives
ICN	International Council of Nurses
IUD	Intrauterine Contraceptive Device
KDHS	Kenya Demographic Health Survey
KNBs	Kenya National Bureau of Statistics
MA	Medical Abortion
MEC	Medical Eligibility Criteria
MICS	Multiple Cluster Indicator Survey
MMR	Maternal Mortality Rate
MOH	Ministry of Health

PAC	Post Abortion Care
STI	Sexually Transmitted Infection.
UNFPA	United Nation Population Fund
WHO	World Health Organization

OPERATIONAL DEFINITION OF KEY TERMS

Abortion: In this study abortion is a personal initiative by the adolescents to expel out products of conception using medications or crude instruments.

Abortion: pregnancy termination prior to 20 weeks gestation.

Adolescent: According to WHO, Puberty is that period that young girls transition from childhood and adulthood, from ages 10-19 years. In this study adolescents are a sexually active female aged 10-19 years, mature minor who is presently pregnant or had a previous pregnancy.

Clandestine abortions: Abortion services which are provided to adolescents by backstreet quacks who are not trained to give pregnancy termination services in areas not meeting the required standards.

Comprehensive Post Abortion Care: includes; preconception counselling, sharing information for avoidance of pregnancy, giving contraceptives, abortion management and post abortion care. This involves primary, secondary, and tertiary prevention as operationalize below:

Intention: Is a well thought out action by an individual to procure an abortion

Primary health care (PHC): It's an approach where the government empowers, support and allows the community to participate and get involved in their own health issues with an aim of increasing universal health coverage. The community through its health leadership i.e. community health volunteers are equipped with necessary equipment and supplies to provide information and basic services at the community. The community members have the power to identify their health challenges, came up with solution and task a community member to support them.

Primary prevention involves preventing pregnancy occurrence among adolescents by education and promotion on abstinence, condom use, and safe sex to prevent unplanned pregnancy.

Secondary prevention involves supporting the pregnant adolescents through antenatal care, safe abortion, safe delivery, and linkage to adoption centers

Tertiary prevention involves rehabilitation post induced abortion, management of complications arising through induced abortion such as uterine rupture, infertility, post abortion depression and palliate care.

Unplanned Pregnancy: A situation where an adolescent conceives and it is not within her reproductive goal plan. Each adolescent and young woman has a reproductive goal which stipulates when to get pregnant.

Youth friendly services: These are either targeted or integrated adolescent friendly centers which are well designed to reach out to all adolescents irrespective of age, race, religion, disability, health status among others. They are accessible, effective, efficient, patient centered, equitable and safe, among others.

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter provides literature on the magnitude of unsafe abortion among adolescents both globally and nationally, the problem statement, the main and specific objectives of the research, research questions, and conceptual framework of the study, justification, and limitation of the study.

1.2 Background of the Study

Approximately 3.2 unsafe abortions occur annually among adolescents girls ages 15–19 (Unsafe abortion is gestational stop done by either untrained individual or in facilities that do not meet the minimum required parameters).The aggregate above, contributes to nearly 15% of the cumulative world-wide occurrence of unsafe abortion (22 million).One in every three young girls die as a result of unsafe abortion (Espinoza *et al.,* 2020).Abortion incidence has been on the upward trend from 50.6 to 56.3 million from 1990-94 and 2010-2014, respectively (Gilda, *et al.,* and (2016). Half of all the abortions procured globally, are unsafe leading to 47,000 abortion related mortality and 5 million disabilities (Rehnstron-Loi *et al.,* 2015). 95% of births are in developing countries.

While under reporting is experienced in Sub Sahara Africa because of restrictive laws, a study done revealed abortion rate of 29/1000 among adolescents in sub Saharan Africa, with the highest being Eastern Africa (38%), lowest in Southern Africa (15%) and with the highest incidences of complication reported of 8.8/1000. Eastern African countries report higher abortion incidences compared to southern Africa countries i.e., Kenya 38%, Uganda 39%, Rwanda 23%, Tanzania, and Malawi

36% as compared to Botswana and Swaziland in Southern Africa reporting 5% and 10% respectively (Singh, *et al.,* and 2017). Out of the 22 million unsafe abortion worldwide, nearly 6 million occur in Africa nations, 2.5 million occur among adolescents ages 15-19 years, contributing to 22,000 related deaths (Sama, Ngasa, Dzekem&Chouken, 2017).

Kenya still remains among the countries experiencing unacceptably high maternal mortality, for each 100,000 live births, 530 deaths occur and abortion contributes quite a significant figure (WHO, 2020). Nearly half a million unsafe abortions occur nationally, with an abortion rate of 48 per 1,000 fertile women age (15-49) years, adolescents being the majority (Mohamed *et al., (2015).In contrast, to the land of Sahara rate of* 31 abortions per 1000 women of child bearing age (Rehnstron-Loi (*et al.,* 2018). Out of all the mistimed gestations among young girls only 37% are wanted, 63% are unwanted leading to a 35% abortion rate (KDHS,2014).

Homa bay county a fishing community in Kenya, is among the 15 burden counties with high teenage pregnancy of 23%, high unmet contraceptive need of 33% and a high HIV prevalence of 25% compared to the national rate of 18% teenage pregnancy, 18% unmet need and 6% HIV prevalence respectively (KDHS,2022). The county also faces challenges on inadequate Adolescent Reproductive Health data giving a false impression of the health status of adolescents in the county. In 2016 according to the district health information system only 216 adolescents were captured to have presented with unsafe abortion complications at health facilities in Homa bay County. Furthermore, in 2016 a stakeholder's forum held on Maternal Neonatal child health service providers in various health facilities confirmed that several adolescents procure unsafe abortion and present to the health facilities with

complications (Reproductive Maternal Neonatal child and Adolescent Health-TWG stakeholders meeting, 2016). In spite of, intense commitment to improve adolescent reproductive health, our grasp of their abortion happenings is abysmal. Besides, most programs interventions and operationalized policies address adolescent's ages 15-19 years dominantly, leaving a glaring gap among adolescents ages 10-14 years. In light of this, the comprehension of their abortion happenings is limited. Given the limited grasps of adolescents experience on abortion, the proposed research intends to examine the determinants of intention to unsafe procure abortion among adolescents age 10-19 years in Homa Bay County.

1.3 Statement of the problem

Sexual abuse among adolescents is harmful and a growing threat, it exposes them to unintended pregnancy leading to unsafe abortion, A significant number of unsound abortion occur among adolescents in the land of Sahara which have restrictive laws. Worldwide, the incidences of deaths as a result of unsound abortion in the land of Sahara are quite high. Three quarters of unsound abortion in economically disadvantaged countries occur in unsafe conditions, which accounts for 520 deaths per 100,000 unsafe abortions. A majority of economically disadvantaged countries prohibit abortions which have contributed to culture stigma and discrimination among the religious and cultural systems, which has a ripple effect on safe abortion access leading to unsafe abortion (Zia *et al.*, 2021).

Yearly, nearly half a million unsafe abortion occur in Kenya, For every 1,000 pregnancies 48 abortions occur among fertile women, a greater number being among young girls (Mohamed *et al., (2015).* In contrast, to the land of Sahara which experience slightly lower rate of 31 abortions per 1000 women of child bearing age

(Rehnstron-Loi *et al.,* 2018).Out of the nearly 63% of pregnancies among adolescents are mistimed and 35% of them do not reach term in Kenya (KDHS, 2022).

Homa-bay County is among the 15 burden counties with high teenage pregnancy of 23%, In contrast, to the national rate of 15%. A majority end up in abortion (KDHS, 2022). Homa-bay County technical assistance/ supportive supervision reports clearly highlights gaps in unsafe abortion management within the health system in Homa Bay County. Lack of accurate data from the community and facility on prevalence of unsafe abortion and its determinants, is a setback to eliminating abortion in the county. In 2016, according to the district health information system only 216 adolescents were reported yet providers who were present at the meeting quoted higher numbers, which clearly depicts a threat to the future Reproductive Health future of the adolescents.

Kenya is a signatory to several declarations and has made quite a number of commitments to safe guard the health rights, including the Reproductive Health Rights of the adolescents. One such commitment is (Maputo Protocol), which is one of the most progressive legal instruments whose aim is to, advocate for advancing human rights for adolescent girls and women. It states that abortion can be procured in case of incest or rape. (Gerntholtz *et al.,* 2011). Besides, the 2010 constitution has addressed the parameters permitting abortion , it states; abortion is prohibited except, in the view of a qualified service provider, in an urgent situation that needs treatment, the wellbeing of the mother is in a crisis, or if allowed by other legislations that Kenya is a signatory to.. Despite, the progressive legal framework and commitments, our comprehension on the abortion experience among adolescents

is limited. Besides, the policy and programmatic interventions has focused majorly on girls aged 15-19 years, with a glaring gap on girls aged 10-14 years, leading to sub-optimal grasp of the sexual and reproductive health experiences of young girl's ages 10–14.Girls in this age cohort contribute a significant number to the total adolescent's population especially in the developing countries. Furthermore, premarital fertility has extended as a result of a growing age of marriage exposing young adolescent girls to risk of unintended pregnancy resulting to unsafe abortion (Espinoza *et al.,* 2021).Thus, the motivation behind this inquiry is to scrutinize the factors of intention to procure unsafe abortion among adolescents 10- 19 years accessing youth friendly services in selected health facilities in Homa Bay County. Thus, the outcomes of this inquiry will assist in defining distinct priorities aimed at generating local evidence-based solutions geared towards advising programs/policies on reducing unsafe abortion among adolescents especially the age cohort 10-14 years.

1.4 Main Objective

To assess the determinants of intention to procure unsafe abortion among adolescents seeking youth friendly services in Homa bay County, Kenya.

1.4.1 Specific Objectives

1. To investigate the effects of adolescents' perceived susceptibility to intention to procure unsafe abortion.
2. To determine the influence of adolescent's perceived severity to consequences of procuring unsafe abortion.
3. To examine adolescent perceived barriers to Youth friendly Services.

4. To evaluate the influence of health system factors to procuring unsafe abortion.

1.5 Research Questions

1. What is the association between the effects of adolescent's perceived susceptibility to intention to procure unsafe abortion.
2. What is the association between the influences of adolescent's perceived severity to consequences of procuring unsafe abortion?
3. What are adolescents perceived barriers to youth friendly services?
4. What is the association between healthcare system factors and procuring unsafe abortion among adolescents?

1.6 Justification

Kenya is among the eight African countries accounting for very high maternal mortality, between 2017 and 2020 Kenya had a 55% increase on maternal mortality, accounting for 530 deaths per 100,000 (WHO, 2021). Adolescents girls in Kenya experience high rate of sexual based Violence (Ministry of L, social protection, 2019), unintended pregnancy of 60% and 35% end up in unsafe abortion (Ajayi *et al.,* 2021).Besides, adolescents are a vulnerable population who are undeserved in Kenya yet they represent a huge population in the country (Karianjahi *et al.*,2020). Homa-Bay County is among the top fifteen high burden leading counties nationally on maternal mortality and teenage pregnancy among adolescents and its contributing to 98.7% of maternal deaths nationally where abortion is a major contributor (UNFPA, 2013). Furthermore adolescents are exposed to premarital fertility as a result of a growing age bracket of marriage. This exposes them to unintended pregnancy leading to unsafe abortion. In addition, they adolescent face social stigma,

mental instability, isolation and risk of complications arising from unsafe abortion especially in set ups with restrictive abortion access such as Homa-bay County (Congo *et al.,* 2022).

1.7. Limitations of the Study

The study aims to determine the intention to procure unsafe abortion among adolescents. Intention is not the actual action of procuring unsafe abortion, hence it might give a full impression of a behavior either positives or negatively. Furthermore the Cross-sectional study design adopted by the researcher does not follow study participants over time and thus lack causal link. In addition, the study sample size of 332 is small which exposes the study findings to challenges of generalization of the study findings; however the findings are still useful in populations with similar background.

1.8. Conceptual Framework of the Study

The theoretical structure of this dissertation was directed by the health belief model.

1.8.1 The Health Belief Model

The Health Belief Model (HBM) is a cognitive behavioral theory. It outline how an individual's culture, education level, health behavior, media, social system, previous knowledge, experience and mental status can have an influence his/her thoughts over a particular health problem and define the action that he/she takes after weighing the benefits and the consequences with an aim of achieving a desired goal. (Janz&Becker,(1984). The HBM model describes a person's thinking from a point of not knowing to a point of knowledge after being exposed to knowledge. Then makes a resolve to protect self from a disease by adopting a preventive behavior, this depends on how he/she views himself/herself to be vulnerable to the disease. The

perceptions include perceived to what extent can the illness damage the person; the positive outcomes after taking an action to prevent the illness, possible hindrance to act and taking action. (Stretcher & Rosenstock, (1997).

The HBM model is criticized for individualizing the decision making process by an individual yet the individual behaviors are influence by his/her environment who she/he interacts with and the governing body of that person (cultural norms, gender norms) (Gage *et al., (*1994).In summary, health-seeking behavior theories help to understand the steps individuals go through from not thinking, thinking, Trial and taking action to receive care and relapse. None the less, these assumptions have several inadequacies. The Health-seeking behavior models is human centered ,it tries to understand the occurrence of a health problem through an individual lens, as opposed to an integrated approach, which is inclusive of the interpersonal and as well as institutional factors.

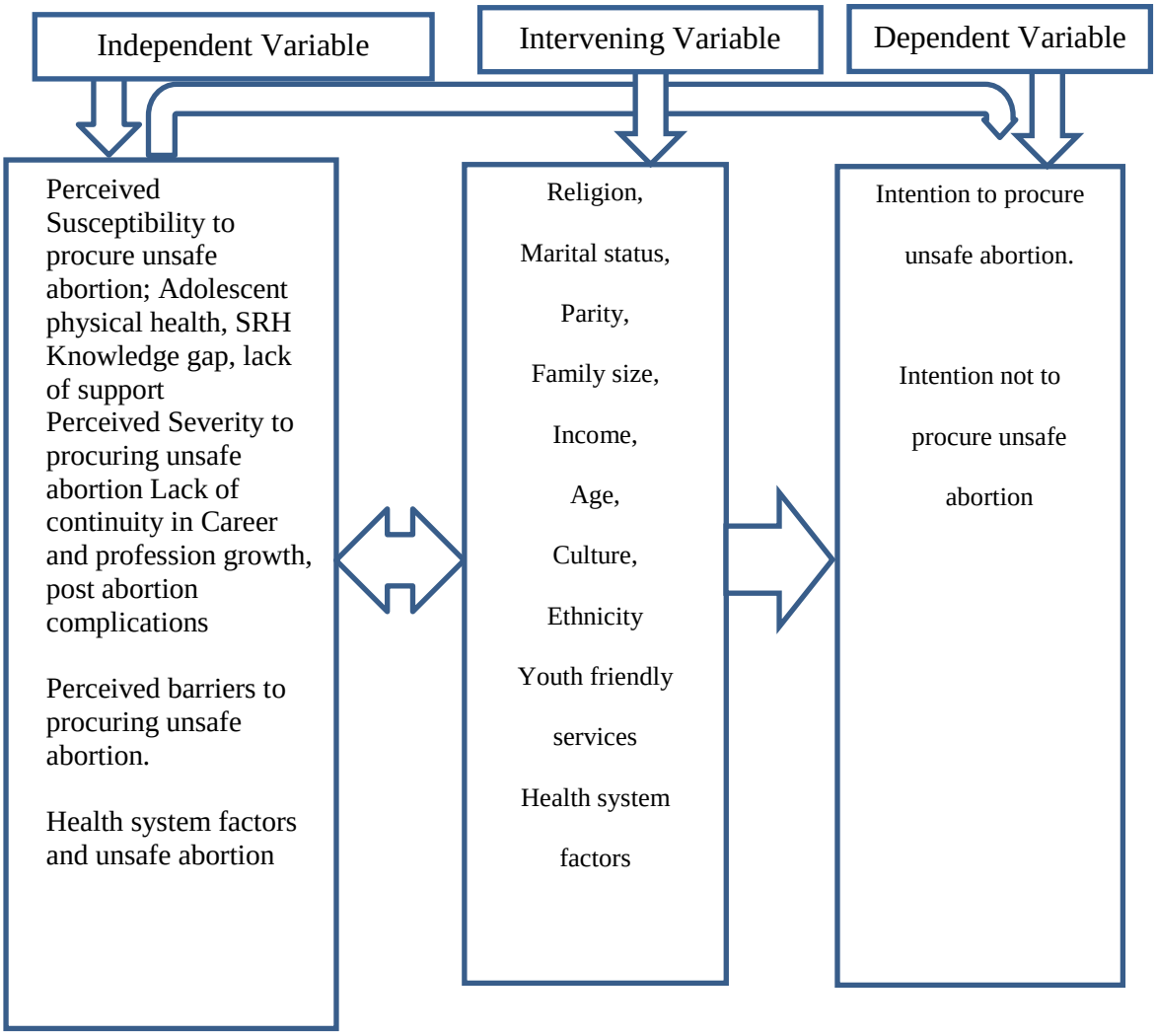
Most of the behavioral model blame the individual for failing to meet the desired outcome of health care yet a lot is at play that influences the positive outcome which is not limited to; institutional and system factors. The two define and limit the extent in which an individual can prevent an occurrence of a disease (Hausmann *et al.,* 2003).

1.8.2 Conceptual Framework

Several literatures on sexuality, pregnancy, abortions, and childbirth among adolescents, highlight a variety of inter-related and complex association of factors that influence their health behavior towards the outcome. The framework in this proposal is shaped and modified from Health Belief (HB) model. HB is a psychological model that attempts to explain and predict a health behavior. HB

model constructs: That everyone perceives susceptibility, threat, and seriousness of a health behavior differently, assesses its severity, benefits, and barriers that facilitates self-efficacy and come up with cues to action (Stretcher & Rosenstock, 1997).

Conceptual Framework



CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

The literature review explores the perceived susceptibility to unsafe abortion, perceived severity, perceived barriers, health system factors to unsafe abortion, determinants to unsafe abortion and lastly the summary to the literature review.

2.1 Unsafe abortion and Teenage Pregnancy

Overall, approximately 121 million mistimed pregnancies occur each year among women of child bearing age, out of which only 40% are delivered, while 60% are terminated internationally, (Bearak *et al.,* 2020) with a majority of unsafe abortion occurring among adolescents. Most of the unwanted pregnancies originate from the Sub Saharan Africa with 91 pregnancies per 1,000 women aged 15–49 (Guttmacher Institute (2020). Besides, out of all the young girls gestation's, 60% of are mistimed, leading to nearly 35% abortion (Congo *et al.*, 2014).

Each year 25 million unsafe abortion occur worldwide of which 97% are in developing countries (Bela, 2017). In Asia approximately 27 million induced abortions were carried out in 2008 and available DHS data suggests that a range of 0% to 4% of adolescents have had induced abortion but because of restricted laws and stigma the current data is likely not showing a true reflection of the problem. A study in Thailand revealed a high rate of (10%) of abortion among adolescents in 2010 and in a nationally representative study in China, found out that 17% of sexually active adolescents had experienced unintended pregnancy and 91% were aborted (Aghaei, Shaghaghi&sarbakhsh, 2017).

The abortion incidence has been on the upward trend globally from 50.6 million abortions in 1990-94 to 56.3 million in 2010- 2014 respectively (Gilda, *et al.,* (2016). 2.5 million unsafe abortion occurred in resource constrained countries resulting to, 47,000 deaths and 5 million disabilities (Aghaei, S. &Sarbakhsh, 2017). Most studies indicate that more abortions occur in Economically unstable countries than the More economically stable countries. (35 million versus 7 million), though there are similarities in access to abortion in the two economic worlds ;26 per 1,000 among fertile women ages (15-44) years in Economically stable countries compared with 29/1,000 in Low economically stable countries adolescents being a majority (Mote, Reindorf, Otupiri& Hindin,2010).

Adolescent pregnancy in Kenya is "multifaceted", it's a social and public health menace that should be controlled [Onono *et al.,* 2022]. Study findings, indicate that a fifth of the young girls ages 15-19 years is either pregnant or already a mother [KDHS, 2022]; this age-group accounts for 14% of all births in Kenya [Deroch *et al.,* 2017]. A study in Kenya indicated that the major contributor to pregnancy related deaths was abortion at 35%, with adolescents being the majority (Kabiru *et al.,* 2016). Another inquiry by (Mohamed, *et al.,* 2015) in the slums in Nairobi revealed a higher maternal death compared to the national aggregate of 706 per 100,000 live births and 362 per 100,000 live births respectively, of which 31% were because of unsafe abortion. Before the 2010 promulgation of the constitution studies indicate that 21,000 patients were being attended to annually in government facilities because of abortion complications.

Homa Bay county reports high incidence of teenage pregnancy of (40%), Low contraceptive prevalence rate of (36%) and 30 % unmet contraceptive need. Factors leading to backstreet abortion and abortion related deaths among adolescents (KDHS, 2014). Unsafe abortion is very common in areas with high fertility among the adolescents, unintended pregnancy, lack of access to contraceptives and restrictive laws. The study aims to investigate the determinants of intention to procure unsafe abortion among adolescent accessing youth friendly services which will influence programming, policies, and health systems strengthening.

2.1.2 Predisposing Factors to Unsafe Abortion

Evidence shows early sexual debut among adolescents at 15 years leading to approximately 48.2 % of pregnancies that are unintended and 13% end up in abortion globally. Studies have also noted a higher proportion of these pregnancies and births are among adolescents aged 19 years and below. For instance, in Latin and Caribbean countries this account for more than a half while in Africa it's a third (Vanessa, Susheela, Alyssa & Jesse,2015).

Family planning plays a significant role in fecundity control and defines the reproductive health rights of women [Matston *et al.*, 2018]. However, quite a number of adolescents in low resourced Countries intend to delay postpone, or even stop their next pregnancy but unfortunately a sizeable population in Sub-Saharan Africa is not utilizing the birth control, in spite of the need to control their family size. (Ali *et al.*, 2013; Cleland *et al.*, 2014). Lack of availability of birth control methods is a setback to the girls reproductive health rights [Yaya *et al.*, 2018].

At present, almost 214 million fertile women globally can't access birth control methods yet they need them [WHO, 2018]. Which has led to an incident of over 85 million of unplanned pregnancy annually? In the long run, this has evolved to a surge of pregnancy outcome complications [WHO, 2017] with 75% of unsafe abortions in the land of Sahara contributing significant challenges to the health of a mother [WHO, 2020].

Side by side, a rise in the age for marriage has complicated the matter and has expanded the prenuptial fecundity ,exposing young girls to the consequences of unplanned pregnancy and unsafe abortion [Woog *et al.,* 2012 &Pierce *et al.*,2017).Moreover, sexual abuse among adolescent is on the rise and is a menace presently, which has contributed to several unwanted pregnancy among adolescents , leading to unsafe abortion [Abiola *et al.,* 2016).

2.2. Perceived Susceptibility to Procuring Unsafe Abortion among Adolescent Girls

Young girls are exceptionally immature psychologically and intellectually which exposes them to the probability of seeking unsafe abortion. The countless influence of self, others and the institutions affect their understanding on reproductive health issues, their conduct towards the reproductive health and seeking the services., including abortion services (Scholmerich *et al.,* 2016; Okigbo *et al.,* ; 2015, Maticka *et al.,* ; 2010, Steinberg *et al.,* ; 2008 and Phillips *et al.,* 2008). In the course of adolescence period, the concept of danger and how they face the danger are confronted against the endless outcomes, up to risk perception, and risk taking are challenged against long-term outcome until the time when the psychological and intellectual maturity is established through a neuro-developmental evolvement,

(Linnemayr *et al.,* 2015; Galvan *et al.,*; 2009 &Johnson *et al.,* 2006). Adolescents encounter limitations while sailing through carnal independence given their stage of life which is full with inadequacies, limited phenomenal will, or acquaintance in bargaining for safe sex , and challenges in availability of the abortion information and services [Maticka *et al.,* ; 2010, Nwaozuru *et al.,* 2020, ; Sayles *et al.,* 2006 ; & Closson *et al.,* 2018).

It's not always obvious that when parents and guardians participate in adolescent's abortion decision they support her decision. In an inquiry in the United States a quarter of the adolescents reported that among the people who influenced their decisions to abort , by applying pressure were parents 26%, intimate partner 27% and peers 21% . While, those who supported them to carry the pregnancy to term were; intimate partners (20%), peers (19%) and mothers (7%) respectively [Henshaw *et al.,* 1992] . None the less, there's abysmal proof that the force contributes to their mistimed pregnancies since <1% of minors reported that. The coercion of their mothers, fathers and their partner was the main reason for opting for an abortion. Although, perceived deficiency of help could influence adolescent's feelings of independence to manage the resolution [Major *et al.,* 1990]. In one of the inquiry among African-American young girls and women, 88% who made independent decisions to procure abortion were well pleased with their resolve a year later Zabin et al [1992] ; Non the less those adolescents who flagged out lack of parents help in their resolve ,were distinctly possible to be more likely to be dissatisfied a year later Notable drivers of abortion among girls are inner feeling of suffering, which is also significant among adult populations and a though of coercion from intimate friends either to continue until term or terminate the pregnancy [Major *et al.,* 2000].Lack of

support system among adolescents on their reproductive health goal exposes them to risks to unintended pregnancy and the emotional impact after the abortion services calls for a help system that can comprehend their word and identify what necessitated the action. So many studies have not captured targeted help services for adolescents, to include comprehensive abortion care, teaching and help services, which can improve the emotional stability of the adolescents.

Sexual negotiation in relation to gender classification in the society is an overrated phenomena and a false norm. Supporting, comprehensive abortion care and sexual teaching and services that promote sex resolve independence among young girls will boost informed sex resolve and consent (Ajayi *et al.,* 2019). Parental participation in the abortion process may enhance coping, relieve anxiety and modify the behavior of the young person (Ralph & Ajayi *et al.*, 2014 &2019).

In contrasting, abortion occurrence among adolescents in the land of Sahara and other regions issues on dishonor, humiliation and sex identity, and lack of support were major universally. Internationally, where abortion is permitted vs prohibited and country-side vs. city settings; issues of communal and inner shame, mother and intimate friend participation or delay in care were quite obvious (Palma et al 2017, Domingo's *et al.,* 2017, Gelman *et al.,* 2019 Coleman *et al.,* 2017).

The abortion involvements is compounded with the effect from mothers , fathers, companions , Health care workers self-determination, available information from the community, peers, social media and the rules and laws governing the young girls behavior in a society . Trans-versing abortion experiences as a young girl calls for being in charge of inner and thought shame, repulsion from others, confidentiality and endurance in order to prevail over the over whelming limitations that the

environment and people put on access to abortion services. However, not all adolescents enjoy the parental help, and the urge to confidentiality and shame may pose limits to sharing mistimed pregnancy and unsafe abortion experience.

In spaces, where communal and society heavily contributes to humiliation on a young girls sexual life which leads to psychological destruction. , Seeking reproductive health services, pre-marital help before intimacy through youth friendly center's may encourage them to stop mistimed pregnancy and/or manage the shame that come after an abortion (Kumar *et al.,* 2009). The minimum initial package for adolescents reproductive health include comprehensive sexual education in and out of school, Adolescent integrated health system which is functional, human centered and non-discriminatory and shares the urge to support the adolescents through all the stakeholders such as; media, community, and family (Biddlecom *et al.,* 2007). Building the self-efficacy of adolescents in informed decision making on whether to terminate, have a solid post abortion resolve to manage post abortion humiliation, build agency within her and positive coping mechanism (Mohamed *et al.,* 2018,). No research in Africa has used verified psychological wellbeing screening tools to assess cognitive impacts among adolescents or to assess the impact of awareness among adolescents and access to abortion services.

Carnal and procreative empowerment can be estimated well; using reliable research methodologies and aggregates collected can define the pre and post abortion experiences among young girls with resilience or agency (Upadhyay *et al.,* 2020). A Proven, precise and authenticated results is important in generating new ideas. Abortion is sensitive and secretive and not many people are willing to share their stories, thus, these tools for assessing the cognitive wellbeing and procreative

empowerment can be used to enhance quality of statistics captured in the research design.

2.3 Perceived Severity and unsafe Abortion

The irreconcilable and severity of adolescent unintended pregnancy with their education and professional pursuits, monetary necessity , future economic, pressure of bringing up a child and finally withdrawal of social help from those close to them, was a clear view that guided their decision to abort(Aziato *et al.,* 2016 ; Cleeve *et al.,* 2017). Subsequently, The principal factor for girls to rationalize on termination of pregnancy while , it was viewed as morally wrong, not permitted, or intolerable, it was the single available choice which permitted the girls to pursue their future education and career goals (Esia-Donkoh *et al.,* 2015; Dahlback *et al.,* 2010).In addition, people having power and control over their own lives was equally cited from some researches globally (Ralph *et al.,* 2014),Furthermore, adolescents in Brazil and United States expressed higher confidence , self- consciousness and higher possibility of schooling continuation or remaining in schools as grounds to terminate pregnancy.

2.4. Perceived Barrier to Youth Friendly Services

Young girls highlight provider segmentation, bias , inadequate privacy and secrecy by the service providers as predominant factors that limits them from accessing youth friendly services including abortion care from the formal service providers (Bankole *et al.,*2010). Quite a number of explorations have reported that service providers can be judgmental, openly rude or even holding back abortion care services from the adolescent girls seeking abortions (Izugbara *et al.,* 2017; Kakansson *et al.,* 2018) Moreover, the service providers, who have the ability to offer the youth

friendly services, might not safe guard the adolescents privacy and confidentiality to the standards prescribed. The aforementioned barriers reflect those often addressed in the adolescent sexual reproductive health surroundings. The barriers, places specific prejudice towards girls accessing abortion services (Hobcraft *et al.,* 2006). Subsequently, awareness creation on and service delivery of sexual and reproductive health could be cumbersome as a result of castigating and humiliating factors such as norms (cultural, gender and peer) , which castigate shame to adolescents seeking contraceptives and comprehensive abortion care (Nyblade *et al.,*2017). While, most nations in Africa do not permit abortion , the overwhelming folk and spiritual humiliation create limitation to obtain pregnancy termination services leading to clandestine abortions(Grimes *et al.,* 2006).In instances where abortion is not prohibited, certain reservations, such as; notable hurdles and communal humiliation contributes to safe abortion site access limitations such as ; guardian consent, limited resources to offset abortion services, limited knowledge on abortion service providers and untimely abortion care contribute to abortion related complications (Izugbara *et al.,*2012 & Mulumba *et al.,* 2017).On top of that, broadened delays and challenges in trans-versing the abortion restriction globally can lead adolescents to back street abortion.

2.5. Health System factors and Unsafe Abortion

2.5.1 Policies

The international communities, through ICPD saw the challenges of Adolescent's in accessing Sexual Reproductive Health services. The communities committed through Program of Action (POA) to increase universal access to Adolescents SRH and reverse the negative health outcomes such as abortion, teenage pregnancy among

others. Through this Kenya drafted the Adolescent Reproductive Health and Development policy (ASRH, (2015). The policy provides a framework for, Adolescents favorable services, the minimum allowable services to guide the implementing partners and the government of Kenya. In addition, the policy addresses concern on Adolescent Sexual Reproductive Health rights. Furthermore, the earlier constitution was so restrictive and termination of pregnancy was to protect the life of a woman. However, this changed when a new constitution was promulgated, and abortion issues were among the thorny issues discussed by all stakeholders. In the 2010 new Constitution was birthed and an improvement on abortion care was highlighted. Chapter (26) sub section four; highlights four circumstances in which pregnancy termination is allowed ; In the view of the health care worker, In emergency situation, when the life and wellbeing of the mother is in jeopardy, and if interpreted in any other legislation where Kenya is a signatory to. The clause, on abortion as currently stated is ambiguous and has caused so much confusion to service providers and the citizens who are interpreting it to mean that abortion is permitted on demand. With the new constitution, the health fraternity hoped for a new legislation to clarify on abortion service delivery in public institutions. To date none has been shared to operationalize the service. Besides, no civic education has been done to enlighten the adolescents on the abortion law. The stigma on pregnancy termination will keep on hindering access even in instances where it's not restricted. (Mohamed, *et al.,* (2015).

2.5.2 Availability and Accessibility of Adolescent Sexual Reproductive Health Services

Abortion care among adolescents entails a complex health system that incorporates both structured, non-structured institutions and infrastructure (e.g. location of service areas, availability of methods and services, and information flow on where, who, how and for whom abortion is provided in line with the legal parameters. A study by Millicent, (2016) on accessibility of youth friendly services revealed quite several obstacles hindering access of youth friendly services in African countries. For instance, in Zimbabwe facility distance, being too busy and lack of self-efficacy among adolescents made adolescents shy away from services. While in Nigeria the ratio of Health providers not able to offer youth friendly services visa vi those able was quite significant thus could not manage the adolescent's population and meet the acceptable standards of youth friendly services. The YFS were mostly supported by Non-Governmental Organization and learning institutions with no clear policies, procedures, and guideline on how to implement (Oyekunle, 2015).In addition, obtaining and usage of safe abortion care is delayed in Health systems because of the requirements such as; multiple visits, bridge of confidentiality, investigations, waiting time, conditionality and parental or guardian consenting (Brittain, *et al.,* 2020). Utilization of abortion services is further shaped by segmentation of adolescents. Besides, the response the adolescents received from the health care worker determined the choice of facility and time to procure the abortion. (Birdsey, *et al.,* 2016); Holcombe, *et al.,* 2015). The carefulness of service Providers may be interpreted as stigma (Holcombe, *et al.,* (2015), and further stigmatize abortion care-seeking. Access to safe abortion has become easier through the internet (Aiken, *et al.,* 2020). Adolescents can seek for consultation and services through the web. In

Kenya the 2010 constitution allowed middle- level service providers (Midwife, clinician & nurses) to offer safe abortion services. This has made safe abortion more available and accessible. Though the service providers experience a setback on abortion service provision because of lack of clarity on abortion clause, safe abortion guidelines withdrawal and unregulated abortion care. It's noted that a range of unqualified practitioners, including those in private practice, traditional birth attendants, herbalist and pharmacists procure abortion as a source of income (Norris, *et al.,* 2016).

Kenya further registered medical abortion drugs (Mifepristone and Misoprostol) in 2012 and included them as essential drugs making abortion accessible. The drugs are distributed through the government supply chain (Kenya Medical supply Agent (KEMSA). This has influenced the utilization of pregnancy termination services, as well as quality of the services. A study by Godia (2014) noted that utilization of youth friendly services had a setback because of lack of awareness creation and agency on SRH and available services, community participation and involvement, inadequate skills among staff, lack of leadership support and health financing gaps.

2.5.3 Health Care Worker Factors and Unsafe Abortion

Human resource for health is one of the WHO building blocks that can either improve or be a setback to usage of pregnancy termination services among adolescents. A research in land of Sahara and South East Asia classified factors associated with abortion service providers as follows; (I) Rights based; the study highlighted service providers unfamiliar with the laws governing abortion in their jurisdiction. Though some of the health care workers agreed that unrestricting abortion could mitigate the negative health outcome after unsafe abortion, they also

agreed that abortion is a health nuisance.. Besides, in South Africa the midwives and nurses concluded that despite legalization of abortion the health care workers should be given an option to decide whether to provide or not. (ii) Stigma and Victimization: The health care providers had a strong feeling that women should carry pregnancy to term, which clearly confirmed the abortion attitudes among the health workforce. This contradicted a study in South Africa which classified abortion into medical and surgical abortion. The health care workers believed that self-care abortion using abortion pills was fully a woman's issue and it's only the woman that can be judged by God not the health care provider (Rehnström, *et al.,* 2018). A research done in Tanzania reported unfriendly service providers, who , were using languages and tones that were not acceptable by the adolescents. While in Uganda the adolescents were resorting to drug vendors (pharmacist) because of the staff attitude (Millicent, 2016). Another study in Ethiopia revealed that the service providers had a score card on whom to engage in premarital sex, this ended up discouraging health seeking behavior among the adolescents (Tilahun, *et al.,* 2012). (iii)Capacity of Health Care worker; in the study, the health care providers reported inadequate skills and expertise in the area of abortion. Access and quality of care; Quite a number of studies in the economically unstable countries confirmed that the adolescents were neglect, they were being judged and the midwives and nurses were projecting their attitudes on them as well as withdrawing from offering the abortion services. (Rehnstrom-Loi, *et al.,* 2015). Additionally, there was an already existing follow up failure after an abortion; lack of follow up among healthcare workers to check how adolescents are coping psychologically was predominant. Follow up services are so essential in assessing the cognitive status of a post abortion adolescent, so as to link

her with referral services, programs need to focus on more services beyond contraceptives (WHO, 2013).

2.5.4 Youth Friendly Health Services

Abortion services are part of the general youth friendly services offered in most government facilities. The services can either be stand alone, static, mobile or integrated. Besides, the services are individualized, easily accessible, affordable, and non-discriminatory, with meaningful engagement by the adolescents and meet the needs of the adolescents (WHO, 2012). Furthermore, the International Communities came together to address the challenges faced by the adolescents while accessing Sexual Reproductive Health Services through Program of Action (POA). The POA highlighted and endorsed sexual Reproductive Health of the adolescents as a human right. Countries committed to increasing coverage to SRH information and services among adolescents while also improving adolescent's demographic dividend through provision of targeted SRH services and prevent health problems. Up to date this agenda has not been met since adolescents are the most under privileged cohort on access of abortion services with an uptake of 10% in developing countries. In 2012 a study by Kabiru *et al.,* confirmed that 120,000 women who sought care on abortion related complications 17% were adolescents aged below 19 years of age.

2.6. Determinants of Unsafe Abortion among Adolescents

Adolescents are a vulnerable group, and they face multifaceted challenges in accessing sexual reproductive health services. Several studies findings in resource constrained countries have highlighted various barriers among adolescents hindering service delivery to adolescents. The barriers include Age, policies, health systems, culture, religion, ethnicity, gender, economic status, information, and abysmal

sexuality education in and out of school among others. Several studies are assessing adolescent's influence to abortion decision making process, though the systemic reviews remain limited on all related contexts, there is need to understand the adolescent's social demographic that influence decision making. This will provide a more comprehensive and robust knowledge on their sexual reproductive health needs (Munakampe, Z. &Michelo *et al.,* 2018).

2.6.1. Adolescent socio-demographic characteristics

2.6.1.1 Age

Globally studies have shown that, early sexual initiation among adolescent exposes them to sexual reproductive health risks. Several studies have confirmed this i.e. A study in Niger in a sample of 896 teenagers, 80% had their sexual debut by age of 16 years, with 14% among them having experienced first sex between ages 9 and 12 years (Rafael, & Oluwole, (2016).

This is further confirmed through a study by Wanjiru in Dagoretti (Nairobi), which revealed that the mean age at first coitus among girls and boys was at 13.7% and 14.9% respectively (Wanjiku, 2015). Early sexual debut exposes the adolescents to potential sexual risky outcomes such as a premature intimate relationship, unwanted pregnancy, unsafe abortion, and self-inducing abortion by use of crude objects, herbs, and pregnancy termination drugs (Rasch *et al.,* 2014); Vallely, *et al.,* (2015). According to a study by Mohamed, *et al.,* and 2015) abortion was higher among adolescents between 15-19 years compared to the age between 20-24 years while it dropped between the ages 25–29, and steadily drop among older women. The researcher related this to the increased number of adolescents who want to avoid pregnancy but cannot due to lack of contraceptive Due to age limit, the adolescent's

self-efficacy and autonomy is normally bridged through proxy decision makers, parents, friends, or relatives. Abortion being a sensitive issue, it takes courage, confidence, and a sense of belonging for adolescents to share what they feel about a pregnancy. This delays their access to care and consequently seek abortion at a bigger gravity (Foster *et al.,* 2018; &Kimport et al, 2021). They are more likely to access induced abortion from untrained service providers or perform a self-induction. The adolescent need individualized care RH services because of the risks they are exposed to during pregnancy, unsafe abortion, and sexual exploitation (Norris, *et al.,* 2016).

2.6.1.2 Marital status

A research done in Burkina Faso reported that 61% of fertile women who went through spontaneous or induced abortion were single adolescents. Out of this 63% were for induced and 28% spontaneous abortion and two-fifths were repeat induced abortion among adolescents (15–24 years). A similar study in India also reported 13.1% abortions among adolescents (lboudo, *et al.,* 2015).

The high reported cases on induced abortion among adolescents are attributed to early sexual debut and lack of availability of youth friendly services in most health facilities in several countries Kenya not excluded. Many studies have observed that adolescents ages 15-24 years are the majority repeat abortion care seekers which is worrisome (Adelaja, 2015)

2.6.13. Education Status

Studies have shown correlation between level of education and uptake to safe abortion services. The lower the education levels the higher the chances of being more vulnerable to induced abortion. For instance, studies in India 44.4% of induced

abortion seekers were uneducated and 48.2%cases were schooled up to primary level (Sudhir *et al.,* (2017). A contrast was noted in a study in Ethiopia where those who had some level of Education were more vulnerable to induced abortion. (Gezahegn, M. &Agumasie, 2017).

2.6.14. Religious Affiliation

Kenya is religious country, with over 97% ascribing to a religious affiliation (11% Muslim and 88% Christians). This makes it impossible to influence people on matters abortion care without involving the Faith Based Institutions. Regions have religion diversity and each religion guides the norms that govern people, influence decision at the leadership on matters health (Al-Matary& Ali, 2014). The Roman Catholic is known not to support health timing and spacing of pregnancy, family planning live alone pregnancy termination , yet its contribution to the governing rules and regulations is strong in Latin America, where pregnancy termination is majorly prohibited, than in Western Europe, where pregnancy termination is unrestricted (Blofield, 2008).

The church has a role to play on matters abortion and adolescence sexual reproductive health. Through messaging on reproduction, abortion, anti-abortion protests policies and shape abortion trajectories since most of them are healthcare providers (Eisenberg & Leslie, 2017). Their impact could influence positively or negatively on how adolescents perceive the morality of abortion and its repercussions in the society especially among those who procure abortions (Barot, (2012).

In Kenya today, FIDA and other sexual reproductive health rights civil society organization petitioned the Kenyan government (Ministry of Health) in the high court. To clarify chapter 26 sub section 4 of the 2010 constitution which talks on

abortion. The ministry of Health withdrew a safe abortion guideline that was to guide service providers on safe abortion management. The withdrawal of the guideline was prompted by the religious body. That felt that the guideline would promote abortion on demand yet at the end of the day abortion related mortality is still on the rise because of unsafe abortion and the adolescents are the most affected.

In Homa Bay County most people in the urban set up are Christian with a small proportion being Muslims. While in the rural some people still believe in tradition and worship "jwok"- the creator of heaven and earth - and the culture of wife inheritance (HCIDP, 2015)

2.6.1.5 Parity

Ilboudo, Greco, Sundby & Torsvik (2015) noted that most of the women who undergo induced abortion had their first pregnancies (63%) against (24%) who were expecting the 2nd, 3rd or more. Among those who had their first pregnancy were under parents' guardianship. A similar study in Nigeria and Ghana also noted that among those women who came for abortion services a majority were single (Adelaja, (2015). However, Ellen *et al.,* (2015) observed that multiparty is also associated with induced abortion. The researcher noted that women who were para two were 3.8 times likely to seek pregnancy termination while those who were para three were 6.6 times likely.

In Kenya, 24% of adolescents have unmet need for contraceptives and the position is even worse in rural set up. For instance, in Homa Bay the unmet need of contraceptives among adolescent is 30% (KDHS, 2014). In addition, lack of youth friendly services is also a hindrance to reproductive health access among adolescents. Nationally only 7% of facilities operate youth friendly centers (KASP, 2010). These

dilemmas confirm the high number of gestations among adolescents and enhance the chances of unsafe abortion.

2.6.1.6 Economic status

Unintended pregnancy among adolescents pose short and long term challenges from loss of opportunities to economic instability (Gipson, *et al.,* 2008). For instance, an early pregnancy predisposes adolescents to; health issues, early marriage, school dropout among others which is a setback to economic stability of an individual. Unavailability or inadequate finances among adolescents exposes them to vulnerability and delay in accessing youth friendly services in hospitals.

In many settings (public/private), the cost for safe abortion and unsafe abortion is quite high and not affordable to the adolescents. Thus, for one to know the pregnancy status she must source for funds which might delay her access to care. A quarter of adolescents who sought first trimester termination in Mozambique public health facility delayed care due to lack of financial resource (Mitchell, *et al.,* 2010).

Studies have shown high charges on safe abortion and induced abortions (PAC) among adolescents and vary according to the presenting client characteristics. For instance, the charges on induced abortion among adolescents is not constant and varies between (68,100 shillings) to (94,500 shillings) in government facilities. The charges are pegged on adolescent social and economic status (attending school, married, unmarried, economically stable, and economically unstable) and her geographical location (Rural or Urban). While those older women above 25 years who are in the same circumstance are not experiencing such treatment. In addition, adolescents receiving care at private facilities were paying huge costs as compared to those who were attended to at the government owned facilities (100% more).

Besides, the charges were also being influenced by who sees the client, the higher the carder (consultant, Doctor) the higher the cost and the lower the cadre (Nurses, midwives, clinicians) the lower the cost. (Ilboudo, *et al.*, 2014)

Adolescents are a vulnerable group who are not economically unstable hence going to seek for help in a private/ public hospital for a safe abortion would be a tall order. In most studies, frequently the adolescents seek for unsafe abortion followed by post abortion care when complications arise. This exposes the adolescents to double their expenditure at the clandestine provider and further to health facilities for management of complications arising from the unsafe abortion. This is a burden since they are economically unstable. (Sundaram, *et al.*, 2016).

2.6.1.7 Ethnicity

Quite a number of exploration have reported that black and Hispanic women are thrice more likely, to experience unintended pregnancy than white women who are twice likely. This is because the black women are disadvantaged is several ways; culturally, education, socioeconomic, access to contraceptive, health seeking behavior and their reproductive health goal among other factors. High fertility among the black community, they are more likely to experience unintended pregnancies and seek out abortion services than any other group (Guttmacher Institute, (2016).

An inquiry by Mullen et al, 2016 in United States found that of the 405,795 abortions procured in 2016, blacks and Hispanic women accounted for approximately 55.4%. Thisis disproportionate, since the fact is the black and Hispanic women only represent 29% of the total U.S. population (Mullens *et al.*, 2016). In Kenya a significant variation is observed among regions with regards to abortion uptake, the western, costal, North Eastern and Rift valley counties account for a higher

percentage of abortion nationally this varies across the counties and is attributed to the high fertility rates within these counties (KDHS, 2014). (Mohamed *et al.*, 2015).

2.6.2 Culture

Culture is either learned or unlearned in a social cultural system present in communities. It influences how an adolescent feel, say, do or think on matters abortion. The cultural system is multifaceted and a lot is involved that influence abortion decision making process either individually, institutionally, or intrapersonal. These are dependent on the health systems and infrastructures. On many occasions and in African communities' abortion is abomination and never discussed, always stigmatized and its acceptability is quite low because of the cultural norms that govern the community and defined by gender, race and ethnicity. In a study in Ghana on safe abortion, social stigma was highlighted by the adolescents as a hindrance. The adolescents developed fear, shame and embarrassment because of social stigma that defined their perception and decision making (Tagoe-Darko, 2013). While in South Africa in a community engagement study on safe abortion, the community members felt that legalizing abortion was destructive to the South African traditional culture. In addition, they also believed that the decision to legalize abortion was a colonist endeavor which was interfering with the inter-generation and cultural norms (Macleod, *et al.,* 2017). Other studies also noted norms also arise from society, peers, experience, institutions and social platforms (Kebede, *et al.,* 2012). Cultural perspectives differ from community to community, in some settings abortion might be viewed as embarrassing, while an adolescent pregnancy and childbirth might be a worse of outcome (Fordyce, 2012). Adolescents being unmarried and having

unintended pregnancy their social cultural networks normally influence sex preference, number of children and cultural norms (Bongaarts&Guilmoto, 2015).

2.6.3 Knowledge and Beliefs on Abortion

Often, adolescent's first reference points on information enquiry on abortion are their social networks, peers, and friends. Furthermore, the information from these sites is normally not in-depth and a lot is left untouched thus. In most cases the information is in accurate and misleading. More so, other researchers believe that curriculum based sexual education programs, targeting specific age group of adolescents are successful in providing the necessary knowledge. Though the researcher also notes that as much as it is successful it has some weaknesses; the curriculum based sexual education program does not address issues on induced abortion nor is it frequently addressed in schools and higher learning institutions (Carlsson *et al.,* 2016).

More often, adolescents interact with fellow peers and internet to access information on abortion, but the validity of the information varies (Dittus *et al.,* 2015). Accuracy in most circumstances is normally dependent on a prior knowledge and experience on the possibility and care sources from the existing apps (Arambepola& Rajapaksa, 2014). Limited awareness on the extent of legalization of abortion is a hindrance to utilization of pregnancy termination services (Marlow *et al.,* 2014).

Adolescent's limited knowledge on safe abortion and unsafe abortion defines their reasons for seeking for care either through a trained provider or untrained provider (Ralph, *et al.,* (2014). It's equally important to understand how others involved in the adolescent pregnancy make sense of relative risks from knowledge available and define their trajectory pathway (Izugbara *et al.,* (2015).

2.7. Summary of Literature Review and Knowledge Gaps

Most studies have contributed majorly on abortion experience among older adolescents than the younger adolescents 10-14. Little is known and understood about their abortion interactions. Besides, no research in Africa has used verified mental health screening tools to assess psycho-social impacts to assess the impact of awareness among adolescents and access to abortion services. Despite, the intensified advocacy on adolescent's health and the commitments made, our grasp of their abortion experiences is limited. Furthermore, the focus of the guiding principles and legislations majorly address adolescent's ages 15–19, leaving a wide gap in our comprehension of the sexual and reproductive experiences of adolescent's ages 10–14. This study aims at determining the intention to procure unsafe abortion among adolescents age 10-19, with a specific focus to age 10-14 years. The findings shall support the county to customize age specific policy and program interventions.

CHAPTER THREE

METHODOLOGY

3.1 Overview

In this chapter, the researcher describes the research design, the study are, the study population, participants inclusion and exclusion criteria, sample size calculation, sampling procedure, data collection instrument, the instrument validity and reliability, data collection procedure, data collection, data analysis and finally the ethical consideration.

3.2 Research Design

The inquiry assessed determinants of intention to procure unsafe abortion among adolescents seeking youth friendly services. A cross-sectional analytical research design was used to get the wholesome presentation of an occurrence of unsafe abortion among adolescents at a specified time. The design was suitable and multiple outcomes could be assessed (Kumar, 2012). The researcher use quantitative to gather data using structured questionnaire.

3.3 Study Area

Homa Bay County is in southwestern Kenya, Nyanza region along Lake Victoria. It is bordered by Kisumu, Siaya, Kisii, Nyamira, Migori Counties. The County has eight sub counties namely KabondoKasipul, Kasipul, Karachuonyo, Homa Bay Town, Ndhiwa, Rangwe, Mbita and Suba (HCIDP, 2018).

The county population is estimated at 1,101,125 (KNBS, 2014) with a density of 370 persons per sq. kilometer. Homa Bay County economic activity is fishing. The county has a total of 214 health facilities plus a beyond zero clinic van with only 60

facilities offering youth friendly services actively. Poverty level remains high, with the major health problems being teenage pregnancy, abortion, HIV and AIDs and Maternal Mortality among others (HCIDP, (2018-2022).

The study further purposively sampled Homa-bay County and 30 youth friendly facilities (19 private and 11 public).The higher number of the private facilities was because of the structured nature of the youth friendly services (daily) functionality as opposed to government facilities which was a few days in a week and was had oc.

3.4 Study Population

The research participants included adolescents between ages 10-19 years who were seeking youth friendly services. Adolescents in school and out of school were considered in the study irrespective of their educational, occupational status and marital status.

3.5 Inclusion and Exclusion Criteria

3.5.1 Inclusion Criteria

The girls were included in the study if they met the following criteria:

We’re seeking youth friendly services

Age 10-19 years

Guardian provides consent for adolescent to participate in the study

The mature minor adolescent assents to participate in the study

3.5.2 Exclusion criteria

The adolescents who were not seeking youth friendly services.

3.6 Sample Size Calculation

The sample representation of the study was calculated using the fishers formula comprised of respondents aged between 10-19 years.

$N=Z^2pq/d^2$

$N=1.96^2x\ (0.27x0.73) \div (0.05)^2$

N=required sample size

Z=confidence level at 95% (standard level 1.96)

P=Estimated proportion of the adolescence (10-19) who are pregnant (0.27)

Q=Estimated proportion of the rest of the population of adolescence (0.73)

D=margin error 5% (0.05)

N=302 participants

10% loading population will be added to take care of refusals giving a final total sample of 332.

3.7 Sampling Procedure

The study area Homa Bay County was purposively sampled from the 47 counties based on high burden- teenage pregnancy of 23% (KDHS, 2022) it's one of the top fifteen high burden counties on, teenage pregnancy, induced abortion and unmet need of contraceptives among adolescents. The study further purposively sampled 30 youth friendly facilities which offer post abortion care services in the 7 sub-counties, the facilities were distributed as follows High volume facilities (6), Medium Volume facilities (14) and Low volume facilities (10). Then, the researcher proportionately sample 332 in level 4, level 5, and level II and III facilities. In addition, the researcher used systematic sampling method to identify the respondents. To identify

every 5th client, the researcher populated the private numbers given to each adolescents who came for youth friendly services in an excel then selected every 5th respondent into the study.

Table 3.1: Proportionate distribution of study participants per health facility

Facility level	% proportion of participants distribution	Number of participants
Level IV & V	60	200
Level III	30	99
Level II	10	33

3.8 Data Collection Instrument

To answer the objectives, the study adopted both the structured questionnaire and key informant interview guide. The tools were adopted from a similar study done in Ghana whose aim was to investigate factors of unsafe abortion among adolescents and young adults in Ghana in 2013 (Ofori-Anankwah,G. (2013).The questionnaire is segregated into 3 parts; part one generated fundamental information of the participants. The second part assessed on knowledge and third part assessed abortion behavior and pregnancy using the Health Belief Model (HBM) elements. The third part gathered information on the provider and health system factors. While the Key informant guide consists of three parts; provider knowledge, capacity and attitude on abortion services, facility readiness to abortion services, youth friendly services set up and finally affordability of abortion services.

3.8.1 Validity and Reliability of Instruments

The research adopted and used an already developed instrument with established validity and reliability measures. For ease in using the tool, abortion questions were placed in between more favorable questions that were not touching on sexuality to

avoid participant discontinuation before completion. A pretest of the instrument was undertaken at Makongeni health center in Homa Bay County which was not one of the study areas to re-check validity and reliability. The pretest was used to determine any inconsistencies within the questionnaire or questions. From the pretest findings, the participants felt that the tool was long and some of the questions were too sensitive. The researcher reviewed the questionnaire post pretest and removed questions that were not directly relevant to the study to limit the length. As for the sensitivity feedback the researcher mitigated this by equipping the data collectors with comprehensive information on abortion, current abortion practice in Kenya, the tool and the participants were also taken through abortion legislation to understand the parameters of abortion in Kenya, besides, they were also reassured of privacy and confidentiality of the information they gave.

3.9 Data Collection Procedure

3.9.1 Recruitment of the field staff

The data collectors were recruited by the researcher from different youth friendly sites. The researcher used an adolescent sexual reproductive health assessment tool to assess adopted from the Adolescent sexual Reproductive Health Service provision guideline, 2015 to assess their knowledge on abortion, standardization and validity of data. The data collectors were youth peer providers, who were speaking in the local dialect, English and had relevant background and previous experience on Sexual Reproductive health.

3.9.2 Research Assistant's Training

A one and half day training session was conducted by the researcher who was assisted by the Sub-county Health promotion officer-Homabay-County. The Training sessions included overview of abortion nationally and locally, why the study (objectives), who will be involved (interviewed), communication skills, questionnaire, feedback, how the study findings will be used, storage of the tool and the nature of interviews.

The sessions were held at Tanyoka resource center a community-based organization in Rachuonyo North-Kanyaluo Ward. The facilitators adopted experience sharing, lectures, demonstration, role plays, and discussion, mock as some of the teaching. Each interviewer in each facility was to undertake the interviews. Thus, a total of 20 field team members were engaged. Various measures were adopted to ensure trustworthiness of the information collected.

3.9.3 Pre-testing

To establish soundness of the questionnaire, the researcher pre-tested 20 questionnaires in one of the facilities which was not part of the facilities participating in the study-Makongeni health center in Homa Bay County. The pretest test was entered into a spreadsheet and an analysis was done to confirm if the results were the thoughts of the researcher and check on consistency of the questionnaire. The researcher then analyzed feedback revised the questionnaire by omitting questions that were repeated and were not relevant to the study.

3.9.4 Data Collection

The researcher collected data in 30 facilities in the 7 sub-counties, six sub-county had a total of 3 facilities each (level IV, and a private facility (Level III & II) depending on availability apart from Homa-bay County that had a total of 12 facilities because it's a referral point to the peripheral facilities. Thus, most clients seek services within the county as opposed to other sub-counties (Level V, 3-Level IV, level III and Level II, 3-Level III & 3-level II private). In addition, data was also collected among 30 health care workers in each facility. Every facility had one data field staff at a time apart from the referral hospital which had 2. Data collection took 6 months; this was as results of Covid-19 pandemic hence the client flow was very low in all facilities and administratively groups were not allowed. The data collection tools were shared quite in advance with the field staff and in situation where there was need then the lead data field staff would send to them. Before data collection a thorough explanation of the tool to the participants was done and the data staff ensured the participant were comfortable. Data collection process was accomplished with no hitches; the lead data field staff engaged each field staff on phone and face to face weekly to clarify issues.

3.10: Data Analysis

Uni-variate analysis was used for both independent and dependent variables to look at the relationship between the dependent variable and all other independent variables, separately. For the HBM Likert scale statements, the values were collapsed into agree and disagree. Scores 4 and 5 were considered as agree while 1, 2, and 3 were considered as disagree. For multivariate analysis, total score for each domain (perceived susceptibility, severity, benefits, barriers, and self-efficacy) was

calculated by summing the responses to the individual questions. The possible scores ranged between 3 – 15 (susceptibility), 6 – 30 (severity), 2 – 10 (benefits), 6– 36 (barriers) and 6 – 36 (self-efficacy).

The researcher used stepwise selection, the step wise selection was to align all the variables and remove those which were redundant and retain those that were relevant to the study and in each step a model was fitted. The analysis was done into three steps. Finally, multivariate logistic regression analysis was done by fitting the logistic regression model for determinants of intention for induced abortion after controlling the other factors. In the bivariate analysis, independent variables significantly associated with the dependent variable at P-value ≤ 0.2 were included in the multivariable logistic regression analysis and variables significantly associated at p-value ≤ 0.05 were identified as determinants of intention for induced abortion. The degree of association was assessed using adjusted odds ratios. Adequacy of the model was assessed using Hosmer and Lemeshow goodness of $p > 0.05$.

3.11 Ethical considerations

The data collectors were trained comprehensively, which enabled them to take the participants through the study objectives, study purpose, benefits and the risks involved. The respondent's s were assured of transparency and confidentiality of the data generated from the researcher and their individual information respectively. They were also made aware of voluntarism (Ritchie *et al.,* 2013).

To meet the research requirements, the researcher sought and was granted approval from the Institutional Research and Ethics Committee (IREC) of Masinde Muliro University of Science and Technology (MMUST). The researcher equally obtained permit from the National Commission for Science, technology, and Innovations

(NACOSTI) and Permission to carry out the study in Homa Bay County was sought from the County Health Executive, County Health Directors of Homa Bay County Referral Hospital, and the research committee of the hospital.

3.11.1 Beneficence

The researcher in the study ensured no participants were exposed to any harm physically, psychologically, economically, and socially. The researcher ensured that the questionnaires were individualized and the participant had a right to decline to respond to a sensitive question, discontinue with the interview and rescheduled if still willing.

The agreement before the interview with the participant on the study process was sustained and could only change with the request of the participant. The respondents were made aware that the inquiry might not benefit them directly but will help the county to improve the youth friendly services and minimize maternal deaths because of unsafe abortion. Childress, 2001)

3.11.2 Respect for Human Dignity

The study allowed participants to share their views, ask questions, and opt for the interview without coercion, denial of services or reward to the action. The participants after full disclosure and clarity of the study were allowed to decide to continue or not to continue voluntarily which was captured in the consent at the start of the interview (Denzin & Lincoln, 2011).

3.11.3. Informed Consent

The research majorly focused on young girl's ages 10-19 years. In the Kenyan constitution any one below 18 years cannot give consent, while the mature minors are permitted to give consent. Thus, the researcher allowed the mature minors to sign assent and also engaged the guardians of adolescents to consent where necessary. The researcher applied the four elements of informed consent in this study: giving all the information about the study to the respondent. Free will to participate in the study with no coercion, No prejudice or discrimination even in instances that the respondent opt out and are allowed to opt out at any given stage. The researcher also used both written informed and assent consent forms which were signed by either the guardians or participants who participated in the study (Zegwaard, (2015).

3.11.3.1 Informed Assent

Being cognizant that every human being has a right to his/her reproductive health rights irrespective of age, the researcher involved the adolescents by assenting to the research study. The adolescents assented to the study after the researcher obtained consent from the parents. In the same way the researcher informed the adolescents of voluntary participation clear understanding of the research objective and why, right to opt out at any stage without prejudice and disclosure of essential information (Zegwaard, (2015).

3.11.4. Justice

The study ensured equal treatment and respect to all participants who consented and were systematically sampled, which gave an opportunity to all. The questionnaires had no identifiable labels of participants thus maintaining privacy.

3.11.5. Confidentiality

Participants were given a leeway to introduce themselves or not since the information was basically not required. As for the data collected the participants were assured of its safety and the information was only accessible to the researcher only. The respondents were informed that the report will be shared with Masinde Muliro University of Science and Technology, Homa Bay-County and other stakeholders whose interest was on Adolescent Sexual Reproductive Health programming (Mugenda, 2003).

CHAPTER FOUR

RESULTS

4.0 Overview

This section presents the results of the study guided by the study objectives of the study sample size was 332 and the response rate was 89.5% (297 participants). The variation was as a result of participants who voluntarily dropped off reporting sensitivity of abortion.

4.1. Socio-demographic Characteristics of Participants

Table 4.1: summarizes the distribution of study participants' socio-demographic characteristics. Of the 332 who were interviewed 297 (89.5%) had completed questionnaires that were used for the analysis. A majority of participants were in the age bracket of 10 – 17 years (58.9%) with an average of 17.2 (± 1.3) and ranged between 14.0 to 19.0 years. Majority were single (63.3%) with two-thirds having attained secondary level of education (67%). A higher proportion (44.4%) were of SDA faith with the least being Catholics (13.5%). Majority were Luo's (89.6%), and most had a parity of more than one (80.8%) and coming from a family size of 4 – 6 members (52.5%). A higher proportion (81.8%) came from a family with a previous annual income of more than KSh. 30,000/=. More than a third (34.3%) were pregnant among whom 12.8% wanted induced abortion. Of the 297 who attended Youth Friendly Clinic, 17.5% (n = 52) had intended or had induced abortion.

Table 4.1: Socio-demographic characteristics

Variable	Category	N	Percentage
Age cohort in years	10 – 17	175	58.9
	18 - 19	122	41.1
Mean ± SD (Range) in years	17.2 ± 1.3 (14.0 – 19.0)		
Marital status	Single	188	63.3
	Married	109	36.7
Level of education	None	14	4.7
	Primary	84	28.3
	Secondary	199	67.0
Religion	SDA	132	44.4
	Anglican	19	6.4
	Catholic	40	13.5
	Other Protestants	106	35.7
Ethnicity	Luo	266	89.
	Suba	27	9.1
	Luhya	4	1.3
Parity	< 1	57	19.2
	≥ 1	240	80.8
Family size	1 – 3	67	22.6
	4 – 6	156	52.5
	≥ 7	74	24.9
Total household income last year (KSh.)	< 30,000	54	18.2
	≥ 30,000	243	81.8
Currently pregnant/Previously pregnant	Yes	102	34.3
	No	195	65.7
Currently pregnant and has intention for induced abortion	Yes	13	12.8
	No	89	87.2
Previously pregnancy and had an intention to induced abortion	Yes	39	20
	No	156	80

4.2. Socio-Demographic Characteristics Influencing Intention to Procure Unsafe Abortion

Table 4.2; shows results on socio-demographic characteristics influencing intention for induced abortion among the study participants. Significant association was reported among respondents who were multiparous (χ^2 = 9.6; df = 1; p = 0.002) with a higher proportion (20.8%) having had an intention of or having had induced abortion. Participants with less than KSh. 30,000/= in the last one year (χ^2 = 8.7; df = 1; p = 0.003), or those whose close friend died, or family member had serious

medical problem (χ^2 = 12.9; df = 1; p = 0.004) were significantly having intention to procure unsafe abortion.

Table 4.2: Socio-demographic characteristics influencing intention to procure unsafe abortion

Variable	Category	N	Intention to procure unsafe abortion		χ^2	df	P-value
			Yes (%)	No (%)			
Age cohort in years	10 – 17	175	17.1	82.9	0.04	1	0.8
	18 - 19	122	18.0	82.0			
Mean age in years ± SD (Range)			17.6 ± 1.3 (15 – 19)	17.2 ± 1.2 (14 – 19)	- 0.3	295	0.8$
Marital status	Single	188	19.7	80.3	0.7	1	0.2
	Married	109	13.8	86.2			
Level of education	None	14	14.3	85.7	0.5	2	0.8
	Primary	84	15.5	84.5			
	Secondary	199	18.6	81.4			
Religion	SDA	132	18.2	81.8	1.0	3	0.8
	Anglican	19	10.5	89.5			
	Catholic	40	15.0	85.0			
	Other Protestants	106	18.9	81.1			
Ethnicity	Luo	266	19.2	80.8	4.9	2	0.1
	Suba	27	3.7	96.3			
	Luhya	4	0.0	100.0			
Parity	< 1	57	3.5	96.5	9.6	1	0.002*
	≥ 1	240	20.8	79.2			
Family size	1 – 3	67	10.4	89.6	3.3	2	0.2
	4 – 6	156	18.6	81.4			
	≥ 7	74	21.6	78.4			
Total household income last year (KSh.)	< 30,000	54	3.7	96.3	8.7	1	0.003*
	≥ 30,000	243	20.6	79.4			
Has experienced in last 12 months	Close friend died or close family member developed complications	77	7.8	92.2	12.9	3	0.004*
	Was unemployed	25	28.0	72.0			
	Was a mother	170	17.7	82.3			
	None	25	36.0	64.0			

$ t-test, * P-value = .< 0.05

4.4. Association between Perceived susceptibility and intention to procure unsafe abortion

Perceived susceptibility refers to a belief of developing a health problem as a result of a particular condition .For instance, Complications occurring as a result of unsafe abortion. For this reason adolescents would protect themselves from health dangers occurring as a result of the unsafe abortion and embrace behaviors that protect them from the health problem. During adolescence period, risk perception, and risk taking are contested against long-term consequences until the time when cognitive abilities mature through a neuro developmental growth period. Adolescents, who believe that their physical health can protect them from experiencing abortion complications, are more likely to have an intention to procure an abortion.

The current study results reveal a strong association between the beliefs that the adolescent's fitness and strength makes it more likely that they will not conceive if they have unprotected sex (Table 4.3). Those who agreed that their physical health would not make them get pregnant even if they didn't practice safe sex had higher probability of having intention to procure unsafe abortion. Respondents who disagreed were less likely to have opted for induced abortion (OR: 4.5; 95% CI: 2.3 – 8.6; $p < 0.0001$). Furthermore, study participants who nodded not to talking about pregnancy and induced abortion with their partner were thrice as likely to have had the intention for induced abortion (OR: 3.2; 95% CI: 1.7 – 6.1; $p = 0.0002$).

Table 4.3: Bivariate analysis on the association between perceived susceptibility of the consequences of unsafe abortion and intention to procure unsafe abortion

Variable	Category	N	Intention for induced abortion		OR	95% CI	P-value
			Yes (%)	No (%)			
An adolescent can get pregnant for the first time she has unprotected sex	Agree	169	16.6	83.4	0.9	0.5 – 1.6	0.6
	Disagree	128	18.7	81.3			
My physical health makes it more likely that I won't get pregnant if we have unprotected sex	Agree	124	29.8	70.2	4.5	2.3– 8.6	< 0.0001*
	Disagree	173	8.7	91.3			
I do not talk about pregnancy and induced abortion with my partner	Agree	137	26.3	73.7	3.2	1.7 – 6.1	0.0002*
	Disagree	160	10.0	90.0			

* P-value = .< 0.05

4.5. Association between perceived severity of consequences of unsafe abortion and intention to procure unsafe abortion

Perceived severity refers to negative thoughts, life threatening or consequences an individual believe will occur if he/she expose her/him to an unsafe abortion. The health belief model proposes that individuals who foresee a consequence a rising from unsafe abortion would adopt behavior's that would prevent them from procuring an unsafe abortion such as; carrying pregnancy to term or using safe abortion methods that would protect them from unsafe abortion complications.

4.5.1 The relationship between perceived severity of consequences of unsafe abortion and intention to procure unsafe abortion

Participants who perceived that their economic growth and career/profession development was at risk with pregnancy were 90% less likely (OR: 0.1: 95% CI: 0.05 – 0.20; $p < 0.0001$) to have had an intention to procure unsafe abortion. In contrast, those who believed that if they continued with the pregnancy their academic

career would be endangered were 4.3 times as likely to have had the intention to procure unsafe abortion, the findings being highly statistically significant (OR: 4.3: 95% CI: 2.2 – 8.1; p < 0.0001) suggesting that academic career is rated higher than job career for adolescents. Although at borderline level of statistical significance, respondents who were of the view that the problems they would experience if they were pregnant would last a long time were up to 1.7 times as likely to have intention to procure unsafe abortion (OR: 1.7: 95% CI: 0.9 – 3.1; p = 0.07).

Table 4.4: Bivariate analysis on the association between perceived severity of the consequences of unsafe abortion and intention to procure unsafe abortion

Variable	Category	N	Intention to procure unsafe abortion		OR	95% CI	P-value
			Yes (%)	No (%)			
Conceiving would devastate at this age.	Agree	99	14.1	85.9	0.7	0.3 – 1.4	0.3
	Disagree	198	19.2	80.8			
Problems I would experience if I conceived would be long –term	Agree	127	22.1	77.9	1.7	0.9 – 3.1	0.07
	Disagree	170	8.1	85.9			
Conceiving would shift my plans and life	Agree	91	16.5	83.5	0.9	0.5 – 1.7	0.7
	Disagree	206	18.4	81.6			
My economic growth and professional career would be interfered with pregnancy	Agree	220	7.7	92.3	0.1	0.05 - 0.2.0	< 0.0001*
	Disagree	77	45.4	54.6			
The thought of being pregnant scares me	Agree	239	26.3	83.7	0.7	0.3 – 1.4	0.3
	Disagree	58	22.4	77.6			
If I continue with this pregnancy my academic career would be endangered	Agree	65	36.9	63.1	4.3	2.2 – 8.1	< 0.0001*
	Disagree	232	12.1	87.9			

* P-value = .< 0.05

4.6. Association between perceived barriers to accessing abortion services and intention to procure unsafe abortion

Perceived barriers are obstacles either from the individual, institution or policies that hinders an individual from accessing abortion services. Besides, a situation can be life threatening to the health of an individual but the barrier will hinder the individual to act and adopt a healthy behavior Table 6; presents results on bivariate analysis on association between perceived barriers and induced abortion. Respondents who agreed that they were worried about the changes that would arise because of pregnancy (OR: 0.06; 95% CI: 0.03 – 0.12; p <0.0001), were afraid that carrying pregnancy would hurt me (OR: 0.05; 95% CI: 0.02 – 0.10; p <0.0001, delivering at this tender age would affect future fertility (OR: 0.07; 95% CI: 0.03 – 0.17; p <0.0001, feared pregnancy would affect their libido (OR: 0.07; 95% CI: 0.04 – 0.14; p <0.0001) had a significantly lower odds of opting for induced abortion. On the other hand, while feeling of embarrassment when talking about pregnancy and induced abortion with my partner was statistically significantly associated with increased proportion of intention to procure unsafe abortion (OR: 11.7; 95% CI: 5.8 – 23.6; p <0.0001.

Table 4.5: Bivariate analysis on the association between perceived barriers to abortion services and intention to procure unsafe abortion

Variable	Category	N	Intention to procure unsafe abortion		OR	95% CI	P-value
			Yes (%)	No (%)			
I am afraid that the outcome of pregnancy would affect future fertility	Agree	80	11.3	88.7	0.5	0.2 – 1.1	0.08
	Disagree	217	19.8	80.2			
I am worried about the changes that would arise because of pregnancy	Agree	221	5.9	94.1	0.06	0.03 – 0.12	< 0.0001*
	Disagree	76	51.3	48.7			
I fear carrying pregnancy would hurt me	Agree	218	5.1	94.9	0.05	0.02 – 0.10	< 0.0001*
	Disagree	79	51.9	48.1			
Carrying pregnancy to term at this tender age would affect future fertility.	Agree	182	4.4	95.6	0.07	0.03 – 0.17	< 0.0001*
	Disagree	115	38.3	61.7			
I fear that pregnancy would affect my libido	Agree	219	6.4	93.6	0.07	0.04 – 0.14	< 0.0001*
	Disagree	78	48.7	51.3			
I often feel embarrassed when talking about pregnancy and induced abortion with my partner	Agree	89	43.8	56.2	11.7	5.8 – 23.6	< 0.0001*
	Disagree	208	6.3	93.7			

* P-value = .< 0.05

4.7. Association between perceived self-efficacy and intention to procure unsafe abortion

Self-efficacy refers to an individual's ability to actively drive his /her agency and demand access to a service with confidence. Adolescents are risk takers and a well-defined agency to their health issues would influence their health change. The six independent variables examined under self-efficacy were statistically significantly

negatively associated with intention for unsafe abortion. Respondents who confirmed that disclosing their thoughts on unsafe abortion and carrying pregnancy till delivery was impossible (OR: 0.14; 95% CI: 0.07 – 0.29; p <0.0001), they were confident to seek a safe abortion or receive ANC services if it became available (OR: 0.14; 95% CI: 0.07 – 0.27; p < 0.0001), would not insist on getting unsafe abortion or carrying pregnancy to term if a partner threatened to leave them if they it (OR: 0.11; 95% CI: 0.05 – 0.22; p < 0.0001) felt capable of discussing the importance of opting for induced abortion or carrying pregnancy to term with a sex partner (OR: 0.11; 95% CI: 0.02 – 0.10; p < 0.0001), would go for an induced abortion or carry pregnancy to term even if my partner did not want me to (OR: 0.03; 95% CI: 0.01 – 0.07; p < 0.0001) or felt their partner was comfortable talking about pregnancy and induced abortion with me (OR: 0.05; 95% CI: 0.02 – 0.11; p < 0.0001).

Table 4.6: Bivariate analysis on the association between perceived self-efficacy and intention to procure unsafe abortion

Variable	Category	N	Intention to procure unsafe abortion		OR	95% CI	P-value
			Yes (%)	No (%)			
It would be impossible to disclose my thoughts on induced abortion or carrying the pregnancy to term to my partner	Agree	184	7.1	92.1	0.14	0.07 – 0.29	< 0.0001*
	Disagree	113	34.5	65.5			
I am confident that I could seek a safe abortion or receive ANC services if it became available	Agree	216	8.8	91.2	0.14	0.07 - 0.27	< 0.0001*
	Disagree	81	40.7	59.3			
If my partner threatened to leave me, l would not insist on getting an induced abortion or carrying pregnancy to term	Agree	186	5.9	94.1	0.11	0.05 – 0.22	< 0.0001*
	Disagree	111	36.9	63.1			
I am confident of discussing the two options (opting for induced abortion or delivering.	Agree	215	4.7	95.3	0.05	0.02 – 0.10	< 0.0001*
	Disagree	82	51.2	48.8			
I would seek for an induced abortion or deliver even if my partner did not want me to	Agree	227	4.4	95.6	0.03	0.01 – 0.07	< 0.0001*
	Disagree	70	60.0	40.0			
My partner is comfortable talking about pregnancy and induced abortion with me	Agree	210	4.8	95.2	0.05	0.02 – 0.11	< 0.0001*
	Disagree	87	48.3	51.7			

* P-value = .< 0.05

4.8. Association between health care factors and intention to procure unsafe abortion

Table 4.7; shows results on association between opinion of participants who aid in health care services and intention to procure unsafe abortion. Participants who stated that they were blamed by someone for their condition were 99% unlikely to have had an intention to procure unsafe abortion (OR: 0.1; 95% CI: 0.03 – 0.51; p = 0.0007). However, respondents whose opinion was that waiting time was short were 3 times more likely to have intended to go for induced abortion (OR: 3.2; 95% CI: 1.1 – 9.4; p = 0.2). The following results, although not statistically significant, appear to be important with reference to the upper limit of 95% CI levels. Notably, respondents who felt that healthcare providers treated them well were up to 4 – fold more likely to go for safe abortion as confirmed by those who stated that waiting time was between 15- 30 minutes who were up to 3.8 as likely to go for safe abortion as opposed who though it took longer. Again, participants who said that 'healthcare worker informed them when to return for follow up' or that they 'would recommend to the services to peers experiencing the same to visit the health facility were up to 6.7 more likely to go for safe abortion.

Table 4.7: Bivariate analysis on the association between health system factors and intention to unsafe abortion

Variable	Category	N	Intention to procure unsafe abortion		OR	95% CI	P-value
			Yes (%)	No (%)			
Healthcare providers treated me well	Yes	237	19.0	81.0	1.8	0.8 – 4.2	0.2
	No	60	11.7	88.3			
Health care provider was understood my problem	Yes	238	18.1	81.9	1.2	0.6 – 2.7	0.6
	No	59	15.3	84.7	84.7		
I was blamed by someone for my condition	Yes	63	3.2	96.8	0.1	0.03 – 0.51	0.0007
	No	234	21.4	78.6			
Length of time taken to see healthcare provider today	15 - 30 minutes	250	18.4	81.6	1.5	0.6 – 3.8	0.4
	> 30 minutes	47	12.8	87.2			
Waiting time	Short	241	19.9	80.1	3.2	1.1 – 9.4	0.02
	Long	56	7.1	92.9			
Affordability of abortion services	Yes	250	18.4	81.6	1.5	0.6 – 3.8	0.4
	No	47	12.8	87.2			
Healthcare worker information on return date	Yes	268	18.3	81.7	1.9	0.6 – 6.7	0.3
	No	29	10.3	89.7			
Healthcare provider told me why I need to return for follow up					1.4	0.6 – 3.3	0.4
	Yes	260	18.1	81.9			
Healthcare provider guidance on when to visit the facility	No	37	13.5	86.5	1.4	0.5 – 3.8	0.5
My testimony would be a motivation to someone with similar experience to visit the facility for services	Yes	268	18.3	81.7	1.9	0.6 – 6.7	0.3
	No	29	10.3	89.7			

* P-value = .< 0.05

4.9. Determinants associated with intention for induced abortion

Table 4.8; shows results on multivariate analysis on determinants of intention to induced abortion. A stepwise selection or sequential replacement method was used. The method assess the statistically significance of each independent variable in a linear regression. It combines both the forward and backward selection, the forward selection starts with nothing but keeps on adding new variables testing for statistical significance. While in the backward selection approach the variables that do not provide any statistical significance are removed from the model. Twenty-two variables with a p-value of ≤ 0.20 were used at the start-up of the model development. Out of these, only five (5) remained in the final model. Having found that pregnancy within the first three months was a positive predictor of intention for induced abortion while perceived self-efficacy, barriers, consideration that waiting time to receive care was short and being nulliparous were negatively associated with intention for induced abortion. The effect of realizing that one is pregnant within the first three months was most important with the odds being almost 12 times higher for adolescents who had the intention for induced abortion compared to those who did not want it (OR: 11.8; 95% CI: 1.334 – 24.917; $p < 0.0001$). The odds of adolescent's intention for induced abortion was over 90% significantly lower for those with higher rating on self-efficacy (OR: 0.003; 95% CI: < 0.0001 – 0.031; $p < 0.0001$) and perceived barriers (perceive induced abortion as threatening) (OR: 0.04; 95% CI: 0.006 - - 0.254; $p < 0.0001$), those who viewed waiting time as short (OR: 0.052; 95% CI: 0.003 – 0.918; $p = 0.020$) and nulliparous (OR: 0.064; 95% CI: 0.005 – 0.918; $p = 0.028$). Finally, being single, having annual income of less than Ksh. 30,000/=, having had a dependant or close family member who developed a medical complication, access and duration of having access to internet, being currently

pregnant, positive attitude of partner towards carrying pregnancy to term or inducing abortion, use of male condom as the last method of pregnancy prevention, not having had fever when pregnant, recommendation by health care provider to visit Youth Friendly Centre, having ever received information about abortion, having been treated well by health care providers or having been blamed for the condition had no statistically significant effect on having an intention for induced abortion. To test the goodness-of-fit of the final model, the Hosmer-Lemeshow Test was used to check on the model fitness. The resultant Hosmer-Lemeshow goodness-of-fit test statistic was 0.9994 which is greater than 0.05. Thus, the null hypothesis that there is no difference between observed and model predicted value is not rejected. This implies that the model estimates are adequate to fit the data at an acceptable level.

Table 4.8: Determinants associated with intention for induced abortion

Variable	Logistic Regression*		P-value
	Adjusted OR	95% CI	
Self-efficacy	0.003	< 0.0001 – 0.031	< 0.0001
Barriers	0.04	0.006 – 0.254	< 0.0001
Less than 3 months when realized was pregnant	11.8	1.334 – 24.917	0.004
Waiting time before receiving care was short	0.052	0.003 – 0.918	0.020
Nulliparous	0.064	0.005 - 0.918	0.028

* Hosmer and Lemeshow (Chi sq. 0.76; df=8; p = 0.9994)

CHAPTER FIVE

DISCUSSION

5.1. Overview

This section presents discussion of study results guided by the study objectives. The chapter begins by discussing socio-demographic determinants to intention to procure unsafe abortion among adolescents followed by effects of adolescents' perceived susceptibility to consequences of unsafe abortion and intention to procure unsafe abortion ; the influence of adolescent's perceived severity to consequences of unsafe abortion and intention to procure unsafe abortion; examine adolescent perceived barriers to access youth friendly services and intention to procure unsafe abortion and finally, evaluate the influence of health system factors and intention to procure unsafe abortion among adolescent's.

5.2. Socio-demographic determinants associated with intention to induced abortion

The study findings show that adolescents who were nulliparous had significant association to intention to induced abortion. The findings were similar to a research in the land of Sahara which noted that many nulliparous adolescents who conceived were opting for termination of pregnancy as opposed to delivery (Guttmacher, 2019). Besides, a study finding in Zambia which highlighted that girls aged less than 19 years had higher intention to induced abortion due to: schooling, protection of future aspiration, stigma of teenage pregnancy, rape, transactional sex, health and incest. Indistinguishable outcomes were also echoed in an inquiry in South Africa, Bangladesh, Guadeloupe and Brazil and in Nigeria (Espinoza, et, al 2020). In addition, studies in Nigeria and Ghana also supported the findings by reporting that

approximately 50% of abortions were among nulliparous adolescents. Likewise, in Asian countries abortion rates among adolescents was highest in 11 out of the 12 Asian countries. A replica was observed in a study in Nepal which reported 42% of abortions occurring among nulliparous adolescents.

Subsequently, the study findings reported association between high income levels with intent to procure unsafe abortion among adolescents. Which was same to a study in Ethiopia that confirmed that adolescents in higher wealth quintile experienced more abortions compared to the lower wealth quintile adolescents (Gilano et, al., 2021). On the contrary, a study in Kisumu further reported low income capacity or lack of it for that matter was a positive for the decision to procure unsafe abortion (Rehnstrom *et al.,* 2018). This was supported by a study in Addis Ababa, Ethiopia which also confirmed that adolescents at the bottom wealth quintile had higher probability of procuring unsafe abortion as compared to those at the top wealth quintile. This is because abortion is attached to costs and the costing depends with the facility, clients, provider and gestation of the pregnancy. Adolescents at this age have no income hence would get it as a challenge to access it. While at the same time the adolescents with low income who see pregnancy as a burden opted for termination in whichever way possible.

Abortion experiences by others also played a role in adolescents having intent to procure unsafe abortion. The current study found out that adolescents whose close friend or family member had serious medical problem resulting from induced abortion were not likely to have an intention to procure unsafe abortion ($\chi^2 = 12.9$; df = 1; p = 0.004). In which contrasts with a study in Kisumu which reported previous experiences and prior knowledge on complications arising from unsafe

abortion, the adolescents would still proceed to procure abortion. Their reasoning was you never know when one will die and what will cause his/her death (Rehnström et, al. (2018). One of the adolescents testified as below:

"Being so fearful of the whole abortion processes and the possible outcomes, I still will go for termination because no one knows her destiny nor what will cause his/her death so if it is abortion so be it"

5.3. Effects of adolescents' perceived susceptibility to consequences of abortion and intention to procure unsafe abortion

In the current study, Adolescents who perceived that their physical health makes them more likely not to get pregnant if they have unprotected sex were more susceptible to having intention to induced abortion. The perception by adolescents of being immune to pregnancy because of them being physically fit is a result of their inadequate psychological development. Moreover, they also experience countless influences from self, intrapersonal and systems that affect SRH understanding, attitudes , behavior and approach to managing their abortion (Scholmerich *et al.*,2016; Okigbo et al.,2015; Maticka-Tyndale *et al.,* 2010; Steinberg L., A 2008; Phillips *et al.,* 2016 ; Johnson *et al.,* 2009). During adolescence period, the adolescents view issues differently, most of the time they act on a problem hastily without thinking of the consequences until the time when the psychological abilities mature through a neurodevelopmental growth period (Johnson *et al.,* 2009; Galvan *et al.,* 2006; Linnemayr *et al.,* 2015). Young girls experience quite a number of challenges while trans-versing their sex independence given their vulnerabilities, a lack of independent force to demand for safe sex, and limitations in accessing sexual health information and services (Maticka-Tyndale *et al.,*2010; Nwaozuru *et*

al., 2020; Sayles *et al.,* 2006 ; Closson *et al.,* 2018). On a social level, girls experience a higher level of stigma socially related to gender classification norms, the position he/she holds in the society and lack of empowerment which at times leads to non-consensual sex or transactional sex (Hall-KS *et al.,* 2018; Stoebenau *et al.,* 2016). Furthermore, sexual and reproductive health information and services may be challenging to obtain as a result of traditional and communal norms about adolescent carnal knowledge, which creates stigma to accessing safe abortion services and post-abortion care where available (Nyblade *et al.,* 2017 ; Kumar *et al.,*2009). This study has a correlation with a study in Kisumu which equally confirmed the ignorance among adolescents on pregnancy. They lack knowledge on how to prevent unintended pregnancy, contraceptive use and abortion. In a forum with teachers and students, the researcher also noted that the sources of information used by the adolescents were; social media and peers which was not comprehensive and factual limiting their knowledge and increasing the risk to unsafe abortion (Håkansson *et al.,* 2020).

"With no education quite a number of us have no capacity to negotiate safe sex with our partners and we don't use contraceptives"

"Adolescents are risk takers, they like to try something and they also receive information from many sources which are not factual. With all these energy their knowledge should be guided through structured comprehensive sexual Education to enable them make an informed choice"

The study also revealed that adolescents who were not comfortable in disclosing to their partners their feelings on pregnancy and intention to procure unsafe abortion were more likely t to procure unsafe abortion. This was consistent with a study in

Low and Middle income countries whose findings highlighted the secrecy that adolescent held with abortion issues to avoid loss of respect, their dignity stigma and abuse (Zia et al 2021). While in In Zambia, despite having unrestricted laws on termination of pregnancy, the adolescents still performed clandestine abortion to safe guard their secret. The desire not to disclose among adolescents was also because of the Christian and culture values they uphold, in a study in Kisumu, the study participants reported that sex was holy and was only to be practiced by the married people. It was also viewed as an act of reproduction and only those who were married were allowed to. Besides, those who were not married like the adolescents having sex were such a taboo and not acceptable (Håkansson *et al.,* 2020). These results were further confirmed through a FGD where adolescents said the following;

"Talking about my pregnancy with my mum or dad clearly confirms to them that l'm an indiscipline child and the trust level between us deteriorate, to avoid this l will gladly opt for termination"

*"*Immoral behavior at a tender age was viewed as the girl's character and behavior that would persist forever and was unforgivable. The study findings are also in line with other studies in Zambia which highlighted that internalized stigma and shame led Adolescent assess their emotions, do a comparison of the aftermath of termination and delivery as well as reflecting on post abortion feelings. In Ghana an in-depth interviews (IDI) carried out among adolescents revealed that stigma occurred as a result of individual thoughts/perceptions, faith affiliation, Religious norms, social platforms and worse of the legal restrictions. A majority (30-60%) viewed abortion as unacceptable or refused to share their feelings towards the internalized stigma. Besides, lack of support system, being neglected by the person

who should was a concern among adolescents in Zambia and Ghana Esia-Donkoh *et al.,* 2015). In addition, the adolescents described the emptiness they feel post abortion because of limited or lack of support from those close to them. Adolescent pregnancy is unacceptable and it can lead the culprit to legal battle through the child's act bill hence most of the time the perpetrators deny the act of being intimate with the adolescent and pregnancy. While the adolescents due to lack of self-efficacy feels shy or afraid to say who made her pregnant(Dahlbäck et al 2010).In a study in Ghana adolescent girls were sent far away either to aunts, grand parents to hide the shame. Besides, lack of privacy and confidentiality was experience by the adolescents through the service providers who talked to other community members about them. (Aziato *et al.,* 2016).

5.4. The influence of adolescent's perceived severity to intention to procure unsafe abortion

In the current study the adolescents who perceived severity to consequences to procure a safe abortion as endangered academic career and professional growth had close association and intent to procure unsafe abortion. Uniformity of the study findings was observed in a study in Kenya and Uganda. The two studies highlighted that the adolescents who were pregnant viewed pregnancy as a hindrance to their education and professional pursuits and thus decided to abort (Aziato *et al.,* 2015; Cleeve *et al.,* 2017. This was further supported by a study that reported that despite adolescent knowledge on abortion stigma, the cultural and religious norms on abortion which branded abortion as unacceptable and immoral. The adolescents could hear none of that and pursued abortion. They believed that abortion was the only way that could allow them to pursue their education and professional goal

(Donkoh *et al.,* 2015. In further studies in Brazil and USA the adolescents expressed that unsafe abortion hide their sexuality inadequacy, protected their respect and allowed them not to discontinue their schooling (Ralph *et al.,* 2014). Furthermore, a study in Zambia, among girls of 19 years old confirmed to opt for abortion to continue with studies as well as professional growth. These findings were echoed in Bangladesh, Brazil, South Africa, and Guadeloupe (Flory et, al., 2014).

5.5. Adolescent perceived barriers to intention to procure unsafe abortion

In this study adolescents who perceived barriers such as; carrying pregnancy would hurt them, would cause permanent infertility and finally would affect their sex drive had significant low odds of opting for induced abortion. In contrast with a study in South Africa reported that adolescents who opted for abortion feared the trauma as a result of delivery (Ramakuela *et al.,* 2016; Flory *et al.,* 2014). While another study by Mitchell *et al.,* 2020 that was consistent with this study in terms of lack of SRH knowledge and misconceived ideas that were barriers to access to abortion services.

5.6. Influence of health system factors and intention to procure unsafe abortion

Adolescents who were blamed by the health care provider of their condition were unlikely to go for safe abortion; rather they opted for unsafe abortion. Uniformity of the findings is reported in a study in United States, where many young adolescents shared their experience on the attitudes and care they received from health care workers, which they described as discriminate and public shaming (white *et al.,* 2018). In addition, the health care worker -patient relationship was fowl which created fear among them (O'Connor *et al.,* 2019). Besides, Adolescents were not comfortable with health care workers who lived within the community a common practice among most health care workers. Moreover, the health care workers were

relatives, neighbors and they believed that their secret could not be kept safe by them (Mitchell *et al.,* 2020).

Furthermore, a study in Kisumu reported disapproval of abortion among the nursing fraternity; the nurse's attitudes were quite evident while attending to adolescents seeking abortion and commonly reported unwillingness to provide abortion care. Consequently, the health care workers noted that their withdrawn services compromised the quality of abortion services the adolescents received.. Besides, the health care workers were also stigmatizing their fellow colleagues providing abortion services. This had harmful professional consequences (Rehnstrom et al., 2018).

The study further found out that the adolescents who reported short waiting time, being treated well, a friendlier health care provider and friendly communication on return date were likely to have intention to procure safe abortion. In Australia a study reported that Service efficiency and effectiveness is a quality indicator and most studies have shown that health facilities which embrace efficiency not only improve utilization but also continuity of services among adolescents (Dawson et, al., 2016). This finding further aligns to a study in Ghana that reported refusal by adolescents to patronize abortion services because of a feeling of widespread negative attitude of service providers towards adolescents (Kyilleh*et al.*, (2018).

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1. Overview

This section provides the study conclusions and recommendations derived from study results as guided by the objectives. The conclusion and recommendation describes the researcher's thoughts on the study result outcomes and the researcher proposing actions to be adopted by the respective bodies to limit the occurrence of unsafe abortion as well as improving the adolescent's sexual reproductive health service delivery.

6.2. Conclusions

6.2.1 Effects of adolescents' perceived susceptibility to consequences of abortion and intention to procure unsafe abortion

Unsafe abortion has been confirmed to be a viable option to terminate unwanted pregnancies among adolescents in the study, little is understood about adolescents psycho-social abortion experience especially those age 10-14 years, despite, the existing policies and program interventions targeting them. Furthermost, adolescents experience proximal pressure from peers, partners and parents which influence their reproductive health choices and affect their thought process and worsen by their cognitive inadequacy. For this reason there is need to establish support services such as prevention, comprehensive Sexual Reproductive Health Education, post abortion care as well as Multisectoral approach to better understands the circumstances that put pressure for unsafe abortion among adolescents and enhance their psycho-social support. In addition, there is need to empower the girls in making the decision pertaining pregnancy, safe abortion,, and post trauma following an abortion.. This

presents a rare opportunity to build self-power and positive drive to cope with stigmatizing circumstances.

Subsequently, Partner and Parental social support to adolescents following unwanted pregnancy will improve her decisions on how to go through with the pregnancy, either a safe abortion or a term pregnancy. None the less not all girls are bold enough to disclose their pregnancy and abortion state to their parents, partners and guardians due to stigma thus, limiting the chances of accessing the social support. This calls for a strong family support system and an empowered male partner to ease disclosure.

6.2.2 The influence of adolescent's perceived severity to intention to procure unsafe abortion

During this age adolescents are busy learning in schools, most adolescents would not wish to discontinue with learning due to pregnancy. Hence, programs should adopt a multisector approach, aspect of prevention and sexual health promotion that advocate for condom and sexual self-efficacy among adolescents to improve their sexual decision-making and consenting.

6.2.3 Adolescent perceived barriers to intention to procure unsafe abortion

Cognitive inadequacies among adolescent girls makes them unable to comprehend the development processes in their body during pregnancy, moreover, this is the period their body structure/physique means a lot to them. Hence, they would rather avoid anything that would disfigure them or expose them to unnecessary injury. They would rather do away with the mistimed pregnancy through abortion in whichever away possible. Their decisions are never well thought, leading to quite a number of consequences that endanger their lives.

6.3.4 Influence of health system factors and intention to procure unsafe abortion

Lastly, health systems has failed adolescents because of stigmatization of services and blaming them. This has pushed the adolescents to seek for unsafe abortion in places where they are respected and later report to the main facilities with post abortion complications. The ministry of health should Support targeted comprehensive sexual education, strengthen health system and advocate for human centered services; and advocate for safe spaces for adolescents across all sectors .Moreover, the service providers should facilitate continuity of care through client follow up and check how the girls are coping psycho-socially and offer any service needed.

6.3. Recommendations

6.3.1 Effects of adolescents' perceived susceptibility to consequences of abortion and intention to procure unsafe abortion

Adolescent sexual Reproductive Health is multifaceted, thus a multisectoral approach should be adopted in addressing adolescent sexual reproductive health. The government should operationalize comprehensive sexual reproductive health education in all schools per age cohort. Besides, the ministry should actively operationalize pre-conception counseling and should be mandatory in all health facilities to create awareness among adolescents who are not familiar with their sexuality status.

Active male gender involvement is quite important in mitigating mistimed pregnancy among girls, they should be empowered on sexual outcomes, while, the youth friendly centers should be attractive to the male gender, so as to encourage them to come for the services such as condoms and emergency pills. Health care

workers should adopt strategies that attract the young males within the youth friendly centers and engage them as advocates to mitigate the unwanted pregnancies among their peers.

6.3.2 The influence of adolescent's perceived severity to intention to procure unsafe abortion

Communities should be empowered to promote education among girls to prevent them from being exposed to risks of unintended pregnancy.. While also coming up with by laws that can penalize perpetrators of adolescent pregnancy and linking up the adolescents who are defiled to the respective authorities.

6.3.3 Adolescent perceived barriers to intention to procure unsafe abortion

In order to minimize the barriers to access SRH services by the adolescents, the government should adopt a multisector approach and scale up comprehensive sexual education. Furthermore, the ministry of Health should scale up Youth friendly services, to be accessible to all adolescents irrespective of the geography. The youth friendly center should be fully equipped both with competent health care workers and necessary resources.

6.3.3 Influence of health system factors and intention to procure unsafe abortion

Finally, the ministry should work on a responsive health system free from stigmatization. Besides, the Nursing training institutions need to review nurses training curriculum often and update technical training's occasioned through evidence in nursing practice. Such as; primary health cares, Universal Health Coverage and value clarification and attitude transformation.

Further research can be done on psycho-social impacts among adolescents post abortion.

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APPENDICES

APPENDIX I: CONSENT FORM

Title of Study: Determinants of Induced abortion among Adolescents in Homabay County, Kenya.

Principal Investigator and institutional affiliation: Miss. Everline Adhiambo Ajwang

Co-Investigator and institutional affiliation: Dr. Damaris /Dr. John Arudo

Introduction:

I would like to inform you about research being conducted by above named researchers. This consent form will give you information which will help you to make a decision if you will participate in the study or not. You are free to ask questions about the study. There are no benefits in this study, participation is voluntary, you can withdrawal at any time you feel like, and no penalty will be taken against you.

WHAT IS THE PURPOSE OF THE STUDY?

The purpose of the study is to determine determinants of induced abortion among adolescents in Homabay County, Kenya Researchers will be interviewing adolescents accessing antenatal and induced abortion services in maternal neonatal child health clinics, Outpatient, Obstetric and gynecological wards and youth friendly clinics and nurses/midwives/clinicians who will be present in these wards during the exercise. The participants will be interviewed on social-

demographic characteristics, maternal characteristics, facility factors , Health provider factors and pregnancy outcomes.

WHAT WILL HAPPEN IF YOU DEICDE YOU WANT TO BE IN THIS RESEARCH STUDY?

You will give informed consent and you will be interviewed by a trained interviewer in a private area where you will feel comfortable answering questions. The researcher will ask the contact of the participant if a need a rise she/he may be contacted. If he/she accept, the contact will be used only by the people who are involved in the study.

ARE THERE ANY RISKS, HARMS, DISCOMFORTS ASSOCIATED WITH THIS STUDY?

This research may have psychological, social, emotional, and physical risks. The researcher will use code numbers to avoid loss of confidentiality in this research. Although with new technology it is possible for someone to go into system and get the information which had been secured. The participant has right to skip question she/he may find uncomfortable to answer. The participant has a right to contact the study staff at the number provided at the end of document in case of complications related to the research.

ARE THERE ANY BENEFITS BEING IN THIS STUDY?

The information the participant give at the study will help us outline specific priorities aimed at eliciting local evidence-based solutions geared towards prevention of unwanted pregnancies, and induced abortion in adolescents. This information

may contribute to science and government to improve the health condition of the pregnant adolescent with unwanted pregnancy by formulating appropriate guidelines and policies.

WILL BEING IN THIS STUDY COST YOU ANYTHING?

The study will cost time and money . The researchers who will be collecting data will need allowance for the service- transport and lunch.

IS THERE REIMBURSEMENT FOR PARTICIPATING THIS STUDY?

Direct material gain from the study will not be there.

WHAT IF YOU HAVE QUESTIONS IN FUTURE?

If a participant may have questions latter on about the study may call/send a message to the study staff at the number provided at the bottom of the page.

But if she/he wants more clarification about their rights may contact the Secretary/Chairperson , MMUSTIERC on .

WHAT ARE YOUR OTHER CHOICES?

Participation in this research is voluntary. The participant is free to decline or withdraw from participation in the study at any time without injustice or loss of benefits. She/he does not have to give reasons for withdrawing and will not affect the services entitled to in the health facility or other health facilities.

For more information contact Everline Adhiambo Ajwang 0726151561 from 7.30am to 5pm.

CONSENT FORM (STATEMENT OF CONSENT)

I have read this consent form or had the information read to me. I have had the chance to discuss this research study with researcher. I have had my questions answered by him or her in a language that understand. The risks and benefits had been explained to me. I understand that my participation in this study is voluntary and that I may choose to withdraw at any time.

She understands that all efforts will be made to keep information regarding her identity confidential. By signing the consent form, she has not given up her legal rights as a participant in the study.

I voluntarily agree to participate in this research study: Yes, No

I agree to provide contact information for follow up: Yes, No.

Participation's signature/Thumb stamp:……Date……

Participant printed name……

Researcher's statement

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believed that the participant has understood and has knowingly given his/her consent.

Name:……..Date……

Signature……

Role in the study:…….(i.e. study staff who explained informed consent form)

Witness Printed Name (If witness is necessary)……..

Signature……. Date……

APPENDIX II: ASSENT FORM

Title of Study: Determinants of Induced abortion among Adolescents seeking Youth Friendly services in Homabay County, Kenya.

Principal Investigator and institutional affiliation: Miss. Everline Adhiambo Ajwang

Co-Investigator and institutional affiliation: Dr. Damaris /Dr. John Arudo

My name is [……]. On behalf of Miss. Eveline Adhiambo Ajwang a **master's** student, studying **Masters** of Science in Nursing at Masinde Muliro University of Science and Technology, I am inviting you to participate in a research study about determinants of induced abortion among adolescents seeking youth friendly services in Homabay County, Kenya

Your parent/Guardian knows about this **study and** gave permission for you to be involved. If you agree, I will ask you Sex, **sexuality,** and abortion questions that you will voluntarily respond to in **Yes**/No answer. The sessions will take 30-45 minutes.

You do not have to be in this study. No one will be mad at you if you decide not to do this study. Even if you start the study, you can stop later if you want. You may ask questions about the study at any time.

If you decide to be in the study, I will not tell anyone else how you respond or act as part of the study. Even if your parents or teachers ask, I will not tell them about what you say or do in the study.

Signing here means that you have read this form or have had it read to you and that you are willing to be in this study.

Name of the Participant _____

Signature of the Participant _____

Date: _____

APPENDIX III: QUESTIONNAIRE

Participant code: ……Date of interview: ……

County: …… Sub-County: …….

Name of Data collector: ……Signature: …….

	Questions	Responses	Code
1	Age	_____in years	
2	Marital status	1=Single 2=Married 3=Separated 4=Divorced 5=Widowed	
3.	Level of education:	1= none 2=primary 3=secondary	
4	Religion	1= SDA 2=Anglican 3=Catholic 4=Muslim 5=other protestants	
5	What is your ethnic group / tribe?	1= Luo 2=Suba 3=Kisii 4=Kikuyu 5=Luhya 6=Other (specify)_____	
6.	parity	1= <1 2=>1	
7.	Including you, how many family members do you currently live with?	_____	
8.	What was the total household income last year (2018), of yourself and all the family members counted in the last question? (In	1= <10,000 2=10000 - 19999 3=20000 – 29999 4=30000-39999 5=≥400000	

	Ksh)		
9.	Indicate if you experienced any of the following in the LAST 12 MONTHS (*check all that apply*):	1=A close friend died 2=I separated from my husband/partner 3=I was unemployed and looking for work for a month or more 4=A dependent or close family member had a serious medical problem 5=I had a baby 6=None	
10.	How many births have you had?	_____	
11.	Do you have a mobile phone?	1=Yes 2=No	
12.	Are you able to access internet/WhatsApp on your phone?	1=Yes 2=No	
13.	How often do you access internet/WhatsApp?	1=At most every day 2=At least once a week 3=Less than once a week 4=Not at all	
14.	Do you listen to radio?	1=Yes 2=No	
15.	How often do you listen to radio?	1=At most every day 2=At least once a week 3=Less than once a week 4=Not at all	
16.	Do you listen to TV?	1=Yes 2=No	
17.	How often do you watch TV?	1=At most every day 2=At least once a week 3=Less than once a week 4=Not at all	
Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question.			
	Sexuality history		
18.	How old were you when you had sexual intercourse for the very first time?	----------	

PREGNANCY HISTORY			
19.	Are you pregnant now?	1= Yes 2= No	
20.	How many months were you when you found out you were pregnant?	…….. Months	
21.	At the time you became pregnant, did you want to become pregnant then, did you want to wait until later, or did you not want to have any child at all?	1= Then 2= Later 3= Not at all	
22.	If pregnant now, do you intend to carry this pregnancy to term?	1= Yes 2= No	
23	In your previous pregnancy did you intend to carry that pregnancy to term?		
24.	What were/are your reasons for carrying the pregnancy to term?		
	What were/are your reasons for not carrying to term to (inducing abortion)?		
25.	What was/is the attitude of your partner towards carrying this pregnancy to term or inducing abortion	1= Favored 2= Opposed 3= Neutral 4= He did not know 5= Don't know/Don't remember	
26.	Before you became pregnant that/this time, had you stopped using all methods of pregnancy prevention, including condoms, withdrawal, rhythm etc.?	1=Yes 2=No 3=Never used any pregnancy prevention	
27.	What was the LAST method of pregnancy prevention you used before you found out you	1=male condom 2=oral pills 3=emergency contraception 4=rhythm method	

	were pregnant? (*Check all that apply*)	5=withdrawal method 6=periodic abstinence 7=lactational amenorrhea 8=intrauterine contraceptive device 9=injectable 10=traditional method 11=none	
28.	In the month you became pregnant, were you living with your partner?	1=Yes 2=No	
29.	Is/was this/that pregnancy the result of a man forcing you to have sex when you didn't want to have sex?	1=Yes 2=No 3=Don't know	
Now I would like to ask you some questions about induced abortion experiences both previous and current. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question			
30.	Do you have any history of previous termination of pregnancy	1= Yes 2= No	
31.	Number of previous pregnancy (ies) terminated	----------	
32.	Where did you terminate	1= Government Hospital 2= Private Hospital 3= At Home	
33.	What was the attitude of your partner towards having this abortion	1= Favored 2= opposed 3= Neutral 4= He did not Know 5= Don't Know/Don't remember	
34.	What was the main reason for you having this induced abortion	1= Health of the mother 2= Risk of birth defect 3= No money to take care of the baby 4= too young to have a child 5= Not ready to be a mother 6= wanted to continue schooling 7= Did not love the father 8= wanted to delay childbearing 9= Wanted to continue working	

		10= Did not want to stay with the father 11= wanted to space child 12= Partner did not want child/Denied Pregnancy 13= Childs sex 14= because of rape 15= To avoid shame 16 = Afraid of parents 17= No one to help me look after the child 18= Parents insisted 19= Father of child died Other……..	
35	Type of contraceptive used after previous or current termination of pregnancy:	1=male condom 2=oral pills 3=emergency contraception 4=rhythm method 5=withdrawal method 6=periodic abstinence 7=lactational amenorrhea 8=intrauterine contraceptive device 9=injectable 10=traditional method 11=none	
36.	Adolescents sometimes take many steps to terminate pregnancy, did you do more than one thing to terminate this pregnancy?	1= Yes 2= No	
37.	What did you do to end this pregnancy?	1= Drink milk/coffee/ other liquid with lots of sugar. 2= Drunk herbal concoction 3= Drunk other home remedies 4=Inserted herbal/object/other substance in the vagina 5= Cytotec tablets (Misoprostol) 6= Manual Vacuum Aspiration 7= Excessive exercise 8= Injection	
38.	Who did you see to get this first step done?	1= Health professional 2 = Pharmacist/Chemical seller	

		3=Community Health Volunteer 4= friend/relative 5= Traditional birth attendant Other …….. (specify)	
39.	Where did you go to get this first step done?	1= Public Hospital 2= Private Hospital 3= Pharmacy store 4 = Mobile Clinic 5= Home	
40.	Who paid to get this procedure done?	1= Mother 2= Friend 3= respondent 4= Father 5= Other family member 6= Partner Other…… (Specify)	
Now l would like to talk about any problem that you may have had when you had this first step to stop this pregnancy			
41.	Did you have any bleeding? If Yes: was it Mild, moderate, or severe	1= Mild 2= Moderate 3= Severe 4= did not have bleeding 5= Don't Know	
42.	Did you have any pain? If Yes; Was it Mild, moderate Severe	1= Mild 2= Moderate 3= Severe 4= did not have pain 5= Don't Know	
43.	Did you have any fever? If Yes; Was it Mild, moderate Severe	1= Mild 2= Moderate 3= Severe 4= did not have fever 5= Don't Know	
44.	Did you have any injury/perforation? If Yes; Was it Mild, moderate Severe	1= Mild 2= Moderate 3= Severe 4= did not have injury 5= Don't Know	
45.	Did you have foul smelling-vaginal	1= Mild 2= Moderate	

	discharge? If Yes; Was it Mild, moderate Severe	3= Severe 4= did not have foul smelling- vaginal discharge 5= Don't Know	
46.	Were you given any pain relivers	1= Yes 2= No 3= Don't know	
47.	Did you take any antibiotics after the abortion?	1= Yes 2= No 3= Don't know	
48.	Did you have any local/general anesthesia for this abortion? By local l mean an injection at the vaginal opening	1= Yes 2= No 3= Don't know	
49.	In the first one month after the abortion, did you have any health problem because of abortion?	1= Yes 2= No 3= Don't know	
50.	Did a health care provider recommend that you come here?	1=Yes 2=No 3=Don't know	
KNOWLEDGE ON ABORTION			
51.	Have you ever received information about abortion	1=Yes 2= No	
52.	Where have you received information about abortion?	1=School 2=Healthcare providers 3=Family 4=Television 5=Trainings or workshops 6=Friends or peers 7=Internet 8=Other (Please specify) 9= I have never received any information about abortion	
53.	At what age(s) did you receive information about abortion?	----------	
54.	Altogether, please estimate how much time	1=10–30 minutes 2=30 minutes–1 hour	

	was devoted solely to information about abortion**:**	3=1 hour–2 hours 4=More than 2 hours	
55.	What information were you taught about abortion?	1=Abortion laws 2=Values clarification 3=Messaging 4=Clinical training on how to provide abortion 5=Advocacy 6=Harm reduction 7=Abortion as part of sexuality education 8=Other (Please specify	
56.	In your opinion, what further information do you feel was missing from these that would have been useful for you?	---------- (specify)	
57.	In your opinion, abortion should be legal if**:**	1=the pregnancy endangers a woman's physical health? 2=the pregnancy endangers a woman's mental health? 3=the pregnancy was a result of rape? 4=the pregnancy was a result of incest? 5=the woman is under 18? 6=the woman can't afford a child financially? 7=the woman doesn't want a child? 8=there is severe fetal malformation? 9=Other (Please specify) _____	

The next series of statements have to do with abortion behavior and pregnancy. Please respond with your primary partner in mind. Please indicate your answers on a scale from 1-5						
	Statement	1=strongly disagree	2= Disagree	3=Neutral	4= Agree	5=Strongly agree
Perceived susceptibility						
58.	An adolescent can get pregnant the first time she has unprotected sex.					
59	My physical health makes it more likely that I won't get pregnant if we have unprotected sex					
60.	I do not talk about pregnancy and induced abortion with my partner					
Perceived Severity						
61.	Getting pregnant is one of the worst things that could happen at this stage in my life.					
62.	Problems I would experience if l were pregnant would last a long time.					
63.	If I got pregnant, my whole life would change.					
64.	My job opportunities and professional career would be endangered with pregnancy					
65.	The thought of being pregnant scares me.					
66.	If I continue with this pregnancy my academic career would be endangered					
Perceived Benefits						
67.	A pregnancy would reduce my fear of being embarrassed as a woman.					

68.	I have a lot to gain by carrying a pregnancy to term					
Perceived Barriers						
69.	I am afraid that the outcome of pregnancy would affect my ability to have children later.					
70.	I am worried about the changes that would arise because of pregnancy.					
71.	I am afraid that carrying pregnancy would hurt me.					
72.	Carrying pregnancy to term at this tender age would cause me to be permanently infertile.					
73.	I am afraid that pregnancy would affect my sex drive.					
74.	I often feel embarrassed when talking about pregnancy and induced abortion with my partner					
Self-Efficacy						
75.	It would be difficult to tell a partner that I am going for an induced abortion or carrying the pregnancy to term.					
76.	I am confident that I could go to the doctor to get an induced abortion or receive antenatal services if it became available.					
77.	I would not insist on getting an induced abortion or carrying pregnancy to term if a partner threatened to leave me if I got it.					
78.	I feel capable of discussing the importance of opting for induced abortion or carrying pregnancy to term with a sex partner.					
79.	I would go for an induced abortion or carry pregnancy to term even if my partner did not want me to.					
80.	My partner is comfortable talking about pregnancy and induced abortion with me.					

Health Care Provider Factors

81.	Do you think the healthcare providers treated you well?	1= Yes 2=No
82.	Was the provider (s) concerned about the cause of your problem?	1=Yes 2=No
83.	Did you notice anywhere where abusive language was used?	1=Yes 2=No
84.	Were you blamed by anyone for your condition?	1=Yes 2=No
85.	How do you rate the interaction with the service provider (s)?	1=Poor 2= Unsatisfactory 3= Satisfactory 4= Good 5=Excellent
86.	How long did you have to wait today before you saw a health care provider	1= 15-30 minutes 2= 40-60 minutes 3= above 60 minutes
87.	What is your opinion on the time you waited before receiving care?	1= short 2= Too long 3= Satisfactory
88.	Did you pay any money for the services you received today?	1= Yes 2=No
89.	How much did you pay for the services?	----------
90.	Was it affordable to you?	1=Yes 2= No
91.	If NO, who catered for your services?	1= Myself 2= partner 3= parent 4= Others
92.	Do you think the services in this facility are affordable to most people in the community?	1= Yes 2= No
93.	Did the provider tell when to return for follow-up care?	1= yes 2=No
94.	Did the provider tell you why you need to return for follow up?	1= Yes 2= No
95.	Were you told where to return for follow-up care?	1= Yes 2= No
96.	Did the provider tell you the importance of seeking medical attention if problems arise?	1= Yes 2= No
97.	Would you recommend someone with similar condition as yours to come for services in this facility?	1= Yes 2= No

APPENDIX IV: INTERVIEW GUIDE FOR THE KEY INFORMANTS (SERVICE PROVIDERS)

This interview will be administered to the service providers of abortion services in the study facilities. The aim will be to gather information on their perceptions about abortion services to adolescents seeking youth friendly services.

Facility's Code: _____Date of Interview: _____

Type of Facility: Government_____ Private_____

Level of Facility: _____ (e.g., Health Center, Hospital) District: _____Ward_____

Provider's Names _____

Provider's Designation/Title _____ (e.g., Nurse, Doctor,)

Sex/Gender of the provider _____

Interviewer's Name _____

*(*Instead of using the actual names of the facilities codes will be assigned to each participating health facility for confidential purposes)*

#	Statement	
1.	For how long have you been working in this health facility?	
2.	Are you trained in Safe abortion service provision? 1= Yes 2= No	
3.	What kind of abortion training do you have? 1= College/University as a part of curriculum 2= In service training 3= Short course 4= Reproductive health training 5= Others	
4.	When was your last training?	
5.	Do you have regular in-service training? 1=Yes 2= No	
6	How often do you have in service training?	

TYPE OF ABORTION SERVICES OFFERED BY A HEALTH FACILITY		
7.	What abortion services does this facility offer? 1= Medical 2= surgical 3= Both	
8.	At what time do these services are provided?	
9	Who is the provider of abortion services in this facility by title? 1= Nurse 2= Clinical Officer 3= Midwife 4= Doctor 5= Others (specify)	
10	Are abortion service providers in this facility adequate in number? 1= Yes 2= No	
11.	Are you comfortable in providing abortion services? 1= Yes 2= No Please provide reason (s) for you answer above	
EQUIPMENT SUPPLY AND MEDICATION		
12.	What is essential medicine and equipment needed for abortion services? 1= Misoprostol 2= Mifepristone 3= Mifepristone & Misoprostol 4= Manual vacuum Aspiration Kit	
13.	Are essential equipment and medicine available all the time? 1= Yes 2= No	
14.	If **no,** what does the facility do in case of the short supply?	
15.	Are essential equipment and medication adequate compared to abortion cases you handle per day 1= Yes 2= No	
16.	What are the challenges you encounter in providing abortion services to the adolescents in this facility?	
YOUTH FRIENDLY SERVICES SET UP		
17.	Please explain where (in which department) are abortion services being provided in this health facility	
18.	Do you think it is ok for them to be treated here? 1= Yes 2= No	
19.	Please explain your answer	
20.	Do you think is easy for a first-time patient to identify where abortion service is offered 1= Yes 2= No	

21.	What is your comment on the location and set up of the serves?	
22.	Do you think there is a need for improving the youth friendly set-up of the facility for abortion services?	
23.	please explain your answer	
PROVIDER'S ATTITUDE TOWARDS ABORTION AND CLIENTS		
24.	How do you perceive/think of an adolescent who have had an induced abortion?	
25.	How do you perceive/think of an adolescent who have had a spontaneous abortion?	
26.	Do you think adolescents with unsafe abortion complications should be denied services? 1= Yes 2= No	
27.	Please give reasons for your response	
28.	Do adolescents who have undergone unsafe abortion deserve equal attention like any other patients? 1= Yes 2= No	
29.	Please give reasons for your answer	
30.	Do you think unmarried women may have additional challenges in accessing abortion services compared to married women? 1= Yes 2= No	
31.	Please provide reasons for your answer	
32.	Describe your experience with adolescents accessing abortion services 1= Poor 2= satisfactory 3= Good	
34.	Describe your opinions about the country legal framework on abortion services?	
35.	What are some of the ways abortion services among the adolescents could be improved?	
COST OF ABORTION SERVICES		
36.	Does the facility have charges for abortion services? 1 = Yes 2= No	
37	What are the clients 'costs for abortion services? _____	
38.	What is your opinion on the cost of abortion services? 1= Cheap 2= affordable 3= very expensive	
FOLLOW- UP		
39.	Do you provide any information for follow up to adolescents accessing abortion services? 1= Yes 2= No	

40	If clients do not return for follow-up care, do you try to find out why? 1= Yes 2= No	
41.	Do you document abortion services offered at the facility? 1= Yes 2= No	

Facility Codes:

1=Dispensary: 002

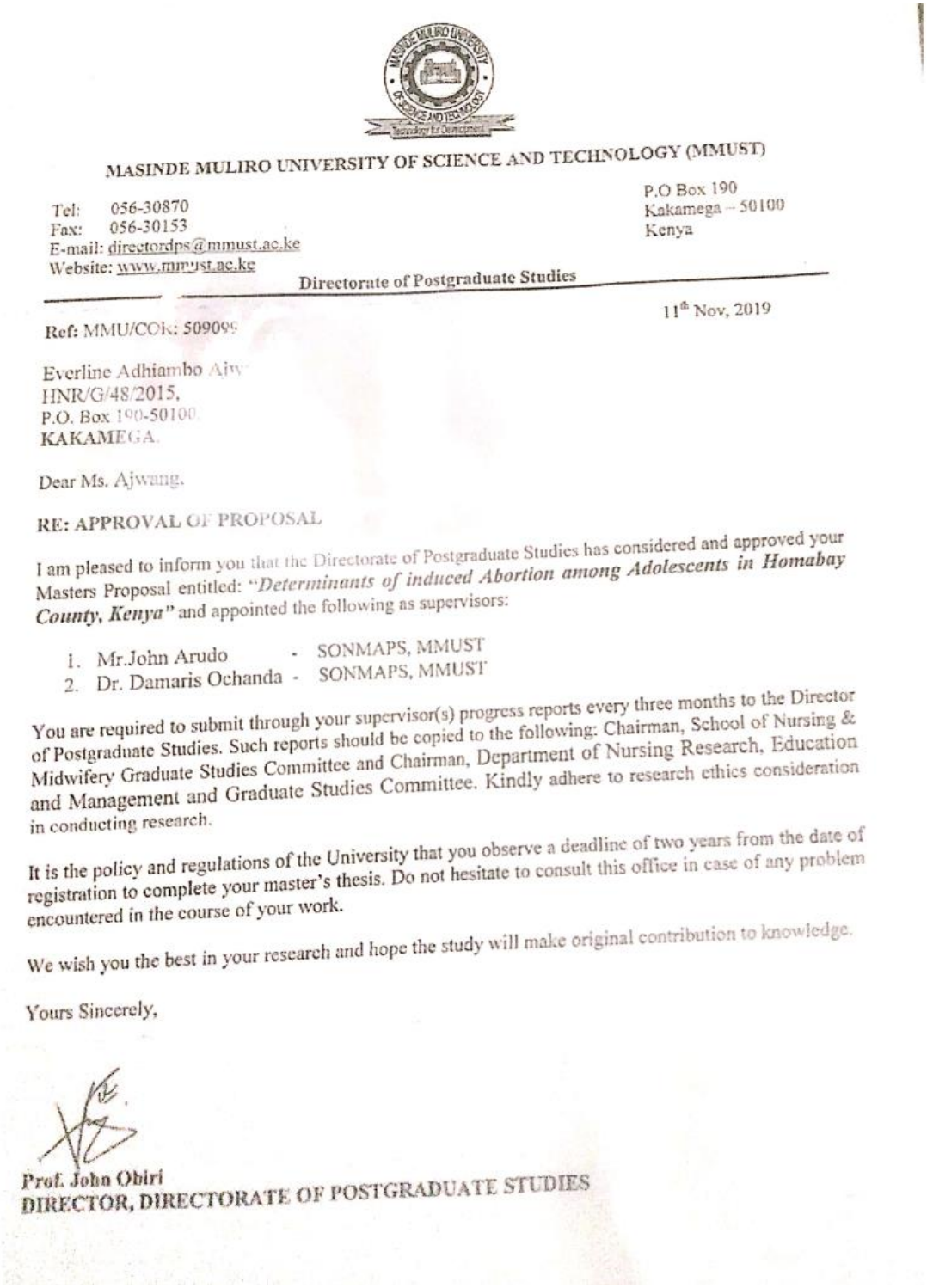
2= Health center: 003

3= Sub- County Hospital: 004

4= County Hospital: 005

5= Private facility: 006

APPENDIX V: LETTER FROM DPS



MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

Tel: 056-30870
Fax: 056-30153
E-mail: directordps@mmust.ac.ke
Website: www.mmust.ac.ke

P.O Box 190
Kakamega – 50100
Kenya

Directorate of Postgraduate Studies

Ref: MMU/COR: 509099

11th Nov, 2019

Everline Adhiambo Ajwang
HNR/G/48/2015,
P.O. Box 190-50100
KAKAMEGA.

Dear Ms. Ajwang,

RE: APPROVAL OF PROPOSAL

I am pleased to inform you that the Directorate of Postgraduate Studies has considered and approved your Masters Proposal entitled: "*Determinants of induced Abortion among Adolescents in Homabay County, Kenya*" and appointed the following as supervisors:

1. Mr.John Arudo - SONMAPS, MMUST
2. Dr. Damaris Ochanda - SONMAPS, MMUST

You are required to submit through your supervisor(s) progress reports every three months to the Director of Postgraduate Studies. Such reports should be copied to the following: Chairman, School of Nursing & Midwifery Graduate Studies Committee and Chairman, Department of Nursing Research, Education and Management and Graduate Studies Committee. Kindly adhere to research ethics consideration in conducting research.

It is the policy and regulations of the University that you observe a deadline of two years from the date of registration to complete your master's thesis. Do not hesitate to consult this office in case of any problem encountered in the course of your work.

We wish you the best in your research and hope the study will make original contribution to knowledge.

Yours Sincerely,

Prof. John Obiri
DIRECTOR, DIRECTORATE OF POSTGRADUATE STUDIES

APPENDIX VI: LETTER FROM IERC

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY
Tel: 056-31375
Fax: 056-30153
E-mail: ierc@mmust.ac.ke
Website: www.mmust.ac.ke
P. O. Box 190-50100
Kakamega, Kenya

Institutional Ethics Review Committee (IERC)

Ref: MMU/COR: 403012 vol2 (80)
Everline Adhiambo Ajwang
Masinde Muliro University of Science and Technology
P.O. Box 190-50100
KAKAMEGA

Date: 06th March, 2020

Dear Ms. Ajwang

RE: Determinants of induced abortion among adolescents in Homabay County, Kenya. - MMUST/IERC/110/20

Thank you for submitting your proposal entitled as above for initial review. This is to inform you that the committee conducted the initial review and approved (with no further revisions) the above Referenced application for one year.

This approval is valid from **06th March, 2020 through to 06th March,2021.** Please note that authorization to conduct this study will automatically expire on **06th March, 2021**. If you plan to continue with data collection or analysis beyond this date please submit an application for continuing approval to the MMUST IERC by **06th February, 2021.**

Approval for continuation of the study will be subject to submission and review of an annual report that must reach the MMUST IERC secretariat by **06th February, 2021**. You are required to submit any amendments to this protocol and any other information pertinent to human participation in this study to MMUST IERC prior to implementation.

Please note that any unanticipated problems or adverse effects/events resulting from the conduct of this study must be reported to **MMUST IERC.** Also note that you are required to seek for research permit from **NACOSTI** prior to the initiation of the study.

Yours faithfully,

Dr. Gordon Nguka (PhD)
Chairman, Institutional Ethics Review Committee

Copy to:
- The Secretary, National Bio-Ethics Committee
- Vice Chancellor
- DVC (PR&I)
- DVC (A & F)

APPENDIX VII: LICENCE FROM NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 773545

Date of Issue: 01/April/2020

RESEARCH LICENSE

This is to Certify that Ms.. Everline Adhiambo Ajwang of Masinde Muliro University of Science and Technology, has been licensed to conduct research in Homabay on the topic: DETERMINANTS OF INDUCED ABORTION AMONG ADOLESCENTS IN HOMABAY COUNTY, KENYA for the period ending : 01/April/2021.

License No: NACOSTI/P/20/4496

773545

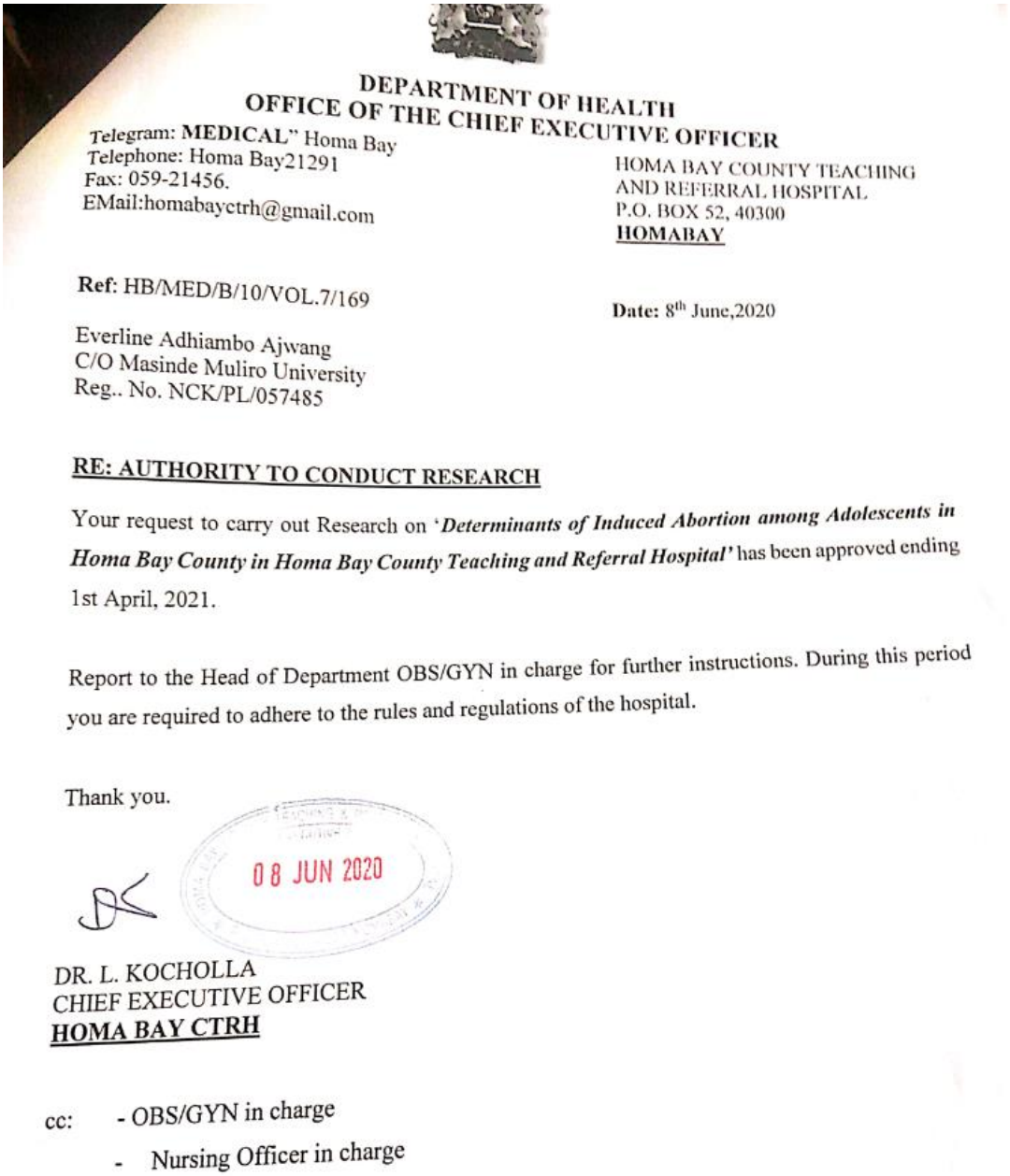
Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

APPENDIX VIII: AUTHORIZATION LETTER FROM HOMA BAY COUNTY REFERRAL HOSPITAL



DEPARTMENT OF HEALTH
OFFICE OF THE CHIEF EXECUTIVE OFFICER

Telegram: MEDICAL" Homa Bay
Telephone: Homa Bay21291
Fax: 059-21456.
EMail:homabayctrh@gmail.com

HOMA BAY COUNTY TEACHING
AND REFERRAL HOSPITAL
P.O. BOX 52, 40300
HOMABAY

Ref: HB/MED/B/10/VOL.7/169

Date: 8th June,2020

Everline Adhiambo Ajwang
C/O Masinde Muliro University
Reg.. No. NCK/PL/057485

RE: AUTHORITY TO CONDUCT RESEARCH

Your request to carry out Research on '***Determinants of Induced Abortion among Adolescents in Homa Bay County in Homa Bay County Teaching and Referral Hospital'*** has been approved ending 1st April, 2021.

Report to the Head of Department OBS/GYN in charge for further instructions. During this period you are required to adhere to the rules and regulations of the hospital.

Thank you.

08 JUN 2020

DR. L. KOCHOLLA
CHIEF EXECUTIVE OFFICER
HOMA BAY CTRH

cc: - OBS/GYN in charge
- Nursing Officer in charge

APPENDIX IX: MAP OF HOMABAY COUNTY