EXPLORING THE INFLUENCE OF FEMALE SOCIAL SCIENCE STUDENTS' CHARACTERISTICS ON THEIR KNOWLEDGE, ATTITUDES, AND PRACTICE OF EMERGENCY CONTRACEPTIVE PILLS (ECPs) AT THE UNIVERSITY OF NAIROBI.

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N69/67307/2013

A RESEARCH PROJECT REPORT PRESENTED TO THE DEPARTMENT OF ANTHROPOLOGY, GENDER, AND AFRICAN STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN GENDER AND DEVELOPMENT STUDIES OF THE UNIVERSITY OF NAIROBI

July 2023

DECLARATION

This project is my original work and has not been presented for examination at any other university.

Signature.  Date 24.07.2023

Florence Mwikali Kitheka

This project has been submitted for examination with my approval as the university supervisor.

Signature.  Date 24.7.2023

Prof. Tom Ondicho

DEDICATION

I dedicate my work to my family. Special gratitude to my husband, children and siblings who have been my source of inspiration and encouragement .

ABBREVIATIONS AND ACRONYMS

EC	Emergency Contraceptive
ECPs	Emergency Contraceptive Pills
HIV	Human Immune-Deficiency Syndrome
IUDs	Intrauterine Devices
KDHS	Kenya Demographic and Health Survey
LMICs	Low- and Middle-Income Countries
SPSS	Statistical Package for Social Science
SSA	Sub-Saharan Africa
STIs	Sexually Transmitted Infections
WHO	World Health Organization

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ABSTRACT

Emergency Contraceptive Pills (ECPs) are highly effective post-coital interventions for preventing pregnancy. However, in low- and middle-income countries, including Kenya, women's access to ECPs and reliable information on their use remains limited due to various barriers. This study sought to investigate the impact of female social science students' characteristics on their knowledge, attitudes, and practices of ECPs at the University of Nairobi. The research was grounded in the Health Belief Theory and Risk Compensation Theory to understand factors influencing ECP utilization among young female students and inform effective interventions for responsible sexual behavior and increased usage of emergency contraception. A quantitative cross-sectional research design was employed, and data were collected using a structured questionnaire from 372 undergraduate female students in the Faculty of Social Sciences. The findings revealed that a majority of students demonstrated high knowledge about ECPs, but demographic variables like religion and relationship status significantly influenced ECP knowledge. Attitudes towards ECPs did not show significant associations with demographic characteristics, except for the year of study and family income. Most students had used ECPs at least once, primarily obtained from healthcare professionals due to condom breakage. Fear of stigma emerged as a primary challenge in ECP use. These insights highlight the need for targeted interventions and educational programs to promote responsible ECP use among young adults in Kenya. The study recommends comprehensive reproductive health education campaigns, interventions to change negative attitudes, and collaborations to make ECPs more affordable and accessible. Further research is also recommended to understand specific factors contributing to negative attitudes and inform effective policies to improve reproductive health outcomes among young people in Kenya.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

ECPs are pills that can prevent pregnancy after unprotected sex, such as in cases of contraceptive failure, sexual assault, unintended sexual activity, or lack of other contraceptive options (World Health Organization, 2011). ECPs can help women avoid the negative health outcomes of unwanted pregnancies and reduce the demand for abortions. Studies have found that ECPs can significantly lower the risk of pregnancy if taken within 72 hours of having sex with a high chance of pregnancy (Hickey & Shedlin, 2017). Moreover, when ECPs are combined with intra-uterine contraceptive devices (IUCDs), they can almost 100% effectively prevent pregnancies (Endler, Li, and Danielsson, 2022). However, despite the increased information and awareness about ECPs, many women still face barriers to accessing and using this important contraceptive method (Kara, Benedicto, & Mao, 2019).

According to the World Health Organization (WHO,2020), emergency contraception can prevent up to over 99% of pregnancies within 5 days after intercourse. There are two major methods of emergency contraception: copper-bearing intrauterine devices (IUDs) and emergency contraceptive pills (ECPs) (Turok et al., 2021). The copper-bearing IUD is the most effective form of emergency contraception available, and it works by preventing fertilization by causing a chemical change in sperm and egg before they meet (Turok et al. 2021). The ECPs prevent pregnancy by preventing or delaying ovulation, and they do not induce an abortion or harm a developing embryo (Turok et al., 2021). The ECPs recommended by WHO are ulipristal acetate, levonorgestrel, or combined oral contraceptives consisting of ethinyl estradiol plus levonorgestrel. Emergency contraception can be used in situations such as unprotected intercourse, concerns about possible contraceptive failure, incorrect use of contraceptives, and sexual assault without contraception coverage. WHO findings also dispel myths associated with emergency contraceptives,

specifying categorically that they do not interrupt pregnancy or harm the woman's future fertility (WHO, 2020).

The International Family Planning Federation (IFPF) adopted a declaration on reproductive and sexual rights that emphasizes providing young people with adequate education and knowledge on sexuality and ensuring access to friendly and affordable sexual and reproductive health services (IPPF, 2008). One of the topics that young people need to learn about is contraceptives, including their benefits and risks, which can be obtained from various sources such as family and friends, print and electronic media, health professionals, educational materials, and community resources (Zajec et al., 2022). However, these sources may differ in the quality and quantity of information they offer the public.

In America, there is evidence that the public has been intentionally misinformed about the benefits and risks of contraceptives by anti-abortion activists and Republican lawmakers who falsely claim that some forms of contraception are equivalent to abortion (CNN Business, 2022; Kaiser Health News, 2022). For example, Plan B, a popular emergency contraceptive pill (ECP), has been labelled as having the potential to prevent the "attachment of a fertilized egg to the uterus," even though scientific studies have shown that it works by delaying ovulation and preventing fertilization (CNN Business, 2022; Kaiser Health News, 2022). As a result, many adolescents and adults are misinformed about the benefits and risks associated with ECPs. The lack of accurate knowledge can hinder their efforts to obtain and use contraceptives and increase their risk of experiencing unplanned pregnancies (The Guardian, 2022).

According to Sharma et al. (2021), numerous barriers hinder many young adults' access, knowledge, and awareness of contraceptives. Despite public and private sector efforts to promote awareness about emergency contraceptives, young adults still lack sufficient knowledge about their practicality. In light of this, Sharma et al. emphasize the significance of establishing a consistent platform that provides comprehensive information on contraceptives to adolescents and young adults. They propose enhancing the effectiveness of emergency contraceptives through mechanisms such as counselling and awareness creation, integrating these efforts into the services providers provide to improve users' decision-making

capabilities and overall quality of life. Specifically, they recommend comprehensive counselling on emergency contraceptives for adolescents and young adults, incorporating public education campaigns to raise awareness about emergency contraceptives and their importance as a backup method of contraception, and integrating counselling and awareness creation about emergency contraceptives into healthcare settings by training providers and ensuring availability. These measures aim to equip young adults with the necessary information and resources for informed decision-making regarding their sexual health (Sharma et al., 2021).

Generally, higher education is often seen as a pathway to economic and social independence (UNESCO, 2017). However, examining why this may not be the case in other parts of the world is important. For young women, higher education offers academic advancement and opportunities for forming new relationships, including romantic and sexual associations (Lemma, 2009). Nonetheless, there remains a significant global concern regarding the high incidence of unintended pregnancies among students in institutions of higher learning, and supporting statistical data can be provided to emphasize this concern. For instance, the issue is particularly prevalent in Ethiopia, further complicated by the interplay of religious, cultural, and social practices that discourage family planning methods. The impact of unwanted pregnancy on students' educational trajectory and prospects is widely recognized (Gebrehiwot et al., 2014).

Consequently, many students resort to illegal or legal abortion as a response, and this necessitates the need for evidence to support this claim. To address the complications associated with pregnancies and reduce the number of abortions, many students turn to emergency contraceptive pills as a form of birth control (Tilahun et al., 2010). This study aims to explore and understand the use of emergency pills among students in mitigating the impact of unwanted pregnancies and related complications, intending to identify effective interventions to improve reproductive health outcomes in this population.

1.2 Statement of the problem

Unintended or early pregnancy among adolescents and young people poses significant challenges to their sexual and reproductive health, social well-being, and economic prospects (Darroch et al., 2016). In developing regions, approximately half of pregnancies among adolescent women aged 15–19 are unintended, with many ending in unsafe abortions (Darroch et al., 2016). Such pregnancies also adversely affect educational attainment, prompting the education sector to participate in prevention efforts actively (UNESCO, 2014). Early and unintended pregnancies jeopardize individual well-being and hinder the achievement of Sustainable Development Goals (SDGs) related to maternal and newborn health (WHO, 2021). In low- and middle-income countries (LMICs), an estimated 49% of the 21 million pregnancies among adolescent and young women are unintended (WHO, 2021).

The consequences of early and unintended pregnancies are particularly pronounced in Africa, with approximately 45% of pregnancies among young women in the region being unintended (Darroch et al., 2016). These pregnancies often lead to severe adverse health conditions and have detrimental economic, social, and educational consequences. A study in six Sub-Saharan African countries revealed that young girls who became pregnant during school faced challenges balancing academic responsibilities with parenthood, resulting in higher dropout rates and academic underperformance (Merrick, 2015). Furthermore, early childbearing has been linked to increased perinatal deaths and infant health problems (WHO, 2014).

To address these critical issues, comprehensive sex education, access to contraception and family planning services, and supportive school environments are crucial. Preventive interventions are essential to support the academic success and long-term economic well-being of young girls who experience pregnancy during their education (Mueller et al., 2017). Among the mechanisms for preventing unintended pregnancies, Emergency Contraceptive Pills (ECPs) are particularly effective and affordable tools when used appropriately. However, despite efforts to raise awareness and increase the availability of ECPs in Kenya, their utilization remains low, especially among young women (KDHS, 2014).

The disproportionately low utilization of ECPs among young women in Kenya, particularly those attending universities, represents a significant public health concern. The occurrence of unintended pregnancies exposes young women to increased risks of birth complications and unsafe abortions and impedes their educational aspirations. Despite previous efforts to increase awareness and uptake of ECPs, the factors contributing to this phenomenon are poorly understood, as available information primarily stems from non-research-based reports or mass media discourse.

This study investigates the level of knowledge, attitudes, and practices concerning Emergency Contraceptive Pills (ECPs) among social science students at the University of Nairobi (UoN). By examining students' knowledge, attitudes, and practices regarding ECPs, the research seeks to provide empirical insights into using ECPs among this population. Understanding the factors influencing knowledge, attitudes, and practices related to ECPs among social science students at UoN is crucial for developing targeted strategies to promote their appropriate use and reduce unintended pregnancies in this group. Addressing the low utilization of ECPs among young women is vital to mitigate the rates of unintended pregnancies and their associated health, social, and economic consequences. The findings will contribute to a better understanding of the factors influencing knowledge, attitudes, and practices related to ECPs among social science students at UoN, ultimately informing strategies to promote their appropriate use and reduce unintended pregnancies in this group.

1.3 Research Objectives

1.3.1 General Objective of the Study

The study's general objective is to investigate the impact of female social science students' characteristics on their knowledge, attitudes, and practices of emergency contraceptive pills (ECPs) at the University of Nairobi.

1.3.2 Specific Research Objectives

i. To assess how female social science students' characteristics influence their knowledge regarding emergency contraceptive pills (ECPs) at the University of Nairobi.
ii. To examine how female social science students' characteristics impact their attitudes toward the use of ECPs.
iii. To analyze how female social science students' characteristics influence their actual practices of ECP usage at the University of Nairobi.

1.4 Assumption of the Study

To achieve the specific research objectives of this study, several assumptions are acknowledged by the study. These assumptions form the foundation for the research and guide the exploration of social science students' knowledge, attitudes, and practices related to ECPs at the University of Nairobi.

i. Social science students at the University of Nairobi have limited knowledge about Emergency Contraceptive Pills (ECPs) and their proper usage.
ii. Social and cultural factors significantly influence social science students' attitudes and practices toward using Emergency Contraceptive Pills (ECPs).
iii. Availability and accessibility of Emergency Contraceptive Pills (ECPs) might be limited on the University of Nairobi campus or within its vicinity.
iv. Social science students at the University of Nairobi may face barriers in accessing information about Emergency Contraceptive Pills (ECPs) from reliable sources.

1.5 Justification of the Study

The University of Nairobi is home to a vibrant population of young women who require comprehensive reproductive health options, including emergency contraceptive pills (ECPs). For many of these women, preventing unintended pregnancies is crucial as it can have life-threatening consequences due to the high

risk of complications during pregnancy, labor, delivery, and postnatal period, significantly contributing to mortality rates among adolescents and young girls. This study aims to address the existing gaps in knowledge and fill the void in the literature by generating new empirical data on the knowledge, attitudes, and practices of social science students at the University of Nairobi regarding ECPs. The findings of this study will be of interest to various stakeholders, including policymakers, healthcare providers, educators, and researchers, as they will provide valuable insights into the current situation and serve as a point of reference for future research. The study addresses several valuable insights, including the level of knowledge, attitudes, and practices concerning Emergency Contraceptive Pills (ECPs) among social science students at the University of Nairobi. It seeks to uncover the factors influencing the low utilization of ECPs among young women, particularly those attending universities in Kenya, thereby shedding light on the challenges these female students face in balancing academic responsibilities with reproductive health decisions.

The research also delves into the potential impact of cultural, religious, and social norms on attitudes toward ECPs and their utilization among this demographic. Furthermore, the insights derived from the study hold significance for policymakers, as they can inform the formulation of reproductive health policies tailored to meet the needs of female university students in Kenya. Also, the findings serve as a crucial point of reference for future research and comparative analyses in reproductive health and contraception, contributing to evidence-based decision-making in this critical area.

The study identifies significant theoretical and conceptual knowledge gaps concerning using Emergency Contraceptive Pills (ECPs) among young adults. These gaps pertain to the limited exploration of risk compensation behaviors associated with ECP usage and the insufficient understanding of sociocultural factors influencing contraceptive decision-making. The study proposes a two-pronged approach, utilizing quantitative and qualitative research methods to address these gaps. The quantitative aspect investigates the relationship between knowledge, attitudes, and practices concerning ECP utilization and potential risk

compensation behaviors. On the other hand, the qualitative aspect seeks to gain deeper insights into the cultural beliefs, societal expectations, and interpersonal influences shaping ECP utilization.

Moreover, the study highlights the need to include male perspectives, often overlooked in existing literature, to understand contraceptive decision-making comprehensively. By bridging these knowledge gaps, the research endeavors to contribute to developing gender-inclusive interventions and advancing the field of sexual and reproductive health. In the long term, the study's outcomes can contribute to developing targeted interventions, educational programs, and policies that promote safe and effective contraceptive practices, ultimately improving the reproductive health outcomes and well-being of young women at the University of Nairobi and beyond.

1.6 Scope and Limitations of the Study

This study focused on female students in the social sciences at the University of Nairobi, limiting the generalizability of the findings to other tertiary-level institutions and excluding the experiences of students in rural areas. Additionally, the study solely collects data from female respondents, potentially overlooking the significance of male involvement in reproductive health decisions. Using a questionnaire as the primary data collection method introduced the possibility of reporting errors due to respondent bias or non-response. The sensitive nature of the study's content may lead to underestimation, despite assurances of anonymity. Furthermore, the study primarily employs quantitative methods, limiting the depth of qualitative insights and perspectives that could have been gained through qualitative methodologies.

The report addresses the need for comprehensive reproductive health options among young women, particularly in university settings. It justifies the study by highlighting the gaps in knowledge and the potentially life-threatening consequences of unintended pregnancies. The study's research questions and specific objectives are outlined, focusing on examining students' knowledge, attitudes, and practices related to ECPs. The scope of the study is described, emphasizing the limitations of the sample size, exclusion of rural areas, and reliance on female respondents. The methodological limitations are acknowledged, such as

potential reporting errors and the lack of qualitative insights. Overall, the study aims to generate new empirical data that can inform future research, contribute to policymaking, and improve the reproductive health outcomes of young women at the University of Nairobi.

1.7 Operational Definition of Concepts

The operational definitions provide specific meanings and parameters for the key concepts within the context of this study, allowing for consistent interpretation and measurement of these variables throughout the research process.

Social Science Students: For this study, social science students refer to individuals who are currently enrolled in undergraduate or postgraduate programs in disciplines such as sociology, psychology, anthropology, political science, economics, and other related fields within the social sciences at the University of Nairobi.

Knowledge of ECPs: Knowledge of emergency contraceptive pills (ECPs) refers to the understanding and awareness that social science students possess regarding the availability, purpose, usage, effectiveness, side effects, and accessibility of ECPs as a method of contraception. It includes knowledge of proper administration, timing, and potential health benefits or risks associated with ECPs.

Attitudes towards ECPs: Attitudes towards ECPs refer to the opinions, beliefs, and feelings that social science students hold regarding the acceptability, desirability, efficacy, safety, and moral implications of using ECPs as a method of contraception. It encompasses their approval, support, or resistance toward using ECPs as a reproductive health option.

Practices of ECPs: Practices of ECPs entail social science students' actual behaviors, actions, and utilization patterns concerning the use of emergency contraceptive pills. It encompasses factors such as the frequency of ECP usage, adherence to recommended guidelines, consistency in ECP administration after unprotected sexual intercourse or contraceptive failure, and the extent to which social science students seek ECPs as a preventive measure against unintended pregnancies.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter comprehensively reviews the relevant literature on the knowledge, attitudes, and practices of emergency contraception (ECPs). It aims to provide a solid foundation for understanding the existing body of research in this area. The first section of the literature review explores the level of knowledge and awareness regarding ECPs, examining the factors that influence awareness and understanding. The second section explores past literature on attitudes towards and utilization of ECPs, considering cultural influences and other factors that shape individuals' beliefs and perceptions. The third section focuses on the practices and utilization patterns surrounding ECPs, analyzing the decision-making processes and factors influencing their use. Additionally, this chapter discusses the theoretical framework that underpins the study, providing a conceptual lens for interpreting the findings. Moreover, it identifies the research gap within the literature, highlighting areas that require further investigation. Lastly, key terms are defined to ensure clarity and consistency throughout the study.

2.2 Teenage Pregnancy

Teenage pregnancy is a global public health concern that affects the well-being of young women, their children, and their families. According to a study by Mueller et al. (2017), teen pregnancy prevention is one of the major evidence-based policy initiatives funded by the U.S. government, as the U.S. has one of the highest teen pregnancy rates among developed nations. The study also describes implementing a multicomponent, community-wide approach to teen pregnancy prevention involving evidence-based interventions, youth-friendly reproductive health services, stakeholder education, youth engagement, and community mobilization. Another study by Wall-Wieler et al. (2016) examines the impact of maternal adolescent childbearing and an older sister's teenage pregnancy on a younger sister's risk of teenage pregnancy. The study uses linkable administrative data from Manitoba, Canada, and finds that both factors

significantly increase the odds of teenage pregnancy for younger sisters. The study suggests that interventions should target families with a teenage pregnancy history and support teenage mothers and their siblings.

In Africa, teenage pregnancy is a major challenge contributing to maternal and child mortality, school dropout, and poverty. According to a study by Mchunu et al. (2012), teenage pregnancy rates are high in South Africa, especially among black African adolescents in rural areas. The study explores the perceptions and experiences of pregnant teenagers and their parents in a rural district of KwaZulu-Natal province. The study reveals that factors such as poverty, lack of parental guidance, peer pressure, substance abuse, sexual violence, and cultural practices influence teenage pregnancy. The study recommends that healthcare providers, educators, and community leaders collaborate to provide comprehensive sexual and reproductive health education and services for teenagers and their families. Another study by Kabiru et al. (2013) investigates the factors associated with teenage pregnancy among urban poor young women in Nairobi, Kenya. The study uses longitudinal data from the Transition to Adulthood study and finds that teenage pregnancy is associated with low levels of education, early sexual debut, inconsistent contraceptive use, cohabitation with a partner, and having a mother or sister who was a teenage mother. The study suggests that interventions should address teenage pregnancy's structural and social determinants and empower young women to make informed choices about their sexual and reproductive health.

In Kenya, teenage pregnancy is a prevalent problem that affects the educational attainment, economic opportunities, and health outcomes of young women and their children. According to a study by Izugbara et al. (2008), teenage pregnancy is a common reason for school dropout among girls in Kenya. The study examines the school re-entry policy for pregnant girls and finds that it is poorly implemented and faces many challenges, such as stigma, discrimination, lack of support, and inadequate resources. The study calls for a more supportive and enabling environment for pregnant girls and young mothers to continue their education. Another study by Godia et al. (2014) evaluates the effectiveness of an adolescent sexual and reproductive health intervention in rural western Kenya. The intervention includes teacher-led sex

education, youth-friendly health services, and community activities. The study uses a quasi-experimental design and finds that the intervention significantly reduces the incidence of teenage pregnancy among intervention schools compared to control schools. The study concludes that comprehensive adolescent sexual and reproductive health interventions can prevent teenage pregnancy and improve the well-being of young people in rural settings.

2.3 Understanding Knowledge and Utilization of ECPs

The knowledge and utilization of emergency contraception pills (ECPs) among different populations have been investigated in various contexts (Abera et al.,2014; Mwaura, 2018; Kipkosgei, 2021). Abera et al. (2014) assessed the knowledge, attitude, and utilization of ECPs among female university students using a mixed-methods cross-sectional study with 549 participants selected through a multi-stage sampling technique. The results showed that the students had low knowledge of the correct timing for taking ECPs and low utilization of ECPs for preventing pregnancy. This study identified the need for addressing the knowledge gaps among female university students regarding ECPs. Mwaura (2018) also found a lack of knowledge and misinformation about ECPs among college students in the study. However, Kipkosgei (2021) reported a different finding, indicating that most university students aged 18-24 had adequate knowledge of the appropriate timing for taking ECPs. These conflicting findings suggest that further research is needed to understand the factors influencing the knowledge and utilization of ECPs among different populations.

Additionally, the study by Abera et al. (2014) revealed concerns regarding the effects of ECPs, suggesting incorporating health education programs into the university curriculum to enhance knowledge on the use, timelines, and effects of ECPs. Similarly, Jima et al., Segni, and Zergaw (2016) assessed the knowledge, attitude, and utilization of ECPs among unmarried women of childbearing age. Their findings aligned with those of Abera et al. (2014), indicating low knowledge of ECPs among unmarried women of childbearing age and emphasizing the need for community-based health education programs to increase awareness and utilization of ECPs.

Furthermore, Onasoga et al. (2016) conducted a study to investigate the knowledge and utilization of ECPs among adolescents in the Niger Delta region of Nigeria. The research employed a descriptive cross-sectional design and purposive sampling, targeting 220 adolescents. The study reported a high level of awareness but low utilization of ECPs among adolescents in the region. These findings contradict the results of Abera et al. (2014) and Jima et al. (2016), who reported low awareness among young women regarding ECPs. However, Onasoga et al. (2016) found no significant association between knowledge and utilization of ECPs among adolescents in the Niger Delta region. This contrasts with the findings of Mwaura (2018), which established a significant association between knowledge and utilization. Nonetheless, the study by Onasoga et al. (2016) agrees with Jima et al. (2016) in emphasizing the need for health education programs to enlighten adolescents and their guardians about the benefits of using ECPs to reduce unintended pregnancies.

Kwame et al. (2022) also researched awareness and utilization of ECPs among women of reproductive age in Sub-Saharan Africa. The study involved a systematic review of 867 Google Scholar and EBASE database articles. The results revealed significant variations in the knowledge and utilization of ECPs across different countries in the Sub-Saharan region. Notably, the study found that the level of ECP utilization was lower compared to the level of knowledge among women of reproductive age. Among the ECPs used, Postinor 2 (levonorgestrel-only pills) emerged as the most commonly utilized option. However, it is important to acknowledge a limitation of the study as the reviewed articles were conducted at different periods, necessitating the use of a standardized data collection tool for future research. Based on their findings, the study recommended implementing health education programs to disseminate accurate information about the use and benefits of ECPs while dispelling misconceptions regarding the associated health risks. Additionally, the study highlighted the need for further research to investigate the influence of social, cultural, and economic factors on ECP utilization.

Sitini et al. (2020) conducted a quantitative cross-sectional study in Rwanda to investigate the knowledge, attitude, and practices regarding emergency contraception (ECPs) among university students. The study

utilized stratified and simple random sampling methods, with a sample size of 313 unmarried female students. The findings revealed a high level of knowledge about ECPs among unmarried university students, but the utilization of ECPs remained low. Additionally, the study identified a significant association between religious affiliation and the consumption of ECPs. Consolidating similar findings from various studies, it is evident that there is a need for health education campaigns to increase awareness and promote the uptake of contraceptives. This recommendation aligns with the research conducted by Ikamari et al. (2013) in Nairobi, which focused on the prevalence and determinants of unwanted pregnancies among unmarried women. The study emphasized the importance of enhancing the accessibility of contraceptives for unmarried women in Nairobi, regardless of their educational and income levels. The findings from both Sitini et al. (2020) and Ikamari et al. (2013) highlight the significance of implementing user-friendly contraceptive packages and comprehensive education programs to address the challenges surrounding unintended pregnancies.

Nyambura et al. (2017) conducted an institution-based cross-sectional quantitative study to examine the knowledge and utilization of emergency contraception (ECPs) among female students at the University of Nairobi. The study utilized systematic random sampling and recruited a total of 383 students. The findings indicated a high level of awareness regarding the existence of ECPs. However, there was a lack of knowledge regarding the recommended timelines for consuming ECPs. Interestingly, most students identified 72 hours as the maximum period for taking ECPs after intercourse, contrary to the WHO recommendation of 120 hours. These findings are consistent with the studies conducted by Shelat et al. (2012) and Tilahun et al. (2021), which also reported a lack of knowledge regarding the appropriate timeframe and dosage of ECPs. Furthermore, the students demonstrated insufficient awareness regarding the effectiveness of ECPs. The utilization of ECPs was low, and the students rarely sought information on usage and benefits from public health workers. Additionally, Shelat et al. (2012) found that most students knew that ECPs do not protect against sexually transmitted diseases (STDs) and HIV.

2.3 Assess attitudes towards ECPs

The youth in Kenya today face significant challenges related to early pregnancies, abortion, and sexually transmitted diseases, reflecting their perceptions of available measures to address these issues. Adolwa et al. (2022) conducted a qualitative study exploring the social meaning of contraceptives among university students. Despite the students' high level of knowledge about emergency contraception (ECPs), the uptake of ECPs remained remarkably low, even with increased government initiatives to educate and improve accessibility. The study identified a poor attitude towards ECPs as the main factor contributing to this low uptake. Consequently, this has led to increased rates of abortion, heightened poverty levels, limited educational opportunities for girls, a rise in HIV infections, and an upsurge in teenage pregnancies. Moreover, within youth environments, sociocultural and religious practices have assigned varying meanings to ECPs, creating discomfort among young individuals when discussing such topics. Thus, the crucial missing link in government efforts to educate youth about contraceptives is understanding their attitudes toward ECPs. By gaining insight into the youth's perceptions of ECPs, policymakers can more effectively develop strategies and policies that address their specific needs and concerns, facilitating better access and utilization of ECPs.

On the contrary, Mwaura (2018), on the determinants of utilization of ECPs among college students, found no significant relationship between attitude and ECP utilization. Mwaura (2018) reported that students disagree that contraceptives promote promiscuity. Neither did they concur that it is a way of abortion. Also, the research indicated a positive attitude toward using ECPs among college students. This matches Sitini et al.'s (2020) results that indicated university students' positive attitudes toward using ECPs. Though there is a positive attitude, the uptake of contraceptives is still deficient. The low utilization was ascribed to a lack of information, fear of side effects, and unavailability of the ECPs on the university premises.

Tilahun et al. (2021) evaluated the knowledge, attitude, and practice of ECPs through a cross-sectional study. The scope included 260 preparatory and high-school students recruited through systematic sampling. The study found no significant relationship between the level of education and the usage of ECPs. The

results also revealed a significant relationship between religion and attitude toward ECPs, with Orthodox having a higher significant positive attitude followed by Muslims than Protestants. Comparatively, Shelat et al. (2012) assessed college students' knowledge and attitude about ECPs. The study reported poor knowledge of the students' brand names and usage of ECPs despite having a medical background. The study attributed the increased number of unwanted pregnancies in India to a lack of awareness of the usage and timeframes of ECPs. Further, most students did not favor having ECPs sold over the counter. This is because many would misuse the drugs, which would warranty unsafe sexual relationships. This showcases a poor attitude toward the use of ECPs. The study also highlighted the need for health education programs to disseminate the correct information on ECPs. Nevertheless, this study was limited to research about practices since it was felt to be a personal issue.

Nibabe and Mgutshini (2014) conducted a quantitative descriptive cross-sectional study to assess the knowledge, attitude, and practice of contraceptives among female college students in Ethiopia. The study included a sample of 2554 female college students selected through multistage sampling. The study's findings revealed a significant association between the level of education and attitude toward sex. Furthermore, age was identified as a significant predictor of attitude toward contraceptives, with individuals aged 24-25 exhibiting a more positive attitude than those aged 20-21. Additionally, students with higher education levels demonstrated a more favorable attitude toward sex than those with lower levels of education. Moreover, the study found that individuals with prior knowledge about contraceptives held a positive attitude toward their use. Furthermore, age and marital status were significantly associated with contraceptive usage, warranting further explanation. It is important to note that the study had some limitations, including its limited statistical power, which restricts its generalizability to all college students. Additionally, non-response to the survey was a limitation due to the topic's sensitive nature.

In a cross-sectional survey conducted by Maurice et al. (2022), the knowledge, attitude, and utilization of emergency contraceptives (ECs) among adolescents in Congo were explored. The study included 353 adolescents aged 15-25. The findings indicated a high level of awareness and positive attitude toward ECs

among most participants. Moreover, a significant association between educational level and EC utilization was observed, consistent with the findings of Tilahun et al. (2021), suggesting that higher education is linked to increased EC use. Furthermore, Maurice et al. (2022) found that most respondents regarded ECs as their preferred method of emergency contraception, perceiving them as effective in preventing pregnancy. Approximately half of the participants reported using ECs, while those who had never used them cited concerns about side effects and religious beliefs as primary reasons. It is important to note that the study had a limitation as it was conducted over a specific period, and the results might have varied if the same questions were asked at a different time.

2.4 Practices and Patterns of ECPs Utilization

Chin-Quee et al. (2014) conducted a study investigating the repeat usage of ECPs among respondents in urban Kenya and Nigeria. The findings revealed a low frequency of ECP usage in both countries. Interestingly, while the acceptance of ECPs was higher in Nigeria compared to Kenya, the frequency of usage was more likely among individuals who engaged in regular sexual intercourse. However, it is important to note that the study had limitations. One limitation was the misrepresentation of women across different socio-economic strata, with an overrepresentation of those with lower income and an underrepresentation of those with higher income. This limitation is significant as it may affect the generalizability of the findings. Moreover, the study found no significant association between the frequency of ECP use and socioeconomic status. Another limitation of the research was the sparse utilization of ECPs, with only a relatively small number of participants reporting usage within six months. This limited the comparability and reliability of the study's findings. Additionally, the study indicated that, on average, individuals who engaged in sexual intercourse frequently tended to use ECPs at least once per month.

Kipkosgei (2021) investigated the factors that promote the usage of ECPs among students. The study included Health Science female students at Gretsa University aged 18-24 years through a cross-sectional survey. The findings indicated that most of the respondents' first encounter with the ECPs was with friends, followed by social media. They learned about the usage and benefits of the ECPs from friends and social

media. This coincides with Sitini et al. (2020). They investigated university students' knowledge, attitude, and practices and determined that the significant information sources of ECPs among university students are friends and media. The study further established that students from rural areas were challenged with a lack of knowledge and timeframes for using ECPs. Thus, health education was recommended to be integrated into the university to disseminate knowledge on the proper use of ECPs. The study recommended further research on the awareness and usage of ECPs.

Similarly, Nyambura et al. (2017), in investigating knowledge and utilization of ECPs, found that most respondents used friends and mass media as their sources of information. Further, most did not utilize health work providers as their source of information for the usage and benefits of ECPs. This contradicts Tilahun et al. (2021), who found that health professionals were the second-best source of contraceptive information after the media. The underutilization of health professionals was found to be wanting. The primary reason for using ECPs among university students was engaging in unprotected sex. The results also showed that a few students knew what ECPs were or had ever heard about them. The study also found that only a handful of students believed the ECPs were effective.

Abate et al. (2014) assessed the knowledge, attitude, practice, and utilization of ECPs among abortion-seeking women using a cross-sectional design. Three hundred ninety women were sampled using multi-stage random sampling. The results showed that less than half of the women had heard about ECPs, and the majority preferred ECPs as their method of contraception. The study established that a substantial number of the individuals had misinformation about ECPs. Despite the respondent's knowledge and positive attitude toward ECs, they had less information about the available options they could use. The results informed that the healthcare professionals did not provide the necessary information about ECs to the respondents. Only a few individuals were reported to have used Emergency Contraceptives, which was positively associated with the education level. And most of the respondents who reported using ECs were Christians, followed by Muslims. Also, the research informed that unmarried women were more likely to use ECs than married women. The study revealed that friends are the primary source of information about

ECs. In conclusion, the study established a lack of knowledge as a stumbling block toward realizing the great potential of ECs in reducing unwanted pregnancies and abortions.

Finally, a systematic review by Munakampe et al. (2018) evaluated knowledge, attitudes, and practices concerning contraception among adolescents in developing countries. The study included 21 studies from 6 different databases. Results showed that utilization of ECs was low, and the standard methods of contraception, such as ECPs, were dominant among adolescents due to their accessibility. The lack of information and inaccessibility to services mirrored the low utilization of contraception. Another challenge was fear for those with older partners since they were not decision-makers for using or not using contraceptives. Also, education plays a critical role in the utilization of contraception as those adolescents attaining higher levels of education are more likely to use contraception compared to those attaining lower levels of education.

2.5 Theoretical Framework of the Study

The utilization of ECPs among young adults can be discussed in the context of two main theories: the health belief theory and the risk compensation theory.

2.5.1 Health Belief Theory

The health belief model is a sound framework to support understanding the dynamics of the utilization of ECPs. The theory emerged from US public health researchers seeking to develop models in psychology designed to promote effective health interventions and education programmes. The theory is credited to the works of Hochbaum (1958) and Rosenstock (1966). The model focuses on the dynamics of an individual's beliefs about certain health conditions and how these beliefs can predict the person's health-related behaviors. The research found that beliefs shaped health-related behavioral patterns as individuals reach decisions based on their perceived likelihood of experiencing increased health complications, the expected severity associated with the condition, and the benefits of utilizing an intervention that is a preventative

strategy to the problem (Rosenstock, 1974). The findings of Becker et al. (1977b) affirmed the model by determining that health beliefs were correlated with variations in health-related behavior patterns.

Globally, unintended pregnancies have presented an enormous social and health problem despite widely rolled-out family planning interventions. The reason attributed to poor utilization of these preventive measures is, among other things, ignorance, inaccessibility, affordability, and other psychologically based beliefs. Further, personal and societal immature perceptions about the risks and benefits of the intervention have also significantly contributed to the low utilization levels (Eisen et al., 1985). The health belief model is a structured attempt at addressing the perpetual context influencing health behaviors to develop strategies and intervention points to enhance prevention-related beliefs, motivations, and behavior. The idea espoused by the model supposes that the possibility of an individual utilizing a preventive measure such as an emergency pill prevents exposure to a condition like pregnancy is governed by their perceptions (Janz & Becker, 1984).

Abraham and Sheeran (2015) propose that the model focuses on health behavior and the representation of health. These were categorized as behavioral evaluation and threat perception. Threat perception was constrained to refer to the perceived susceptibility to a health condition and the expected gravity of the illness. The behavioral element of the model was composed of the concerns and perceptions of the efficacy and benefits of the intervention and associated barriers, such as costs that limit the utilization of an intervention. However, they supposed that the model could be used to propose cues of action that can activate favorable health behaviors. Educational campaigns promote awareness of diverse triggers of a condition, the perceptions but the associated systems, and societal influences effectively promote true beliefs about a condition.

Since the model is an interpersonal, cognitive framework that casts humans as rational beings whose decision-making strategies for health behavior use a multidimensional approach, it provides valuable insights into understanding factors influencing emergency contraceptive pill (ECP) utilization among the young. An approach that can be leveraged to understand the complexity of preventive health behaviors of

people, such as contraception use. The complexity of family planning stretches from the decision of initiation, continuation and discontinuation, misuse, and nonuse. Adherence and compliance to this intervention can thus be understood from the behavioral factors that motivate or hinder utilization. In this study, the researchers sought to understand the knowledge and perception of female students on using ECPs. The model guidelines were relevant in informing the structure and content of contraceptive education that ensures the responsible use of ECPs by young female students.

The relevance and applicability of the health belief model (HBT) to the present study should be forcefully articulated. The HBT is a sound theoretical framework that supports understanding the dynamics of ECP utilization. Originating from the research of US public health researchers, such as Hochbaum (1958) and Rosenstock (1966), the model focuses on individuals' beliefs about health conditions and how these beliefs influence their health-related behaviors. The model suggests that individuals make decisions based on their perceived likelihood of experiencing health complications, the severity of the condition, and the perceived benefits of utilizing preventive interventions (Rosenstock, 1974). Becker et al. (1977b) further affirmed the model by demonstrating the correlation between health beliefs and variations in health-related behavior patterns. Therefore, the HBT provides a valuable framework for understanding and promoting ECP utilization.

The tenets of the health belief model encompass key components related to health behavior and the representation of health. According to Abraham and Sheeran (2015), the model focuses on behavioral evaluation and threat perception. Threat perception refers to an individual's perceived susceptibility to a health condition and their expectations regarding the severity of the illness. On the other hand, behavioral evaluation involves considerations of the efficacy and benefits of an intervention, as well as barriers to its utilization, such as costs. Additionally, the model proposes using cues of action to activate favorable health behaviors. Educational campaigns that promote awareness of various triggers, societal influences, and perceptions related to a condition are effective ways to foster accurate beliefs about the condition. The HBT

provides a comprehensive framework for understanding and influencing health behaviors, including contraceptive use.

In the context of this study, the health belief model serves as an interpersonal, cognitive framework that considers humans as rational beings who employ multidimensional decision-making strategies for health behavior. This framework is particularly valuable for understanding the complexity of preventive health behaviors, such as contraception use, which involves decisions regarding initiation, continuation, discontinuation, and adherence. By understanding the behavioral factors that motivate or hinder ECP utilization, the researchers aimed to gain insights into the knowledge and perceptions of female students. The guidelines provided by the health belief model informed the structure and content of contraceptive education, promoting responsible ECP use among young female students.

2.5.2 Risk Compensation Theory

The Risk Compensation Theory, initially proposed by Sam Peltzman, delves into the intricate relationship between individuals' behavior and their perceived changes in risk (Peltzman,1975). According to this theory, when people feel protected or shielded from harm due to the implementation of safety measures, they may exhibit riskier behavior patterns, thus counteracting the intended benefits of those safety measures. This theoretical framework serves as a crucial lens through which we can explore the profound impact of the Risk Compensation Theory on the knowledge, attitudes, and practices regarding the utilization of Emergency Contraceptive Pills (ECPs).

The origins of the Risk Compensation Theory can be traced back to the realm of public health and safety, particularly in the context of automobile safety (Peltzman,1975). Peltzman's groundbreaking study conducted in 1975 focused on evaluating the effectiveness of automobile safety regulations. His research demonstrated that while these safety measures did reduce the overall risk of accidents and injuries, they also resulted in an unexpected consequence: an increase in risky driving behaviors(Peltzman,1975). This

finding challenged the prevailing assumption that safety measures inherently decrease risk-taking behaviors and introduced the concept of risk compensation.

The Risk Compensation Theory encompasses several key concepts and mechanisms that underpin its framework. One such concept is risk perception, which refers to an individual's subjective evaluation of the likelihood and severity of a potential threat (Evans & Graham, 1991). People make decisions based on their perception of risk, and changes can influence their behavior in their perception of safety. Another essential component is risk compensation, which describes individuals' tendency to adjust their behavior in response to changes in perceived risk. When people perceive a lower level of risk due to safety measures, they may engage in riskier behavior, ultimately offsetting the intended benefits of those measures. This phenomenon highlights the complex interplay between perceived risk and behavior(Peltzman,1975).

Behavioral adaptation is a crucial mechanism within the Risk Compensation Theory framework. It refers to the changes in individual behavior that arise from alterations in risk perception. In the context of using ECPs, behavioral adaptation may manifest as an increased likelihood of engaging in risky sexual behaviors, such as unprotected sex or multiple sexual partners. Individuals may feel a reduced perception of risk due to their knowledge about and access to ECPs, which are perceived as a safety net against unintended pregnancies. Consequently, they may be more inclined to engage in riskier sexual practices, potentially negating the intended benefits of ECP utilization.

Applying the Risk Compensation Theory to the study on knowledge, attitudes, and practices regarding the utilization of ECPs offers valuable insights into the field of reproductive health(Shukla et al., 2021). The objective of such a study is to examine whether individuals who possess knowledge about and access to ECPs are more likely to engage in riskier sexual behaviors due to their reduced perceived risk. This exploration is essential in understanding the potential impact of risk compensation within reproductive health. It can guide the development of interventions and educational programs to promote responsible sexual behavior while ensuring the effective use of emergency contraception.

The theory provides a robust theoretical framework for investigating the relationship between knowledge, attitudes, and practices regarding using ECPs. By comprehending the potential impact of risk compensation in the context of reproductive health, we can develop targeted interventions and educational initiatives to promote responsible sexual behavior while maximizing the efficacy of emergency contraception.

2.5.3 Relevance of the Theories

The study's theoretical framework incorporates two main theories: the Health Belief Theory (HBT) and the Risk Compensation Theory. These theories provide valuable perspectives for understanding the dynamics of ECP utilization among young adults and shed light on the factors influencing their knowledge, attitudes, and practices.

The Health Belief Theory (HBT) is particularly relevant to the study as it focuses on individuals' beliefs about health conditions and how they shape their health-related behaviors. Originating from the works of Hochbaum and Rosenstock, the HBT emphasizes the role of perceived susceptibility to health conditions, the expected severity of the illness, and the perceived benefits of utilizing preventive interventions. This theory highlights the significance of individuals' perceptions in determining their likelihood of using ECPs. By understanding the components of the HBT, such as threat perception and behavioral evaluation, researchers can explore the factors that influence young adults' decision-making regarding ECP utilization. This understanding can inform the development of educational campaigns and strategies to promote accurate beliefs about ECPs and encourage responsible use.

On the other hand, the Risk Compensation Theory, proposed by Peltzman, offers insights into the complex relationship between behavior and perceived changes in risk. This theory suggests that individuals may engage in riskier behaviors when they perceive a reduced level of risk due to the presence of safety measures. In the context of ECP utilization, the Risk Compensation Theory raises the possibility that individuals with access to ECPs may be more inclined to engage in risky sexual behaviors, assuming a reduced risk perception. By applying the Risk Compensation Theory to the study, researchers can explore

whether young adults who possess knowledge about and access to ECPs are more likely to engage in risky sexual practices. Understanding the potential impact of risk compensation can inform the development of interventions and educational programs that promote responsible sexual behavior while ensuring the effective use of emergency contraception.

The combination of the Health Belief Theory and the Risk Compensation Theory provides a comprehensive theoretical framework for investigating the utilization of ECPs among young adults. The Health Belief Theory helps in enhancing the understanding of the role of individual beliefs and perceptions. At the same time, the Risk Compensation Theory sheds light on the potential behavioral adaptations and risks associated with ECP utilization. By incorporating these theories, the study aims to gain valuable insights into young adults' knowledge, attitudes, and practices regarding ECPs and develop effective strategies to promote responsible and informed contraceptive use.

2.6 Research Gap

The literature review shows significant empirical evidence indicating dynamics, outcomes, and determinants of an unmet need in using ECPs. Government and non-governmental organizations have directed substantial investment in family planning programming that has yielded guidelines, policies, and expanded access to information and services related to family planning. However, there are several research gaps in knowledge, attitudes, and practices regarding using Emergency Contraceptive Pills (ECPs) among young adults. These gaps must be addressed to understand the factors influencing ECP utilization comprehensively. This section identifies these research gaps and proposes potential solutions to bridge them.

One research gap is the limited study on risk compensation behaviors associated with ECP utilization. Although the Risk Compensation Theory has been applied in various fields, its application to ECP utilization is relatively scarce. A quantitative study was conducted to explore the relationship between knowledge, attitudes, and practices regarding ECP utilization and risk compensation behaviors, addressing

this gap in understanding. This study can involve surveying a large sample of young adults to assess their knowledge about ECPs, attitudes towards contraception, sexual behavior patterns, and perceived risk of unintended pregnancy. Analyzing the data using appropriate statistical techniques can determine the extent of risk compensation behaviors concerning ECP utilization.

Another research gap is the limited understanding of sociocultural factors influencing ECP utilization. Many studies have focused on individual-level factors but neglected the broader sociocultural context. Qualitative research methods, such as in-depth interviews or focus group discussions, were leveragedto address this gap. Engaging participants in open-ended discussions can provide insights into the cultural beliefs, societal expectations, and interpersonal influences that shape ECP utilization. This approach will lead to a more holistic understanding of the interplay between individual-level factors and sociocultural dynamics.

The third research gap is the limited focus on male perspectives in studies on ECP utilization. Most existing studies primarily examine female perspectives, overlooking male partners' or potential partners' experiences and attitudes. The research recommends that future studies can address this gap by including male participants and specifically exploring their knowledge, attitudes, and practices regarding ECP utilization. Including male perspectives will contribute to a more comprehensive understanding of the factors influencing ECP utilization and allow for the design of gender-inclusive interventions.

A fourth research gap is the limited number of longitudinal studies on ECP utilization. Many studies have a cross-sectional design, providing only a snapshot of knowledge, attitudes, and practices at a specific time. A longitudinal study can be conducted to address this gap, following a cohort of young adults over an extended period. Collecting data at multiple time points will enable researchers to track changes in knowledge, attitudes, and practices regarding ECP utilization, identify trends, understand the stability of behaviors, and assess the effectiveness of interventions implemented over time.

Addressing the research gaps in ECP utilization requires a comprehensive and multi-faceted approach. Researching risk compensation behaviors, sociocultural factors, and male perspectives and employing longitudinal designs will provide a more nuanced understanding of ECP utilization. Bridging these gaps will contribute to developing evidence-based interventions and educational programs that promote responsible sexual behavior and maximize the effective use of emergency contraception among young adults.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section outlines the methodological approaches that facilitated the successful evaluation of the study objectives. It comprises study design, study site, study population, sampling procedure, sample size determination, data collection, data management, data analysis, and ethical considerations outlined in that order.

3.3 Research Design

A research design serves as a strategic roadmap for researchers to effectively address research objectives and associated hypotheses or solve existing research problems (Siedlecki, 2020). It encompasses decisions about data collection methods, sampling approaches, and considerations of time and cost constraints. As highlighted by Creswell and Plano (2007), a well-designed study aids investigators in formulating research questions and determining appropriate statistical approaches for their assessment. In the case of this study, a quantitative cross-sectional design was considered appropriate due to the nature of data collection, which involved gathering information from respondents at a single point in time.

A quantitative cross-sectional study design was chosen for several reasons. Firstly, it allowed for data collection from a diverse sample of respondents between April and May 2023. By administering surveys or questionnaires to participants at a single instance, the researchers could capture a snapshot of knowledge, attitudes, and practices regarding the utilization of Emergency Contraceptive Pills (ECPs) among young adults. This approach enabled efficient data collection and analysis, providing valuable insights into the current situation without needing long-term follow-up.

The study utilized a cross-sectional design to examine relationships and associations between various variables related to Emergency Contraceptive Pill (ECPs) utilization among young adults. This design

involved gathering data at a specific time, enabling researchers to explore the connections between factors like knowledge, attitudes, and practices in a single assessment. The study identified patterns and correlations by doing so, providing a comprehensive overview of the factors influencing ECP utilization. The cross-sectional design offered practical advantages, including ease of implementation and cost-effectiveness. Since data collection occurred only once, researchers could administer the survey to a relatively large sample within a manageable timeframe. This approach minimized logistical challenges and financial resources compared to longitudinal designs, which would require tracking participants over an extended period. As a result, the cross-sectional design provided valuable insights into the relationships between variables, shedding light on the factors impacting ECP utilization among young adults.

3.2 Research Site

The University of Nairobi is a prominent higher education institution in Nairobi, Kenya. It is considered one of the leading universities in Africa and has a rich history dating back to its establishment in 1956. The university offers a wide range of academic programs and is known for its commitment to excellence in teaching, research, and community engagement. As the largest university in Kenya, the University of Nairobi plays a vital role in shaping the intellectual and academic landscape of the country. It has a diverse student body and attracts students from various parts of Kenya, as well as from other African countries and beyond. The university has multiple faculties and schools, including arts and humanities, social sciences, business, engineering, health sciences, and more.

The University of Nairobi is known for its research contributions across various fields, including science, technology, agriculture, health, and social sciences. It has many research centres and institutes that foster interdisciplinary collaboration and provide opportunities for cutting-edge research and innovation. In addition to its academic and research endeavors, the University of Nairobi actively involves itself in community outreach and development initiatives. It seeks to address societal challenges through partnerships with government agencies, non-profit organizations, and industry, aiming to contribute to the social and economic development of Kenya and the wider African region.

For the case study in question, the University of Nairobi served as the site for the research project focusing on the utilization of Emergency Contraceptive Pills (ECPs) among young adults. The university's diverse student population and reputation as a hub of academic excellence made it a suitable setting for exploring the knowledge, attitudes, and practices related to ECP utilization among this demographic.

Table 3.1: Target Population Distribution

Name of Programme	Programme Code	Target Population
Bachelor of Arts in Anthropology	N06	279
Bachelor of Arts in Gender and Development Studies	N12	1080
Bachelor of Economics	X74	1300
Bachelor of Economics and Statistics	X75	955
Bachelor of Arts in Journalism and Media Studies	K59	743
Bachelor of Arts in Broadcast Production	K62	432
Bachelor of Arts in International Studies	R67	516
TOTAL		**5305**

3.3 Study Population and Unit of Analysis

Kothari (2004) defines the target population as the sum of all entities with desired characteristics that interest a researcher in all research disciplines or fields. The study's target population was female students pursuing undergraduate programmes in the faculty of social sciences at the University of Nairobi. The choice of the faculty of social sciences and undergraduate programmes at the University of Nairobi is justified by the study's focus on understanding Emergency Contraceptive Pill (ECP) utilization among women of reproductive age. The target population, comprised of female students pursuing undergraduate programmes within the faculty of social sciences, aligns with the research interest, as these women are at significant risk of unintended pregnancies. Additionally, the faculty's academic disciplines, including gender issues and social behavior, offer relevant insights into the complexities of contraception practices. With a manageable population and diverse representation from seven undergraduate programmes, this choice provides practicality in data collection, ensuring a comprehensive examination of the factors influencing ECP utilization among young women. Currently, seven programmes are offered in the faculty, as outlined in Table 3.1 above.

3.4 Sample Size and Sampling Procedure

The sampling design plays a critical role in selecting items from a sample, and it consists of the sampling frame, sampling technique, and sample size (Kothari, 2004). In this research study, the sampling frame comprised undergraduate female students in the faculty of social science at the University of Nairobi. A stratified random sampling technique, which is a type of probability sampling, was employed to ensure a representative sample. This technique divides the entire population into distinct and homogeneous groups, known as strata. The sample was selected from each stratum using a simple random sampling approach, as recommended for clarity (Schindler, 2019).

Adopting a stratified random sampling technique in this study offers several advantages. Firstly, it helps minimize the survey's cost by focusing the data collection efforts on specific strata rather than the entire population. By stratifying the population based on the different programs offered by the faculty of social science at the University of Nairobi, the researchers could ensure that each program was adequately represented in the sample. This approach enhances the degree of representation and improves the overall efficiency of the study.

By considering the stratification variable of the seven programs offered by the social science faculty, the researchers aimed to capture the diversity within the undergraduate female student population. This stratification variable ensured that each program had a proportional representation in the sample, enabling a more comprehensive analysis of the factors influencing ECP utilization among young adults. The sample size is the number of subjects in a sample representing the target population (Schindler, 2019). Determining the optimal sample size is vital in statistical analysis, as too small will not generate valid outcomes. It may lack merits as a representation of the population under study. At the same time, if the sample is too large, it might yield small margins of error and will be more representative but will considerably escalate the cost and the time taken to undertake the research (Kothari, 2004). The Taro Yamane sample size estimation formula was used to determine the sample size. It addresses two fundamental flaws commonly encountered

by researchers: sampling error and commonly disregarded response biases (Adam, 2020). The formula is as follows;

Sample size,

$$n = \frac{N}{(1 + Ne^2)}$$

Where;

N= Total number of units in the sampling frame or the total population with the desired characteristics

e= Represents the margin of error, normally 5%, with an associated 95% level of confidence

Using the formula to determine the sample size;

$$n = \frac{5305}{(1 + (5305 * 0.05 * 0.05))} \approx 372\ respondents$$

The sample distribution was done proportionately based on the population size derived for each of the seven departments to reduce selection bias. The resultant sample size distribution is shown in Table 3.2.

Table 3.2: Sample Size Distribution

Name of Programme	Code	Target Population	Sample Size
Bachelor of Arts in Anthropology	N06	279	20
Bachelor of Arts in Gender and Development Studies	N12	1080	76
Bachelor of Economics	X74	1300	91
Bachelor of Economics and Statistics	X75	955	67
Bachelor of Arts in Journalism and Media Studies	K59	743	52
Bachelor of Arts in Broadcast Production	K62	432	30
Bachelor of Arts in International Studies	R67	516	36
TOTAL		**5305**	**372**

3.6 Data Collection Instrument and Procedure

A questionnaire is a written set of questions that can be either closed-ended, with predetermined response options, or open-ended, allowing for more detailed responses. In this study, a questionnaire was selected as the primary tool for data collection. The decision to use a questionnaire in this study was based on the numerous advantages highlighted by Kothari (2017). Firstly, questionnaires provide a reliable method for collecting raw data while ensuring respondent anonymity. This anonymity encourages participants to provide honest and unbiased responses, particularly when addressing sensitive topics such as attitudes and practices related to emergency contraceptive pills (ECPs). Furthermore, questionnaires offer a cost-effective and efficient means of data collection. They can be administered to a large number of participants within a reasonable timeframe, enabling data gathering from a diverse sample of young adults. The use of homogeneous questions in the questionnaire ensures consistency throughout the data collection process, minimizing potential biases that may arise from differences in interviewer behavior or questioning techniques.

The structured questionnaire employed in this study was specifically designed to capture both quantitative and qualitative responses. Closed-ended questions were utilized to gather specific information, while open-ended questions allowed for more in-depth insights. The questions were formulated concisely and precisely, facilitating quick and straightforward responses from the participants. The clarity of the questions and the provision of predefined response options aimed to minimize non-response rates and enhance the overall quality of the collected data. It is important to note that the language used in the questionnaire was English, as the respondents demonstrated a strong understanding of the language, eliminating the need for translation. On average, it took approximately 25 minutes for each respondent to complete the questionnaire.

3.5.1 Instrument Validity

Saunders et al. (2012) defined validity as the extent to which a data collection tool measures the indicators for which it was intended to measure. Upon analyzing information deduced from the pilot study, items in the data collection instruments were modified appropriately to capture the required data as advised by the respondents in the pilot study. Certain questions were restructured to enhance their validity to remain in the instruments. Data collected from the pilot study was only used in testing the deficiencies and problem areas of the questionnaire and were used for the final study. Further, to enhance the tool's validity, the researcher sought guidance from the supervisor and other experts in the field of inquiry.

3.5.2 Instrument Reliability

The reliability of a data collection instrument refers to the ability of the instrument to test the equivalence, stability, and internal consistency of the data collection instrument (Blumberg et al. 2014). It refers to the capability instrument to produce consistent and stable measurements if the instruments were read-ministered several times. The study used Cronbach's alpha coefficient to measure the reliability of the questionnaire. A Cronbach's alpha value greater than 0.7 is acceptable in most social science research. A researcher can have confidence that the results yielded using the tool are reliable and consistent if used in other settings.

3.7 Data Analysis Techniques

After data was collected, it was important to be processed and analyzed to ensure that it was relevant for making contemplated comparisons and analysis (Kothari, 2004). The processing was all about editing, classification into homogenous groups, coding, and data tabulation for easy analysis. The analysis involved calculation using computer software, IBM SPSS 2.0, for certain indices or measures and looking for the existing relationship patterns among data groups. The researcher then subjected the processed data to descriptive and inferential statistical analysis. Descriptive statistics techniques enabled the description and comparison of variables numerically. It focused on central tendency and dispersion aspects, namely

frequency, percentages, mode, the mean, and standard deviation for profiling sample characteristics and patterns (Saunders et al., 2016). Inferential statistics involved determining relationships and variances among the variables; the analysis used chi-square tests and odds ratios to establish the significance of this relationship. The statistical outputs were then discussed in the results and findings chapter. The findings were presented in tables and figures.

3.8 Ethical Considerations

Several ethical considerations must be met in any research undertaking. This ethos encourages high professional requirements and prescribes the technical standards that must be attained. They also seek to ensure confidentiality and non-disclosure of personal information for individuals who consent to participate in the study (Bryman & Bell, 2007). In all phases of the research process, researchers are encouraged to note all ethical standards applied to sustain transparency and quality of the research outcomes. In this study, the researcher adopted ethical standards regarding preparing theses and dissertations. These regulations relate to content, organization, and overall requirements.

In this study, all the ethical procedures were adhered to from the beginning of the research process to the end. The researcher was mindful of the sensitive nature of the information collected and designed the instrument to capture only essential and permissible information; the participants were provided with a note to capture their consent in the data collection process to achieve the informed consent ethical principle.

Obtaining informed consent from the participants was a crucial ethical consideration. Before data collection, participants were provided with a detailed explanation of the objectives and purpose of the study. The researcher ensured the information was presented clearly and understandably, allowing participants sufficient time to seek clarification on any unclear aspects. Participants were informed that their participation in the study was entirely voluntary and that they had the right to withdraw at any point without facing any negative consequences of victimization.

Participants were allowed to provide their consent either orally or in writing to obtain informed consent. For those who chose to provide written consent, a consent form was provided that outlined the study's purpose, procedures, potential risks and benefits, confidentiality measures, and the researcher's contact information. The participants were given ample time to read through the consent form, ask any questions they had, and seek further clarification if needed. They were informed that signing the consent form indicated their voluntary participation and agreement to be part of the study. During the study, the informed consent process aimed to protect the participants' welfare and confidentiality while upholding the principles of research ethics.

In addition to obtaining informed consent, this study adhered to principles of confidentiality, privacy, and conflict of interest to protect participants' rights and data integrity. Confidentiality was strictly maintained throughout the study. Participants were assured that their responses and personal information would be kept strictly confidential and only used for research. Data collected from participants were stored securely and accessible only to authorized personnel involved in the study. To further protect confidentiality, all data were anonymized, and any identifying information was removed during data analysis and reporting.

The privacy of the participants was also respected throughout the study. Participants were assured that their participation and responses would be kept confidential and that their identities would not be disclosed in any publications or reports resulting from the study. To address potential conflicts of interest, the researcher maintained objectivity and impartiality throughout the research process. Any personal biases or conflicts of interest that could potentially influence the study outcomes were acknowledged and avoided. The researcher ensured transparency by disclosing affiliations, funding sources, or relationships that could be perceived as potential conflicts of interest, which helped to maintain the integrity and credibility of the study findings.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This section presents the findings of the research. The findings are ordered to include a profile of the study participants and their demographic information. Further, the findings based on the study objectives are presented sequentially and include descriptive and inferential statistics.

4.2 Profile of the Study Participants

The estimated target sample for this study was 372 respondents comprising female students at the University of Nairobi's faculty of social science pursuing undergraduate studies. A total of 290 duly filled self-administered questionnaires were retrieved from the students; this represents a response rate of 78%. The exclusion informs this response rate of 51 (14%) questionnaires that were not duly filled and 30 (8%) questionnaires that were not retrieved due to the unavailability of the assigned respondents (See Table 4.1). The sample size is considered sufficient to draw inferences about the general population. According to Fincham (2008), most research studies target a response rate of 60% and recommend about 80% response rates for school-based studies. In this case, the response rate is closer to 80% as applied in school contexts making this a representative sample for the students at the University of Nairobi's faculty of social sciences.

Table 4.3:Response Rate

Questionnaire status	Count	Percentage
Duly filled questionnaires	290	78%
Not-duly filled (non-response)	51	14%
Total Not Returned	31	8%
Total	**372**	**100.00%**

4.3 Demographic Characteristics of Respondents

Key demographic variables evaluated in the current study are respondents' ages, program type-pursued by the student, year of study, religion, family income, and marital status. Table 4.1 depicts a comprehensive summary of the study participants, indicating the percentage distribution and frequency counts of various demographic categories evaluated during the research. The ages of the respondents were evaluated based on four categories. Most respondents indicated their age group was between 20 and 24 years old (n = 116, 40.0%). The second largest majority were aged between 18 and 19 years (n = 76, 26.2%), followed by those aged less than 18 years, 55 (19.0%), and those aged more than 24 years (n = 43, 14.8%).

In terms of program type taken, most students that participated in the research pursued a BA in Gender and Development Studies (n = 60, 20.7%), Bachelor of Economics (n = 73, 25.2%), and Bachelor of Economics and Statistics (n = 49, 16.9%). The distribution of students' years of study was reasonably similar in proportion throughout the different class groupings. No more than 30% and not less than 20% of the students were reported to be in a particular year of study, hence a good distribution of students drawn from different years of study. Be specific -First-year students represented 24.1% (n = 70) of all the respondents; second-year students were 66 (22.8%), third-year students were 79 (27.2%), and fourth-year students were 75 (25.9%)- why is the year of study important in this study.

The study also considered religion as a critical demographic variable. Most students identified as Christians (n = 157, 54.1%), 25.5% (n = 74) identified as Muslim, 5.2% (n = 15) were Hindu, 39 indicated that they were non-religious, and 1.7% (n = 5) noted that they belonged to other religions

other than the broad categories offered in the study- important to explain that this was an important variable because some religions do not permit the use of contraceptives.

Relationship status and monthly family income were also evaluated. The highest monthly family income reported by the students was between KES 0 – KES 49999 (n = 109, 37.6%). The second-highest majority reported their monthly family income (n = 97, 33.5%), then those that earn KES 100000 to KES 199999 (n = 64, 22.1%), and finally, those that made above KES 200000 and above (n = 20, 6.9%). Finally, most respondents indicated their relationship status as being single (n = 127, 43.8%), followed by those with a boyfriend (n = 121, 41.7%). Those that were divorced were (n = 25, 8.6%), and finally, those that reported their relationship status as married were (n = 5.9%, 17). – this is contradictory, but then you should have asked about marital status- otherwise, you have indicated that the target population involved young female undergraduate students in the social sciences giving the impression that they were single and not ready to sire children.

Table 4.4: Sample Demographic Characteristics

Characteristic		**N (%)**
Age	18 years	55 (19 %)
	>24 years	43 (14.8 %)
	18-19 years	76 (26.2 %)
	20-24 years	116 (40 %)
Program type	BA Anthropology	20 (6.9 %)
	BA Broadcasting and Production	15 (5.2 %)
	BA Gender and Development Studies	60 (20.7 %)
	BA International Studies	35 (12.1 %)
	BA Journalism and Media Studies	38 (13.1 %)
	Bachelor of Economics and Statistics	49 (16.9 %)
	Bachelor of Economics	73 (25.2 %)
Year of Study	First	70 (24.1 %)
	Fourth	75 (25.9 %)
	Second	66 (22.8 %)
	Third	79 (27.2 %)
Religion	Christian	157 (54.1 %)
	Hindu	15 (5.2 %)
	I do not have a religion	39 (13.4 %)
	Muslim	74 (25.5 %)

Characteristic		N (%)
	Other	5 (1.7 %)
Family monthly income	KES 0 - KES 49999	109 (37.6 %)
	KES 100000 - KES 199999	64 (22.1 %)
	KES 200000 and above	20 (6.9 %)
	KES 50000 - KES 99999	97 (33.4 %)
Relationship status	Divorced	25 (8.6 %)
	Has a boyfriend	121 (41.7 %)
	Married	17 (5.9 %)
	Single	127 (43.8 %)

4.4 Female Students' Knowledge of ECP

This section examines the student's knowledge of ECPs. This examination entailed an analysis to determine the knowledge levels and awareness of ECPs. Further, the section presents the tests of association to determine whether the demographic variables influenced the respondents' knowledge of ECPs. The study first assessed whether the respondents had heard of ECPs before the survey. Most respondents indicated that they had heard about ECP (n = 246, 85%) compared to those that had not (n = 44, 15%). Therefore, the student's knowledge or awareness of the existence of ECPs was high, as presented in Figure 4.1.

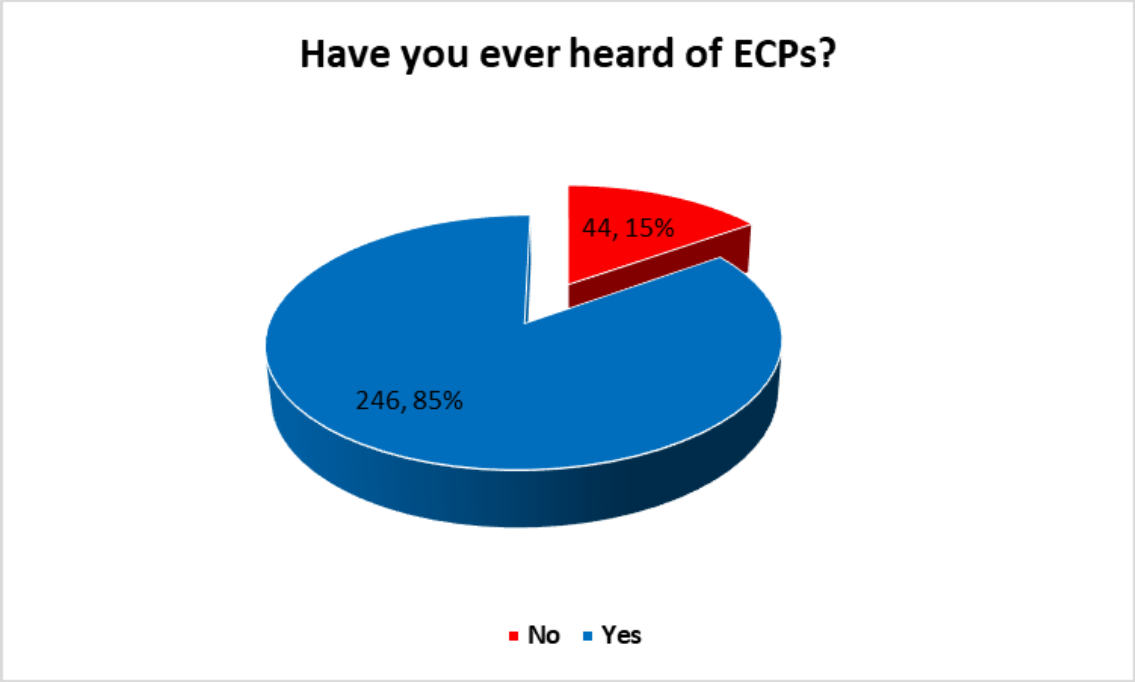

Figure 4.1:Student Awareness of ECPs

Age-wise comparisons of student awareness of ECPs indicated that knowledge varied across different age groups. The highest proportion of respondents who indicated desirable feedback on having heard of ECPs was between 20 and 24 years (n = 78, 26.9%). Coincidentally, the highest proportion of respondents who reported having never heard of ECPs was in the age bracket of 20-24 (n = 38, 13.1%). An indication that a gap in knowledge and awareness of ECPs still exists among the students. The second highest proportion of respondents reporting ECP awareness was aged 18-19 (n = 53, 18.3%). Despite the high proportions reported for select age groups of the students, no significant association was established between age and the respondents who had ever heard of ECPs ($p > 0.05$).

The study also investigated whether the program types pursued by the students were associated with whether they had ever heard of emergency contraceptive pills. Students that pursued a BA in Gender and Development Studies recorded the highest number of respondents that had ever heard

of ECPs (n = 43, 14.8%) and those that pursued a Bachelor of Economics (n = 49, 16.9%). Though differences were observed in proportions, the association between program types pursued by the respondents and whether they had ever heard of ECPs was statistically non-significant ($p > 0.05$).

The study also evaluated the associations between the year of study and whether the respondents had ever heard of ECPs. There were minimal differences in the proportions of students reporting whether they had heard of ECP use by the year of study. The majority of respondents indicating the highest proportion of students who had ever heard of ECP were third-year students (n = 53, 18.3%), followed by first-year students (n = 52, 17.9%), second-year and fourth-year students (n = 45, 15.5%, respectively). It was further determined that the year of the study did not significantly affect whether the students had ever heard of ECPs ($p > 0.05$). The lack of significant variability in knowledge between students in different years of study suggests that the year of study does not induce any noticeable shifts in knowledge.

Religion was evaluated as another demographic characteristic in relation to whether the students had ever used ECPs. Among the respondents, the highest proportion who had heard of ECPs identified as Christians (n = 133, 45.9%), followed by non-religious (n = 23, 8.6%), Muslims (n = 25, 8.6%), Hindus (n = 12, 4.1%), and those who did not specify their religion (n = 2, 0.7%). Notably, students who identified as Muslims recorded the highest proportion who had never heard of ECPs (n = 49, 16.9%). The association between religion and whether one had ever heard of ECPs was statistically significant ($p = 0.000$), indicating that religion influenced the respondents' knowledge of ECPs.

Family income also registered varied responses on whether the respondents had heard of ECP use. The highest proportion of respondents recording having heard of ECPs was from families with monthly income ranging from KES 0 - KES 49,999 (n = 73, 52.2%) and those earning KES 50,000

– KES 99,999 (n = 65, 22.4%). The two groups also recorded the highest proportions reported to have never heard ECPs, as shown in Table 4.2. As such, family monthly income had non-significant associations with ECP knowledge ($p > 0.05$). The study's findings show that respondents' awareness of emergency contraceptive pills (ECPs) is not significantly influenced by their family income. The highest proportion of respondents who reported knowing about ECPs came from families with a monthly income ranging from KES 0 - KES 49,999 and KES 50,000 – KES 99,999. However, it is important to note that even within these income brackets, a significant number of respondents still reported never having heard of ECPs. This suggests that family income is not a major factor in ECP knowledge. The statistical analysis confirmed no significant association between family income and ECP knowledge ($p > 0.05$). The study indicates that other factors may play a more significant role in influencing respondents' awareness and knowledge of emergency contraceptive pills.

Finally, the study examined the relationship status of the students against whether they had ever heard of ECPs. Most of the students indicating they had ever heard of ECPs had a boyfriend (n = 111, 38.3%) followed those that reported their relationship status as single (n = 57, 19.7%). Most of those reporting to have never heard of ECPs reported their relationship status as single n = 50, 17.2%). The study determined significant associations between relationship status and ECP awareness ($p = 0.002$). Therefore, the relationship status of the students influenced their ECP awareness and knowledge. The results are displayed in Table 4.2

Table 4.5: Association between ECP Knowledge and the Respondents' demographic characteristics

Have you ever heard of emergency contraceptive pills?		**No**	**Yes**	**Chi-square (p-value)**
Age	18 years	21 (7.2%)	34 (11.7%)	0.783
	>24 years	13 (4.5%)	30 (10.3%)	
	18-19 years	23 (7.9%)	53 (18.3%)	

	20-24 years	38 (13.1%)	78 (26.9%)	
Program type pursued in the faculty of social science	BA Anthropology	5 (1.7%)	15 (5.2%)	0.369
	BA Broadcasting and Production	3 (1%)	12 (4.1%)	
	BA Gender and Development Studies	17 (5.9%)	43 (14.8%)	
	BA International Studies	10 (3.4%)	25 (8.6%)	
	BA Journalism and Media Studies	18 (6.2%)	20 (6.9%)	
	Bachelor of Economics and Statistics	18 (6.2%)	31 (10.7%)	
	Bachelor of Economics	24 (8.3%)	49 (16.9%)	
Year of Study	First	18 (6.2%)	52 (17.9%)	0.335
	Fourth	30 (10.3%)	45 (15.5%)	
	Second	21 (7.2%)	45 (15.5%)	
	Third	26 (9%)	53 (18.3%)	
Religion	Christian	24 (8.3%)	133 (45.9%)	0.000
	Hindu	3 (1%)	12 (4.1%)	
	I do not have a religion	16 (5.5%)	23 (7.9%)	
	Muslim	49 (16.9%)	25 (8.6%)	
	Other	3 (1%)	2 (0.7%)	
Family monthly income	KES 0 - KES 49999	36 (12.4%)	73 (25.2%)	0.890
	KES 100000 - KES 199999	22 (7.6%)	42 (14.5%)	
	KES 200000 and above	5 (1.7%)	15 (5.2%)	
	KES 50000 - KES 99999	32 (11%)	65 (22.4%)	
Relationship status	Divorced	3 (1%)	10 (3.4%)	0.002
	Has a boyfriend	35 (12.1%)	111 (38.3%)	
	Married	7 (2.4%)	17 (5.9%)	
	Single	50 (17.2%)	57 (19.7%)	

Additionally, the study aimed to investigate the students' knowledge of whether emergency contraceptive pills (ECPs) were perceived as a form of early abortion. The findings Table 4.3 showed that, across all age groups, the largest percentage of respondents who disagreed with the statement that ECPs were a method of early abortion were aged between 20 and 24 years (n = 97, 33.9%). Compared to those who agreed, more respondents across other age groups disagreed with the statement. It is worth noting that although most respondents did not consider ECP use as a method of early abortion, the study found a non-significant association between age and perception of ECPs as a method of early abortion ($p > 0.05$).

The table also presents information on the Emergency Contraceptive Pill (ECP) perceptions as a method of early abortion by program type pursued in the Faculty of Social Science. The data shows that the majority of students across all program types do not consider ECP as a method of early abortion, with the percentages of "No" responses ranging from 87.9% to 94.3%. The highest percentage of "Yes" responses was recorded for the Bachelor of Economics and Statistics program, with 2.8% of students considering ECP as a method of early abortion. However, the Chi-square test indicates no statistically significant association between program type and the perception of ECP as a method of early abortion ($p = 0.085$). Therefore, the results suggest that the perception of ECP as a method of early abortion is not influenced by the program type pursued in the Faculty of Social Science.

Similarly, the results observed across other demographic characteristics such as year of study, religion, family monthly income, and relationship status had a lower proportion of respondents noting that ECPs were not a method for early abortion. The study also conducted a test of association to evaluate whether these demographic factors did influence the respondents' knowledge of this method of ECP use. No statistically significant associations were determined across all the demographics of the respondents ($p > 0.05$).

Table 4.6: Knowledge of ECP use as a method for early abortions

The emergency contraceptive pill is a method of early abortion.		**No**	**Yes**	**Chi-square (p-value)**
Age	18 years	47 (16.4%)	6 (2.1%)	0.376
	>24 years	38 (13.3%)	5 (1.7%)	
	18-19 years	71 (24.8%)	5 (1.7%)	
	20-24 years	97 (33.9%)	17 (5.9%)	
Program type pursued in the faculty of social science	BA Anthropology	18 (6.3%)	2 (0.7%)	0.879
	BA Broadcasting and Production	13 (4.5%)	2 (0.7%)	
	BA Gender and Development Studies	53 (18.5%)	7 (2.4%)	
	BA International Studies	31 (10.8%)	3 (1%)	

	BA Journalism and Media Studies	35 (12.2%)	3 (1%)	
	Bachelor of Economics and Statistics	38 (13.3%)	8 (2.8%)	
	Bachelor of Economics	65 (22.7%)	8 (2.8%)	
Year of - Study	First	65 (22.7%)	5 (1.7%)	0.214
	Fourth	60 (21%)	13 (4.5%)	
	Second	59 (20.6%)	6 (2.1%)	
	Third	69 (24.1%)	9 (3.1%)	
Religion	Christian	138 (48.3%)	17 (5.9%)	0.813
	Hindu	13 (4.5%)	1 (0.3%)	
	I do not have a religion	33 (11.5%)	6 (2.1%)	
	Muslim	64 (22.4%)	9 (3.1%)	
	Other	5 (1.7%)	0 (0%)	
Family monthly income	KES 0 - KES 49999	95 (33.2%)	11 (3.8%)	0.741
	KES 100000 - KES 199999	58 (20.3%)	6 (2.1%)	
	KES 200000 and above	17 (5.9%)	2 (0.7%)	
	KES 50000 - KES 99999	83 (29%)	14 (4.9%)	
Relationship status	Divorced	12 (4.2%)	1 (0.3%)	0.082
	Has a boyfriend	120 (42%)	23 (8%)	
	Married	21 (7.3%)	3 (1%)	
	Single	100 (35%)	6 (2.1%)	
Summary of ECP Use as a method of early abortion		253(88.5%)	33(11.5%)	

The study also examined the respondents' knowledge of whether ECPs can help prevent sexually transmitted diseases. Age-wise, the study determined that the majority of the respondents did not agree that when contraceptives were used early, they could prevent STIs. The majority that disagreed were aged between 20-24 years (n = 66, 25.8%), followed by those aged 18-19 years (n = 41, 16%), less than 18 (n = 30, 11.7%), and finally, those aged more than 24 years (n = 27, 10.5%). Contrastingly, much lower proportions were observed for those that agreed across each age category. The chi-square test of independence indicated a non-significant association between age and whether ECP can help prevent STIs.

In terms of the program type pursued, the majority of the respondents indicated that they did not think ECP prevented STIs when taken earlier. The majority of respondents fitting the deduction

include students enrolled in Bachelor of Economics (n = 47, 18.4%), BA Gender and Development Studies (n = 35, 13.7%) and those who pursued Bachelor of Economics and Statistics (n = 28, 10.9%). The study also established non-significant associations between the program pursued and the student knowledge of whether ECPs could prevent STIs when taken early ($p > 0.05$).

Similarly, the findings showed a higher proportion of the respondents disagreeing on whether the ECPs prevented STIs when taken early. The majority of the respondents disagreeing were fourth-year students (n = 46, 18%), then - third-year students (n = 45, 17.6%), - first-year students (n = 39, 15.2%), and finally - second-year students (n = 34.13, 3%). The study determined a non-significant association between the year of study and whether they believed that ECPs prevented STIs when taken early ($p > 0.05$).

Further, an evaluation of the respondents' religious affiliation and whether ECPs prevented STIs when taken early was undertaken. The majority of respondents identifying as Christians disagreed (n = 88, 34.4%), and the second highest proportion of students disagreeing were Muslim (n = 39, 15.2%). By contrast, lower proportions agreed across the different religions, as presented in Table 4.4. The study determined that religion was not significantly associated with the respondents' knowledge of whether ECPs prevented STIs when taken early ($p > 0.05$).

Further, the study evaluated the income level against the knowledge of ECP use and whether it prevented STIs when taken early. Respondents reporting lower family income had the highest disagreement rates on the construct. The highest proportion of these respondents was from families with a monthly income of KES 0 – KES 49,999 (n = 65, 25.4%) and KES 50,000 – KES 99,999 (n = 50, 19.5%). In each income category, lower proportions were deduced for respondents agreeing that ECPs prevented STIs by comparison. Even though these finding varied in proportions, the non-significant associations were deduced ($p > 0.05$).

Regarding relationship status, the findings remained consistent with the previous demographic characteristics. The highest number of respondents that indicated that ECPs did not prevent STI had a boyfriend (n = 71, 27.7%), followed by those who were single (n = 66, 25.8%), followed by those who were divorced (n = 16, 6.3%) and finally, those who were married (n = 11, 4.3%) recording the lowest proportion among those that disagreed. The relationship status was not significantly associated with knowledge of ECP use to prevent STI ($p > 0.05$). Much of this information sounds like repetition- read through and clean up this section so that it only presents findings of students' knowledge of ECP which was the first study objective.

Table 4.7: Knowledge of ECP use on STI prevention.

When taken early, can ECP prevent STI?		**No**	**Yes**	**Chi-square (p-value)**
Age	18 years	30 (11.7 %)	20 (7.8 %)	0.642
	>24 years	27 (10.5 %)	10 (3.9 %)	
	18-19 years	41 (16 %)	24 (9.4 %)	
	20-24 years	66 (25.8 %)	38 (14.8 %)	
Program type pursued in the faculty of social science	BA Anthropology	10 (3.9 %)	4 (1.6 %)	0.504
	BA Broadcasting and Production	4 (1.6 %)	6 (2.3 %)	
	BA Gender and Development Studies	35 (13.7 %)	23 (9 %)	
	BA International Studies	17 (6.6 %)	11 (4.3 %)	
	BA Journalism and Media Studies	23 (9 %)	13 (5.1 %)	
	Bachelor of Economics and Statistics	28 (10.9 %)	17 (6.6 %)	
	Bachelor of Economics	47 (18.4 %)	18 (7 %)	
Year of Study	First	39 (15.2 %)	20 (7.8 %)	0.616
	Fourth	46 (18 %)	21 (8.2 %)	
	Second	34 (13.3 %)	25 (9.8 %)	
	Third	45 (17.6 %)	26 (10.2 %)	
Religion	Christian	88 (34.4 %)	54 (21.1 %)	0.797
	Hindu	11 (4.3 %)	3 (1.2 %)	
	I do not have a religion	24 (9.4 %)	12 (4.7 %)	
	Muslim	39 (15.2 %)	22 (8.6 %)	
	Other	2 (0.8 %)	1 (0.4 %)	

Family monthly income	KES 0 - KES 49999	65 (25.4 %)	33 (12.9 %)	0.240
	KES 100000 - KES 199999	34 (13.3 %)	24 (9.4 %)	
	KES 200000 and above	15 (5.9 %)	3 (1.2 %)	
	KES 50000 - KES 99999	50 (19.5 %)	32 (12.5 %)	
Relationship status	Divorced	16 (6.3 %)	6 (2.3 %)	0.380
	Has a boyfriend	71 (27.7 %)	38 (14.8 %)	
	Married	11 (4.3 %)	3 (1.2 %)	
	Single	66 (25.8 %)	45 (17.6 %)	
Summary: When taken early, can ECP prevent STI?		164 (64.1%)	92 (35.9%)	

The study also probed to determine whether the respondents were knowledgeable about the required dosage for ECPs. Across the different age categories, the majority of the respondents indicating the correct dosage were aged 20-24 years (n = 80, 28.8%). The second highest proportion indicating the correct dosage were aged 18-19 (n = 49, 17.6%), then those 18 years (n = 35, 12.6%), and finally, those aged more than 24 years (n = 25, 9%). Lower proportions were recorded by comparison for those that reported incorrect dosages of ECP. There were non-significant statistical associations between the age of the respondents and their knowledge of ECP's recommended dosage ($p > 0.05$). Similarly, higher proportions of respondents correctly identified recommended ECP dosages across the program types pursued by the students, the year of study, religion, relationship status, and monthly family income. None of these variables were statistically associated with the 'student's knowledge of the recommended dosage for ECP ($p > 0.05$). The findings are presented in Table 4.6.

Table 4.8: Knowledge of ECPs recommended dosage.

What is the recommended number of doses for ECPs?		Correct Dosage (1)	Incorrect Dosage (>1)	**Chi-square (p-value)**
Age	18 years	35 (12.6%)	18 (6.5%)	0.794
	>24 years	25 (9%)	13 (4.7%)	
	18-19 years	49 (17.6%)	26 (9.4%)	
	20-24 years	80 (28.8%)	32 (11.5%)	
	BA Anthropology	12 (4.3%)	7 (2.5%)	0.581

Program type pursued in the faculty of social science	BA Broadcasting and Production	7 (2.5%)	8 (2.9%)	
	BA Gender and Development Studies	38 (13.7%)	19 (6.8%)	
	BA International Studies	25 (9%)	8 (2.9%)	
	BA Journalism and Media Studies	26 (9.4%)	11 (4%)	
	Bachelor of Economics and Statistics	32 (11.5%)	16 (5.8%)	
	Bachelor of Economics	49 (17.6%)	20 (7.2%)	
Year of Study	First	47 (16.9%)	21 (7.6%)	0.880
	Fourth	49 (17.6%)	24 (8.6%)	
	Second	42 (15.1%)	23 (8.3%)	
	Third	51 (18.3%)	21 (7.6%)	
Religion	Christian	107 (38.5%)	42 (15.1%)	0.415
	Hindu	9 (3.2%)	6 (2.2%)	
	I do not have a religion	26 (9.4%)	12 (4.3%)	
	Muslim	45 (16.2%)	26 (9.4%)	
	Other	2 (0.7%)	3 (1.1%)	
Family monthly income	KES 0 - KES 49999	68 (24.5%)	36 (12.9%)	0.858
	KES 100000 - KES 199999	44 (15.8%)	18 (6.5%)	
	KES 200000 and above	13 (4.7%)	7 (2.5%)	
	KES 50000 - KES 99999	64 (23%)	28 (10.1%)	
Relationship status	Divorced	9 (7.6%)	2 (1.4%)	0.356
	Has a boyfriend	100 (28.8%)	40 (12.6%)	
	Married	14 (3.2%)	9 (2.9%)	
	Single	66 (28.4%)	38 (15.1%)	
	Recommended dosage summary	189 (68.0%)	89 (32.0%)	

The second objective evaluated relates to the female students' attitudes toward ECP. The specific attributes defining these attitudes included constructs such as whether ECP promotes sexual promiscuity, whether ECPs would cause STI/HIV due to condom non-use, care about advanced effects of long-term contraception, and whether the use of ECPs can prevent pregnancy, whether its use can affect future pregnancies, ECP availability without prescription, and whether they had major side effects. These constructs were measured on a Likert scale strongly agree and agree, reflecting positive attitudes; strongly disagree and agree, showing negative attitudes; and the fifth scale represented neutrality in perception.

The study also evaluated various indices measuring attitudes toward emergency contraceptive pills. On the probe that ECP availability would promote sexual promiscuity, most respondents agreed with 101 (36.9%), and 72 (26.3%) strongly agree. Therefore, the total number of respondents that positively perceived that ECPs promoted sexual promiscuity was 53% (n = 173) and was more compared to those that expressed negative perceptions on the stated construct (n = 27, 9.9%) and those that remained neutral (n = 74, 27%). Therefore, more respondents noted that ECP availability and use promoted sexual promiscuity.

Most respondents agreed (n = 119, 43.9%) and strongly agreed (n = 68, 25.1%) that ECPs would cause more STI and HIV infections because of increased nonuse of condoms. Those that expressed negative perceptions relating to the construct had 1 (0.4%) strongly disagreeing and 18 (6.6%) disagreed, while 65 (24%) expressed neural perceptions on the construct. Therefore, the respondents' perception of ECPs causing STI and HIV due to condom non-use was generally positive.

More respondents were neutral (n = 121, 42.2%) on whether ECPs made people care less about the advanced usage of long-term contraceptives. Contrastingly, fewer respondents indicated their disagreement (n = 15, 5.2%) or strong disagreement (n = 60, 20.9) compared to those indicating their agreement (n = 74, 25.8%) and strong agreement (n = 17, 5.9%). Therefore, the respondents' attitude was generally neutral on the construct. The majority agreed on whether the ECPs could be used to avoid pregnancy (n = 95, 39.6%) and strongly agreed (n = 99, 41.3%). Contrastingly, fewer respondents expressed their strong disagreements (n = 0, 0%), disagreements (n = 8, 3.3%), and 38 (15.8) respondents expressed neutral attitudes towards ECPs being used as a method of preventing pregnancies. Therefore, these findings indicate that more respondents' believed that ECPs prevented pregnancy.

High agreement levels were also noted when asked to indicate their perception of whether ECPs might affect pregnancy in the future, with 92 (33%) agreeing and 39 (14%) strongly agreeing. Those expressing disagreements were 8 (3.3%), those expressing strong disagreements were 0 (0%), and those expressing

neutral perceptions were 38 (15%). More respondents agreed and strongly agreed that ECPs could affect future pregnancies.

Regarding the availability of ECPs without prescription, 89 (31.6%) respondents agreed, and 30 (10.6%) strongly agreed. On the other hand, 7 (2.5%) strongly disagreed, and 46 (16.3) strongly disagreed that ECPs were available without a prescription, while an overwhelming majority expressed neutrality (n = 105, 37.6%). Even though the majority were neutral, more respondents collectively agreed and strongly agreed on the availability of ECPs without prescription.

Finally, the respondents were asked to indicate their perceptions on a 5-point Likert scale on whether ECPs have major side effects. Those that agreed were 52 (18.2%), and those that strongly agreed were 11 (3.9%) while those that disagreed were 89 (31.2%), those that strongly disagreed 25 (8.8%), and those that expressed neutral perceptions were 108 (37.9%). Although more students expressed neutral perceptions on the neutral scale, more disagreed and strongly disagreed that ECPs had major side effects.

Table 4.9: Attitudes of ECP Utilization

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
The availability of ECPs will promote sexual promiscuity and irresponsibility [ECP13]	3 (1.1%)	24 (8.8%)	74 (27%)	101 (36.9%)	72 (26.3%)
ECPs would cause more STIS/HIV due to the nonuse of condoms [ECP14]	1 (0.4%)	18 (6.6%)	65 (24%)	119 (43.9%)	68 (25.1%)
ECPs use makes people care less about the advanced use of long-term contraception [ECP15]	15 (5.2%)	60 (20.9%)	121 (42.2%)	74 (25.8%)	17 (5.9%)
ECPs can be used to avoid pregnancy [ECP16]	0 (0%)	8 (3.3%)	38 (15.8%)	95 (39.6%)	99 (41.3%)

ECPs might affect pregnancy in the future [ECP17]	8 (2.9%)	35 (12.5%)	105 (37.6%)	92 (33%)	39 (14%)
ECPs should be readily available without prescription [ECP18]	7 (2.5%)	46 (16.3%)	110 (39%)	89 (31.6%)	30 (10.6%)
ECPs have major side effects [ECP19]	25 (8.8%)	89 (31.2%)	108 (37.9%)	52 (18.2%)	11 (3.9%)

The study also conducted a test of the association between attitudes toward ECP utilization and the demographic characteristics of the respondents. The 5-point Likert scale associated with the constructs collapsed to accommodate dichotomous responses with values higher than 2.5 categorized as agree and lower values as disagree. The findings determined that most of the ECP attitude indicators were not significantly associated with most of the demographic descriptors.

However, the findings established an association between their attitudes on whether ECPs could be used to avoid pregnancy against the year of study ($p < 0.05$). Similarly, there was a statistically significant association between the students' attitude toward ECPs causing more STIS/HIV due to the nonuse of condoms and the family's monthly income ($p < 0.05$). Table 4.7 presents the study findings.

Table 4.10: Associations between Attitudes of ECP Utilization and Demographic Characteristics

		Pearson Chi-Square Tests						
		ECP13	ECP14	ECP15	ECP16	ECP17	ECP18	ECP19
What is your age	Chi-square	6.782	1.673	1.720	5.778	2.267	5.331	3.466
	Df	3	3	3	3	3	3	3
	Sig.	0.079	.643	0.633	.123	0.519	0.149	0.325
Which programme in the faculty of social science are you pursuing?	Chi-square	1.716	0.550	2.016	7.238	7.757	7.496	5.693
	Df	6	6	6	6	6	6	6
	Sig.	.944	.997	0.918	.299	0.256	0.277	0.458
Indicate your year of study.	Chi-square	0.748	7.136	0.303	9.762	0.792	1.088	2.310
	Df	3	3	3	3	3	3	3
	Sig.	0.862	.068	0.959	.021	0.851	0.780	0.511

Please indicate your religion	Chi-square	3.702	0.696	4.121	0.950	5.727	3.857	5.331
	Df	4	4	4	4	4	4	4
	Sig.	.448	.952	.390	.917	.221[a,]	.426	.255
What is your family's monthly income?	Chi-square	7.158	10.616	2.714	3.196	3.732	2.230	0.481
	Df	3	3	3	3	3	3	3
	Sig.	0.067	.014	0.438	.362	0.292	0.526	0.923
What is your marital status?	Chi-square	4.806	2.198	6.336	1.293	1.971	1.094	4.700
	Df	3	3	3	3	3	3	3
	Sig.	.187	.532	0.096	.731	.579	.779	0.195

4.6 Female Students' Practices Towards the Use of ECPs

The final objective examined was determining the female students' practices towards ECP use. The specific constructs used to determine this objective included asking students whether they had used ECPs before, sources of ECP information, number of times ECP use in the last year, reasons for ECP use, and challenges faced when getting ECPs. Utilization of ECPs was significantly high among the students. The findings in Figure 4.2 indicate that 206 (71%) of the respondents that participated in the current study had at one point in their lives utilized ECPs. Only a simple majority (n = 84, 29%) noted that they had never used these pills.

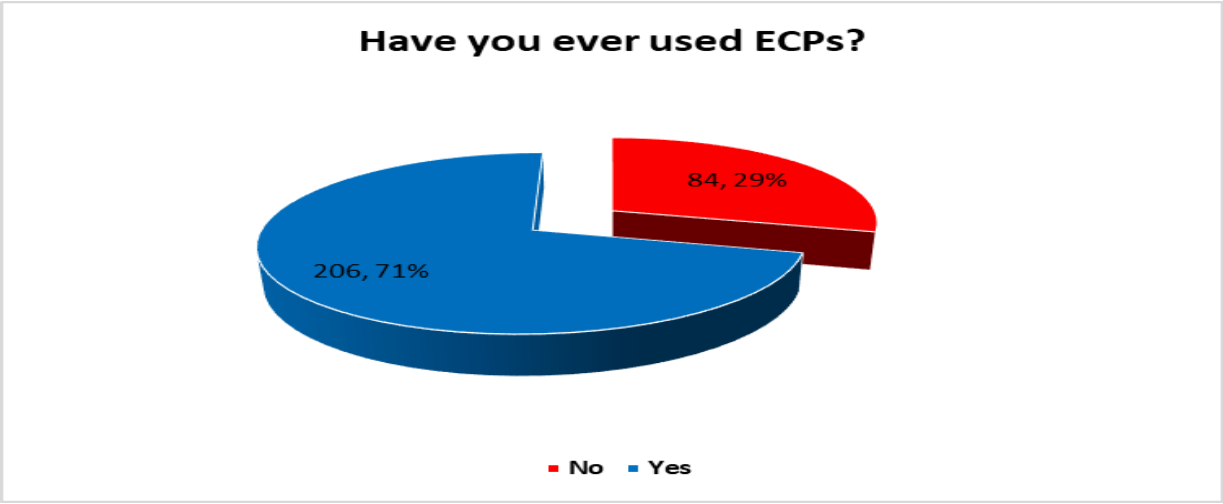

Figure 4.2: Use of Emergency Contraceptive Pills

The utilization rates of ECPs among students were also evaluated across different demographic characteristics. While assessing the correspondence across the demographic characteristics, the study also utilized the chi-square association tests to determine whether there were significantly associated. The findings in Table 4.4 demonstrate the associations between ECP usage instances and the proportion of respondents distributed according to their responses.

Comparative distribution by the age of the respondents revealed that most women indicated that they had used ECPs at one point (n = 100, 34.5%). By contrast, of all the women aged between 20-24 years, 16 (5.5%) responded that they had never taken ECPs before. The second largest majority of women that used ECPs of all that responded to this question were 67 (23.1%). Notably, a higher proportion of those aged 18 years (n = 43, 14.8%) than those above 24 years (n = 36, 12.4%). Although varied proportions were deduced from the findings, the relationship between the respondents' ages and whether they had ever used emergency contraceptive pills was statistically non-significant ($p > 0.05$). Therefore, no relationship was deduced between ECP use and the respondents' ages.

The second demographic variable evaluated against whether the respondents had used ECPs before was the program type pursued in the University of Nairobi's faculty of social sciences. While the deductive contrasts arising from the question can be affected by the distribution of students by program, a higher proportion of students indicated that they had once used ECPs. The highest proportion of ECP usage was recorded among students pursuing a Bachelor of Economics (n = 62, 21.4%). In retrospect, the highest proportion of students indicating nonuse also pursued a Bachelor of Economics (n = 10, 3.4%). Although disparities were noticed across the program types pursued, the association test revealed statistically non-significant with whether they had used these drugs before ($p > 0.05$).

Similarly, there was no significant association between the year of study and ECP use among the respondents ($p > 0.05$). However, of all the respondents that reported to the question, the majority of the students indicating the use of ECP were fourth-year students (n =64, 22.1%), followed by third-year students (n = 62, 21.4%), then second-year students (n = 61, 21%), and finally first-year students (n = 59, 20.3%). Despite the increasing trend in ECP usage from first-year to fourth-year students, the chi-square test indicated no statistically significant relationship between the year of study and ECP usage among the respondents.

The students' religious affiliations were also evaluated against ECP usage. The majority of respondents identifying as Christian in their religious status had the highest proportion of respondents indicating that they had used ECPs (n =136, 46.9%) compared to other religions. While this is true, the highest proportion of those that had not utilized ECPs before was also Christian (n = 21, 7.2%). The second-highest majority of respondents indicated to have used ECPs identified their religion as Muslim (n = 62, 21.4%). Also, they presented the second-highest proportion of respondents that had not utilized ECPs (n = 12, 4.1%). Similar trends were observed for those identifying as non-religious, where reporting using ECPs was 13 (4.5%) and those that did not were 8 (2.8%). Finally, the least proportion of students indicated the use of ECPs identified their religion as Muslim (n = 62, 21.4%). The association test revealed a non-significant association between religion and ECP usage among the students.

The study also cross-tabulated ECP usage against family monthly income. The majority of the respondents that provided feedback on this question and had used ECPs before were from families with monthly KES 0 - KES 49,999 (n = 92, 31.7%). The second highest majority came from families with monthly income ranging from KES 50,000 – KES 99,999 (n = 82, 28.3%), followed by those that earned between KES 100,000 – KES 199,999 (n = 53, 18.3%), and finally, those that

made KES 200,000 and above monthly. The highest proportion of respondents who indicated they had not used ECPs was from families earning a monthly income of KES 0 – KES 49,999 (n = 17, 5.9%). Although incremental observation in the utilization and non-utilization of ECPs assumes and declining trend, it was determined that there was no statistically significant relationship between ECP use and income ($p > 0.05$).

Finally, a cross-tabulation between ECP use and marital status was done. Most students reported utilizing ECPs before noted their relationship status as single (n = 109, 37.6%). The second largest proportion of women who indicated they had used ECPs had boyfriends (n = 101, 34.8%), followed by those who indicated they were divorced (n = 23, 7.9%), and finally, those that were married at the time of the study (n = 13, 4.5%). Generally, more people in each reported relationship status indicated a higher proportion of ECP usage. Further statistical tests of association deduced a non-significant relationship between ECP use and the relationship status of the respondents ($p > 0.05$).

Table 4.11: Associations between ECP usage and Demographic Characteristics

Characteristics		**Have you ever used emergency contraceptive pills?**		**Chi-square (p-value)**
		No	**Yes**	
Age	18 years	20 (6.9%)	35 (12.1%)	0.189
	>24 years	16 (5.5%)	27 (9.3%)	
	18-19 years	17 (5.9%)	59 (20.3%)	
	20-24 years	31 (10.7%)	85 (29.3%)	
Program type pursued in the faculty of social science	BA Anthropology	8 (2.8%)	12 (4.1%)	0.582
	BA Broadcasting and Production	2 (0.7%)	13 (4.5%)	
	BA Gender and Development Studies	16 (5.5%)	44 (15.2%)	
	BA International Studies	12 (4.1%)	23 (7.9%)	
	BA Journalism and Media Studies	12 (4.1%)	26 (9%)	
	Bachelor of Economics and Statistics	16 (5.5%)	33 (11.4%)	
	Bachelor of Economics	18 (6.2%)	55 (19%)	

Year of Study	First	21 (7.2%)	49 (16.9%)	0.709
	Fourth	21 (7.2%)	54 (18.6%)	
	Second	16 (5.5%)	50 (17.2%)	
	Third	26 (9%)	53 (18.3%)	
Religion	Christian	22 (7.6%)	135 (46.6%)	0.000
	Hindu	3 (1%)	12 (4.1%)	
	I do not have a religion	8 (2.8%)	31 (10.7%)	
	Muslim	50 (17.2%)	24 (8.3%)	
	Other	1 (0.3%)	4 (1.4%)	
Family monthly income	KES 0 - KES 49999	35 (12.1%)	74 (25.5%)	0.486
	KES 100000 - KES 199999	18 (6.2%)	46 (15.9%)	
	KES 200000 and above	3 (1%)	17 (5.9%)	
	KES 50000 - KES 99999	28 (9.7%)	69 (23.8%)	
Relationship status	Divorced	4 (1.4%)	21 (7.2%)	0.369
	Has a boyfriend	40 (13.8%)	81 (27.9%)	
	Married	5 (1.7%)	12 (4.1%)	
	Single	35 (12.1%)	92 (31.7%)	

Table 4.9 presents the findings on common practices around the utilization of ECPs. The practice of sourcing information on ECPs indicated that most respondents relied more on healthcare professionals (n = 157, 54.1%). Family and friends were the second most likely information source (n = 75, 25.9%). About 40 (13.8%) indicated their information sources from their partners, and 18 (6.2%) noted their primary source as media. Regarding the number of times the respondents had used ECP in the past year, the majority stated that they had used these drugs once (n = 183, 63.1%). During the specified period, 57 (19.7%) noted they used ECPs more than two times, and 50 (17.2%) indicated they had used the drugs twice in the past year.

One of the commonly cited reasons for using ECP among students is condom breaking which was attested by most respondents (n = 186, 64.1%). Others indicated failure of withdrawal (n = 36, 12.4%), miscalculated timing (n = 44, 15.2%), and finally, missed pills (n = 24, 8.3%). One of the significant barriers to accessing emergency contraceptive pills was fear of stigma (n = 170, 58.6%).

The second key barrier identified is a lack of knowledge is prices (n = 47, 16.9%), followed by a lack of knowledge on ECPs (n = 44, 15.2%), and finally, 24 (8.3%) respondents cited unavailability of pills in pharmacies as the main challenge.

Table 4.12: Practices and Utilization of ECPS

Characteristics		N	%
What and/or who was your source of information on ECPs?	Family/Friends	75	25.9%
	Health professional	157	54.1%
	Media	18	6.2%
	Partner	40	13.8%
How many times have you used ECPs during the last year?	More than two times	57	19.7%
	Once	183	63.1%
	Twice	50	17.2%
Why did you use emergency contraception?	Condom broke	186	64.1%
	Missed pills	24	8.3%
	Time was miscalculated	44	15.2%
	Withdrawal failed	36	12.4%
What were the challenges you faced to get ECPs?	Fear of Stigma	170	58.6%
	Lack of knowledge	49	16.9%
	Not available in pharmacies	24	8.3%
	Price	47	16.2%

4.6 Chapter Summary

This section presented the results detailing the respondent profiles using demographic information, presenting findings relating to the study objectives that include determining the female students' knowledge of ECPs, the female students' practices towards using ECPs, and the students' practices towards using ECPs.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

The current study sought to determine the Social Science students' Knowledge, Attitudes, and Practice of Emergency Contraceptive Pills (ECPS) at the University of Nairobi. The overall guiding objective of the current study was to explore the Social Science (SS) students' knowledge, attitudes, and practices of ECP at the University of Nairobi. The specific research objectives examined were: to examine the levels of knowledge SS students in UON have about ECPs, to assess the SS student's attitudes towards ECP at UON, and finally, to explore SS students' practices of ECP. This chapter discusses the findings, conclusions deduced, and the study's recommendations. The discussions will be presented in the order of the study objectives, along with the discussions on the sample characteristics

5.2 Summary of the Key Findings

The data analysis showed that 85% of students had a high level of knowledge regarding emergency contraceptive pills (ECPs). Demographic variables such as age, specific programs pursued by students in the faculty of social science, year of study, and family income were not significantly associated with ECP knowledge ($p > 0.05$). However, religion and relationship status were significantly associated with ECP knowledge ($p < 0.05$). The data further suggest that ECPs were not used for early abortion and were not statistically associated with age, programs pursued by the students, year of study, religion, and relationship status ($p > 0.05$). The findings on whether ECPs could prevent STIs when taken early revealed that the students did not believe this to be true and that no associations were determined across different demographic variables ($p > 0.05$). Students

understood the correct dosage for ECPs, and none was significantly associated with the different demographic characteristics of the respondents ($p > 0.05$).

The data also revealed varied findings concerning the students' attitudes toward ECPs. The students noted that the use of ECPs was more likely to encourage sexual promiscuity, but no associations were deduced when cross-tabulated across the demographic characteristics ($p > 0.05$). Similarly, the findings suggest that ECP use increased risks for STI and HIV Infections, that ECPs could prevent pregnancies, that ECPs could affect future pregnancies, and that ECPs were accessible without prescription. The data also suggested that more students expressed neutral perceptions of ECPs having major side effects, and the students cared less about whether ECPs made them care less about the use of long-term contraception. However, more students agreed or strongly disagreed with both constructs. Across the different demographic characteristics, the data revealed that the year of study was associated with ECP use to prevent pregnancy, and ECP leading to STI/HIV infection was statistically associated with the family's monthly income ($p < 0.05$). Regarding the female students' practices towards ECP use, the data revealed that most female students had used ECPs at least once in their lifetime. However, none of the demographic variables were found to have a significant association with the use of ECPs except for religion which revealed a significant association with whether the students had used ECPs ($p < 0.05$). Regarding other practices, it was established that most of the students obtained their ECPs from healthcare professionals and had used ECPs once in the previous year. The findings also indicate that the main cited reason for ECP use was condom breakage, and the primary challenge faced by most female students was fear of stigma.

5.3 Discussion

The level of ECP awareness among students in the University of Nairobi's faculty of social sciences is high. Comparatively, this rate is close to a study conducted in Kenya that estimated the levels of awareness at 84% (Mwaura, 2018) but higher than 65.7% recorded among university-going female students in Kilimanjaro region, Tanzania (Miriki et al., 2022). However, Kwame et al. (2022) note that awareness levels have been increasing over the recent decades among several countries in sub-Saharan Africa with continued training and educational interventions. Kwame and compatriots identify a case example of Nigeria, where awareness levels increased by 28.5% between 2005 and 2017, and yearly incremental trends in levels of awareness were also observed for Ethiopia, Ghana, and South Africa.

The present study's findings on the influence of demographic factors on ECP awareness overlap with those of prior researchers. While Karelia et al. (2022) found a link between relationship status and ECP awareness, it was not statistically significant. Similarly, Qadir et al. (2018) found that religion and education were associated with ECP awareness. However, the current study's sample only included university students, which limited the variation in education levels. Notably, religion impacted ECP awareness, with Christians exhibiting the highest level of awareness compared to other religions. This is likely because most of the university's students were Christians, with significantly lower proportions of students from other religious backgrounds. Mwaura (2018) notes that religious affiliation such as Christianity and Islam discourages the use of ECPs owing to their religious values and practices.

The current study also investigated the students' awareness of using ECPs. Many students noted that abortion was not a means for early abortion. The proportional distribution of the responses

across the demographic characteristics revealed that a higher proportion of respondents disagreed with the idea that ECPs were a method for early abortion. Chandramohan and Prabhudev (2022) also noted that many students did not believe that contraceptives could be used to induce abortion. Mwaura (2018) also determined that students in Thika's Kenya Medical training college also noted that ECPs could not be used to achieve ECPs and therefore had favorable attitudes towards the use of ECP.

In the present research, students' perceptions regarding the use of Emergency Contraceptive Pills (ECPs) as a preventive measure against Sexually Transmitted Infections (STIs) were investigated. Many also noted that ECPs can reduce the risk of STIs when taken early. Noone (2004) found that the provision of contraceptives could increase the incidence of STIs, as individuals may feel protected from unwanted pregnancies. According to Mwaura's (2018) findings, ECPs do not reduce the risk of contracting infectious diseases, including HIV and STIs. Therefore, socially constructed attitudes toward the risks associated with such risks have not been favorable. Rightfully so, the inherent lack of care in taking up preventive measures outside contraception may cause an increase in other opportunistic diseases. Therefore, myths about the students must be debunked to encourage positive attitudes, especially because ECPs can reduce the risk of STIs.

The study also examined the students' awareness regarding the appropriate number of doses allowed. In the current study, most respondents correctly identified one dose as the appropriate dosage for ECPs. This finding is consistent with Shakya et al.'s (2020) study, where most respondents also identified one dose as the correct dosage for ECPs. However, despite identifying one dose as the correct dosage in the current study, other studies have reported the administration of ECPs in multiple doses. For instance, Edelman et al. (2022) identified single and double doses, although the double dosage did not significantly impact suppressing ovulation.

This study examined various attitude indicators related to students' understanding of reproductive health and their use of emergency contraceptive pills (ECPs). Specifically, the study assessed the respondents' attitudes toward whether the availability of ECPs encourages sexual promiscuity and irresponsibility. The majority of respondents expressed negative attitudes towards this idea, with a significant proportion indicating agreement or strong agreement. This finding is consistent with Shakya et al.'s (2020) study, which reported that most university students had an increased perception of sexual promiscuity due to ECP availability in their context. Similarly, Kipkosgei (2021) and Owoko (2023) found that ECP use led to increased promiscuity in their studies conducted in select locations in Kenya. However, Mohammed et al. (2019) showed that research in different contexts has produced conflicting results on this issue, with some studies finding no link between ECPs and promiscuity.

The study also examined attitudes towards emergency contraception pills (ECPs) and their association with increased HIV and STI infections due to the non-use of condoms. A majority of respondents believed that this was true. Also, evidence determined similar patterns in beliefs and attitudes among students in Jimma Training College in Ethiopia (Warri & Gurmu, 2018). Similar conclusions were drawn by Daniel et al. (2022), Genemo, Korsa, & Bayisa (2022), and Isaiah (2017), who found that ECPs were not an effective measure for preventing HIV and STIs. However, the study did not provide conclusive evidence to support the extent of this claim.

The respondents' attitudes regarding whether ECP use makes people care less about the long-term effects of contraception were recorded as neutral attitudes among most respondents. Cumulatively, the number of respondents that agreed and strongly agreed was fewer than those that strongly disagreed and disagreed. This means that the respondents' attitudes were favorable toward ECP use as the respondents cared whether there were long-term resulting implications. The current

study's findings differed from Shakya et al. (2020), which determined that 67% of the respondents were aware of the side effects of ECPs. Despite the respondents' low attitude ratings on the long-term effects of contraceptive use, more than half of the individuals that used ECP in Nepal did not experience any side effects (Chaudhary, 2022).

The attitudes towards ECPs being used to avoid pregnancy were positive. Most respondents agreed and strongly agreed that ECPs can be used to prevent pregnancy. Similarly, most respondents expressed neutral attitudes when probed on whether ECPs affected future pregnancies. By contrast, more respondents agreed and strongly agreed than those who agreed and strongly agreed. According to Mital (2014), no associations had been established on the negative effect of ECPs on future pregnancies, partly due to limited studies on births to women who utilized ECPs in their lifetime.

In addition to examining respondents' attitudes towards the availability of emergency contraceptive pills (ECPs) without a prescription, the study found that while the majority of respondents held neutral attitudes towards this concept, more respondents agreed or strongly agreed with it, compared to those who disagreed or strongly disagreed. These findings align with a systematic review conducted by Atkins et al. (2022), which concluded that providing over-the-counter ECPs is cost-effective and aligns with user preferences. However, due to ethical concerns, Indraccolo et al. (2020) point out that pharmacologists may be hesitant to sell ECPs over the counter. Despite these concerns, ECPs have been proven to be effective.

Regarding the side effects of ECP, the respondents had a neutral attitude. However, more students expressed negative attitudes than positive attitudes. While studies, such as Yongpraderm et al. (2022), have shown attitudes towards ECPs among females, these studies evaluated different

components of ECPs independently compared to this study. In contrast to this study's findings, Yongpraderm et al. (2022) found that 71% of students in Southern Thailand were unaware of ECP side effects. These variations may be due to differences in social and literacy integration. Furthermore, the low knowledge and attitudes toward ECPs can be attributed to widespread misinformation regarding their side effects (Abate et al., 2014).

5.2.3 Practices regarding ECPs.

The third objective of the study was to assess the extent of utilization of emergency contraceptive pills (ECPs) among respondents who had ever used them. The results indicated a utilization rate of 71%, with higher usage rates found among different demographic variables such as age, program of study, year of study, family income, religion, and relationship status. However, only religion was found to significantly impact utilization rates (p-value<0.05), while other variables were not statistically significant. Previous studies on female students in Kenya reported lower rates of ECP use. For instance, Nyambura et al. (2017) found that only 20% of students had ever used ECPs despite 80% knowing of them. Similar findings were reported by Nyambura et al. (2019), who found that ECP use was associated with being enrolled in a health-related course. In a separate study conducted by Demissie et al. (2020), 33% of college students in Debre Tabor town reported using ECPs within the last three months - before the study. The differences in timeframes for ECP utilization may introduce recency bias, which could explain the higher utilization rates recorded among college-going students in Kenya.

Regarding the source of information, most respondents identified their primary source of ECP information as health professionals and family or friends. Differences in information sources are modelled by social adaptation on reproductive health and healthcare policies adopted in different

countries. Nyambura et al. (2019) indicate the primary sources of information on ECPs among college students include mass media as a predominant information source and other primary sources that include peers, gender studies, magazines, and health workers. The evaluation domains varied with the current study as the sources proposed for the respondents were not identical. Demisse et al. (2020) and Barbian et al. (2021) identified friends as the most common source of information, followed by media which ranked among the lowest sources identified in the current study. Medical practitioners featured prominently also in the current study, although students in the current study noted it as the most prevalent source of ECP information.

The study aimed to determine how often ECPs were used the previous year. Results showed that more participants used ECPs once than those that used them twice or more in the past year. However, the frequency of ECP use varies across studies, depending on the retrospective evaluation period used in the current evaluation. Mwaura (2018) found that 36% of students sometimes used ECPs after unprotected sex. Direct comparisons between studies with different evaluation periods are not possible. Additionally, relying solely on ECP use during sexual intercourse to measure frequency may not accurately reflect effectiveness, so caution is advised (Barbian et al., 2021).

This study shows that ECP use was primarily attributed to condom breakage, incorrect calculation of ovulation timing, failed withdrawal, and missed pills. These reasons align with the recommended uses and regulations proposed by the WHO, which advocate for ECPs to be used in situations such as condom breakage and incorrect usage of other forms of contraception (Barbian et al., 2021). However, improving knowledge on the effective use of contraception can help alleviate uncertainties surrounding its routine use, including missed pills and miscalculated ovulation timing, among other factors, despite their compliance with established guidelines.

In obtaining emergency contraceptive pills (ECPs), common challenges have been identified as stigma, low levels of knowledge, high prices, and unavailability of ECPs in pharmacies. Gonsalves et al. (2020) have also identified barriers such as costs, stigma, and limited professional confidence in dispensing ECPs. High costs discourage individuals from low economic backgrounds from accessing ECPs, and fear of stigma from attending physicians and professionals limits access. Despite similar reasons for the low utilization rates of ECPs in Sub-Saharan Africa, specifically in South Africa and Kenya (Kwame et al., 2022), it has been noted that the utilization rates are lower than those in developed countries. Yet, Sub-Saharan Africa records the highest levels of unintended pregnancies. The current study has determined that low knowledge levels about ECPs are linked to low uptakes, indicating the need for increased scrutiny in different contexts to address normative challenges and cultural influences in addressing these challenges.

5.3 Conclusion

The study examined the levels of awareness among the University of Nairobi's faculty of social sciences students on emergency contraceptive pills (ECPs) and their use. The students were knowledgeable on matters relating to ECP, reflecting similar patterns to previous studies in Kenya but higher than those in Tanzania. Demographic variables such as program pursued, year of study, family monthly income, and relationship status were not significantly associated with ECP awareness. However, religion affected the ECP knowledge as various religious values and practices advocate against its use. Furthermore, the students have good knowledge and awareness of ECPs as they refuted claims that they could be used as methods for early abortion in preventing STIs and were knowledgeable on the recommended dosages for ECPs.

The current study also explored students' attitudes towards reproductive health and emergency contraceptive pill (ECP) usage. A significant proportion of the respondents held negative attitudes

towards the availability of ECPs, with many believing that it promotes sexual promiscuity and irresponsibility. Additionally, the general belief was that ECPs increase HIV and STI infections due to condom non-use. However, despite the positive attitudes towards ECPs being used to avoid pregnancy, the students were unsure whether they affected future pregnancies. ECP availability in Kenya was without prescriptions, and the awareness levels of their side effects were neutral in many instances. These findings highlight the complex attitudes and beliefs surrounding ECP usage and reproductive health among students, which may have important implications for education and public health initiatives. Good points here, but they are presented like findings-

Additionally, the study revealed that the utilization rate of ECPs among respondents was high, with higher rates observed across various demographic variables. The primary sources of ECP information were health professionals and family or friends. Condom burst was the most common reason cited for ECP use, and stigma was the most significant challenge in obtaining ECPs. The study also found that most respondents had used ECPs once in the past year and that religion significantly influenced utilization rates. The findings from this study can be useful for healthcare professionals, policymakers, and stakeholders to develop appropriate interventions that address the challenges faced by individuals in accessing ECPs and promoting their effective use.

In conclusion, the study provides insights into the levels of awareness, attitudes, and utilization rates of emergency contraceptive pills (ECPs) among students at the University of Nairobi's faculty of social sciences. The findings suggest that while most students know of ECPs and their uses, negative attitudes toward their availability and potential consequences remain prevalent. The study also highlights the challenges of accessing ECPs, including stigma, low knowledge levels, and affordability. The results provide valuable information for policymakers and stakeholders in developing interventions to promote the effective use of ECPs and reproductive health education

among young adults. Overall, the study emphasizes the need for further research on the complex attitudes and beliefs surrounding ECP usage and reproductive health in Kenya and other settings. There is a need to therefore legislate towards bridging this gap to promote sexual and reproductive health among students in universities to guarantee their continued education and reduce unintended pregnancies.

5.4 Recommendations

The study recommendations are as follows:

The study findings indicate that while the respondents had high awareness levels of emergency contraceptive pills (ECPs), there were significant knowledge gaps regarding their utilization, potential side effects, and long-term effects. The study recommends conducting education campaigns on reproductive health and family planning, specifically on ECPs, through social media, workshops, and community outreach initiatives to address these gaps.

Furthermore, the study highlights the prevalence of negative attitudes towards ECPs and their utilization among the majority of respondents. To tackle this issue effectively, targeted interventions are recommended. These interventions should aim to sensitize and change people's negative perceptions and attitudes towards ECPs. Given their significant influence over people's attitudes towards contraceptives, religious organizations should be a priority target for sensitization programs.

Barriers to accessing ECPs were also identified, including stigma, lack of knowledge, and affordability. To improve access, policymakers and stakeholders should collaborate to make ECPs more affordable and widely available and reduce prescription requirements in clinics and pharmacies.

Overall, the study underscores the need for further research on the complex attitudes and beliefs surrounding ECP use among students in Kenya. Specifically, future research should examine the factors contributing to negative attitudes, associated consequences, and the effectiveness of strategies and interventions to increase ECP use and address barriers to access. Such research could inform policymakers and stakeholders in generating effective interventions and policies to improve reproductive health outcomes among young people.

REFERENCES.

Abate, M., Assefa, N., & Alemayehu, T. (2014). Knowledge, attitude, practice, and determinants of emergency contraceptive use among women seeking abortion services in Dire Dawa, Ethiopia. *PloS one, 9*(10), e110008.

Abera, H., Mokonnen, M., & Jara, D. (2014). Knowledge, Attitude, Utilization of Emergency Contraceptive and Associated Factors among Female Students of Debre Markos Higher Institutions, Northwest Ethiopia, 2014. *Fam Med Med Sci Res, 3(4),* 1000149.

Abraham, C., & Sheeran, P. (2015). The health belief model. *Predicting health behaviour: Research and practice with social cognition models*, *2*, 30-55.

Adolwa, J., Abuya, W., & Masinde, J. (2022). Contraceptives and the Youth: Examining the Social Meaning of Contraceptives among Undergraduates in Kenya. *Journal of Advanced Research in Social Sciences*, *5*(1), 18-34.

Atkins, K., Kennedy, C.E., Yeh, P.T., & Narasimhan, M. (2022). Over-the-counter provision of emergency contraceptive pills: a systematic review. *BMJ Open, 12*.

Barbian, J., Kubo, C. Y., Balaguer, C. S., Klockner, J., Costa, L. M. V. D., Ries, E. F., & Bayer, V. M. L. (2021). Emergency contraception in university students: prevalence of use and knowledge gaps. *Revista de Saúde Pública*, *55*, 74.

Becker, M.H., Haefner, D.P. and Maiman, L.A. (1977b) The health belief model in the prediction of dietary compliance:a field experiment, *Journal of Health and Social Behaviour*, 18, 348–66.

Blumberg, B., Cooper, D., & Schindler, P. (2014). *EBOOK: Business Research Methods*. McGraw Hill.

Chandramohan, M.J., & Prabhudev, P. (2022). Emergency contraception: knowledge, attitude and awareness of its usage among medical students in a private medical college of Davangere. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*.

Chaudhary, S. (2022). Knowledge, attitude and practice towards emergency contraceptive pills and factors hindering its use among females of reproductive age group visiting urban health centre at Rajbiraj, Nepal. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, *11*(3), 676-683.

Chin-Quee, D., L'engle, K., Otterness, C., Mercer, S., & Chen, M. (2014). Repeat use of emergency contraceptive pills in urban Kenya and Nigeria. *International perspectives on sexual and reproductive health*, *40*(3), 127-134.

CNN Business. (2022). Future of emergency contraception in US complicated by misinformation. Retrieved from https://www.cnn.com/2022/06/07/business/emergency-contraception-khn-partner-wellness/index.html

Creswell, J. W., Hanson, W. E., Clark Plano, V. L., & Morales, A. (2007). Qualitative research designs: Selection and implementation. *The counseling psychologist*, *35*(2), 236-264.

Daniel, A. K., Casmir, E., Oluoch, L., Micheni, M., Kiptinness, C., Wald, A., ... & Ngure, K. (2022). " I was just concerned about getting pregnancy": Attitudes toward Pregnancy and Contraceptive Use Among Adolescent Girls in Thika, Kenya.

Darroch, J. E., Woog, V., Bankole, A., & Ashford, L. S. (2016). Adding it up: Costs and benefits of meeting the contraceptive needs of adolescents. *Guttmacher Institute*.

Darroch, J. E., Woog, V., Bankole, A., & Ashford, L. S. (2016). Adding it up: costs and benefits of meeting the contraceptive needs of adolescents.

Davey, M. (2022, December 22). Peak GP group urges Australia-wide reform to abortion and contraception access. The Guardian. Retrieved from https://www.theguardian.com/australia-news/2022/dec/22/peak-gp-group-urges-australia-wide-reform-to-abortion-and-contraception-access

Demissie, T. W., Nigatu, A. M., & Beyene, G. M. (2020). Assessment of emergency contraceptives utilization and associated factors among female college students at Debre Tabor town. *Contraception and Reproductive Medicine*, *5*(1), 1-9.

Edelman, A. B., Hennebold, J. D., Bond, K., Lim, J. Y., Cherala, G., Archer, D. F., & Jensen, J. T. (2022). Double dosing levonorgestrel-based emergency contraception for individuals with obesity: a randomized controlled trial. *Obstetrics and gynecology*, *140*(1), 48.

Eisen, M., Zellman, G. L., & McAlister, A. L. (1985). A health belief model approach to adolescents' fertility control: Some pilot program findings. *Health education quarterly*, *12*(2), 185-210.

Endler, M., Li, R. H. W., & Danielsson, K. G. (2022). Effect of levonorgestrel emergency contraception on implantation and fertility: a review. *Contraception*, *109*, 8-18.

Evans, W. N., & Graham, J. D. (1991). Risk reduction or risk compensation? The case of mandatory safety-belt use laws. *Journal of Risk and Uncertainty*, *4*(1), 61-73.

Fincham, J. E. (2008). Response rates and responsiveness for surveys, standards, and the Journal. *American journal of pharmaceutical education*, *72*(2).

Foundation Consumer Healthcare. (n.d.). How Plan B One-Step works. Retrieved from https://www.planbonestep.com/how-plan-b-works/

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). Collecting research data with questionnaires and interviews. *Educational research: An introduction*, *12*(10), 227-261.

Gebrehiwot, H., Gebregziabher, T., & Gebrehiwot, Y. (2014). Unintended pregnancy and associated factors among female students in Axum University, Ethiopia. Journal of Women's Health Care, 3(5), 1-6.

Genemo, E. S., Korsa, A. T., & Bayisa, H. G. (2022). Emergency Contraceptive Pill Use and its Impact on Condom Utilization Among University Students: A Cross-Sectional Study. *International Journal of Women's Health*, 1115-1126.

Godia, P. M., Olenja, J. M., Lavussa, J. A., Quinney, D., Hofman, J. J., & Van Den Broek, N. (2013). Sexual reproductive health service provision to young people in Kenya; health service providers' experiences. *BMC health services research*, *13*(1), 1-13.

Godlonton, S., Munthali, A., & Thornton, R. L. (2011). *Behavioral Response to Information?: Circumcision, Information, and HIV Prevention*. Bureau for Research and Economic Analysis of Development.

Gonsalves, L., Wyss, K., Gichangi, P., & Hilber, A. M. (2020). Pharmacists as youth-friendly service providers: documenting condom and emergency contraception dispensing in Kenya. *International journal of public health*, *65*, 487-496.

Hickey, M. T., & Shedlin, M. G. (2017). Emergency contraceptive pill users' risk perceptions for sexually transmitted infections and future unintended pregnancy. *Journal of the American Association of Nurse Practitioners*, *29*(9), 527-534. doi: 10.1002/2327-6924.12485. Epub 2017 Jun 22. PMID: 28639423.

Hochbaum, G. M. (1958). Public participation in medical screening programs. *Public Health Service Publication*, *12*, 572-577.

Ikamari, L., Izugbara, C., & Ochako, R. (2013). Prevalence and determinants of unintended pregnancy among women in Nairobi, Kenya. *BMC pregnancy and childbirth*, *13*(1), 1-9.

Indraccolo, U., Castigliego, A. C., Di Iorio, R., Favilli, A., Greco, P., Fedeli, P., & Indraccolo, S. R. (2020). Knowledge and availability of the emergency contraceptive pills: an Italian women survey. *Clinical and Experimental Obstetrics & Gynecology*, *47*(1), 93-98.

IPPF. (2008). Sexual rights: an IPPF declaration. Retrieved from https://www.ippf.org/sites/default/files/sexualrightsippfdeclaration_1.pdf

Isaiah, G. (2017). Knowledge, attitudes, and practices of emergency contraception among female undergraduate health science students in Kenya. *Annals of Medical and Health Sciences Research*, *7*(4).

Janz, N. K., & Becker, M. H. (1984). The health belief model: A decade later. *Health education quarterly*, *11*(1), 1-47.

Jima, A., Segni, M. T., & Zergaw, A. (2016). Assessment of knowledge, attitude and utilization of emergency contraception among unmarried women of reproductive age in Adama, Ethiopia. *Health Science Journal*, *10*(6), 0-0.

Kabiru, C. W., Izugbara, C. O., & Beguy, D. (2013). The health and wellbeing of young people in sub-Saharan Africa: an under-researched area?. *BMC international health and human rights*, *13*, 1-7.

Kaiser Health News. (2022). Misinformation clouds America's most popular emergency contraception. Retrieved from https://www.adn.com/nation-world/2022/06/11/misinformation-clouds-americas-most-popular-emergency-contraception/

Kane, T. J., & Staiger, D. (1996). Teen motherhood and abortion access. *The Quarterly Journal of Economics*, *111*(2), 467-506.

Kara, W. S. K., Benedicto, M., & Mao, J. (2019). Knowledge, attitude, and practice of contraception methods among female undergraduates in Dodoma, Tanzania. *Cureus*, *11*(4).

Karelia, B.N., Patel, R.R., & Vegada, B.N. (2022). Awareness of emergency contraceptive pills among female patients of family planning unit of tertiary care teaching hospital, Rajkot, Gujarat, India. *National Journal of Physiology, Pharmacy and Pharmacology*.

Kenya National Bureau of Statistics (KNBS) and ICF Macro. (2004). *Kenya Demographic and Health Survey 2002-03*. Calverton, Maryland: KNBS and ICF Macro.

Kenya National Bureau of Statistics (KNBS) and ICF Macro. (2010). *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro.

Kenya National Bureau of Statistics (KNBS) and ICF Macro. (2015). *Kenya Demographic and Health Survey 2013-14*. Calverton, Maryland: KNBS and ICF Macro.

Kiani, M. A., Ghazanfarpour, M., & Saeidi, M. (2019). Adolescent pregnancy: a health challenge. *International Journal of Pediatrics*, *7*(7), 9749-9752.

King'au, S. K. (2014) (Doctoral dissertation, University of Nairobi).

Kipkosgei, O. (2021). Factors Contributing to The Use of Emergency Contraceptive Pills Among Female University Students in Kenya: A Case Study of Gretsa University-Thika, Kenya.

Kipkosgei, O. (2021). Factors Contributing To The Use Of Emergency Contraceptive Pills Among Female University Students In Kenya: A Case Study Of Gretsa University-Thika, Kenya.

Kothari, C. (2017). research methodology methods and techniques by CR Kothari. *Published by New Age International (P) Ltd, Publishers*, *91*.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.

Kwame, K. A., Bain, L. E., Manu, E., & Tarkang, E. E. (2022). Use and awareness of emergency contraceptives among women of reproductive age in sub-Saharan Africa: a scoping review. *Contraception and Reproductive Medicine*, *7*(1), 1-14.

Kwame, K. A., Bain, L. E., Manu, E., & Tarkang, E. E. (2022). Use and awareness of emergency contraceptives among women of reproductive age in sub-Saharan Africa: a scoping review. *Contraception and Reproductive Medicine*, *7*(1), 1-14.

Lemma, D. A. (2009). *Emergency contraception in Addis Ababa: practice of service providers* (Doctoral dissertation).

Liddelow, C., Mullan, B., & Boyes, M. (2020). Adherence to the oral contraceptive pill: the roles of health literacy and knowledge. *Health Psychology and Behavioral Medicine*, *8*(1), 587-600.

Mariki, T. J., Mbuya, E. J., Mkojera, E. J., Amour, C., Mboya, I., & Msuya, S. E. (2022). Knowledge, Practice and Barrier Towards Emergence Contraceptive Usage Among Female University Students at Kilimanjaro Region in Tanzania.

Maurice, N. M., Olivier, M., & Jean-Claude, A. B. (2022). Adolescents' knowledge, attitude and utilization of emergency contraceptive in Idjwi Island in the Democratic Republic of the Congo. *Int J Fam Commun Med*, *6*(4), 145-151.

Mchunu, G., Peltzer, K., Tutshana, B., & Seutlwadi, L. (2012). Adolescent pregnancy and associated factors in South African youth. *African health sciences*, *12*(4), 426-434.

Merrick, T. W. (2015). Making the case for investing in adolescent reproductive health: a review of evidence and PopPov research contributions. *Washington, DC: Population and Poverty Research Initiative and Population Reference Bureau*.

Mittal, S. (2014). Emergency contraception-Potential for women's health. *The Indian journal of medical research*, *140*(Suppl 1), S45.

Mohammed, S., Abdulai, A. M., & Iddrisu, O. A. (2019). Pre-service knowledge, perception, and use of emergency contraception among future healthcare providers in northern Ghana. *Contraception and reproductive medicine*, *4*, 1-7.

Mueller, T., Tevendale, H., Fuller, T., House, L. D., Romero, L. M., Brittain, A., & Varanasi, B. (2017). Teen Pregnancy Prevention: Implementation of a Multicomponent, Community-Wide Approach. J *Adolesc Health*, *60*(3 Suppl), S9-S17. doi: 10.1016/j.jadohealth.2016.11.002

Munakampe, M. N., Zulu, J. M., & Michelo, C. (2018). Contraception and abortion knowledge, attitudes and practices among adolescents from low and middle-income countries: a systematic review. *BMC health services research*, *18*(1), 1-13.

Mwaura, M. W. (2018). *Determinants Of Utilization Of Emergency Contraceptive Pills Among Female Students At Kenya Medical Training College, Thika, Kiambu County, Kenya* (Doctoral dissertation, University of Nairobi).

Mwaura, M. W. (2018). *Determinants Of Utilization Of Emergency Contraceptive Pills Among Female Students At Kenya Medical Training College, Thika, Kiambu County, Kenya* (Doctoral dissertation, University of Nairobi).

Nibabe, W. T., & Mgutshini, T. (2014). Emergency contraception amongst female college students-knowledge, attitude and practice. *African Journal of Primary Health Care and Family Medicine*, *6*(1), 1-7.

Noone, J. (2004, October). Finding the best fit: a grounded theory of contraceptive decision making in women. In *Nursing forum* (Vol. 39, No. 4, pp. 13-24). Oxford, UK: Blackwell Publishing Ltd.

Nyambura, M. G., Kiarie, J. N., Orang'o, O., & Okube, O. T. (2017). Knowledge and utilisation of emergency contraception pills among female undergraduate students at the University of Nairobi, Kenya. *Open Journal of Obstetrics and Gynecology*, *7*(9), 989-1005.

Nyambura, M. G., Kiarie, J. N., Orang'o, O., & Okube, O. T. (2017). Knowledge and utilisation of emergency contraception pills among female undergraduate students at the University of Nairobi, Kenya. *Open Journal of Obstetrics and Gynecology*, *7*(9), 989-1005.

Onasoga, O. A., Afolayan, J. A., Asamabiriowei, T. F., Jibril, U. N., & Imam, A. A. (2016). Adolescents' knowledge, attitude and utilization of emergency contraceptive pills in Nigeria's niger delta region. *International Journal of MCH and AIDS*, *5*(1), 53.

Owoko, S. O. (2023). *Factors Influencing Contraceptive Use among Adolescent Girls Aged 14-19 Years in Homa Bay County, Kenya* (Doctoral dissertation, JKUAT-COHES).

Panda, S., Das, R., Das, A., Sharma, N., & Sharma, A. (2021). A study to assess the knowledge and awareness among young doctors about emergency contraception. *Journal of Family Medicine and Primary Care*, *10*(6), 2304.

Pem, D., Nidup, T., Wangdi, U., Pelzom, D., Mirzazadeh, A., & McFarland, W. (2018). Emergency contraceptive pills (ECP) knowledge, attitudes, and practices among women working in the entertainment industry and men in the trucking industry, Bhutan. *AIDS and Behavior*, *22*, 121-124.

Qadir, S., Anbreen, F., Naeem, A., Naeem, H., Akhtar, M. N., & Shirazi, S. A. H. (2018). ASSOCIATION OF CONTRACEPTIVE BARRIERS WITH SOCIO DEMOGRAPHIC VARIABLES. *Gomal Journal of Medical Sciences*, *16*(3).

Rojas Castro, D., Delabre, R. M., & Molina, J. M. (2019). Give PrEP a chance: moving on from the "risk compensation" concept. *Journal of the International AIDS society*, *22*, e25351.

Rosenstock, I. M. (1974). The health belief model and preventive health behavior. *Health education monographs*, *2*(4), 354-386.

Rosenstock, I.M. (1966). Why people use health services, *Milbank Memorial Fund Quarterly*, 44, 94–124.

Rosenstock, I.M. (1974). Historical origins of the health belief model, *Health Education Monographs*, 2, 328–335.

Rosenstock, I.M., Strecher, V.J. and Becker, M.H. (1988) Social learning theory and the health belief model, *Health Education Quarterly*, 15, 175–83.

Saunders, M., Lewis, P., & Thornhill, A. (2012). Research methods for business students (6. utg.). *Harlow: Pearson*.

Sexual Rights: An IPPF declaration | IPPF. (2022). Retrieved 3 October 2022, from https://www.ippf.org/resource/sexual-rights-ippf-declaration

Shakya, S., Shrestha, S., Shrestha, R. K., Giri, U., & Shrestha, S. (2020). Knowledge, attitude and practice of emergency contraceptive pills among community pharmacy practitioners working in Kathmandu Valley: a cross-sectional study. *BMC Health Services Research*, *20*(1), 1-18.

Sharma, A., Lee, A., McCabe, E., Jani, S., Gonzalez, A., & Demissie, S. (2019). 240. Knowledge And Attitudes Towards Contraceptives Among Adolescents And Young Adults. *Journal of Adolescent Health*, *64*(2), S122-S123.

Shelat, P. R., Hihoriya, N. H., & Kumbar, S. (2012). Knowledge and attitude towards the use of emergency contraceptive pills among college students. *Int J Basic Clin Pharmacol*, *1*(2), 77-84.

Shukla, P., Pullabhotla, H. K., & Arends-Kuenning, M. (2021). Choosing Plan B Over Plan A: Risk Compensation Theory and Contraceptive Choice in India. *Demography*, *58*(1), 273-294.

Shukla, P., Pullabhotla, H. K., & Arends-Kuenning, M. (2021). Choosing Plan B Over Plan A: Risk Compensation Theory and Contraceptive Choice in India. *Demography, 58*(1), 273-294.

Siedlecki, S. L. (2020). Understanding descriptive research designs and methods. *Clinical Nurse Specialist, 34*(1), 8-12.

Sitini, B., Okova, R., Nizeyimana, F., & Rutayisire, E. (2020). Knowledge, Attitude and Practices towards contraceptive Use among Unmarried Females Students at Mount Kenya University Rwanda.

T.R Ministry of Health. (2010). *Participant handbook of reproductive health services for the youth*. http://kadinureme.thsk.saglik.gov.tr/Dosya/Genclere_Yonelik_.pdf access date:09.06.2017

Tilahun, D., Assefa, T., & Belachew, T. (2010). Knowledge, attitude and practice of emergency contraceptives among Adama University female students, Ethiopia. *Ethiopian journal of health sciences, 20*(3).

Turok, D. K., Gero, A., Simmons, R. G., Kaiser, J. E., Stoddard, G. J., Sexsmith, C. D., ... & Sanders, J. N. (2021). Levonorgestrel vs. copper intrauterine devices for emergency contraception. *New England Journal of Medicine, 384*(4), 335-344.

UNESCO. (2014). Early and unintended pregnancy: What role can education play? UNESCO.

UNESCO. (2017). Education for All Global Monitoring Report 2017/8. UNESCO Publishing. https://unesdoc.unesco.org/ark:/48223/pf0000247444

Wall-Wieler, E., Roos, L. L., & Nickel, N. C. (2016). Teenage pregnancy: the impact of maternal adolescent childbearing and older sister's teenage pregnancy on a younger sister. *BMC pregnancy and childbirth*, *16*(1), 1-12.

Warri, B. K., & Gurmu, T. G. (2018). Knowledge, attitude and practice of progestin-only emergency contraceptives among female students of Jimma Teachers Training College, Jimma, Ethiopia. *Ghana Medical Journal*, *52*(4), 183-188.

WHO(2022). *Emergency contraception: dispelling the myths and misperceptions [Internet]*. *WHO*. *World Health Organization*; [cited 2022 Sep 13]. Available from: https://www.who.int/reproductivehealth/publications/family_planning/ec_editorial/en/.

World Health Organization (2014). *Health for the world's adolescents*, https://www.who.int/maternal_child_adolescent/topics/adolescence/second-decade/en/ Geneva, Switzerland: World Health Organization, 2014.

World Health Organization. (2011). Family planning: a global handbook for providers: 2011 update: evidence-based guidance developed through worldwide collaboration. https://apps.who.int/iris/handle/10665/44028

World Health Organization. (2021). Adolescent pregnancy. https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy

Yongpraderm, S., Uitrakul, S., Daengnapapornkul, P., & Sinsangbun, B. (2022). Knowledge and attitude toward emergency contraceptive pills among first-year undergraduate students in Southern Thailand. *BMC Medical Education*, *22*(1), 1-7.

Zajec, V., Mikuš, M., Vitale, S. G., D'alterio, M. N., Gregov, M., Šarić, M. J., ... & Ćorić, M. (2022). Current status and challenges of drug development for hormonal treatment of endometriosis: a systematic review of randomized control trials. *Gynecological endocrinology*, *38*(9), 713-720.

APPENDICES

Appendix I: Introduction Letter

Dear Respondent,

RE: RESEARCH STUDY

I am conducting research for my Master of Arts in Gender and Development Studies of the University of Nairobi on knowledge, attitudes, and practice of social science students on the utilization of emergency contraceptive pills. The findings will also be instrumental in informing the formulation of policies about the reproductive health of young women. Further, the findings on attitudes and knowledge expressed by respondents in the study will be paramount in providing insight to development of information products for creating awareness about proper use of ECPs. All the information given will be treated with utmost confidence and shall maintain anonymity for the responding individuals.

Kindly follow closely the instructions on the questions while responding and give one answer per question.

For any clarification feel free to get in touch with the researcher using the below provided contacts

Yours Sincerely

FLORENCE MWIKALI KITHEKA

N69/67307/2013

Email: flokitheka@gmail.com

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Appendix II: Questionnaire

The purpose of this questionnaire is to collect data to determine knowledge, attitudes, and practice of social science students at the University of Nairobi on the utilization of emergency contraceptive pills. The research is a partial requirement for the completion of a degree of Master of Arts in Gender and Development Studies of the University Of Nairobi.

The information you provide will be confidential and will only be used for the purposes of this research. Responding to this questionnaire confirms your full consent to participate in this process.

Kindly answer all the questions by filling in the space provided.

Date: ……..

Part A: Sociodemographic and Economic Information of the students.

1. What is your age?

< 18 years [ ]

18-19 years [ ]

20-24 years [ ]

>24 years [ ]

2. Which programme in the faculty of social science are you pursuing?

Bachelor of Arts in Anthropology [ ]

Bachelor of Arts in Gender and Development Studies [ ]

Bachelor of Economics [ ]

Bachelor of Economics and Statistics [ ]

Bachelor of Arts in Journalism and Media Studies [ ]

Bachelor of Arts in Broadcast Production [ ]

Bachelor of Arts in International Studies [ ]

3. Indicate your year of study.

First [ ]

Second [ ]

Third [ ]

Fourth [ ]

4. Please indicate your religion

Christian [ ]

Muslim [ ]

Hindu [ ]

Other [ ]

I do not have a religion [ ]

5. What is your family monthly income?

KES 0 - KES 49999 [ ]

KES 50000 - KES 99999 [ ]

KES 100000 - KES 199999 [ ]

KES 200000 and above [ ]

6. What is your marital status?

Married [ ]

Single [ ]

Divorced [ ]

Has a boyfriend [ ]

Part B: Knowledge and Utilization of ECPs

7. Have you ever heard of ECPs?

   No [ ]

   Yes [ ]

   I do not know [ ]

8. Name any ECPs that you know of? …….

9. What is the maximum acceptable time after sex for a woman to take ECP??

   12-18 hrs [ ]

   24-48 hrs [ ]

   72-120 hrs [ ]

   124-160 hrs [ ]

   I do not know [ ]

10. Emergency contraceptive pill is a method of early abortion?

    No [ ]

    Yes [ ]

    I do not know [ ]

11. When taken early, ECP can prevent STIs?

    No [ ]

    Yes [ ]

    I do not know [ ]

12. What is the recommended number of dose for ECPs?

    One dose [ ]

    Two dose [ ]

    Three dose [ ]

    I do not know [ ]

Part C: Attitudes and Utilization of ECPs

The following are statements that are related to attitudes of students on ECPs influence their utilization. Kindly indicate your level of agreement with the statements below. Use a scale of 1-5, where 1- Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly agree.

Statements	1	2	3	4	5
13. Availability of ECPs will promote sexual promiscuity and irresponsibility					
14. ECPs would cause more STIS/HIV due to nonuse of condom					
15. ECPs use makes people care less about the advance use of long-term contraception					
16. ECPs can be used to avoid pregnancy					
17. ECPs might affect pregnancy in the future					

18. ECPs should be readily available without prescription					
19. ECPs have major side effects					

Part D: Practices and Utilization of ECPs

20. Have you ever used emergency contraceptive pills?

    Yes [ ] No [ ]

21. What and/or who was your source of information on ECPs?

    Family/Friends [ ]

    Partner [ ]

    Health professional [ ]

    Media [ ]

    Other sources (specify)…….

22. How many times have you used ECPs during the last year?

    Once [ ] Twice [ ] More than two times [ ]

23. Why did you use emergency contraception?

    Time was miscalculated [ ]

    Missed pills [ ]

    Withdrawal failed [ ]

    Condom broke [ ]

    Other reasons (specify)…….

24. What were the challenges you faced to get ECPs?

Price [ ]

Not available in pharmacies [ ]

Fear of Stigma [ ]

Lack of knowledge [ ]

Other reasons (specify)…….