FACTORS INFLUENCING THE USE OF EMERGENCY CONTRACEPTIVE PILLS AMONG FEMALE UNDERGRADUATE STUDENTS IN KENYA: A CASE OF MAIN CAMPUS HOSTELS OF THE UNIVERSITY OF NAIROBI.

BY

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A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN PROJECT PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI.

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DECLARATION

This Research Project Report is my original work and has never been presented for the award of degree in this University or any other institution.

_____ _____

Wambugu Consolata Judy Njeri
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This Research Project Report has been submitted for examination with my approval as a University Supervisor.

_____ _____

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DEDICATION

This Research Project Report is dedicated to my parents Mr. and Mrs. Wambugu for their moral and financial support.

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I would like to acknowledge my Supervisor Mr. James Kiige for his dedicated support and guidance to see me through the completion of this Research Project Report. His constant criticism has enabled me perfect my project work. I am particularly indebted to my supervisor.

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ABBREVIATIONS AND ACRONYMS

ECPs	-	Emergency contraceptive pills
EC	-	Emergency contraception
FDA	-	Food and Drug Administration
KDHS	-	Kenya Demographic Health Survey
NGO	-	Non-governmental organization
SWA	-	Students welfare authority
TPB	-	Theory of planned behavior
WHO	-	World Health Organization

ABSTRACT

Emergency contraception (EC) is a back-up birth control method that is used within 72 to 120 hours after unprotected or under protected coitus for the prevention of unintended pregnancy or in the event of a known contraceptive failure, such as a condom breaking. Awareness about emergency contraceptive pills does not seem to increase their use in the prevention of unwanted pregnancies in Kenya. Incomplete knowledge on the various factors affecting the use of emergency contraceptive pills for instance ECPs mechanism of action and their side effects leads to misconceptions by users. Limited knowledge of emergency contraceptives and misconceptions impact their use as issues are raised about their safety, the morality of their use, and their effectiveness. Consequent stigmatization further hinders their use. The purpose of this study, therefore, was to explore the factors influencing the use of emergency contraceptive pills among undergraduate students in Kenya by studying a sample of university students who were residents at the main Campus of University of Nairobi. The research design of this study was descriptive survey research.The target population comprised the residential female students of the University of Nairobi's main campus whose total was 1976. A sample was drawn from female students who reside in the six women hostels found in the main campus. Simple random sampling was adopted for this study, for a sample size of 322 students derived through the krejcie and morgan sampling technique. The students were selected randomly and equally from the six women hostels.The research adopted a questionnaire as the instrument for data collection. Instrument's validity was checked by use of content validity. The Research instrument's reliability was done using test -retest technique. Statistical Package for Social Sciences (SPSS) was used as a tool for data analysis and the results was presented in form of tables and percentages to make them reader friendly. The qualitative data analysis was done using both content and thematic analysis. The ethical issues related to the study were addressed by maintaining high level confidentiality of the information volunteered by the respondents. The research findings showed that more than two-thirds of students who knew about ECP's believed that they would use ECP's after unprotected sexual intercourse and 63% of them agreed to advice friends or relatives to take emergency contraceptives after unprotected sexual intercourse. However, a considerable proportion of respondents reported their fear on using ECP's and misconceptions. Based on the findings, it was recommended that more information on human sexuality, conception and contraception should be made available to female students once they join college to eliminate misconceptions about contraceptives. In addition, an effort should be made to promote active involvement and participation of male students/partners in the reproductive health services. Parents, the government and non-governmental organisations could become partners in this campaign by playing an active role, rather than be stuck in a cultural quagmire. They could do this through education and participating in campaigns organized by the Department of Health.

CHAPTER ONE

INTRODUCTION

1.1Background to the study

Emergency contraception (EC), sometimes referred to as "the morning-after pill," is a back-up birth control method that is used within 72 to 120 hours after unprotected or under protected coitus for the prevention of unintended pregnancy or in the event of a known contraceptive failure, such as a condom breaking. It is not intended for use as a regular contraceptive method. Emergency contraceptive prevents a pregnancy from occurring, and should not be confused with medical abortion drugs – mifepristone (RU-486) or methotrexate – that end an established pregnancy (The Henry J. Kaiser Family Foundation, 2004).

The roots of modern emergency contraception date back to the 1920s, when researchers initially demonstrated that estrogenic ovarian extracts interfere with pregnancy in mammals. Veterinarians were the first to apply this finding, administering estrogens to dogs and to horses that had mated when their owner had not wanted them to (Young, 1941). Despite scattered reports of clinical use of postcoital estrogens in humans as early as the 1940s, the first documented case was not published until the mid-1960s when physicians in the Netherlands applied the veterinary practice of postcoital estrogen administration to a 13-year-old girl who had been raped at mid cycle (Ellertson, 1996).

At around the same time, U.S. researchers were investigating the efficacy of high-dose estrogens, and toward the end of the decade, these preparations became the standard. In the early 1970s, the high-dose estrogen regimens gave way to a combined estrogen-progestin standard. Canadian physician Albert Yuzpe and his colleagues began studies in 1972 on this combined regimen (Ellertson, 1996).

In 1997, the USA’s Food and Drug Administration (FDA) declared Emergency contraceptive pills to be safe and effective (The Henry J. Kaiser Family Foundation, 2004). Since then, there has been growing interest in the potential impact that emergency contraception could have on unwanted pregnancies and unsafe abortions in sub-Saharan Africa. Ninety-nine percent of

maternal mortality worldwide occurs in this part of the world, and nearly 20 million unsafe abortions are estimated to occur each year (AbouZahr & Wardlaw, 2001). Alarmingly, these estimates have steadily risen over the years, and so have the efforts to introduce emergency contraception in African countries (Grimes et al., 2006; Åhman & Shah, 2002). Today, there is one dedicated Emergency contraceptive product on the market in Kenya: Postinor-2 (Muia, Blanchard, Lukhando, Olenja, &Liambila, 2002).

The Consortium for Emergency Contraception introduced Postinor-2 into Kenya as part of its work to expand access to Emergency contraceptives in developing countries. The three main EC introduction activities in Kenya were the following: (1) registration of the dedicated emergency contraceptive product Postinor-2; (2) training of health care providers; and (3) development and distribution of information on emergency contraceptive to providers and family planning clients (Muia et al, 2002). This strategy was in agreement to the World Health Organization's (WHO) proposed strategic approach for contraceptive introduction that focuses on quality of care and people's needs and rights (Simmons et al., 1997).

At the start of introduction activities, Postinor-10 was registered in Kenya, although labeled incorrectly for emergency contraceptive use. Consortium partners in Kenya worked with the Ministry of Health, the Poisons and Pharmacy Board of Kenya, and Gideon Richter (sponsor of Postinor-10 and commercial partner of the Consortium) to make Postinor-2, a package of two pills of 0.75 mg levonorgestrel each, correctly labeled for EC, available in its place. An amendment switching from Postinor-10 to Postinor-2 was approved in April 1997, paving the way for further emergency contraceptive introduction efforts. The consortium made Postinor-2 available in a number of public and private clinics in the Nairobi area, including 2 university clinics, 3 non-governmental organization (NGO) clinics, and 9 government facilities (2 hospitals and 7 health centers). In addition, the Ministry of Health included Postinor-2 in provider guidelines and standards for the public health sector, and on the list of approved family planning commodities. In the private sector, NGOs such as the Family Planning Association of Kenya and Marie Stopes procured the method for use in their institutions (Muia et al, 2002).

The Consortium for Emergency Contraception had as its initial goal the model introduction of emergency contraception (EC) in Africa, South and South-East Asia and Latin America and the Caribbean, specifically in four developing countries: Mexico, Indonesia, Sri Lanka, and Kenya (Fernández-Cerdeño, Vernon, Hossain, Keesbury & Khan, 1999). As part of this work, Muia, Blanchard, Lukhando, Olenja, and Liambila (1999) conducted a baseline study of knowledge of emergency contraception among policy makers, health care providers, and family planning clients in Kenya in 1996. They found that knowledge about the types of emergency contraception (EC), applications, and side effects was poor and 49% of the respondents considered emergency contraception (EC) as an abortifacient. Of those familiar with emergency contraception (EC), 77% approved its use for rape victims and 21% for adolescents and schoolgirls. Only 3.5% of all respondents had personally used emergency contraception (EC) in the past, 23% of those familiar with emergency contraception (EC) intend to use it in the future, whereas 53% intend to provide or promote it.

In Kenya, Gichangi, Karanji, Fonck, &Temmerman (1999) found that only 2.6% of 167 qualified nurses and 63 nursing students spontaneously mentioned emergency contraceptives as a form of contraception. Knowledge of the types, application, and side effects of emergency contraceptives was poor (Cited in Baiden, Awini, & Clerk, 2002). In 1996, the Consortium for Emergency Contraception sponsored a project to enhance the use of emergency contraceptives in Kenya. At that time, fewer than half of 90 providers surveyed knew about emergency contraceptives. After training providers and making packaged emergency contraceptives pills available, the percentage of providers who knew about emergency contraceptives nearly doubled from 48% to 88% in 3 years. Those providing the method had also more than quadrupled from 15% to nearly 70% (Baiden et al., 2002).

1.2 Statement of the problem

Awareness about emergency contraceptive pills does not seem to increase their use in the prevention of unwanted pregnancies in Kenya, and as previously noted by The Henry J. Kaiser Family Foundation (2004), emergency contraceptives are supposed to act as a safeguard should other method of contraception noticeably fail. Each year, about 210 million women around the

world become pregnant .Among them, about 75 million pregnancies (36%) are unplanned and/or unwanted .Unplanned/unwanted pregnancy is one of the leading causes of maternal mortality. It is estimated that between 8 and 30 million pregnancies each year result from contraceptive failure either due to inconsistent or incorrect use of contraceptive methods or failure of the method itself. Research studies conducted in the USA have reported that higher rates of unintended pregnancy occur among college-age women, with 60% of pregnancies among 20-24 years old being unintended. The percentage of unintended pregnancy is even higher among 18-19-year-old females (79%).

Unplanned pregnancies account for a substantial proportion of all births in Kenya. Although Kenya's contraceptive prevalence rate of 33 per cent in 1993 (which increased to 39 per cent in 1998), is higher than the rates for most countries in sub-Saharan Africa, the level of unplanned births is also relatively higher. In a study of unintended childbearing and reproductive change in eight sub-Saharan Africa countries, Kenya was observed to have the highest proportion of unintended childbearing (Magadi, 2003).

The adolescent pregnancy rate is 25% most of them are unintended. Maternal mortality rate in Kenya is one of the highest in the world at 350/100,000 live births. About 15 -30% of the maternal deaths are due to unsafe induced abortions, due to unwanted pregnancies in young people. This could mean that both the conventional and emergency contraception have been missed. The contraceptive prevalence rate is 45.5% (Kenya Government survey 2008/9).

Teen pregnancy is a common and leading contributor to Kenya’s continued high maternal mortality. By age 19, nearly a third of the women are either pregnant or have delivered a baby.13% of 16 year olds have had a child or were pregnant at the last KDHS (Kenya Demographic Health Survey).

Postinor-2 is readily available in the public sector and non-governmental services (The Consortium for Emergency Contraception, 2006). However, ECafrique conducted a rapid assessment of emergency contraceptives use among three hundred secondary, university, and out-of-school girls in Nairobi in 2005 and the results demonstrated that while 74% knew about

emergency contraceptives, less than 9% had actually used it. Moreover, although health care providers have known about emergency contraceptives for three decades, awareness and use of this option remain low, with implications on the prevalence of use of the method (Muia et al, 2002).

Young people are particularly vulnerable to unsafe induced abortions and its complications. It has been estimated that widespread use of emergency contraception may significantly reduce unplanned pregnancies and hence the number of abortion-related morbidity and mortality. Therefore the disparity between those who know about the method and those who use it is thus worrying, considering the implications that the use of emergency contraception can have on unwanted pregnancies, which are widespread in Kenya.

1.3 Purpose of the study

The purpose of this study was to explore the factors affecting the use of emergency contraceptive pills among undergraduate students in Kenya.

1.3.1 Objectives of the study

The study focused on the following objectives:

i. To determine how awareness of emergency contraceptives influences their use among undergraduate students in Kenya.
ii. To evaluate how access to emergency contraceptive pills influences their use among undergraduate students in Kenya.
iii. To find out how the effectiveness of choices of emergency contraceptive pills among undergraduate students in Kenya influences their use.
iv. To uncover the attitudes of undergraduate students towards the use of emergency contraceptive pills.
v. To promote effective use of emergency contraceptives among female students at the university of Nairobi.

1.3.2 Research questions

The study was guided by these research questions:

i. How does the awareness of emergency contraceptives influence their use among undergraduate students in Kenya?
ii. How does access to emergency contraceptive pills influence their use among undergraduate students in Kenya?
iii. How does the effectiveness of choices of emergency contraceptive pills influence their use among undergraduate students in Kenya?
iv. What are undergraduate students' attitudes on the use of emergency contraceptive pills?
v. What are the possible ways of promoting effective use of emergency contraceptives among female students at the University of Nairobi?

1.4 Justification of the study

Widespread use of emergency contraception could potentially prevent the more than 80 per cent of births to single women that are unplanned and about 68 per cent and 14 per cent of births to single women that are mistimed and unwanted, respectively (Magadi, 2003). Moreover, there presently exists limited research on factors influencing the use of emergency contraceptive pills among young women of childbearing age.

1.5 Significance of the study

The results of this study may be instrumental in formulating various policies and educational campaigns to promote the use of emergency contraceptive pills. Various stakeholders, including the Ministry of Health, The Consortium for Emergency Contraception, and various Non-Governmental institutions, will benefit from the results of this study. It is expected that the study will show the factors that influence the use of emergency contraceptive pills and the prevailing stance that young undergraduates hold towards use of emergency contraceptive pills (ECPs). The study is therefore a worthwhile undertaking.

1.6 Basic assumptions of the study

The study assumed that the participants are representative of the population, are willing to participate in the study, and will respond to questions honestly or participate without biasing the study results. The study also assumed that the respondents are aware of the concept of and usage of emergency contraceptive hence they could provide clear leads for the researcher in the study.

1.7 Limitations of the Study

This study concentrated on the female students of the University of Nairobi who reside on the Main Campus. The campus is in very close proximity to the city of Nairobi, and thus the students may have above-average access to emergency contraceptive pills as well as information about the pills compared to other students in other areas. The results may thus not be applicable for generalization to students of the same institution in other campuses or other institutions, or for young adults of child-bearing age whose context might be different from those studied. The study involved the use of questionnaires in collecting data. It was possible that responses depended on the mood of the respondents who may not give honest answers. It was also difficult to control the respondent's attitude as they respond to questions in the questionnaire. However, the researcher overcame this by assuring the respondents of the confidentiality of their identity.

1.8 Delimitations of the Study

The focus of the study was on undergraduate students at the University of Nairobi and is ideal, since the population was likely to have participants who are readily accessible for participation in the study (especially considering the short span of time available to complete the study and the budget constraints) and who have open access to information and emergency contraceptive pills, the institution being one of the first places where emergency contraceptive pills were initially introduced. Further, the study focused primarily on female students who reside in main campus and who were drawn principally from College of Humanities and Social Sciences, College of Architecture and Engineering and College of Biological and Physical Sciences. The study therefore did not include students from other colleges that constituted the University of Nairobi.

1.9 Definitions of significant terms

The following terms were defined in the context of the study as:

Use of emergency contraception: refers to female students' chances of ever having used emergency contraception in life.

Knowledge: refers to the information of / having heard about emergency contraception, plus either knowing the indication and /or a method of EC.

Emergency contraception: refers to a group of contraceptive modalities that when used after unprotected sexual intercourse within defined time limits will markedly reduce the risk of a resulting unwanted, unintended pregnancy.

Unsafe abortion: refers to a procedure performed either by persons lacking necessary skills or in an environment lacking minimal medical standards or both.

Postinor-2: refers to an emergency contraceptive that can be used after unprotected sex or where a contraceptive method has failed.

1.10 Organisation of the study

The study was organized into five chapters. Chapter one, which is the introductory part, contains the background of the study, the statement of the problem, purpose of the study, objectives of the study as well as the research questions. Also included are the significance, justification, limitation, delimitation of the study, definition of key significant terms and organization of the study. In chapter two, literature review is given. Chapter three encompasses the research methodology under which, research design, target population, sampling procedure and sample size selection, research instrument in data collection, validity and reliability of the instrument, data collection procedures and data analysis techniques are discussed. Data analysis, interpretation, presentation and discussion were dealt with in chapter four. The summary of the findings of the study, discussion of the findings, conclusion and recommendations made were discussed in chapter five.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews various studies from around the world, Africa and in Kenya that have explored the relationship between the factors influencing the use of emergency contraceptive pills. The chapter comprises of introduction, relationship between the variables, research gaps theoretical framework, conceptual framework, summary and research gaps of the literature reviewed.

2.2 Awareness, Access and Emergency Contraceptive Use

Access and basic awareness about emergency contraceptive pills does not necessarily translate into their use. In a study by Harper & Ellertson (1995), it was found that despite having convenient access to emergency contraceptive pills and high basic awareness about this method, specific knowledge on appropriate use, such as the time limit for use, the level of effectiveness and the possible side effects, was lacking. In the study, approval of the method was wide-spread among both female and male students, although students did voice anxieties about irresponsible use and the lack of protection against the human immunodeficiency virus and other sexually transmitted diseases.

Many of the concerns stem from incomplete information about how the regimen works and some people may view the contraceptive method as a form of abortion (Glasier, 1998; Trussell, Stewart, Guest & Hatcher, 1992). The issues stem in part from the fact that the exact mechanism of action for emergency contraceptive regimens is still unknown (Katzman & Taddeo, 2010).

Aziken, Okonta, Adedapo, & Ande (2003) conducted a study in Nigeria and they found that university students, who would be expected to have greater knowledge of emergency contraception than less-educated youths, lacked correct knowledge of this method, further indicating that knowledge was lacking among teenagers and young adults. This trend had a direct effect on the use of emergency contraception. In Kenya, where emergency contraceptives pills (ECPs) have been available for over a decade, only 1.7% of women aged 15-49 years reported

ever-use and only 40% were aware of the method in a 2008 government survey on health (Central Bureau of Statistics, 2010).

Limited knowledge of emergency contraceptives and misconceptions may thus impact their use as issues are raised about **t**heir safety, the morality of their use, and their effectiveness (Romo, Berenson, & Wu, 2004). Consequent stigmatization may further hinder their use (Corbett, Mitchel, Taylor & Kemppainen, 2006).

Research has found out that two types of ECPs have been rigorously studied during the past 30 years. The more effective regimen is a progestin-only pill. Several manufacturers now package and brand an effective dosage as a dedicated ECP product. Common brand names include Postinor-2, Plan B, and NorLevo. These dedicated products contain a total of 1.50 milligrams (mg) of levonorgestrel. Some labeling requirements say this dosage should be taken in two pills (each of 0.75 mg), 12 hours apart. But research has shown that taking both pills at the same time is equally effective.

If a progestin-only product is not available, a less desirable alternative known as the Yuzpe regimen employs commonly available combined oral contraceptive pills that contain both estrogen (ethinyl estradiol) and progestin (levonorgestrel). This regimen is generally taken in two doses, 12 hours apart, with each dose containing 100 micrograms (mcg) of ethinyl estradiol and 500 mcg of levonorgestrel.

2.3 Effectiveness of choices and use of Emergency Contraceptives (ECs)

Many women **w**ho are hesitant to use emergency contraception are worried about the safety associated with the use of emergency contraceptive pills. The pills are additionally seen to increase the prevalence of risky sexual behavior that could lead to the transmission of sexually transmitted diseases (Sander, Raymond, & Weaver, 2009). In a Swedish study, 24% of the participants had worries about the side effects resulting from the use of the method (Larsson, Eurenius, Westerling, &Tydén, 2004), while a study in the UK cited concern about side effects as the second most common reason why women were apprehensive of the emergency contraceptive pill (Rocca et al., 2007).

Concerns about side effects may thus explain low usage of emergency contraception. Side effects of emergency contraception were reported by more than half of the women who participated in a study by Free & Lee (2002) in the UK to be the main reason why they were hesitant to use emergency contraceptive pills. “Concerns about the harmful effects of emergency contraception had contributed to a decision not to use emergency contraception in a few women” (Free & Lee, 2002).

Studies also indicate that because participants hear about health risks associated with long-term use of oral contraceptives, they are usually worried that by taking emergency contraception, they might experience negative health outcomes. Women also frequently conflate their concerns about long-term pill use with their worries about using emergency contraception (Keesbury, Morgan, & Owino, 2011; Shoveller, Chabot, Soon & Levine, 2007). Long-term pill use has for long been associated with invasive cervical cancer, liver-cell adenoma, and breast cancer (Brinton et al., 1986; Edmondson, Henderson & Benton, 1977; Pike, Krailo, Henderson, Duke, & Roy, 1983). There are also concerns about ingesting a synthetic product, which most women describe as having the potential to interfere with "natural" processes, like menstruation. Further worries are about using emergency contraception more than once or twice because it is feared that repeated use could reduce their fertility or libido (problems also associated with oral contraceptives) is rampant (Shoveller et al., 2007).

The sooner ECPs are started, the more effective they are. In the most thorough study to date, co-ordinated by the World Health Organization (WHO) and involving 2,000 women in sites throughout the world, progestin-only pills prevented 95 percent of expected pregnancies when started within 24 hours of unprotected intercourse, 85 percent when started in the 25th through 48th hour, and 58 percent when started in the 49th through 72nd hour. Combined pills were less effective, preventing 77 percent of pregnancies when started on the first day, 36 percent when started on the second day, and 31 percent when started on the third day. The study clearly points to the need to start ECPs as soon as possible after unprotected intercourse.

In Kenya, research showed that despite clear support for the method, nearly half of the respondents voiced concerns. Hesitation typically sprang from a lack of familiarity with the

method, fears of the health risks, and worry that the fetus might be harmed if the regimen failed. Respondents worried that their fecundity would be affected, or that emergency contraception would be abused or misused in place of other family planning methods (Muiia et al., 1999). Asked whether they had any concerns about the method, nearly half (45%) voiced concerns mainly relating to its non-prescription availability in Kenya and the possible known side effects (Muiia et al., 2002).

2.4 Attitudes and Emergency Contraceptive Use

Women are reluctant to use emergency contraception if they believe that it is an abortifacient (Jackson, Bimla, Freedman & Darney, 2000; Keesbury et al., 2011). This concept has led to strong opposition by the Catholic Church as well as by the anti-abortion or the so-called prolife groups (Herbe, 2002; Smugar, Spina & Merz, 2000). As a result, conservative politicians and fundamentalist opinion leaders have opposed the introduction of emergency contraception (EC) in many countries around the world, citing moral issues (Schiappacasse & Diaz, 2006). As a result, studies in the United Kingdom (UK) have shown women to be reluctant to ask for emergency contraceptive pills (ECPs) because of feelings of shame and worry that health professionals will judge them (Fairhurst, Ziebland, Wyke, Seaman & Glasier, 2004; Free, Lee & Ogden, 2002). In Nigeria, 25.8% of the participants studied considered the use of emergency contraception (EC) as a form of abortion (Baiden et al, 2002). These results were mirrored elsewhere by a study by Free & Lee (2002) and in 2004 in Sweden, where one third (33%) of the respondents considered emergency contraceptive pills (ECPs) to be a kind of abortion (Larsson et al., 2004).

Gichangi et al. (1999) found that 49% of the respondents in the Kenyan study considered emergency contraception to be an abortifacient and were significantly more reluctant to use and to provide or promote it in the future. Specific categories of likely users in Kenya, according to the emergency contraceptive providers queried in a survey, include forgetful pill users, married women who have sex infrequently, commercial sex workers, and college students. (Muia et al., 1999). Teenage use is highly controversial; nonetheless, many teenagers in Kenya know about the contraceptive method (Halpern, Mitchell, Farhat & Bardsley, 2008; Muia et al., 1999). This

explains the initial embarrassment in using emergency contraception services that was reported by some of the younger women in a study by Free & Lee (2002): the perceptions that people have about those who take the pills discourage some women from using the method. Needing emergency contraception was linked to negative evaluations for many of the women. It was seen as a personal failing, and the women felt ashamed. The younger women reported being concerned about what other people might think if they asked for emergency contraception, especially for a second time. A combination of these factors was why emergency contraception had not been used. Women who linked emergency contraception to "undesirable behavior" wanted to dissociate themselves from any negative connotations about themselves or their relationship if they sought emergency contraception. A few women dissociated themselves from emergency contraception entirely, reporting that they were not the kind of person who would ever need it (Free & Lee, 2002).

In a study by Muia (1999),women in Kenya have expressed concerns that emergency contraception may be illegal or a form of abortion. Some people also believe that the availability of emergency contraception could increase immorality, particularly among Kenya's youth. Several people fear that emergency contraception could be misused by the "wrong people" (Muia et al., 1999). Additionally, in another study by Muia et al. (2000), the respondents felt that the use of the pills encouraged immorality and sexual negligence among the youth. The general feeling of many health professionals and the public is that easy access to emergency contraceptive pills (ECPs) could encourage promiscuity and unsafe sexual relations and could discourage use of more reliable contraception (Gichangi et al., 1999; Keesbury et al., 2011).

The efficacy of emergency contraception is also difficult to quantify (Rodrigues, Grou & Joly, 2001). Most studies include large numbers of young women of unproved fertility, and for obvious reasons there can be no control group. Some couples are not certain that there was spillage of seminal fluid when a condom burst or that ejaculation actually occurred (Trussell, Rodríguez & Ellertson, 1998). Many authors simply report failure rates in terms of the number of pregnancies among the women treated, but most of these women would not have conceived even if they had not used emergency contraception (Glasier, 1997).

In a recent meta-analysis of 10 published studies in which data on the menstrual cycle and the timing of intercourse were reported, the efficacy of estrogen plus progestin was estimated to be 74 percent, on average (Trussell, Ellertson, & Stewart, 1996). The imprecise nature of the studies, however, means that it is hard to have a side-by-side comparison of the efficacy of emergency contraception and other methods of contraception (Creinin, 1997; Stirling & Glasier, 2002; Trussell, 1995)

Some providers fear that repeat use of ECPs presents health risks or will encourage women to use emergency contraception routinely. However, repeat use of ECPs poses no health risks, according to WHO, which has placed repeat ECs use in Category 1 of its medical eligibility guidelines, indicating that there is no restriction for the repeat use of this contraceptive method. WHO guidelines on ECs service delivery state, "Although frequent use of emergency contraceptive pills is not recommended, repeat use poses no health risks and [health risks] should never be cited as a reason for denying women access to treatment."

In Kenya, the most frequently mentioned limitation that made health service providers not champion the method was the failure rate. Among providers opposed to the method, many cited its low efficacy, compared with ongoing methods (Muia et al., 1999). Thus, people with basic knowledge about emergency contraception may end up not using the method if they relied on health providers to recommend a method to use or they may inappropriately compare the contraceptives side by side, drawing wrong and misinformed conclusions.

Some health care providers, parents, and policy-makers fear that adolescent awareness or use of ECs may lead to more unprotected intercourse and a decrease in the use of a regular method of contraception. For example, a study in Kenya found that providers and others believe that ECs will discourage regular contraceptive method use among youth. A recent overview of the literature on emergency contraception found that these assumptions and concerns are generally not true. For example, studies in India, Ghana, Mexico, the United Kingdom, and the United States suggest that advance provision of ECPs is not associated with abandonment of regular contraception.

Moral issues and the resulting stigma thus have a negative impact in the choice of women on whether to use emergency contraception. Nonetheless, the extent to which women consider emergency contraception to be morally wrong depends on their misconceptions about the emergency contraception mechanism, not on their religious background (Romo et al., 2004).

2.5 Theoretical Framework

One theoretical framework that can be used to model the complex contraceptive decision-making process is the Theory of Planned Behavi**o**r (TPB) as espoused by Ajzen(1991). The theory states that personal and social beliefs and values determine personal attitudes and perceived social expectations ("subjective norms") and that various additional factors can influence perceived behavior control. These attitudes, subjective norms, and perceived behavior control in turn influence behavioral intention, which then influences actual behavior. The TPB is a comprehensive model that has been assessed and validated for understanding a variety of health conditions, including rule-following in homeless youth, promotion of physical activity, and healthy eating. More recently, the TPB has also been used to understand sexual risk behaviors in adolescents (Mollen et al., 2008). The study can use the framework of the TPB to explore the factors, knowledge, attitudes, and beliefs of undergraduate students about intention to use ECPs and to identify barriers to ECPs use by offering insight into the decision-making processes and the social dynamics at play when young people are faced with the decision on whether to use or not to use emergency contraceptive pills.

2.6 Conceptual Framework

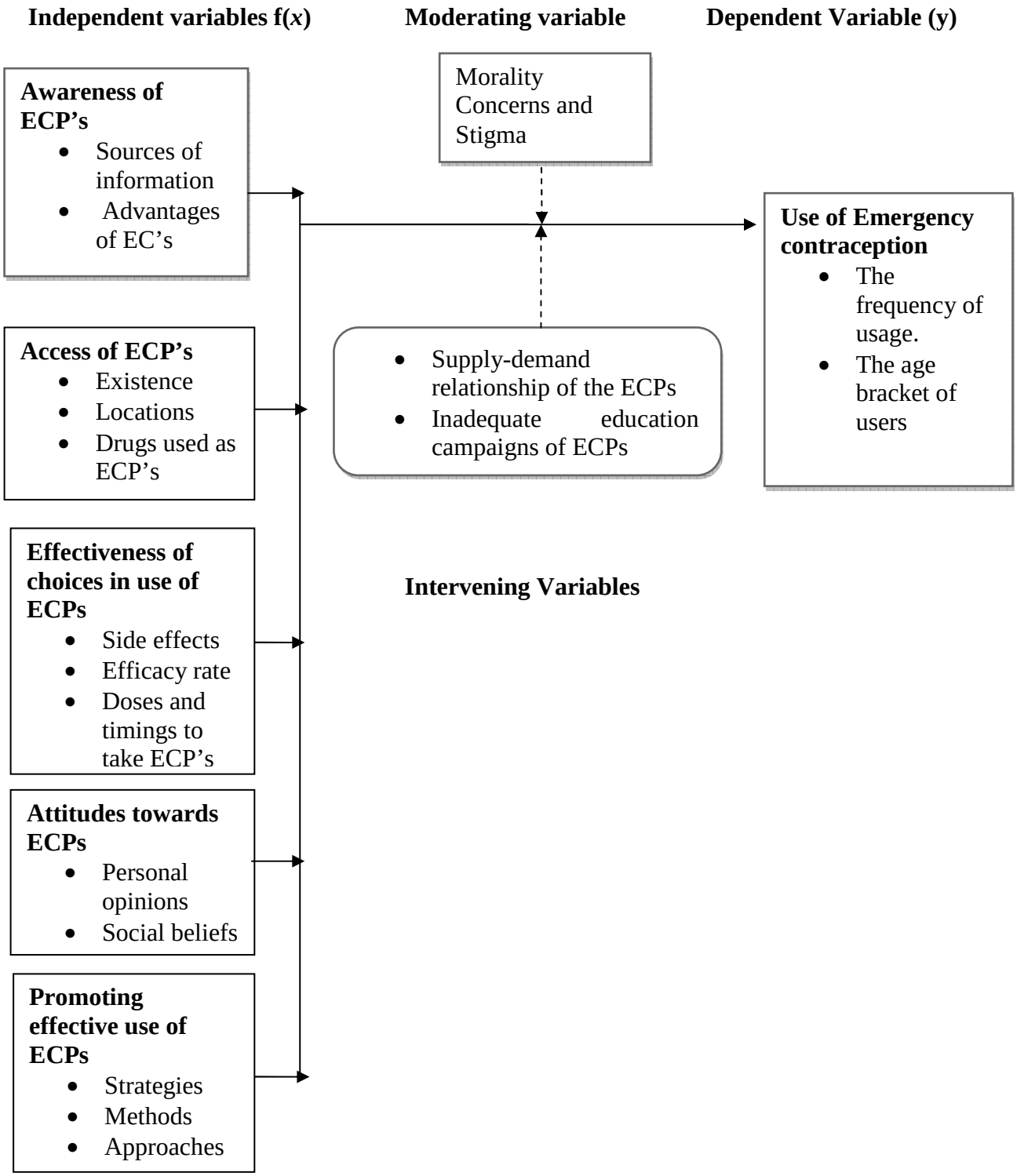

Fig 1: Conceptual framework

2.7 Summary of the literature reviewed and knowledge gaps

Incomplete awareness of emergency contraception – about their mechanism of action and their efficacy – leads to misconceptions by users. Limited knowledge of emergency contraceptives and misconceptions impact their use as issues are raised about their safety, the morality of their use, and their effectiveness. Consequent stigmatization further hinders their use.

Due to low levels of awareness about the method, many people erroneously associate the side effects reported in the use of the long-term contraceptive pills with the emergency contraceptive pill. This is issue compounded by the fact that some people may view the contraceptive method as a form of abortion, which leads to further concerns about the health impact the pills would have on the foetus should the method fail and also raises additional concerns about the morality of using the pill. Many people are opposed to abortion and the same people are led to shun the pill owing to the misconception that it induces abortion. As a result, the use of the pill bears stigma, further impacting its prevalence of use.

Additionally, the fact that there is no precise measure of the efficacy of the emergency contraceptive pill and that the figures obtained from the studies that exist show a low – however not accurately arrived at – rate of success results in many people who do not have in-depth knowledge of the pill and have thus not been exposed to literature on its efficacy to draw mistaken conclusions about their efficacy.

Studies all over the world have explored how awareness of emergency contraception impacts their use and the resultant attitudes that arise from various degrees of knowledge of the emergency pills. In Kenya, even though there are studies that have explored knowledge, attitudes and use of emergency contraceptives and how these aspects interrelate, most of these studies, while few, are not recent. Therefore, there is lack of an up-to-date study that explores the factors that influence the use of emergency contraceptive pills among undergraduate students – or even young people of child-bearing age – in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the methods that were employed in the study are specified. The research design, target population, sampling population, data collection methods and procedures, data analysis methods and justification, and ethical considerations are outlined, in that order.

3.2 Research Design

Research design is defined as plans, or outlines to generate answers to research problem, Orodho, (2004). The study employed a descriptive survey design that will provide with qualitative and quantitative data appropriate for investigating the factors influencing the use of emergency contraceptives among female students in the University of Nairobi, Main Campus. This method helped to collect quantifiable data in its current and natural setting. Descriptive research survey is designed to allow a researcher obtain information of a problem at hand, Orodho, (2004) also explain that survey research is the most commonly used descriptive method in education research.

The research design involved detailed, thick description and inquiry in depth, and direct quotations capturing people's personal perspectives and experiences. This design offered superior advantages over the other methods in that it gave a holistic view of the problem under study. The descriptive survey research design was chosen for this study due to its ability to ensure minimization of bias and maximization of reliability of evidence collected.

3.3 Target population

The total population of residential female students of the University of Nairobi's main campus was 1976.

Table 3.1: Target Population

Hostels in main campus	No of students	Percentage of Total Population (%)
Hall 4	314	15.89
Hall 6	215	10.88
Hall 12	302	15.28
Hall 13	362	18.32
Hall 20(Box)	498	25.20
Stella Awinja (Hall 14)	285	14.42
Total	**1976**	**100**

The population for this study was the female-students residents of the University of Nairobi's main campus.(Source: Chief halls Officer's office)

3.4 Sample Size and Sampling Procedure

A sample is part of the target population that has been procedurally selected to represent it, Oso and Onen, (2005) .Sampling is the process of selecting a number of individuals for the study in such a way that the individuals selected represent the larger group which they are selected, hence representing the characteristics found in the entire group Orodho, (2003). According to Best and Khan, (2004) the ideal sample size should be large enough to serve adequate representation of the population about which the researcher wishes to generalize the findings. The Krejcie & Morgan (1970) table was used to determine the sample size for the study.

According to the table, a sample size for a population of 1976 is 322. The sample was drawn through simple random sampling, an equal number of students in each of the six hostels as the number of students calculated. At least 53 students from each of the six hostels were sampled. This was done by use of the current halls register in each hostel. The simple random sampling used was not only ideal for statistical purposes but was free of classification error and requires minimum advance knowledge of the population. Additionally, it required an accurate list of the whole population which was easily obtainable from the chief halls officer's office.

3.5 Research Instruments

The research adopted a questionnaire as the instrument for data collection. The research questionnaires were personally distributed to the respondents. The reason the researcher chose to use questionnaires in this study is because questionnaires are more efficient because they require less time, are less expensive and are permitted to collect data from a wide population. This questionnaire contained both closed and open-ended questions. Questionnaires were hand-delivered to the respondents and collected from them at an agreed date.

3.5.1 Instrument Validity

Validity may be defined as the ability of a test to measure what it purports to measure. Validation of the research instrument was done by use of content validity. This type of validity addresses how well the items developed to operationalize a construct provide an adequate and representative sample of all the items that might measure the construct of interest. This was addressed when writing the questionnaires and the judgement of experts in this field such as health professionals and my supervisor was used to enhance this. In order to measure what the study is intended to, relevant questions to the area of study were constructed. The questions were re-examined to ensure that they are not ambiguous, confusing, or potentially offensive to the respondents leading to biased responses.

3.5.2 Instrument Reliability

Reliability is the measure of the degree to which a research instrument yields consistent result or data after repeated trials Mugenda & Mugenda (2003). In this study, test- re-test method was used. If similar results will be obtained after several tests, then the instrument will be reliable. The respondents were given the questionnaires on different periods of time, at an interval of one week as the duration. A reliable error, a test method was used to estimate the degree to which the same results was obtained with repeated measure of accuracy of the same concept within the questionnaires in order to determine its reliability. This type of reliability is based on stability of the instrument over time. Pearson product moment correlation coefficient about 0.8 was considered high enough to judge whether the instruments was reliable, and therefore the following formula was used.

$$r = \frac{N\sum XY - \left(\sum X\right)\sum Y}{\left[N\sum X_2 - \left(\sum X\right)^2\right]\left[N\sum Y^2 - \left(\sum Y\right)^2\right]}$$

Where X = Odd scores

Y = Even Scores

$\sum X$ = Sum of X Scores

A pilot study was be done by issuing few questionnaires to the target population. Few questionnaires were issued to some residential female students in the university's main campus and these were marked so as not to form part of the main study. This allowed information such as clarity of the questions, questions wording, or response categories revision which was done where necessary. The corrections were made to the final questionnaire before issuing.

3.6 Data Collection Procedure

A research permit to conduct the study was obtained from the National Council of Science and Technology (NCST). The researcher then reported to the Director, Student Welfare Authority, SWA to obtain permission in order to proceed with the study. Permission was also sought from the Halls Officers, Upper State House Road and Women's Hall Units where the female students' hostels in main campus are situated to conduct research in their units as well as provide access to the Halls registers to facilitate data collection. The questionnaires were then administered to the students with the help of the halls custodians who acted as the research assistants. The questionnaires were collected in good time after completion on an agreed date.

3.7 Data Analysis Techniques

Data analysis involves scrutinizing the acquired information and making inferences. The method used in data analysis is influenced by whether the research data is qualitative or quantitative. It also refers to the interpretation of the collected raw data into useful information (Kombo and Tromp, 2006). In this study, data was analyzed both qualitatively depending on its nature. Data from open ended items in the questionnaires was analyzed and reported qualitatively.

Qualitative data was analyzed through organizing responses in the themes as per the objectives of the study. They were analyzed according to major themes related to the factors influencing female students' use of emergency contraceptives. Responses were organized in various pertinent aspects of the study which included students' awareness of ECs; access, choice and usage of ECs, effects of using ECs on female students, attitudes of female students towards use of ECs and suggestions for promoting effective use of ECs.

Quantitative data was analyzed through descriptive statistics. Responses from the questionnaires were analyzed and reported using simple statistics such as frequencies and percentages. Statistical package for social sciences, SPSS was utilized to provide descriptive statistics.

3.8 Ethical Considerations

The respondents in the study were offered a detailed explanation about the study so that they could participate voluntarily after full disclosure. Additionally, utmost confidentiality of the respondents and their responses were safeguarded. In addition, the information obtained from the respondents was not be used for other purposes other than drawing the conclusion of this study.

3.9 Operational Definition of Variables

Table 3.2 Operational Definition of Variables

Objective	**Variable**	**Indicators**	**Data collection method**	**Type of Analysis**
To determine how awareness of emergency contraceptives influences their use among undergraduate students in Kenya.	**Independent variable** Awareness and use of ECs	• Sources of information • Advantages of EC's	Questionnaire	Descriptive statistics
To evaluate how access to emergency contraceptive pills influences their use among undergraduate students in Kenya.	**Independent variable** Access and use of ECs	• Existence • Locations • Drugs used as ECP's	Questionnaire	Descriptive statistics
To find out how the effectiveness of choices of emergency contraceptive pills among undergraduate students in Kenya influences their use. .	**Independent variable** Effectiveness of choices of ECPs and their use	• Side effects • Efficacy rate • Doses and timings to take ECP's	Questionnaire	Descriptive statistics

To uncover the attitudes of undergraduate students towards the use of emergency contraceptive pills.	**Independent variable** Attitudes and use of ECPs	• Personal opinions • Social beliefs	Questionnaire	Descriptive statistics
To give suggestions for promoting effective use of emergency contraceptives among female students at the university of Nairobi.	**Independent variable** Suggestions for promoting effective use of ECPs	• Strategies • Methods • Approaches	Questionnaire	Descriptive statistics
	Dependent variable Use of Emergency contraception	• The frequency of usage of ECP's. • The age bracket of users	Questionnaire	Descriptive statistics

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This section presents the analysis of the results of the data collected from the respondents. Data is presented in sequence in relation to the research objectives and related themes and responses elicited form the questionnaire items. Tables, frequencies and percentages have been used to present the data.

4.2 Questionnaire Return Rate

Questionnaire return rate is the proportion of the sample that participated in the study as intended in all research procedures. The researcher administered the questionnaire to 322 respondents of which 250 dully filled and returned the questionnaires. The questionnaire return rate was 78.1%. The researcher therefore deemed this a fair representation for purposes of the research.

4.3 Demographic Information of Respondents

A total of 250 female students residing in the main campus, University of Nairobi were involved in the study and dully returned the questionnaires. Majority of the students had an average age of 20 – 21. The findings are presented in Table 4.1.

Table 4.1: Average age of respondents

Age bracket	Frequency	Percentage
18 – 19 years	50	20.0
20 – 21 years	120	48.0
22- 23 years	45	18.0
22 – 23 years	45	18.0
24 – 25 years	27	10.8
Above 26 years	8	3.2
Total	**250**	**100.0**

The respondents were asked to indicate their religion. This could inform the researcher on the aspect of attitudes and perceptions on the use of ECs among female students. The study established that majority of the students were protestants 175(70%), followed by Catholics 60(24.0%) and Muslims accounting for 15 (6.0%).

4.3.1Students' level of study

The researcher sought to establish the respondents' level of study. The study reveal that the respondents were derived from across different levels of study since the halls of residence accommodate students from different faculties. The study found out that majority of the respondents were in their third year of study 86(34.4%), second years accounted for 70(28.0%), first years, fourth years and fifth years accounted for 40(16.0%) 29 (11.6%) and 25 (10.0%) respectively. Table 4.2 presents the findings.

Table 4.2: Respondents level of study

Level of study	Frequency	Percentage
1st year	40	16.0
2nd year	70	28.0
3rd year	86	34.4
4th year	29	11.6
5th year	25	10.0
Total	**250**	**100.0**

The researcher further sought to establish the respondents' sexual activity. Two hundred, 200(80%) of the respondents were sexually active, and out of which they further formed basis for the information the researcher sought as support to the study. Their responses are presented in Table 4.3.

Table 4.3: Respondents sexual activity

Response	Frequency	Percentage (%)
Active	200	80.0
Non-active	50	20.0
Total	**250**	**100**

The respondents were further asked to indicate their home place of residence. Majority, 108 (43.2%) indicated urban, 73(29.2%) indicated rural –urban whereas 69 (27.65) were rural residents. The findings are presented in table 4.4.

Table 4.4: Respondents Home Residence

Residence	Frequency	Percentage (%)
Rural	69	27.6
Urban	108	43.2
Rural – urban	73	29.2
Total	**250**	**100.0**

4.4 Responses to the research objectives

Below information shows responses obtained from the respondents in line with the research objectives.

4.4.1 Students Awareness of ECP's

Overall, majority of the students 220 (88.0%) of the sample stated that they were familiar with the purpose of Planned Parenthood or family planning. Further, all respondents indicated that they had received health education on Planned Parenthood via different media and personalities. More particularly, in the context of the study, respondents indicated that they were abreast with the information on the use of emergency contraceptives ECs and identified various services of this information. The findings are presented in Table 4.5 below.

Table 4.5: Evaluation of Respondent's Sources of Information on Sex Education and ECs

Scale	Family		Partner		Friend		Health Professional		Church		Media	
	F	%	F	%	F	%	F	%	F	%	F	%
Satisfactory Advice	84	33.6	40	16.0	102	40.8	114	45.6	30	12.0	108	45.2
Limited Advice	68	27.2	96	38.4	60	24.0	50	22.0	69	27.6	58	23.2
Neutral	40	16.0	30	12.0	28	11.2	38	15.2	25	10.0	38	15.2
Bad advice	28	11.2	19	7.6	48	19.2	24	9.6	36	14.4	28	11.2
No advice	30	12.0	65	26.0	12	4.8	24	9.6	90	36.0	24	9.6
Total	**250**	**100.0**	**250**	**100.0**	**250**	**100.0**	**250**	**100.0**	**250**	**100.0**	**250**	**100.0**

Data in the Table 4.5 indicate that the persons most appropriate to provide sex education and the use of ECPs were thought to be health professionals 114 (45.6%) followed by media 108(43.2), friends 102(40.8%), family (33.6%) and partner 40 (16.0%). The study findings reveal that on the basis of the religion, majority 90(36.0%) of respondents received no advice from their religious institutions. As for the media which provides majority of the information 58(23.2%) of the respondents indicated that they received limited advice, hence the reason for other sources that offer personalized education and information on ECP's like health professionals, family and partners.

Asked whether they had involved in unprotected sex 145 (58.0%) indicated they had been involved whereas 105 (42.0%) stated that they had never been involved in unprotected sex. When asked to state the reasons for not using ECs, respondents cited lack of knowledge 86(34.4%), fear 72(28.8%), inconvenient service delivery 36(14.4%), attitudes 27 (10.8%), urge to please partners 19 (7.6%), advice from friends 10 (4.0) as some of the reasons. The findings are presented in table 4.6.

Table 4.6: Reasons for involvement in unprotected sex

Response	Frequency	Percentage
Lack of knowledge of ECS	86	34.4
Fear	72	28.8
Inconvenience	36	14.4
Poor attitudes on ECs	27	10.8
Pleasing partners	19	7.6
Advice from friends	10	4.0
Total	**250**	**100.0**

Further respondents were asked to indicate if they were aware of any risks associated with unprotected sex. The results are presented in table 4.7.

Table 4.7: Risks associated with unprotected sex

Risk	Frequency	Percentage
Unwanted pregnancies	200	80.0
Contraction of HIV/AIDS	250	100.0
Contraction of STI's	246	98.4
Total	**250**	**100.0**

Findings in Table 4.7 indicate that female students cited the contraction of HIV/AIDS as the key risk associated with involvement unprotected sex.

4.4.2 Students access to ECP's

The second objective of the study sought to establish female students' access to ECP's. The researcher sought to establish the emergency contraceptive that the students had heard of and accessed more frequently. Two hundred and ten students (84.0%) of the students reported that they had heard of "ECPs" or "morning – after pills" before. Out of these forty 40, (16.0%) reported prior knowledge of the existence of ECPs.

Further, the study sought to establish where students access the ECs. The responses were as presented in table 4.8.

Table 4.8: Sources of Emergency Contraceptives

Source	Frequency	Percentage (%)
Local/ nearby shop / kiosk	126	50.4
Supermarket	87	34.8
Local pharmacy, over the counter	230	92.0
Local clinic on order	145	58.0
Local clinic with prescription	68	27.2
Local pharmacy on prescription	96	38.4
Local clinic on order	78	31.2
Total	**250**	**100.0**

The findings in Table 4.8 indicate that majority of the students' access the ECs on casual order from the kiosks, clinic and pharmacists. Further, the findings revel that the source of the ECs also points at the nature of education that the students get from the persons selling the ECs to them.

Further, respondents were asked to indicate the period within which emergency contraceptives can be used. Table 4.9 below presents the findings.

Table 4.9: Maximum Acceptable time after sex for use of ECS

Period in hours	Frequency	Percentage
2-8	10	4.0
24-48	38	15.2
72-120	196	78.4
Do not Know	6	2.4
Total	**250**	**100.0**

Data in Table 4.9 indicate a variety of timings for use of ECs among female students. The study further sought to establish the drugs access by students that are used on ECPs. The results of the findings are presented in table 4.10 below.

Table 4.10: Drugs access and used as ECPs

Name of drug	Frequency	Percentage
Combined oral contraceptives	164	65.6
Dedicated Levonorgestral – only pills	89	35.6
Menstrogen	90	36.0
Brown codeine	45	18.0
Ampicillin	36	14.4
Quinine	17	6.8
Ergometrine	26	10.4
Gynaecosid	35	14.0
Synergon	27	10.8
Norlevo	67	26.8
Organmetril	34	13.6
Duphaston	36	14.4
Total	**250**	**100.0**

Data in Table 4.10 indicates that female students access a variety of drugs that they use s ECs.

4.4.3 Effectiveness of the choice of ECs used by female students

The researcher sought to establish the effectiveness of the choice of ECS used by female students. The students were asked to indicate the most popular methods of contraception that the frequently use. Table 4.11 presents the findings.

Table 4.11: Most popular methods of contraception

Contraception method	Frequency	Percentage
Condoms	140	56.0
Withdrawal	36	14.4
Birth control pills	70	28.0
Other methods	4	1.6
Total	**250**	**100.0**

Data in table 4.11 indicates that the method of contraception mostly used by students was condoms 140 (56.0%) birth control pills 70(28.0%), followed by withdrawal 36 (14.4%) and others 4 (1.6%). The findings reveal that those students actively involved in sexual activities are more willing to use condoms and birth control pills.

4.4.4 Students Attitudes towards the use of ECS

The attitude of students towards the use of ECs is a major factor that influences their choice and use of ECP's. The study sought to establish how students' attitudes influence their use of ECs. The study sought to establish how students' attitudes influence their use of ECs. The responses from the Likert scale type of questions is presented in table 4.12 below.

Table 4.12: Students use ECs during unintended sexual intercourse

Scale	Frequency	Percentage
Strongly agree	140	56.0
Agree	34	13.6
Neutral	23	9.2
Disagree	37	14.8
Strongly disagree	16	6.4
Total	**250**	**100.0**

The findings in Table 12 indicate that 140(56.0%) of students strongly agreed to use ECs during unintended sexual intercourse.

Table 4.13: Students advise close friends to use ECs after unintended intercourse

Scale	Frequency	Percentage
Strongly agree	98	39.2
Agree	78	31.2
Neutral	39	15.6
Disagree	12	4.8
Strongly disagree	23	9.2
Total	**250**	**100.0**

Data in Table 4.13 indicate that majority of students strongly agreed that they advise friends to use ECs after unintended intercourse. This reveals that peers are a key source and influence of female students to use ECs. Peers also act as teachers/educators on the use of the emergency contraceptives among female university students.

Table 4.14: Widespread use of ECs increases HIV/AIDS and STIs prevalence

Scale	Frequency	Percentage
Strongly agree	135	54.0
Agree	45	18.0
Neutral	23	9.2
Disagree	17	6.8
Strongly disagree	30	12.0
Total	**250**	**100.0**

Majority of the respondents 135(54.0%) strongly agreed indicated that they felt widespread use of ECs increases HIV/AIDs and STIs prevalence, whereas 45(18.0%) agreed to this fact. The findings reveal that like other hormonal contraceptives, ECs provide no protection from STIs. Abstinence or latex condoms provide the best protection against sexually transmitted infections, including HIV. Emergency contraceptive pills should not be used routinely to prevent pregnancy because they are less effective than other family planning methods, such as regular oral contraceptives, injectables, intrauterine devices, and condoms. Also, they have much higher dosages of hormones and more side effects than other methods.

Table 4.15: Use of ECs promotes promiscuity

Scale	Frequency	Percentage
Strongly agree	123	49.2
Agree	67	26.8
Neutral	24	9.6
Disagree	19	7.6
Strongly disagree	17	6.8
Total	**250**	**100.0**

Data in Table 4.15 indicate that majority 123(49.2%) of respondents strongly agreed that the use of ECs promotes promiscuity. This therefore impacts on the access and use of ECs. The findings reveal that while a lack of knowledge among providers is a problem, negative attitudes toward providing adolescents with ECs poses an equal challenge.

Asked about their opinion on whether the use of ECs is one way of abortion, 89(35.6%) strongly agreed that they viewed it as a form of abortion, 98(39.2%) agreed, and 32(12.8%) strongly disagreed. The findings are supported from research in countries where abortion is illegal or religious opposition to contraception and abortion is strong, providers and youth may be more likely to think incorrectly that ECs act as an abortifacient. In Brazil for instance, where general awareness that ECPs existed was nearly universal among 600 obstetricians and gynecologists surveyed, 30 percent erroneously believed ECPs to be an abortifacient, and 14 percent incorrectly identified ECPs as illegal. Table 17 presents the results of the findings.

Table 4.16: Use of ECP's is one way of abortion

Scale	Frequency	Percentage
Strongly agree	89	35.6
Agree	98	39.2
Neutral	13	5.2
Disagree	18	7.2
Strongly disagree	32	12.8
Total	**250**	**100.0**

The fear of the risks/ fears associated with the use of ECs remain a key challenge in the approach to the use of contraceptives among the youth. In this study, 117(46.8%) of the respondents strongly agreed that they do not use ECs since they fear the side effects. Table 4.17 presents these findings.

Table 4.17: Students do not use ECPs for fear of side effects

Scale	Frequency	Percentage
Strongly agree	117	46.8
Agree	67	26.8
Neutral	26	10.4
Disagree	18	7.2
Strongly disagree	22	8.8
Total	**250**	**100.0**

The researcher further sought to establish if use of ECs affects use of regular contraceptive methods as an attitude affecting students' choice and access to ECs. Table 4.18 presents the findings.

Table 4.18: Use of ECP's affects regular contraceptive methods

Scale	Frequency	Percentage
Strongly agree	68	27.2
Agree	112	44.8
Neutral	34	13.6
Disagree	25	10.0
Strongly disagree	11	4.4
Total	**250**	**100.0**

To establish the relationship between use of ECs and regular condom use, the study established that majority of the respondents 89(35.6%) disagreed with the fact. The findings are presented in Table 4.19.

Table 4.19: Students use of ECP's discourages regular use of the condom

Scale	Frequency	Percentage
Strongly agree	68	27.2
Agree	15	6.0
Neutral	67	26.8
Disagree	89	35.6
Strongly disagree	11	4.4
Total	**250**	**100.0**

The research findings on attitudes indicate that more than two-thirds of students who knew about ECP's believed that they would use ECP's after unprotected sexual intercourse and 63% of them agreed to advice friends or relatives to take emergency contraceptives after unprotected sexual intercourse. However, a number of respondents reported their fear on using ECP's and misconception. These includes wide spread use of ECP's will increase the prevalence of HIV/AIDS and other STIs, emergency contraception promotes promiscuity, and emergency contraception will affect regular methods of contraception negatively

Practice of ECP's among participants of this study is very low when compared with studies done in community where awareness for emergency contraception is widespread and service is widely available among university/college students and sexually active teenagers. The possible reason for low ECP's practice rate in this study could be lack of awareness of the place where it is available, lack of correct information, low promotion and availability of the methods in most health institutions.

4.4.5 Suggestions for promoting effective use of ECs

The final objective of the study was to establish ways of promoting effective use of emergency contraceptives among female students. The findings presented a variety of suggestions as presented in Table 4.20.

Table 4.20: Suggestions for Improving Effective use of ECs

Suggestion	Frequency	Percentage
Availing ECs to students	200	80.0
Institutional policy guidelines on ECs use	250	100.0
Awareness creation among youths	246	98.4
Licensing use of key ECs	89	35.6
Subsidizing costs for ECs	67	26.8
Putting in place restrictive and punitive abortion laws	34	13.6

The findings indicate that some of the key suggestions that may be enacted by government agencies which include the government promoting at least one product dedicated for ECs use (in contrast to using standard combined oral contraceptives in higher dosages).In addition, the government should expand awareness and access through efforts such as permitting the sale of ECs without a doctor's prescription (over-the-counter) and enact laws and policies that recognize adolescents' right to use ECs and that address the barriers they face in accessing and using ECs.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter looks at the summary of the findings as obtained from respondents who were female students residing in the Halls of residence situated in the Main Campus, University of Nairobi. It contains the conclusion of the study, recommendations and suggestions for further research.

5.2 Summary of the Findings

The purpose of the study was to examine the factors influencing the use of emergency contraceptives among female undergraduate students in Main Campus, University of Nairobi. To achieve this, research questions on female students' awareness of ECP's; access and use of ECP's; effectiveness of the choice of ECP's; attitudes towards the use of ECP's and strategies for promoting effective use of ECP's were formulated.

5.2.1 Awareness and use of ECP's

Regarding the respondents awareness about emergency contraception (EC), 220 (88.0%) ever heard or knew EC; their common sources of information were friends for 102 (40.8%), media for 108 (45.2%) and partners for 40 (16.0%).

This indicates that the students are aware that ECP's exist based on different sources of information. What may be lacking is proper awareness of how the ECs regime works as well as limited knowledge and misconceptions about ECs.

5.2.2 Access and use of ECP's

To establish the access to ECP's, 230 (92.0%) of respondents who knew about ECP's, 80(32.0%) responded that ECP's could be available in Pharmacies, 68(27.2%) in the Hospitals and 87(34.8%) in kiosks. Of those students who knew about ECP's, 116(46.4%) agreed to use ECP's when they practice unintended sexual intercourse, 103 (41.2%) gave their opinion to advise

friends to use ECP's, 135(54.0%) of respondents replied to agree with increment of prevalence of HIV/AIDS and other STIs when ECP's use in the society increases. Worries with use of ECP's included, ECP's will promote promiscuity 123(49.2%); ECP's will affect on going regular methods of contraception negatively 112(4.8%) and fear of side effects in using ECP's 117(46.8%). Of those respondents who had heard of emergency contraceptives, only 11 (4.4%) used ECP's. Only oral contraceptive pills were used as an emergency contraception.

5.2.3 Effectiveness of the choice of ECP's

Of those respondents who had heard of emergency contraceptives 39 (15.6%) correctly identified progesterone only pills while 12 (4.8%) identified combined oral contraceptive as an emergency contraceptive method. One hundred and ninety six,196(78.4%) correctly identified the recommended 72 hours as the time limit for emergency contraceptive pills. Forty four (17.6%) and 43 (17.2%) of the respondents identified the recommended doses and the recommended time between doses, respectively.

5.2.4 Attitudes towards the use of ECP's

The students' attitudes were measured using nine items rated on a five-point Likert scale. The study established that a high score was indicative of positive attitude while a low score would be indicative of a negative attitude. The student's practices were measured on whether they used ECs or not, hence there was a strong tendency of use of ECs in the future by respondents.

The findings further indicate that the respondents attitude may impact on the access of ECs even among health professional such as clinicians and pharmacists because some think ECs contributed to immoral behaviour or promoted risky sexual behaviour whereas others believe incorrect use of ECs function as an abortifacient or were illegal.

5.2.5 Suggestions for promoting effective use of ECs

The findings presented a variety of suggestions for promoting effective use of emergency contraceptives among the youth. Some of the suggestions included; Awareness creation among youths, licencing use of Key ECs, putting in place restrictive and punitive abortion laws to reduce the number of unsafe abortion in Kenya amongst others. It is evident that the youths are willing to use ECP's provided enough support and education is passed on to them.

5.3 Discussions

The findings on awareness and access of ECPs revealed that students were aware and had basic access to EC's but in spite of this, ECP's usage remained low among the students. Of those respondents who had heard of emergency contraceptives, only 11 (4.4%) used ECP's. This concurs with a study by Harper & Ellertson (1995) who found that despite convenient access and high basic awareness of ECP's, usage was low mainly because specific knowledge was lacking leading to misconceptions.

The findings on Students not using ECPs for fear of side effects revealed that 46.8% strongly agreed and 26.6% agreed with this fact. This coincides with a study in UK which cited concern about side effects as the second most common reason why women were apprehensive of the emergency contraceptive pill (Rocca et al., 2007).This thus explains the low usage of EC's. This is also supported by a research carried out in Kenya by (Muia et al., 1999) which revealed that nearly half (45%) voiced their concerns about the possible known side effects of ECP's. Side effects of emergency contraception were reported by more than half of the women who participated in a study by Free & Lee (2002) in the UK.

Asked about their opinion on whether the use of ECs is one way of abortion, 89(35.6%) strongly agreed that they viewed it as a form of abortion, 98(39.2%) agreed, and 32(12.8%) strongly disagreed. Gichangi et al. (1999) found that 49% of the respondents in the Kenyan study considered emergency contraception to be an abortifacient and were significantly more reluctant to use and to provide or promote it in the future. However this study revealed that those students actively involved in sexual activities are more willing to use condoms and birth control pills as opposed to ECP's, however, they would advocate for ECs use for friends and relatives who have had sexual encounter without a condom.

The findings for the regular use of condom concur with a 2004 study of adolescents in Mexico which found that emergency contraception use had no adverse effects on condom use, but rather was associated with an increased probability of condom use and an increased perceived capacity to negotiate condom use.

From my findings, the respondents' attitudes and perceptions about ECPs were formed depending on the sources of information these students got their information from. From my findings, health professionals seem to offer satisfactory advice followed by peers. However, according to my literature review, the general feeling of many health professionals and the public is that easy access to emergency contraceptive pills (ECPs) could encourage promiscuity and unsafe sexual relations and could discourage use of more reliable contraception (Gichangi et al., 1999; Keesbury et al., 2011). The findings reveal that health professionals are giving advice to the students about EC's and not as before where they used to make clients feel stigmatized if they ask for ECs.

To conclude my discussion, it is evident that my findings concur with other researchers findings. It is also evident that students as well as health professionals have embraced the use of EC's and are willing to use them as long as correct knowledge has been passed on to the users.

5.4 Conclusion

Although emergency contraception is not recommended as a regular family planning method, it is a useful method after unprotected sexual intercourse to reduce the chance of unwanted pregnancies. Emergency contraception is most useful when there is a failure of barrier methods such as slippage and breakage of condoms, or when sexual intercourse was unpremeditated.

The most common sources of information were friends and media which is in agreement with report from Uganda among university students in which the main source was friends (34%), health institutions (24.8%) and schools (19.4%). Even from those who had basic awareness of EC, they lacked detailed knowledge about the regimen, how it is taken and its effectiveness in reducing the chances of pregnancy. Only one-third of them have identified the correct timing of administration of pills after unprotected sexual contact which is lower than in the finding from South Africa (42%). The possible reason for the lack of detailed knowledge on this subject may be linked to the source of information; friends/peers that may not have a good grasp of the subject. The low level of awareness in this study suggests lack of any educational program and service promotion on emergency contraception.

The research findings showed that more than two-thirds of students who knew about ECP's believed that they would use ECP's after unprotected sexual intercourse and 63% of them agreed to advice friends or relatives to take emergency contraceptives after unprotected sexual intercourse. However, a considerable proportion of respondents reported their fear on using ECP's and misconceptions. These includes; wide spread use of ECP's will increase the prevalence of HIV/AIDS and other STIs, emergency contraception promotes promiscuity, and emergence contraception will affect regular methods of contraception negatively.

Practice of ECs among participants of this study is very low when compared with studies done in community where awareness for emergency contraception is widespread and service is widely available among university/college students and sexually active teenagers. The possible reason for low EC practice rate in this study could be due to lack of awareness of the place where it is available, lack of correct information, low promotion and availability of the methods in most health institutions.

In conclusion, this study showed that the awareness of emergency contraception among female students was low. Even among those who were aware, the detail knowledge and practice of EC was very low. There is a need to educate adolescents about emergency contraceptives, with emphasis on available methods and correct timing of use. There should be promotion of emergency contraceptives to enhance their use and making them easily accessible in hospitals, pharmacies and students' clinics. Moreover, health education program should be established to the university students to avail accurate information about emergency contraception.

5.5 Recommendations

Based on the findings and conclusions of the study, the researcher presents the following recommendations:

1. More information on human sexuality, conception and contraception should be made available to female students once they join college to eliminate misconceptions about contraceptives.
2. Female students/young adults should be empowered to take responsibility for the use of contraceptives, by enlightening them with proper and adequate information about their function, usage and methods.
3. Girls should have access to confidential counseling and quality contraceptive information and service, including emergency contraception, where appropriate.
4. Community workshops could be provided by collaborating with different sectors in the community such as the churches, non-governmental institutions, health workers and parents to empower adolescents about sexuality and contraception. This will enhance community participation and address issues of culture.
5. Effort should be put to promote active involvement and participation of male students/partners in the reproductive health services. Parents could become partners in this campaign by playing an active role, rather than be stuck in a cultural quagmire. They could do this through education and participating in campaigns organized by the Department of Health.

5.6 Recommendations for further research

The study sought to explore the factors influencing the use of emergency contraceptive pills among female undergraduate students in Kenya, using main campus hostels as the study case. I recommend a similar research to be undertaken to include male students in the study. The scope of the study should be expanded to base the finding at hopefully a national level in order to prove the findings beyond any reasonable doubt that they apply across the board.

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APPENDICES

APPENDIX I: TRANSMITTAL LETTER

Consolata Wambugu,

P.O Box 15898-00100,
Nairobi.
8th June 2013.

Dear Respondent,

RE: DATA COLLECTION

I am a student at the University of Nairobi. I am currently doing a research study to fulfil the requirements of the Award of Master of Project Planning and Management on **FACTORS INFLUENCING THE USE OF EMERGENCY CONTRACEPTIVE PILLS AMONG FEMALE UNDERGRADUATE STUDENTS IN KENYA – A CASE OF MAIN CAMPUS HOSTELS OF THE UNIVERSITY OF NAIROBI.** You have been selected to participate in this study and I would highly appreciate if you assist me by responding to all questions in the attached questionnaire as completely, correctly, and honestly as possible. Your response will be treated with utmost confidentiality and will be used only for research purposes of this study only.

Thank you in advance for your co-operation.

Yours faithfully,

Consolata Wambugu
REG NO: L50/68397/2011.

APPENDIX II: QUESTIONNAIRE FOR RESPONDENTS

Instructions

Emergency contraception **(EC)** is a method to reduce the probability of pregnancy after unprotected sex or when a contraceptive method fails to work properly, for example, condom breakage. You have been selected to participate in this study. Please place a tick mark (√) in the box provided next to the answer of your choice or write in the space provided as the case might be.

Section A: Respondents' Demographic Information

1. What is your age? .....years.
2. What is your religion? .....
3. What is your level of study at the university 1st[ ] 2nd[ ] 3rd[ ] 4th[ ] 5th[ ] 6th[ ] Other (specify)____
4. Are you sexually active? Yes [ ] No [ ]
5. What is your place of residence? Rural [ ] Urban [ ] Rural-Urban [ ]

Section B: Students Knowledge and Awareness of ECs

6. Are you familiar with the purpose of family planning or Planned Parenthood?
   Yes [ ] No [ ]
7. a) Have you ever received education on the use of ECs? Yes [ ] No [ ]
   b) If YES, which was the source of information? Tick where appropriate

   [ ] Family

   [ ] Partner

   [ ] Friend/classmates

   [ ] Health professional

   [ ] Church

   [ ] Media

   [ ] Other sources (please list)_____
8. a) Have you ever been involved in unprotected sex? Yes [ ] No [ ]

   b) What is the reason for your involvement in unprotected sex?_____

   c) i) Are you aware of the risks associated with unprotected sex? Yes [ ] No [ ]

ii) If YES which risks are you aware of?

i. .....

ii. .....

iii. .....

iv. .....

9. What are some of the advantages of using ECs that you are aware of?

i. .....

ii. .....

iii. .....

iv. .....

Section C: Students Access to ECs

10. Have you ever practiced any form of contraception? Yes [ ] No [ ]
11. Have you ever used emergency contraceptive pills? Yes [ ] No [ ]
12. Are emergency contraceptive pills offered in Kenya?

    Yes [ ] No [ ]

    If yes, how can one access emergency contraceptive pills? (You choose more than one option, if applicable)

    At the local general shop/kiosk [ ]

    At a supermarket [ ]

    At a the local pharmacy, over the counter [ ]

    At a the local pharmacy, prescription-only [ ]

    At a local clinic, without prescription [ ]

    At a local clinic, with a prescription [ ]

13. Who can access emergency contraceptive pills in Kenya?

    [ ] Rape victims only

    [ ] People above 18 years only

    [ ] People with prescription from a doctor only

    [ ] Anyone can access emergency contraception

14. When can emergency contraceptives be used to effectively prevent pregnancy?

    Within 24 hrs after sex [ ]

    Within 72 hrs after sex [ ]

    Until one's period [ ]

    Even after a missed period [ ]

    I do not know [ ]

15. Which drugs can be used as emergency contraceptives? (You can tick more than one option)

    Combined oral contraceptives [ ]

    Dedicated levonorgestrel-only pills [ ]

    Menstrogen [ ]

    Brown codeine [ ]

    Ampicillin [ ]

    Quinine [ ]

    Ergometrine [ ]

    Gynaecosid [ ]

16. How do you think emergency contraceptive pills work?

    [ ] They terminate the early stages of pregnancy after conception

    [ ] They prevent the implantation of the fertilized egg

    [ ] They prevent the fertilization of the egg by the sperm by making the egg non-viable

    [ ] They kill the sperm before they can fertilize the egg

    [ ] All of the above

17. What happens if emergency contraceptive pills are taken after a pregnancy has been established?

    [ ] The pregnancy is terminated

    [ ] The pregnancy continues, but the foetus risks being deformed as a result

    [ ] The pregnancy continues and no negative health effects are suffered by foetus

    [ ] The pregnancy continues, but complications arise during the course of the pregnancy

Section D: Effectiveness of the choice of ECs used by female students

18. Do you know the possible side effects of emergency contraceptive pills?

    Yes [ ] No [ ]

19. Which of the following side effects associated with the use of emergency contraception? (You can choose more than one option)

    [ ] Loss of fertility

    [ ] Weight gain

    [ ] Nausea

    [ ] Headaches

    [ ] Increased risk of miscarriage in future pregnancies

    [ ] Deformation of the foetus if taken beyond the 72-hour window period

20. Do you think that the use of emergency contraceptive pills for more than once a year presents dangers to the user?

    Yes [ ] No [ ]

21. Emergency birth control pills can interact negatively with other drugs

    Yes [ ] No [ ]

22. Which are the most frequent methods of contraception?

    1.....

    2. .....

    3.....

Section E: Students Attitudes towards the Use of ECs

Please tick against each opinion using the scale indicated. **Scale: SA-** Strongly Agree **A-** Agree **N-**Neutral **D-** Disagree **SD-** Strongly Disagree

Opinion	**SA**	**A**	**N**	**D**	**SD**
If I have unintended sexual intercourse, I would use ECPs.					
If a close friend or relative have unintended sexual inter course, I would advise her to use ECPs.					
Wide spread use of ECPs will increase the prevalence of HIV/AIDS and other STIs.					
Emergency contraception promotes promiscuity					
Emergency contraception is one way of abortion					
I don't want to use ECPs for fear of side effects					
Emergency contraception will affect ongoing regular methods of contraception negatively					
I have complete and correct knowledge of emergency contraceptive pills.					
Providing ECs would discourage consistent use of condoms					
ECs are safe for its users					
It is against religious doctrines to use ECs					
Distance from health clinic makes me avoid use of ECs					
I use ECs even if it is against my religious beliefs					

Section F: Strategies for promoting use of ECs

23. In your opinion which strategies can be used in promoting use of ECs among female students in the University?
    i. .....
    ii. .....
    iii. .....
    iv. .....
    v. .....

Thank you for your co-operation

APPENDIX III: THE KREJCIE & MORGAN (1970) TABLE

Table for Determining Sample Size from a Given Population

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size.
S is sample size.