

**KNOWLEDGE, ATTITUDE AND USE OF EMERGENCY
CONTRACEPTIVES AMONG ADOLESCENT GIRLS IN
SECONDARY SCHOOLS IN NAIROBI**

BY

PAUL NYACHAE MICHIEKA

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MASTER OF PUBLIC HEALTH

DEPARTMENT OF COMMUNITY HEALTH

UNIVERSITY OF NAIROBI

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DECLARATION

I declare that this thesis is the result of my original work and that it has not been submitted either wholly or in part to this or any other university for the award of any degree or diploma.

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12/09/2010

APPROVAL

This is to certify that this thesis entitled "Knowledge, Attitude and Use of Emergency Contraceptives among Adolescent Girls in Secondary Schools in Nairobi" has been submitted as part fulfilment for the award of the degree of Masters in Public Health of the University of Nairobi with our approval as supervisors:

Prof. Elizabeth Ngugi, (PhD, MA, BScN, RN, RM, RSCN,)

Senior Lecturer,

Department of Community Health,

University of Nairobi

Signed:  Date: 16/9/2010

Dr Richard Ayah, (MSc, MB. Ch.B.)

Lecturer,

Department of Community Health

University of Nairobi

Signed:  Date: 17/9/2010

Approved by Chairman, Department of Community Health, University of Nairobi

Dr Dismas Ongore (PhD, MPH, MB. Ch.B.)

Chairman,

Department of Community Health,

University of Nairobi

Signed:  Date: 21/9/2010

DEDICATION

This thesis is dedicated to my family, Valerie Michieka and daughter Lauryn Nyabange and her grandparents.

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TABLE OF CONTENTS

- Declaration..... ii
- Approval..... iii
- Dedication..... iv
- Acknowledgment v
- Table of contents vi
- List of tables viii
- List of figures..... ix
- Acronymsx
- Definition of terms xi
- Abstract xii
- 1. Chapter One 1**
 - 1.1. Introduction and background..... 1
 - 1.2. Justification 6
 - 1.3. Statement of the problem..... 8
 - 1.4. Objectives 9
 - Main objective:..... 9
 - Specific objectives:..... 9
- 2. Chapter Two..... 10**
 - 2.1 Literature review 10
- 3. Chapter Three 16**
 - 3.1 Study design..... 16
 - 3.2 Description of study area..... 16
 - 3.3 Study population..... 16
 - 3.4 Study variables..... 17
 - 3.5 Study tools 17
 - 3.6 Sampling..... 18
 - Sample size calculation..... 18
 - Sampling procedure..... 18
 - Selection of study subjects:..... 19
 - 3.7 Eligibility 19
 - 3.8 Data collection , analysis and presentation 20
 - 3.9 Ethical considerations 22
 - 3.10 Study limitations..... 23

4. Chapter Four	24
Findings	24
4.1 Demographic information.....	24
4.2 Knowledge on contraceptives.....	27
4.3 Attitude towards emergency contraceptives	36
4.4 Practice on emergency contraception.....	45
Chapter Five	51
Discussion	51
Chapter Six	59
Conclusions and Recommendations.....	59
Conclusions	59
Recommendations	60
References	62
Appendix I: Questionnaire	69
Appendix Ii: Focus group discussion guide	75

LIST OF TABLES

Table 1: Frequency table showing the number of respondents interviewed in each school. 24

Table 2: Frequency table showing frequency distribution of respondents according to class. 25

Table 3 : Showing the age distribution of respondents 26

Table 4: Frequency table showing the distribution of respondents who have heard about emergency contraceptives. 27

Table 5: Table showing the proportion of students who have heard of different types of Family planning methods (n=280). 29

Table 6: Frequency table showing the name of emergency contraceptives respondents have heard about (n=280)..... 30

Table 7: Proportion of respondents who have heard about emergency contraceptives. 31

Table 8: Table showing the frequency distribution of respondents who reported being taught about contraceptives and emergency contraceptives..... 32

Table 9: Table illustrating the association of various variables to the attitude towards emergency contraceptives 43

Table 10: Perceived barriers to access to emergency contraceptives by adolescent girls 44

Table 11: Showing the type of contraceptive respondents who have engaged in sex have ever used. 46

Table 12: A two-by-two table showing the numbers of respondents who reported ever using ECs and the knowledge of the correct time when emergency contraceptives should be taken..... 48

Table 13: Frequency table showing the number of friends respondents know that have used ECs. 49

Table 14: Table showing friends' source of emergency contraceptive for those who had friends that reported ever using emergency contraceptives..... 50

LIST OF FIGURES

Figure 1 :Pie chart showing the type of school respondents come from 24

Figure 2: Bar chart showing the religious background of respondents. 26

Figure 3: Bar chart showing the proportion of students who have heard about emergency contraceptives..... 28

Figure 4: Bar chart showing the class or respondents who have been taught about contraceptives and emergency contraceptives. 33

Figure 5: Pie Chart illustrating the proportion of respondents who knew of the correct timing within which emergency contraceptives should be used 34

Figure 6: Chart showing the proportion of respondents that know of correct timing of ECs by class 36

Figure 7: Pie chart showing the number of respondents who would use emergency contraceptives..... 38

Figure 8: Pie chart showing the reasons why respondents would not use emergency contraceptives..... 39

Figure 9: Table showing the proportion of respondents who would recommend Ecs to friends. 41

Figure 10: Circumstances under which respondents would recommend emergency contraceptives to friends..... 42

Figure 11: Proportion of respondents with boyfriends or ever had boyfriends who reported ever engaging in sex. 46

Figure 12: Pie Chart illustrating the proportion of respondents that have ever used emergency contraceptives..... 47

ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ECP	Emergency Contraceptive Pills
ECs	Emergency Contraceptives
FGD	Focus Group Discussion
FP	Family Planning
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
ICEC	International Consortium on Emergency Contraception
IPPF	International Planned Parenthood Federation
IUCD	Intrauterine Contraceptive Device(s)
KDHS	Kenya Demographic and Health Survey
MOH	Ministry of Health – Kenya.
OTC	Over –the–counter
POPs	Progestin Only Pills
UPSI	Unprotected Sexual Intercourse
WHO	World Health Organisation

DEFINITION OF TERMS

- Adolescence:** That period in one's life between 10 and 20 years in which the individual progresses from the point of initial appearance of the secondary sexual characteristics to that of sexual maturity, the individual's psychological process and patterns of identification develop from those of a child to those of an adult. (WHO, 1977)
- Contraception:** Use of a regimen of one or more actions, devices, or medications in order to deliberately prevent or reduce the likelihood of a woman giving birth or becoming pregnant
- Emergency contraception:** Is the use of an emergency contraceptive regimen in the first few days following unprotected intercourse, in order to prevent pregnancy (WHO, 2004)
- Unwanted pregnancy:** A pregnancy that is not desired by one or both biologic parents
- Unprotected sex:** Sexual activity engaged in by people who have not taken precautions to protect themselves against sexually transmitted infections and / or pregnancy.
- Secondary School:** An educational institution in Kenya where schooling is done for four years following an elementary or primary education.

ABSTRACT

Unwanted pregnancy and unsafe abortions among young women are major problems in Africa accounting for an estimated 13% of all maternal deaths in the region. Emergency contraceptives have been described as having the potential to reduce the number of unwanted pregnancies and consequently reduce the abortion-related morbidity and mortality. The purpose of this study was to examine knowledge, attitudes, and use of emergency contraception in girls in secondary schools in Nairobi. A randomly selected sample of two-hundred and eighty (280) girls from five secondary schools in Nairobi was studied. Their demographic information, sexual history, knowledge, attitude and use of emergency contraceptives, sources of information about emergency contraceptives and their perceptions on adolescent sexual activity and risk of pregnancy were studied.

Overall, 57% (n=280) of respondents knew about emergency contraceptives. Of these, only 18% knew of the correct timing of use. The most common sources of information about emergency contraceptives were friends (81%) and magazines/newspapers (66.9%). Misconceptions were found to exist in respondents responses, mostly centered around perceived adverse effects of ECs.

Positive attitude towards emergency contraceptives (would ever use EC and would recommend EC to friends) was found to be associated with previous use of ECs ($\chi^2 = 6.47, p < 0.05$), currently having a boyfriend ($\chi^2 = 11.44, p < 0.05$), knowledge on ECs ($\chi^2 = 6.65, p < 0.05$) and being in a higher class - Form 3 & 4- ($\chi^2 = 10.06, p < 0.05$). Cost of ECs and health worker/pharmacists attitude were perceived as barriers to access to ECs by for young girls.

Of the 280 respondents, 22 (8%) had ever engaged in sexual activity and of these, 73% had used a form of contraception. 11 (50%) of those who had engaged in sex, had used an emergency

contraceptive. Ever use of ECs was not significantly associated with accurate information regarding ECs ($p=0.16$). 9 of the 11 users of EC had gotten them from pharmacies. 70% of respondents knew of pharmacies as the main source of ECs while almost all users of ECs had sourced them from pharmacies. 48% ($n=133$) knew of at least one friend who had used ECs with 21% knowing of more than six (6) friends who had used ECs.

These findings reflect a lack of accurate information on emergency contraceptives by young girls. Despite low reported engagement in sexual activity, the proportion of EC use among those who have engaged in sex is high. In conclusion, use of and accurate knowledge about ECs among secondary school girls is low. Most common sources of information about ECs are friends and media.

LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ECP	Emergency Contraceptive Pills
ECs	Emergency Contraceptives
FGD	Focus Group Discussion
FP	Family Planning
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
ICEC	International Consortium on Emergency Contraception
IPPF	International Planned Parenthood Federation
IUCD	Intrauterine Contraceptive Device(s)
KDHS	Kenya Demographic and Health Survey
MOH	Ministry of Health – Kenya.
OTC	Over –the–counter
POPs	Progestin Only Pills
UPSI	Unprotected Sexual Intercourse
WHO	World Health Organisation

Operational Definition

- Adolescence:** That period in one's life between 10 and 20 years in which the individual progresses from the point of initial appearance of the secondary sexual characteristics to that of sexual maturity, the individual's psychological process and patterns of identification develop from those of a child to those of an adult. (WHO, 1977)
- Contraception:** Use of a regimen of one or more actions, devices, or medications in order to deliberately prevent or reduce the likelihood of a woman giving birth or becoming pregnant
- Emergency contraception:** Is the use of an emergency contraceptive regimen in the first few days following unprotected intercourse, in order to prevent pregnancy (WHO, 2004)
- Unwanted pregnancy:** A pregnancy that is not desired by one or both biologic parents
- Unprotected sex:** Sexual activity engaged in by people who have not taken precautions to protect themselves against sexually transmitted infections and / or pregnancy.
- Secondary School:** An educational institution in Kenya where schooling is done for four years following an elementary or primary education.

1. CHAPTER ONE

1.1. INTRODUCTION AND BACKGROUND

Contraception may be defined as the use of a regimen of one or more actions, devices, or medications in order to deliberately prevent or reduce the likelihood of a woman giving birth or becoming pregnant (1). These agents or devices today come in many different forms.

Emergency contraception, also referred to as post-coital contraception, is a form of birth control that aims at reducing or minimizing the risk of pregnancy after unprotected sexual intercourse (2). Emergency contraception essentially takes two forms: hormonal contraception and through the use of intrauterine contraceptive devices.

Hormonal method: This involves the ingestion of hormonal contraceptive pills containing the hormone(s) oestrogen and/or progestin. Hormonal pills can contain oestrogen and progestin (commonly referred to as combined oral contraceptive pills) or progestin alone (commonly referred to as progestin only pills).

In most countries, combined oral contraceptives as emergency contraceptives are provided to women using the Yuzpe regimen which utilises two doses of combined oral contraceptives taken up to seventy two hours post coitus, each dose twelve hours apart. In Kenya, the Yuzpe regimen is currently one of the recommended methods for emergency contraception (3). combined oral contraceptives registered for use as emergency contraceptives in Kenya include Eugynon®, Neogynon®, Microgynon®, Microgynon 30®, Lo-Rondal®, and Nordette®. Research now suggests that combined oral contraceptives are just as effective when taken 73 – 120 hours after unprotected sexual intercourse as when they are taken in the first 72 hours (4). Correct use of the

Yuzpe regime for emergency contraception reduces the risk of becoming pregnant by about 75% - when taken 72 hours apart - (5).

Progestin only pills are also used for emergency contraception. Only the progestin known as Levonorgesterel has been studied for free standing use as an emergency contraceptive (6).

Progestin only pills are also taken in two doses up to seventy two hours post unprotected sexual intercourse, each dose being taken 12 hours apart. When used within 72 hours they have been found to reduce the risk of pregnancy by 89% (7). Recent research indicates that the treatment is as effective when initiated up to one hundred and twenty hours after unprotected sexual intercourse (7).

Progestin-only pills licensed for use in Kenya as emergency contraceptives include Microlut® and Microval® (3). Postinor 2® was recently licensed in Kenya as a dedicated product for use as an emergency contraceptive (8) and is now widely available and accessible to women in Kenya (9). The other two are used as regular contraceptive pills for lactating women.

Many oral contraceptive pills can be used as emergency contraceptives pills although their manufacturers do not label the pills for this use. In Kenya most of the use of the emergency contraceptives has been through the use of multiple doses of combined oral contraceptives (of between 2 - 4 tablets per dose - depending on the brand - and up to 25 pills per dose for progestin only oral contraceptives such as Microlut®).

The earlier emergency contraceptives are taken after unprotected sexual intercourse, the more effective they are (9).

Intrauterine Contraceptive Devices as Emergency Contraceptives: These consist of small plastic devices that are looped with copper or silver that is inserted into the uterus up to the time of implantation i.e. 5 – 7 days after ovulation to prevent pregnancy. Because of the difficulty in determining the exact day of ovulation, many protocols allow insertion of the IUCD up to 5 days (120 hours) post unprotected sexual intercourse (6). The IUCD can then be removed after the next menstrual period, when it is certain that pregnancy has not occurred. The use of IUCD for emergency contraception reduces the risk of pregnancy by more than 99% (9).

In Africa the use of the IUCD for emergency contraception is rarely considered (10). In Kenya, emergency contraception has been mainly interpreted to mean the use of hormonal methods. This is reflected in major studies such as the Demographic and Health Surveys and also in the National Guidelines for Family Planning. The prevalence of IUCD as an emergency contraceptive in Kenya is unknown.

A key benefit of emergency contraceptives is the reduction in unwanted pregnancies. Unintended pregnancies may arise via three main modalities, viz; failure to practice contraception, incorrect or inconsistent use of contraception and through contraceptive failure.

In the world over 75 million women experience unwanted pregnancies. A significant proportion of the unintended pregnancies are due to contraceptive failure. In USA, over one million adolescents become pregnant each year and an overwhelming majority (85%) of these adolescent pregnancies are unintended (16). 53% of all women experiencing an unintended pregnancy reported becoming pregnant while using a contraceptive method (16). In Kenya, the proportion of unwanted pregnancies has increased from 11% in 1998 (11) to 20% in 2003 (12).

One of the consequences of unwanted pregnancy among adolescents is abortion. WHO estimates that 25% of all pregnancies worldwide, results in an induced abortion. In Eastern Africa the estimated number of induced abortions in 2003 was 2.3 million, or 39 abortions per 1,000 women of reproductive age. (57). In Kenya, where abortion remains illegal, numerous cases of abortion and related complications continue to be reported among young women – estimated at 45.9 abortions per 1000 women aged 15 – 49 years (53). A dire consequence of adolescents seeking abortions is maternal death. WHO estimates that one in seven maternal deaths result from unsafe abortions (56).

One contraceptive, the condom, in particular reports a high proportion of incorrect and inconsistent use that may contribute directly to its failure. This is of particular concern because most adolescents in Kenya, report using condoms as the predominant form of pregnancy prevention (12). It has been reported that nearly a third of condom users reported condom breakage or slippage during intercourse (13) cited in Camp et al, 2003. In yet another study of abortion clients, 43% reported that condom breakage or slippage was the main reason for the subsequent pregnancy (14). It has also been established that a majority of such failure occurs among youth (14).

Other contraceptive devices such as diaphragm and the cervical cap have also high typical-use failure rates that range from 16% to as high as 32% (15). Natural family planning - also known as fertility awareness methods – which rely on periodic abstinence have typical-use failure rates of about 25% in the first year of use (6). Such failure rate of commonly used birth control measures necessitates the presence of emergency contraceptives that would provide women with a second chance at preventing an unwanted or unplanned pregnancy.

Emergency contraception is one of the key components in the management of sexually assaulted women. A vast majority of women would not wish to carry a pregnancy whose conception was the result of sexual assault. In its Directives to Health Care Services, even the Catholic Church - whose opposition to artificial contraception has been stiff- acknowledges the need for a woman to prevent herself from a possible conception following sexual assault (2). The Kenya government too has recently published guidelines for the management of sexually assaulted women that includes dedicated emergency contraceptive products.

Overall, the use of emergency contraceptives is associated with significant reductions in health care costs. Unintended pregnancies have been estimated to cost the government / health care provider between U\$ 541 to U\$ 1079 depending on the setting (42) . The cost of an unintended pregnancy is higher for adolescent mothers. Compared to the cost of an unintended pregnancy, emergency contraceptives - whose cost ranges from U\$ 0.30 to U\$ 20 (42), depending on the setting - are a cost effective intervention with the potential of decreasing health care costs associated with unintended pregnancies.

1.2. JUSTIFICATION

Various studies indicate that sexual activity among adolescents in Kenya is taking place. Lema (28), in a study in Nairobi found that 4% of teenagers were sexually active before the age of 10. Countrywide, eighty five percent (85.0%) of young people aged 24 years and below have engaged in sexual activity (12). The KDHS, 2003 also documents that close to 41% of girls 15 – 19 years have ever engaged in sex. Sexual activity in the adolescent period is associated with unwanted pregnancies which may lead to unsafe abortions, birth complications, dropping out of school, abandonment by parents or guardians, social, psychological and economic consequences. In Kenya, 20% of all pregnancies are unwanted (12) and most of the unwanted pregnancies are among young people.

A major problem for adolescents who get pregnant while in school is drop out from school. Studies estimate that between 10,000 – 13,000 girls drop out of primary and secondary school annually because of unwanted pregnancy (33, 36). Muraya (37) in a study of rural Kenya found that 66.4% of teenage girls dropped out of school as a result of pregnancy. Adolescent girls who wish to continue with education may be forced to seek illegal abortions. Close to half of abortions conducted in Kenya are by adolescent girls between the ages of 14 and 19 years. Such abortions are prone to complications such as haemorrhage and even death.

There are misconceptions and controversies regarding contraceptive use among the young people as evidenced by studies by Kiragu (29) and Lema (40). Further, family life education (FLE) in secondary schools in Kenya, which would have provided an avenue to effectively discuss youth contraception, was discontinued in the late 1990's (31). Thus it is not clear where young people are getting information regarding contraceptives including emergency contraceptives.

Several issues have been raised in the past that allude to the difficulty in accessing contraception by young people such as unavailability of contraceptives, religious environment, parental attitudes and health worker attitudes. However, media reports and anecdotal evidence suggest that young people (in school) are routinely using emergency contraceptives, most of it sourced from pharmacies (9). Thus although adolescent girls continue to be exposed to the risks associated with early sexual activity, use of contraceptives by young people is a sensitive issues.

1.3. STATEMENT OF THE PROBLEM

Pregnancy in a school setup is particularly difficult for most young girls, and because of various reasons such as stigma from teachers, parents and co-students, pregnant school girls are eventually forced to drop out of school and compromise their education.

Emergency contraception is one of the ways of minimizing unwanted pregnancies and consequently a way of minimizing unsafe abortions especially in developing countries such as Kenya where abortion is illegal.

There have been reports of adolescent using emergency contraceptives without proper information regarding their use (9), which may result in contraceptive failure. Being in school, with the absence of family life education/sex education, the concern remains is whether they are receiving proper information regarding emergency contraceptives and who is the source of such information.

This study seeks to describe the knowledge, attitude and use of emergency contraceptives among in-school adolescent girls in Nairobi. Understanding the dynamics and factors related to knowledge, attitude and patterns of use can assist policy makers and planners to design appropriate interventions that will advocate for greater emergency contraceptive use among young women in Kenya in order to decrease the chances of unwanted pregnancy.

1.4. OBJECTIVES

Main objective:

To determine the knowledge, attitude and use of emergency contraceptives by in-school adolescents in Nairobi.

Specific Objective:

1. To establish the socio-demographic profile of emergency contraceptive users in secondary schools.
2. To determine the knowledge, attitude and use of emergency contraceptive use by girls in secondary schools.
3. To identify factors related to knowledge, attitude and use of emergency contraceptives among girls in secondary schools.

2. CHAPTER TWO

2.1 LITERATURE REVIEW

There are varied findings regarding the use of emergency contraceptives. Generally European countries have higher prevalence of emergency contraceptive use. The actual prevalence of use differs in different studies. Most studies however, report low prevalence of use. A study in the US by the Kaiser Family foundation, found that only 2% of respondents 18 – 44 years old reported ever having used emergency contraceptives and only one in four had heard of the method (18). A national survey of women on their sexual health found that 6% of respondents reported using emergency contraceptives in the year 2003. In a study of inner – city adolescents, of whom 71% were sexually experienced, 30% had heard of emergency contraceptives (19). Several other studies paint a picture of lack of sufficient awareness and knowledge among adolescents on emergency contraceptives (20, 21, 22). In France, many young women know about contraceptives and approximately 63% of women between 18 – 44 years of age use a contraceptive method including emergency contraception (23). In the UK national data on the prevalence of emergency contraception does not exist but reports from clinics suggest that use has been increasing (24). In one study of young people, 78% of girls and 39% of boys aged 15 – 16 years reportedly knew about emergency contraception. Recently published studies of knowledge and use of contraceptives indicate that knowledge of EC in Britain is high.

Even in areas where contraceptive knowledge is high, the accuracy of such information has been found by several authors (25, 16) to be wanting and in some cases totally wrong. Baiden (16) found that only 11.3% of the 1.5% of respondents who claimed to know about emergency contraceptives actually knew the correct time within which they should be taken after unprotected sexual intercourse.

Among young women having abortions (an indication that their pregnancies were unintended) Jones et al, (14) found that only 1.3% reported having used ECs to prevent the pregnancy. He also found that 35% of the women who had taken ECs had not used any birth control method in the month they became pregnant.

Most countries in Africa do not have national data on the prevalence of emergency contraceptives. According to the Demographic & Health Surveys from several African countries the level of knowledge on contraception in general is high (26). Knowledge in these demographic and health surveys assesses whether the woman has ever heard of any form of modern contraceptive. However as regards emergency contraceptives in particular, individual studies in several countries indicate low levels of awareness. In Nigeria, Glasier et al (24) acknowledges that awareness levels are low. Similarly Baiden (16) found that Postinor 2®, a dedicated EC product that was already in the Ghanaian market, was known by only 1.5% of university students. Similarly low levels have been reported in Zambia. Solo J et al (27) found that emergency contraception is the least known contraceptive method in Zambia.

Emergency Contraception in Kenya

Emergency contraception in the form of multiple doses of regular combined oral contraceptives has theoretically been available in Kenya for more than two decades now. However, the use of combined oral contraceptives for emergency contraception is an approach that has not been widely known and practiced by Kenyan women.

Kenya is one of the countries in which the International Consortium for Emergency Contraceptives initiated a dedicated emergency contraceptive product. These efforts led to the EC pill named Postinor ® being introduced in Kenya in the mid 1990's.

Access to these emergency contraceptives at inception was good because of the donor support but ran into problems when donations of the product ran out of stock in government facilities. However, the product has continued to be available in private clinics and hospitals. Recently though, the government in collaboration with development partners re-launched Postinor 2[®] with renewed commitment to ensuring adequate supplies and has integrated its use into the public sector contraceptive method mix.

In order to make emergency contraceptives more accessible, they have been licensed by the Government of Kenya as an OTC (over-the-counter drug) meaning ECs are available to a broad range of women, including teenagers, without requiring a doctor's prescription. Several organizations have been working towards increasing accessibility of EC's through pharmacies in Kenya (42).

Price accessibility of EC's in Kenya is comparatively better than in other countries. In Kenya dedicated EC products are available at a cost of US\$ 1.6. The cost of dedicated EC products in Africa ranges anywhere from US\$ 0.3 to US\$ 7.60 while in Britain it costs an average of US\$ 15. (9). Research though, indicates that the price of emergency contraceptives is one that young women in the West are prepared to pay considering the cost of an unwanted pregnancy or undergoing an abortion.

Emergency contraception is especially important to the close to 60% of Kenyan women who are not using a regular contraceptive method (12) and are at risk of pregnancy. While emergency contraceptives do not provide protection against sexually transmitted diseases such as HIV/AIDS, they do offer some reassurance for young women who rely on condoms for protection against pregnancy in the event of contraceptive failure such as condom breakage / slippage or missed pills.

In Kenya there are very few studies that have targeted emergency contraception as a topic. The Kenya Demographic Health Survey (KDHS), [2003] found that 23.7% of women knew of emergency contraception i.e. “know that there are pills that can be taken after sexual intercourse to avoid becoming pregnant”. Among unmarried women the proportion is lower (15.3%). Muia et al (8), in a study of family planning clients also found low proportion of respondents (20%) who had ever heard of emergency contraceptives. ECs, female condom and male sterilization are the least known of any modern contraceptive method in the country (12). Among all women, the KDHS, 2003 documents that only 0.9% had ever used emergency contraceptives (12). Among married women, 1.0% had used ECs while among sexually active unmarried women 2.8% had ever used emergency contraceptives (12).

Knowledge of some modern contraceptive methods has declined slightly since the last Demographic and Health Survey of 1998 (12). This is also about the time that Family Life Education (FLE) in schools was officially discontinued. The KDHS, 2003 (12) found that, contraceptive use increases with the level of education. Use of modern methods was found to increase from 8% among married women with no education to 52% among women with at least some secondary education. Though the disaggregated data does not include emergency contraceptives in particular, the trend is similar for all other modern contraceptive methods.

Among Kenyan secondary school students, Lema (27), in one of the early studies on adolescent sexuality, found that 82.6% of the girls knew the meaning of contraception. However, 72% of these girls did not think they knew enough to protect themselves from pregnancy. He further found a lack of factual knowledge and misinformation amongst the students and implicated this as one of the causes of increasing pregnancies amongst adolescents. He also found that there is a high potential risk of having intercourse in a school setup, since 62% of girls had boyfriends.

Kiragu & Zabin (29) also found contraceptive knowledge in general to be relatively high among secondary school students. Concerning use of contraceptives among the sexually experienced secondary school students, the researchers found that 41.8% of females and 48.7% of males had ever used contraceptives. Contraceptive use on first sex was low. Only 25% of males and 28% of sexually experienced students had used a contraceptive method the first time they engaged in sex. However, the researcher did not look at ECs in particular.

Irrespective of the adolescents' level of emergency contraceptive awareness, misinformation and misconceptions about contraceptive use have been found to be high in many studies (28, 29, 25, 16).

Adolescent reproductive health among Kenya's school-going population

In Kenya the gross percentage enrolment to secondary schools is approximately 40% of the school age population (30). Despite educated women possessing more information regarding contraceptive use than uneducated or lowly educated women in Kenya (30) adolescents in school face various challenges regarding contraceptives in general.

Key among these is the absence of reproductive health education, which would form a cornerstone in providing accurate reproductive health knowledge to adolescents in school. Adolescent reproductive health education in schools has been a controversial issue since the introduction of Family Life Education in Kenya in 1989. Many people including Christian and Muslim leaders opposed this education and subsequently the government officially discontinued it in the early 1990's (31). A few reproductive health concepts though are taught as part of the subjects taught in secondary schools such as biology.

Ajayi et al. (32) in a countrywide study in Kenya found that no primary school teaches family planning and sexuality. In the same study, when asked whether a girl who becomes pregnant should leave school, 81% of the study subjects responded in the affirmative, indicating that they had a negative attitude towards getting pregnant while in school.

Teenage pregnancies in Kenya continue to be high (33), [estimated at 45.6% (12)] despite abstinence messages being given to teenagers. Rising teenage pregnancies are an obvious indication that young people are engaging in unprotected sex that puts them at the risk of unwanted pregnancies and sexually transmitted infections.

3. CHAPTER THREE

METHODOLOGY

3.1 STUDY DESIGN

This was a cross sectional study that described the knowledge, attitude and practice on emergency contraceptives.

3.2 DESCRIPTION OF STUDY AREA

Nairobi is situated in the central highlands of Kenya at an altitude of 5,450 feet above the sea level. It covers an area of 690 square kilometres, and is divided into nine administrative divisions namely Dagoretti, Embakasi, Industrial Area, Kahawa, Kasarani, Langata, Makadara, Pumwani, and Westlands.

Nairobi City is the capital town of Kenya and is situated in Nairobi province. The population of Nairobi is estimated to be 2.137 million people (of these 1.15 million are males and 0.987 million are female. The population growth rate according to the 1999 census is 4.8 % up from 4.7% in the 1989. The province has the lowest fertility levels in the country at 2.7 children per woman compared to the national average of 4.9 children per woman (12). Nairobi has the second highest rate of modern contraceptive use at 51.6% after Central province.

There were 736 secondary schools in Nairobi by 2003. This number has steadily continued to increase.

3.3 STUDY POPULATION

Adolescent girls in secondary schools in Nairobi province between the ages of 15 – 24 years.

3.4 STUDY VARIABLES

a) Independent variables

- a. Age
- b. Education level
- c. Socioeconomic status

b) Dependent Variables

- a. Sexual experience – ever had sex versus never had sex
- b. Emergency contraceptive knowledge – ability to identify emergency contraceptives and non-emergency contraceptives from a list and being able to identify correct use of emergency contraceptives
- c. Frequency of emergency contraceptive use – number of times ECs have been used
- d. Attitude towards emergency contraceptives – measured by willingness to use ECs and whether would recommend ECs to friends.
- e. Emergency contraceptive use – measured as ever use of emergency contraceptives
- f. Type of school – whether school is a private or public school

3.5 STUDY TOOLS

Quantitative data was collected using a standardised self-administered questionnaire. Qualitative data was collected using four focus group discussions with the study subjects. These were conducted in each selected school using a standardised question guide (see Appendix II)

3.6 SAMPLING

Sample Size Calculation

The sample size was determined using the formula as recommended by Fisher et al 1998.

$$n = \frac{z^2 pq}{d^2}$$

Where n = Desired sample size (when population is greater than 10,000)

z = Standard normal deviation which is equal to 1.96 corresponding to the 95% confidence limit.

p = Prevalence of the issue under study, (i.e. knowledge and use of emergency contraceptives). The Kenya Demographic Health Survey established that 23.7% of Kenyan women have knowledge of emergency contraceptives. A slightly lower estimate of the prevalence will be assumed for young women (in high school).

Hence $p = 0.2$

d = confidence limit of the prevalence (p) at 95% confidence interval
 $= 1 - 0.95 = 0.05$

Degree of accuracy desired for the study is hence set at ± 0.05

$$\text{Thus, } n = \frac{(1.96)^2 \times 0.2 \times 0.8}{(0.05)^2}$$

$n = 245.8 \approx 246$ students.

Sampling procedure

A list of all secondary schools in Nairobi was obtained from the Provincial Education Officer and this was used as the sampling frame. From this list all boys' only schools were excluded and the remaining schools (girls' only schools and mixed schools) were clustered into private and

public secondary schools. As there were more public schools, three were randomly selected while among private schools, two were randomly selected. One school was selected for the purpose of pre-testing the questionnaire.

Selection of study subjects:

The total number of enrolled female students was obtained for each school. The number of students to be interviewed at each school was then proportionally allocated according to the enrolment in each school.

At each school all students were requested to assemble at the school hall and as they entered each was issued with a slip of paper indicating a serial number. The students were then given a brief of the exercise at hand, the broad objectives of the study and the eligibility criteria. A pre-prepared list of random numbers was then used to select students to participate in the study. Random numbers were read out and those with slips of paper whose serial number corresponded to those read out were requested to remain behind to participate in the research. The total number selected in each school included additional students to participate in the focus group discussions.

Selected study subjects were then left in the school hall and after consent was sought, given instructions on how to complete the self-administered questionnaire. Study subjects participating in the focus group discussions met in a separate room. To minimise bias, focus group discussion participants did not participate in the self-administered questionnaire.

3.7 ELIGIBILITY

Inclusion criteria

Study subjects who had met the following criteria were eligible to participate;

1. Those who gave informed consent

Exclusion criteria

1. Failure to consent

3.8 DATA COLLECTION , ANALYSIS AND PRESENTATION

a) Recruitment and training of study assistants

Three research assistants were recruited from Nairobi. All the three assistants had undergraduate qualifications and were fluent in spoken and written English and Swahili. The research assistants were briefed on the study objectives and trained on the use of data collections tools including how to conduct focus group discussions.

b) Pre-testing

After training of research assistants the study tools were pretested at one of the schools in Nairobi (Pumwani Girls' Secondary School). The pre-test yielded a number of sequencing issues which were corrected in the final study tool. The average time taken to fill in the questionnaires was also assessed during the pre-test and found to be on average below 45 minutes.

c) Quantitative data

Quantitative data was collected using a self-administered questionnaire (Appendix I).

- Instructions on how to complete the questionnaire were given to eligible study subjects by trained research assistants. All self-administered questionnaires were collected immediately after administration in each school. Each questionnaire was allocated a unique serial number to facilitate organised data entry.

d) Qualitative methods – Focus Group Discussions

A focus group discussion was conducted at each school to corroborate findings from the self-administered questionnaire. A question guide was used to direct all the focus group discussions (see Appendix II). Selection of the participants was done randomly as described earlier. The last 7 – 10 participants in each school took part in the focus group discussion. In total there were forty two (42) students who took part in the five FGDs.

Focus group discussions were carried out in a separate room, concurrently as other study subjects filled in the self-administered questionnaire. The researcher and one research assistant conducted all the FGDs. The research assistant was involved in taking notes. Before the beginning of each FGD, verbal consent was sought from participants and thereafter given a brief introduction of the study and its objectives. Participants were able to freely participate in the discussion. At the end of each session, notes and transcribed summaries were revised and analysed to identify key themes.

e) Data entry and analysis

Data entry was done using SPSS Data Entry 3.0©. Open ended questions were thematically coded before entry and the complete data set analysed using SPSS version 10.0. Data analysed by SPSS® software is presented in descriptive form using frequency tables, cross tabulation tables, bar charts, frequency polygons, pie charts and histograms.

Qualitative data from focus group discussions was transcribed, coded and summarised according to the themes and analysed manually according to the study objectives.

f) Data handling and storage

The researcher was responsible for collection and storage of all cleaned study tools including focus group discussion notes.

3.9 ETHICAL CONSIDERATIONS

Overall permission to conduct the research was sought from the Government of Kenya through the Ministry of Science and Technology. The study was also reviewed and approved by the Kenyatta National Hospital/University of Nairobi Ethics and Research Committee.

As some of the study subjects were anticipated to be below eighteen years of age, permission was sought and granted from the Ministry of Education, through the Provincial Education Office, to carry out research in public schools and private schools within Nairobi Province. In addition consent was sought from the respective head teachers. Individual signed consent was also obtained from all study subjects. Focus group discussion participants gave verbal consent.

To ensure confidentiality, participants did not indicate their names on the study tools. All filled questionnaires were handed to the researcher after data collection for safe storage.

As much as possible, disruption of the day-to-day learning activities of participants was minimal.

MINIMISATION OF ERRORS AND BIASES

As part of the study explored behaviour that may be perceived negatively by society (e.g. premarital sex) social desirability bias was a possible bias in participants' responses. To minimise it, the researcher and research assistants took additional time to assure confidentiality of results and also emphasised the need to give accurate information. During focus group discussions, time was taken to first get the participants comfortable talking about sexuality issues before discussing FGD questions.

To minimise errors, the research assistants were taken through the objectives of the study and trained on data collection techniques, logistics and accurate recording of data before commencement of the study. Standardised study questionnaires were used and reviewed at the end of the day for consistency. Data was coded before entry to ensure clean and accurate data entry.

3.10 STUDY LIMITATIONS

The list of secondary schools in Nairobi used as the sampling frame may not have been updated and could have excluded newer schools.

As the study focused on in-school adolescent girls, the findings from this study may not be generalizable to other adolescent girl populations such as out of school or married adolescents.

As some of the information being sought required recall, recall bias may have interfered with the reliability of the study findings. Further, desire to conceal socially unacceptable behaviours such as pre-marital sex, may have resulted in bias in reporting sexual behaviour.

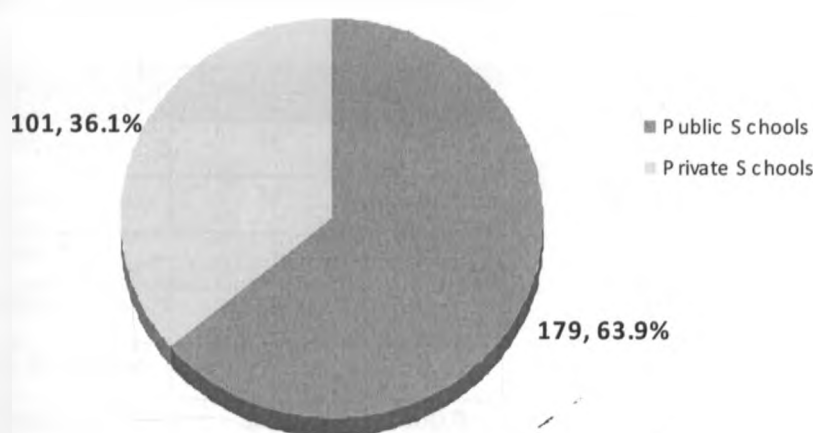
4. CHAPTER FOUR

FINDINGS

4.1 DEMOGRAPHIC INFORMATION

Type of School

Figure 1 :Pie chart showing the type of school respondents come from.



As shown in Figure 2, 63.9% (179) of the respondents were from public schools while 36.1% (101) respondents were from private schools.

Number of respondents interviewed per school.

Table 1: Frequency table showing the number of respondents interviewed in each school.

School	No. of students	Percent
Moi Girls' Secondary	80	28.6%
Huruma Girls Secondary	37	13.2%
Parklands Girls High school	62	22.1%
BuruBuru Girls	67	23.9%
Aga Khan High School	34	12.1%
Total	280	100.0

A total of 5 schools were selected for the study. These were Aga Khan High School, BuruBuru Girls, Huruma Girls Secondary School, Moi Girls' Secondary School and Parklands Girls High School. The proportion of respondents is shown in Table 1.

Class of respondents

Table 2: Frequency table showing frequency distribution of respondents according to class.

Class	Frequency	Percent
Form 1	46	16.4
Form 2	74	26.4
Form 3	77	27.5
Form 4	82	29.3
No Response	1	0.4
Total	280	100.0

The respondents were distributed across all the classes. 29.3% (82) of the respondents were from Form four, 27.5% (77) from Form 3, 26.4% (74) from Form 2 and 16.4% (46) from Form 1.

One respondent did not indicate her class.

Age of respondents

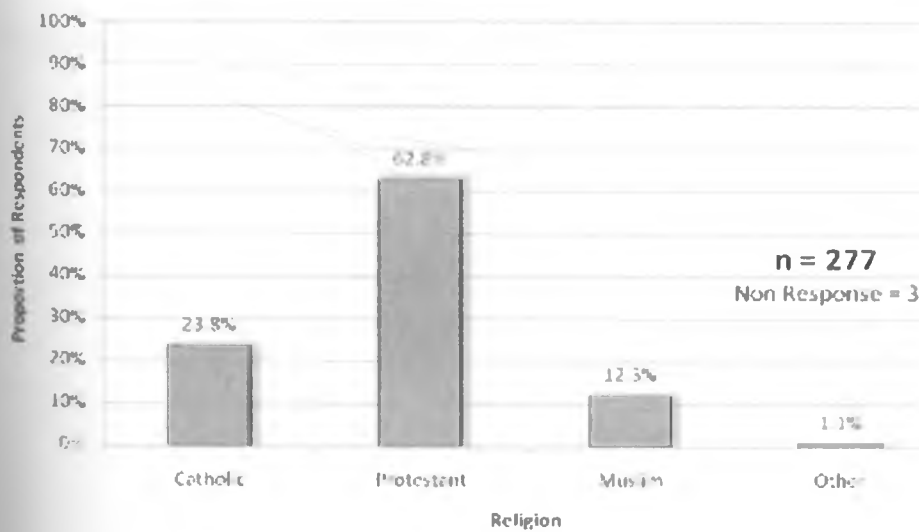
Table 3 : Showing the age distribution of respondents

Age	Frequency	Percent
20 years	4	1.4%
19 years	16	5.7%
18 years	90	32.1%
17 years	73	26.1%
16 years	51	18.2%
15 years	47	16.8%
Total	280	100.0

The mean age of respondents was 16.8 years (CI 16.6 – 17.0). The median age for all respondents was 17 years

Religion

Figure 2: Bar chart showing the religious background of respondents.



A majority of the respondents 62.8% (174) were Protestants while 23.8% (66) were Catholic. 12.3% (34) were Muslim, 1.1% belonged to other religions such as Hindu and Mormons. 1.1% of respondents did not indicate their religious background.

4.2 KNOWLEDGE ON CONTRACEPTIVES

Respondents who have heard about contraceptives

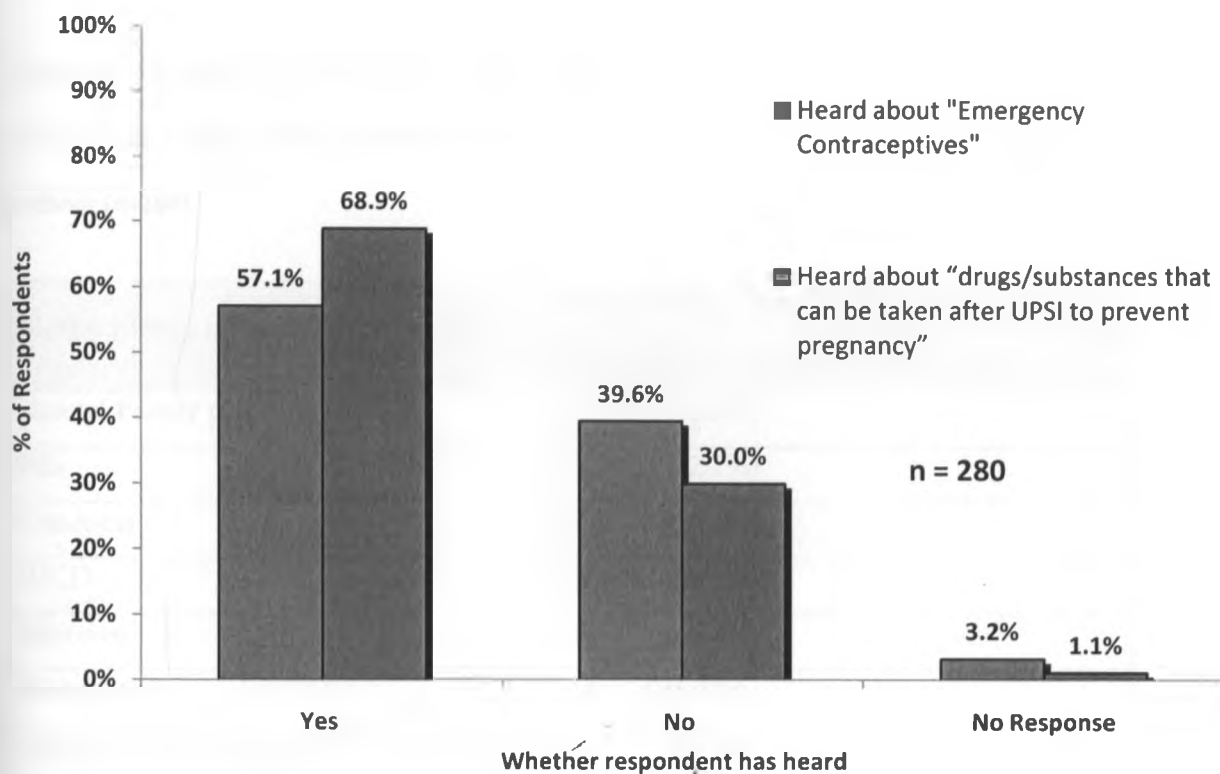
Table 4: Frequency table showing the distribution of respondents who have heard about emergency contraceptives.

Ever Heard about Contraceptives	Frequency (Percent)	Valid Percent
Yes	245 (87.5%)	89.9%
No	28 (10.0%)	10.1%
No Response	7 (2.5%)	-
Total	280 (100.0%)	100%

When respondents were asked whether they had ever heard about contraceptives, 89.9% responded that they had heard while 10.1% reported that they had not heard. Seven (7) respondents did not respond to this question.

Respondents who have heard about emergency contraceptives

Figure 3: Bar chart showing the proportion of students who have heard about emergency contraceptives.



When respondents were asked whether they had heard about emergency contraceptives, 57.1% (n=280) reported that they had heard while 39.6% had not heard about emergency contraceptives.

When asked whether they had heard about "drugs or substances that can be taken after unprotected sexual intercourse to prevent pregnancy", 68.9% of respondents reported that they had heard while 30.0% reported that they had not heard about such drugs.

During the focus group discussions, it emerged that the respondents knew about emergency contraceptives but were unfamiliar with the term "emergency contraceptives". A number of the

respondents knew of emergency contraceptives by the more familiar terms “morning after” pills, “e-pills” and “P2s”.

Types of contraceptives known by respondents

Table 5: Table showing the proportion of students who have heard of different types of Family planning methods (n=280).

Method respondent has heard about	Proportion of respondents that have heard of the method n (%)	
Natural Family planning	106	(43.3%)
Pills	227	(92.7%)
Condoms	207	(84.5%)
IUCD	111	(45.3%)
Injection	108	(44.1%)
Withdrawal	14	(5.7%)
Surgical Contraception (BTL/Vasectomy)	11	(4.5%)
Implants	10	(4.1%)
Other	9	(3.7%)

Of the respondents who had ever heard about contraceptives (245 out of 280 respondents), a large proportion had heard about pills and condoms as contraceptives (92.7% and 84.5% respectively). Natural family planning, IUCD and injection were reportedly known by slightly less than half of the respondents. A small proportion of respondents (5.7%) had heard of withdrawal method.

Name of emergency contraceptives known by respondents

Table 6: Frequency table showing the name of emergency contraceptives respondents have heard about (n=280).

Name of emergency contraceptive	No. of responses	Proportion of respondents
“Family Planning Pills”	180	82.6
“Morning After Pills”	143	65.6
Coil – IUCD	68	31.2
Femiplan	54	24.8
Postinor	35	16.1
Norplant	29	13.3
Plan B	25	11.5
Microval	10	4.6
Eugynon	10	4.6
Neogynon	8	3.7
Nordette	8	3.7
Mirogynon	7	3.2
Jadelle	7	3.2
Lo-Rondal	6	2.8
Microlut	5	2.3
Total	595	

When respondents who had heard about emergency contraceptives, were asked what type of drug they had heard about, a majority (82.6%) responded that they had heard about “family planning pills”. A large proportion (65.6%) reported that they had heard about “morning after” pills. The dedicated EC products – Postinor and Plan B were known by 16.1% and 11.5% of respondents respectively. 31.2% of respondents reported having heard of the IUCD as a type of emergency contraceptive. However, this was not corroborated by respondents during focus group discussion as none of the participants identified it as a type of emergency contraception.

13.3% and 3.2% of respondents reported Norplant® and Jadelle® (long-term family planning methods) respectively as types of emergency contraceptives.

Source of Knowledge on Emergency Contraceptives

Table 7: Proportion of respondents who have heard about emergency contraceptives.

Where respondents heard about emergency contraceptives	No. (%) of responses	Proportion of respondents
Friends	129 (24.2%)	80.60%
Magazines/Newspapers	107 (20.0%)	66.90%
TV/Video/Cinema	98 (18.4%)	61.30%
Radio	68 (12.7%)	42.50%
School / Teacher	57 (10.7%)	35.60%
Health facility	44 (8.2%)	27.50%
Parents	23 (4.3%)	14.40%
Other	8 (1.5%)	5.00%
TOTALS	100.00%	

A majority (80.6%) of respondents cited friends as their source of information. 66.9% of respondents had heard of ECs from magazines or newspapers while an almost similar proportion (61.3%) had heard from TV, videos and/or cinemas. Less than half of the respondents reported hearing of emergency contraceptives from radios, health facilities, or from school. Only 14.4% of respondents reported hearing from parents, while 5.0% reported other sources such as relatives, internet and behaviour change campaigns.

Respondents who have been taught about contraceptives and emergency contraceptives

When respondents were asked whether they had been taught about contraceptives while in school, 31.5% of respondents reported that they had been taught about contraceptives in general while 12.1% reported having been taught specifically about emergency contraceptives. A large proportion of 61.9% and 81.0% reported that they had not been taught about contraceptives and emergency contraceptives respectively.

Table 8: Table showing the frequency distribution of respondents who reported being taught about contraceptives and emergency contraceptives.

	Taught about Contraceptives n (%)	Taught about emergency contraceptives n (%)
Yes	86 (31.5%)	21 (12.1%)
No	167 (61.9%)	141 (81.0%)
Don't remember	18 (6.6%)	12 (6.9%)
Total	100.0%	100.00%

FGDs conducted to establish the nature and content of what was reportedly taught, found that respondents had not been taught about contraceptives in particular but as part of their standard topics for that class e.g. Reproduction in Biology and Sexuality in Christian Religious Education (CRE). The type of contraceptives were in some instances reportedly mentioned but not specifically discussed. As quoted by one of the students,

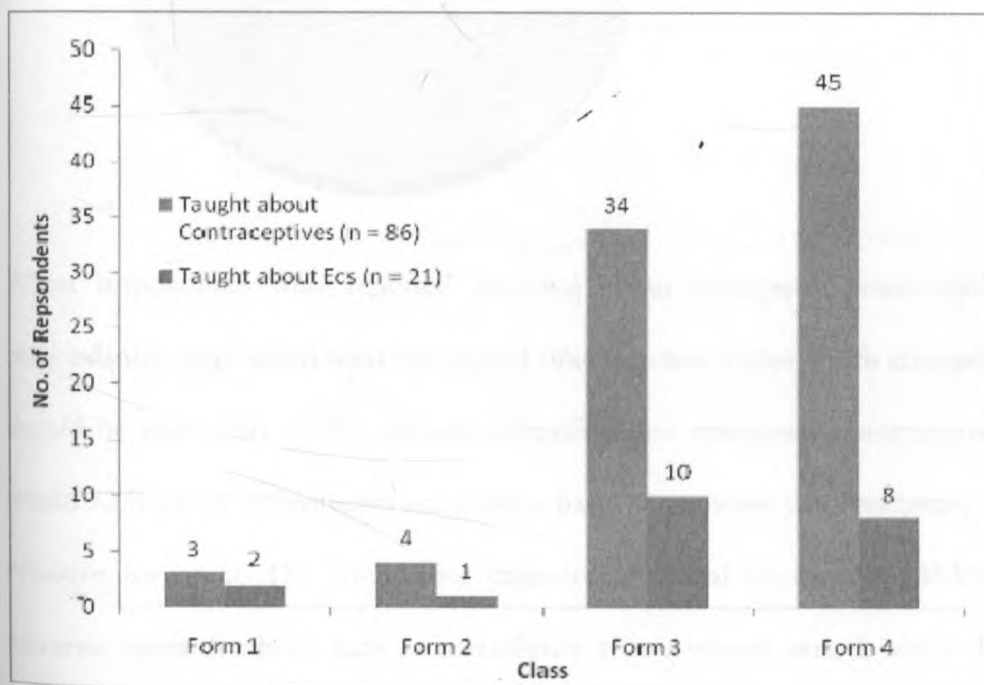
“...we have been taught during our biology lesson that family planning pills can be used to control pregnancy... but I don't know their names...”

Teaching about emergency contraceptives

All the interviewed schools had a guidance and counselling teacher (usually one of the subject teachers who has been given additional responsibilities to counsel students). Some of the information about contraceptives was reportedly given by the counselling and guidance teacher but only upon enquiry from the students. As reported by one participant'

... "these guidance and counselling teachers keep telling us that boys are badthey are always telling us don't do this, don't do that they never tell us what to do when we are with the boys...we want to hear what we should do when we are with the boys..."

Figure 4: Bar chart showing the class or respondents who have been taught about contraceptives and emergency contraceptives.

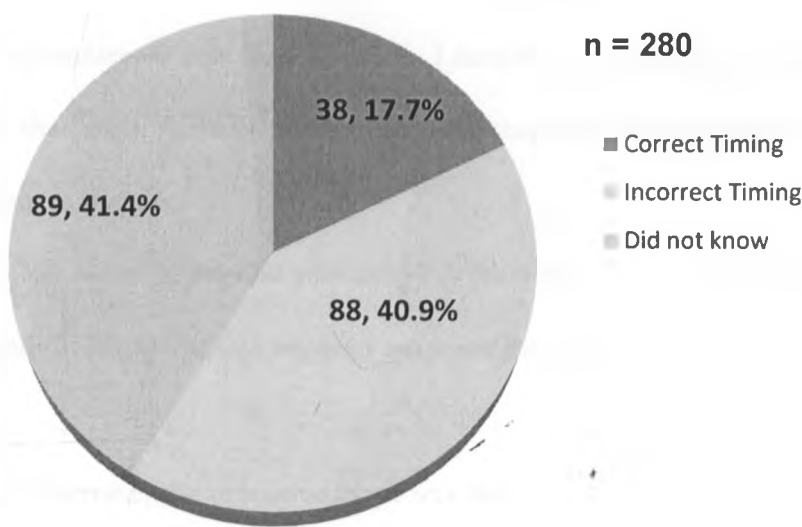


As indicated in Figure 6, a significant proportion of those who were taught about contraceptives and about emergency contraceptives reported being taught when they were in form three and form four.

The content of what was taught was similarly found not to be specific and useful for decision making by respondents but was of a more general nature e.g. about the existence of ECs

Accuracy of information on emergency contraceptives

Figure 5: Pie Chart illustrating the proportion of respondents who knew of the correct timing within which emergency contraceptives should be used



When respondents who reported knowing about emergency contraception (215 of 280 respondents) were asked what the correct time duration within which emergency contraceptives should be used, only 17.7% correctly identified that emergency contraceptives could be used within 72 hours of unprotected sex (studies have since shown that emergency contraceptives are effective for up to 120 hours after unprotected sexual intercourse). 40.9% identified other incorrect times durations such as immediately after a missed period, within 7 days or any time before periods.

Misconceptions regarding emergency contraceptives

Thematic analysis of open ended responses showed that 141 of the 280 respondents (50.4%) had some form of misconception about emergency contraceptives. Most reported more than one misconception.

The misconceptions ranged from those that were incorrect such as,

“...it (ECs) affects the immune system”, “...it (the ECs) accumulates in the body and causes deformity of the foetus and infertility”, they convert sperms into fat which then accumulates in the lower part of the body making one loose shape...” and “...I heard that they can cause you to grow old quickly...”

to those that were partially correct for contraceptives but generally incorrect for emergency contraceptives such as,

“ ..one cannot get pregnant when using P2s (Postinor 2©)...”, “...when taken the periods disappear...” and “... can prevent early pregnancy and protect from certain diseases....”.

A common theme in the misconceptions was that emergency contraceptives could, especially when used repeatedly, lead to adverse effects such as bareness and infertility later in life.

Misconceptions were also present among 3 (27.7%) of emergency contraceptive users.

Figure 6: Chart showing the proportion of respondents that know of correct timing of ECs by class

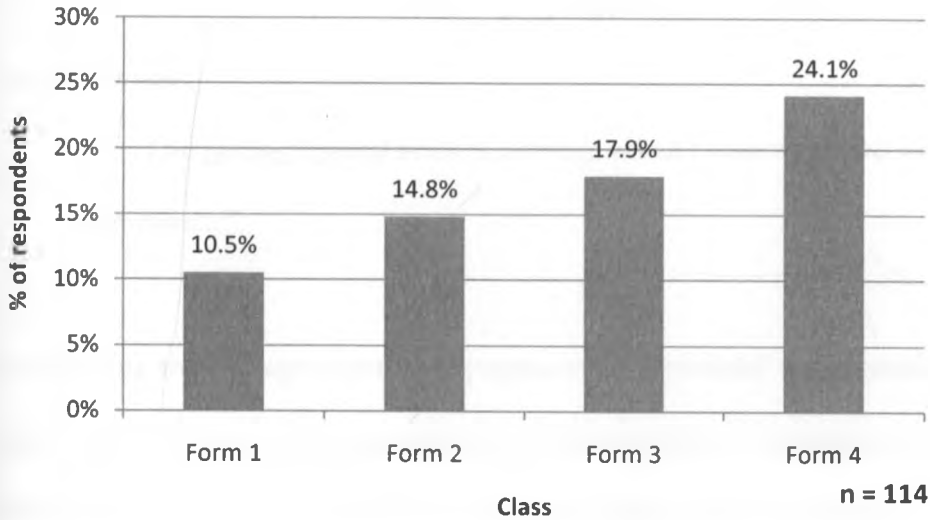


Figure 7 illustrates the proportion of respondents who knew of the correct timing of use of emergency contraceptives. The proportion of respondents with correct knowledge increased from 10.5% in Form 1 to 24.1% in Form 4. The interclass difference was however, not statistically significant ($\chi^2 = 1.66$, p value = 0.645, 3 df).

4.3 ATTITUDE TOWARDS EMERGENCY CONTRACEPTIVES

Attitude towards pregnancy

Respondents' concern about pregnancy while in school were primarily because it affected education (dropping out of school, repeating classes, failure to proceed to university), parental concerns (being chased out of home) and because pregnancy affects self esteem (how people would perceive them, stigma of being associated with sexual activity before marriage).

When asked how one would prevent getting pregnant, respondents were of the opinion that the main way was to avoid getting into relationships with boys and practising abstinence. A few girls

stated that use of emergency contraceptives was a possible way out when one engaged in unprotected sexual intercourse that was “unexpected”.

Asked further what they would do if one got pregnant, the reactions were mixed. As one respondent said;

“... That (getting pregnant) would be extremely serious! I know my parents will definitely chase me from home!...”

Respondents were in agreement that pregnancy at a youthful stage interferes with learning. In each school visited the respondents knew of at least one case of pregnancy (and in some schools, several cases of pregnancy) that had led to the dropping out of a student.

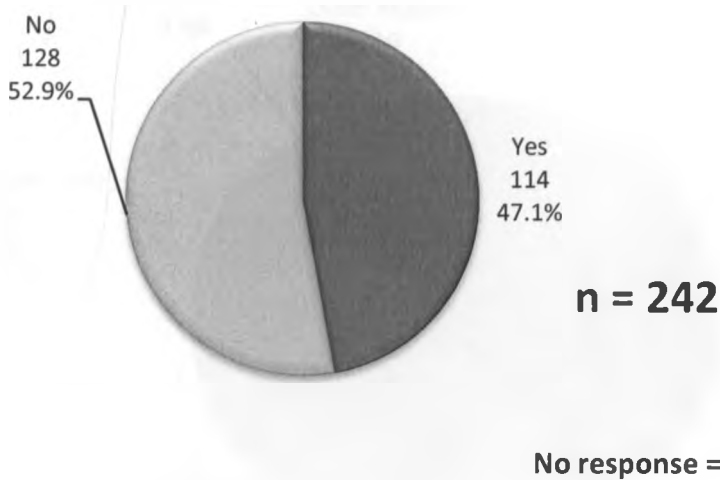
It also came out strongly during the FGDs that almost all respondents would not wish to get pregnant under any circumstances. Some participants even suggested they would take measures as drastic as procuring an abortion in the event that they got pregnant.

As one respondent stated,

“... I think I would look for a way of expelling the pregnancy. I know of a friend whose mum supported her to get an abortion....”

Attitude towards use of Emergency Contraceptives

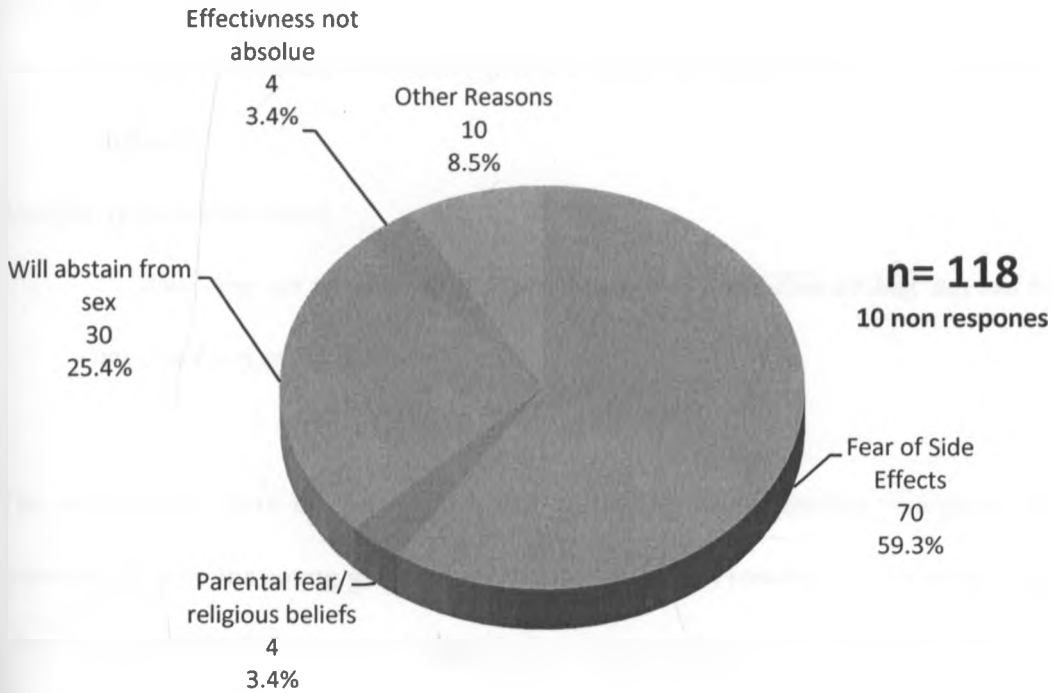
Figure 7: Pie chart showing the number of respondents who would use emergency contraceptives.



Respondents were asked for their opinion on whether they would use emergency contraceptives. 47.1 % (114) reported that they would use them while 52.9% (128) reported that they would not use emergency contraceptives.

When respondents who reported they would use emergency contraceptives were further asked for the reasons why they would use them, a majority (59.3%) of them said they would use them in order to prevent pregnancy and the consequences arising out of pregnancy such as dropping out of school or being forced to procure an (illegal) abortion. From the FGD's the desire to avoid pregnancy and the associated shame was found to be a strong motivator for use of emergency contraceptives.

Figure 8: Pie chart showing the reasons why respondents would not use emergency contraceptives



Of respondents who reported that they would not use ECs, the reasons cited fear of side effects, parental fear or religious concerns, lack of protection against sexually transmitted infections, will use abstinence, and because effectiveness of ECs is not absolute. One respondent in this group cited they would not use ECs because they do not know what they are or how to use them.

These findings were corroborated during focus group discussions;

As stated by one respondent,

“... they (ECs) are very dangerous and can damage my reproductive system in futureI would rather get into trouble with pregnancy than risk my life.”

Another respondent in the FGD stated,

“... these drugs will one day surely affect my reproductive system if I attempt to use them.”

Appropriateness of emergency contraceptives to young girls

Respondents were asked for their opinion on whether contraceptives in general and ECs in particular were appropriate for young people. There were varied reactions as demonstrated by these two participants. One respondent who knew of ECs stated,

“...they (ECs) are good for young girls in situations when a girl has been raped and can help prevent pregnancy.”

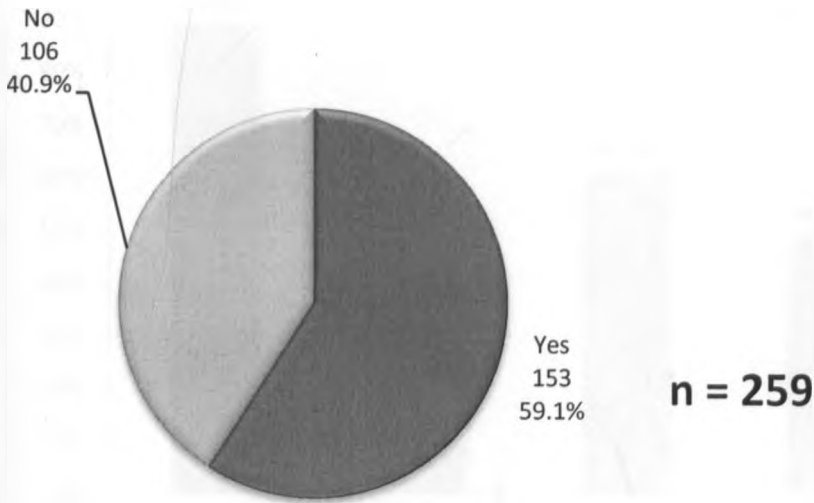
Another respondent stated,

“...these drugs are not good for young girls because if they take them for long, they will have problems in future and may not get children.”

The respondents were of the opinion that contraceptives, including emergency contraceptives were not suitable for young girls and should not be used. However, it was noted that participants who reported that ECs were unsuitable for young girls were in agreement that ECs may be important in situations of rape.

Whether respondents would recommend emergency contraceptives to friends

Figure 9: Table showing the proportion of respondents who would recommend ECs to friends.



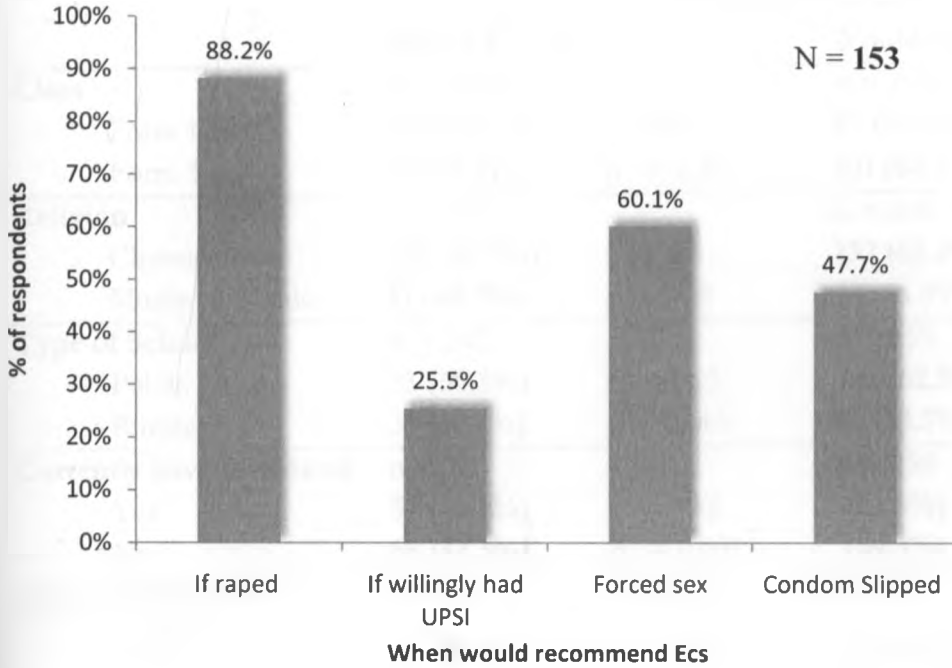
No response = 21

Slightly more than half of respondents (54.6%) reported that they would recommend ECs to their friends who had engaged in unprotected sex while 37.9% reported that they would not.

Figure 11 illustrates the particular situations of UPSI when respondents cited they would recommend emergency contraceptives to friends. A majority of respondents (88.2%) cited that they would recommend ECs to their friends in circumstances of rape.

Circumstances when to recommend emergency contraceptives

Figure 10: Circumstances under which respondents would recommend emergency contraceptives to friends.



60.1% of respondents reported that they would recommend ECs in circumstances of forced sex. Only about a quarter of respondents reported they would recommend ECs if their friends willingly had UPSI. This was corroborated during the focus group discussions when a number of respondents were of the opinion that ECs should not be available to young people because *“this would encourage them to engage in sex more frequently”*.

Attitude towards use of emergency contraceptives

Table 9: Table illustrating the association of various variables to the attitude towards emergency contraceptives

Class	Outcome variable			
	Would Use ECS		Would recommend ECs	
	(n = 242)		n = 259	
Form 1 &2	39 (40.6%)	= 2.68	52 (47.7%)	$\chi^2 = 10.06$
Form 3 & 4	75 (51.4%)	p = 0.10	101 (67.3%)	p <0.05
Religion	n = 239		n = 256	
Christian	100 (47.2%)	$\chi^2 = 0.4$	132 (59.2%)	$\chi^2 = 0.26$
Muslim / Hindu	11 (40.7%)	p = 0.52	18 (54.5%)	p = 0.61
Type of School	n = 242		n = 259	
Public	83 (50.3%)	$\chi^2 = 2.13$	107 (62.9%)	$\chi^2 = 3.06$
Private	31 (40.3%)	p = 0.145	46 (51.7%)	p = 0.080
Currently have boyfriend	n = 218		n = 258	
Yes	57 (64.8%)	$\chi^2 = 10.6$	(62.6%)	$\chi^2 = 3.74$
No	55 (42.3%)	p = 0.0011	(49.3%)	p = 0.05
Ever used ECs	n = 22		n = 22	
Yes	10 (90.9%)	$\chi^2 = 2.33$	11 (100%)	$\chi^2 = 6.47$
No	7 (63.6%)	p = 0.1261	6 (54.5%)	p = 0.010
Ever engaged in sex	n = 238		n = 256	
Yes	16 (84.2%)	$\chi^2 = 11.44$	19 (84.2%)	$\chi^2 = 5.40$
No	96 (43.8%)	p = 0.0007	237(57.0%)	p = 0.020
Knowledge of ECs	n = 240		n = 256	
Yes	100 (51.5%)	$\chi^2 = 6.65$	128 (62.4%)	$\chi^2 = 4.01$
No	14(30.4%)	p = 0.0099	24 (47.1%)	p = 0.045

Different variables were explored for their association with the attitude of respondents towards emergency contraceptives i.e. whether they would ever use emergency contraceptives and whether they would recommend emergency contraceptives to their friends. It was found that respondents in higher classes (Form 3 and 4) were more likely to recommend emergency contraceptives to their friends ($\chi^2 = 10.06$, $p < 0.05$). A higher proportion of respondents in higher classes (47.2%), than in lower classes reported they would themselves use emergency contraceptives, but the difference was not statistically significant.

Respondents who reported knowing about emergency contraceptives were more likely to use emergency contraceptives in future ($\chi^2= 6.65, p<0.05$) and more likely to recommend emergency contraceptives to friends who had engaged in UPSI ($\chi^2 = 4.01, p<0.05$)

Respondents who had ever engaged in sex were also more likely to use emergency contraceptives in future ($\chi^2 = 11.44, p<0.05$) and also more likely to recommend emergency contraceptives to friends who had engaged in UPSI than respondents who had not engaged in sex ($\chi^2 = 5.40, p<0.05$).

Access to emergency contraceptives by adolescent girls

Table 10: Perceived barriers to access to emergency contraceptives by adolescent girls

Perceived Barrier	No. of responses	Percent
Young age	33	12.2%
Cost of ECs	92	33.9%
Where to find EC	14	5.2%
Esteem/fear	72	26.6%
Lack of Knowledge/ignorance on ECs	43	15.9%
Parental fears/barriers	17	6.3%
n=167		

Respondents were asked to identify barriers that adolescent girls face in accessing emergency contraceptives. The open ended responses were then thematically classified into young age, cost of emergency contraceptives, lack of information on where to find ECs, self-esteem and fear of being perceived as immoral, lack of knowledge/ignorance on emergency contraceptives and parental fears and barriers. The perceived high cost of ECs was identified as the leading barrier. Other factors were self - esteem factors - respondents not wanting to be seen as having engaged in sex / immoral activities. Other perceived barriers are illustrated in Table 10.

During the FGDs, the lack of funds to purchase emergency contraceptives was also cited as a key factor that in the respondents' opinion would limit access to ECs. Other factors that were identified as limiting access to ECs included the respondents' young age and negative perceptions by peers, parents & guardians and pharmacist & health workers towards the use of emergency contraceptives by young girls.

As reported by one respondent;

"... if I you go to ask for P2s (Postinor 2®) the chemist will look at you and ask you so many questions that do not even concern him...."

Another participant in a different school stated;

"... all the friends who I know have used Morning Afters always sent their elder girlfriends, boyfriends or older sister to the pharmacy to get them on their behalf...."

4.4 PRACTICE ON EMERGENCY CONTRACEPTION

Respondents with boyfriends

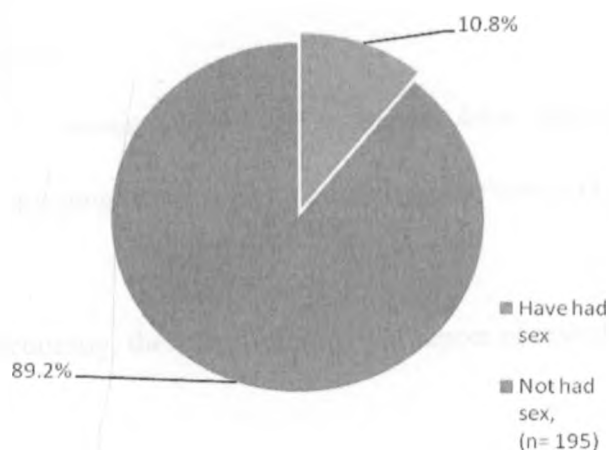
Slightly less than half of respondents, 43.8% (n=274) reported currently having a boyfriend.

70.8% of respondents though, reported ever having had a boyfriend at one time.

Sexual activity

Of all-the 280 respondents in the sample, 22 (8%) reported ever engaging in sex. Of the respondents who had ever had boyfriends or currently had boyfriends, 10.8% of them reported that they had engaged in sex, while 89.2% had not engaged in sex. Of those who had ever engaged in sex, more than half (54.5%) had engaged in unprotected sexual intercourse.

Figure 11: Proportion of respondents with boyfriends or ever had boyfriends who reported ever engaging in sex.



Use of contraceptives

Of the twenty two (22) respondents who had engaged in sex, 16 (72.7%) of them had used some form of contraception as indicated in Table 11. Condoms were the most popular method, having been used by 81.3% of the respondents. 68.8% of these respondents had used pills as a form of contraception. Only two (2) respondents indicated 'having used injectables as a form of contraception.

Table 11: Showing the type of contraceptive respondents who have engaged in sex have ever used.

Contraceptive method used	No of responses	Proportion of respondents
Natural (withdrawal)	4	25.0%
Pills	11	68.8%
Condoms	13	81.3%
Injection	2	12.5%

Knowledge of friends engaging in sex

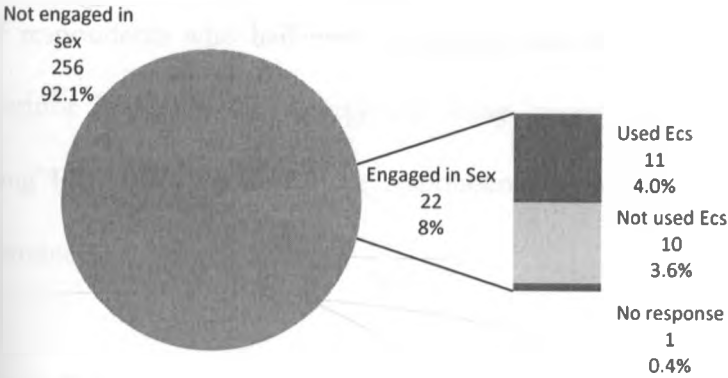
From FGD it emerged that a majority of the respondents had many friends who had engaged in sex and quite a number of their friends continue to engage in sex. As quoted by one of the respondents,

“... *mabeste wangu wengi wanajienjoy lakini hawajui kuna mdudu* (a lot of my friends are engaging in sex without knowing that there is HIV)”.

On the contrary, there was minimal self report of sexual activity by respondents themselves.

Use of Emergency Contraceptives

Figure 12: Pie Chart illustrating the proportion of respondents that have ever used emergency contraceptives.



Of the twenty two (22) respondents who had engaged in sex, half of them reported ever having used emergency contraceptives. Thus, the prevalence of emergency contraceptive use among the study population is thus 4.0%. The mean age of emergency contraceptive users was 17.8 years.

Table 12: A two-by-two table showing the numbers of respondents who reported ever using ECs and the knowledge of the correct time when emergency contraceptives should be taken.

		Know correct timing of ECs		
		Yes	No	Total
Ever use of ECs	Used ECs	4 (36.4%)	7 (63.6%)	11 (100.0%)
	Not used ECs ¹	1 (10.0%)	9 (90.0%)	10 (100.0%)
	Total	5 (23.8%)	16 (76.2%)	21 (100.0%)

A higher proportion (36.4%) of emergency contraceptive users knew of the correct timing when emergency contraceptives are supposed to be taken than respondents who reported never having used emergency contraceptives. However, the difference was not statistically significant ($\chi^2 = 2.01$, p value = 0.16).

Type of emergency contraceptive used

Of respondents who had used emergency contraceptives, 63.6% (n=11) reported having used Postinor 2®, while 27.3% reported using “morning after pills”. One (1) respondent reported using Plan B®. None of the respondents reported ever using the IUCD as an emergency contraceptive.

Frequency of EC use

Respondents who reported using ECs had used them an average of 3.77 (CI 1.60 – 5.94) times in the past one year. Five (5) of the eleven (11) respondents who had used ECs reported using them more than once in each menstrual cycle.

¹ Includes only respondents who reported engaging in sexual activity.

Source of emergency contraceptives

All respondents except two (2), who had used ECs reported sourcing them from the chemist / pharmacy. Of the other two, one reported getting ECs through friends, while the other had got it through family members.

Proportion of friends using emergency contraceptives

About half (47.5%, n=133) of respondents reported knowing of a friend or friends who had used ECs.

Table 13: Frequency table showing the number of friends respondents know that have used ECs.

Number of friends who have used ECs	Frequency (percent)
1 – 5 friend	97 (79.5%)
6 – 10 friends	9 (7.4%)
More than 10	16 (13.1%)
Total	122 (100%)
<i>11 respondents did not indicate the number of friends</i>	

Of the respondents who knew of friends using contraceptives, most knew of between one and five friends. 13.1% of respondents knew of more than ten friends who had ever used emergency contraceptives.

Friends' source of emergency contraceptives

Table 14: Table showing friends' source of emergency contraceptive for those who had friends that reported ever using emergency contraceptives

Source of Emergency Contraceptive	No. of responses	% of responses	% of respondents
Pharmacy	85	37.10%	70.20%
Friends	44	19.20%	36.40%
Health worker / facility	33	14.40%	27.30%
Boyfriends	21	9.20%	17.40%
Parents	12	5.20%	9.90%
Siblings/relatives	11	4.80%	9.10%
Other	18	7.90%	14.90%
Don't know	5	2.20%	4.10%
Total responses	229	100%	n = 133, Non response = 12

of respondents who had friends that had used emergency contraceptives asked where their friends got the ECs, a large proportion (70.2%) reported that they had got the ECs from pharmacies while 36.4% had got their ECs from friends. 27.3% reported that their friends got them from doctors, clinics or hospitals. 17.4% said that the ECs had been sourced from their boyfriends.

CHAPTER FIVE

DISCUSSION

This study sought to establish the knowledge, attitude and practice on emergency contraceptives. Regarding contraceptives in general, it was found that a significant majority of respondents (87.5%) had heard about contraceptives. This is in line with other studies among adolescents and young people in Kenya. Lema (27) in an earlier study found the proportion of respondents in secondary school who knew the meaning of contraception to be high at 82.6%. Kiragu & Zabin (29) similarly document high knowledge levels on contraceptives among secondary school students in Kenya.

In this study, a moderately high proportion of respondents (69%) reported having heard about emergency contraception. While these respondents knew of the concept of emergency contraception (use of drugs or substances to prevent pregnancy after unprotected sexual intercourse), some were unfamiliar with the terms “emergency contraceptives” instead knowing other terms such as “morning after pills”. Important information such as the time duration within which ECs should be taken – was lacking. Other researchers in Africa, (16, 44, 45) have also documented that about one in every ten of the respondents they studied had correct knowledge on details of emergency contraceptives such as the time duration within which they can be used. Such information is pertinent in ensuring that emergency contraceptives are used correctly in order to improve their effectiveness.

Though, respondents reported knowing of various types of emergency contraceptives, data from focus group discussions indicated that this knowledge was not necessarily accurate. For instance, respondents cited implants as a type of emergency contraceptive. Further, despite about a third

of respondents indicating that they knew of IUCDs as emergency contraceptives, this information did not feature during focus group discussions. This implies that whereas young girls may know about the concept of emergency contraception, there is a lack of accurate relevant information.

Misconceptions regarding emergency contraceptives and other contraceptives in general were found to be common among adolescent girls in secondary school. Misconceptions were associated with informal sources of information such as friends, television, magazines and newspapers and were present among respondents from both private and public schools. The misconceptions on emergency contraceptives were primarily centred on their perceived adverse effects (such as infertility) and on their effectiveness – with many respondents wrongly perceiving them to be highly effective. Other studies of contraceptive knowledge among secondary schools students in Kenya have also found misconceptions and rumours to be plentiful (29, 28). Myths and misconceptions about emergency contraceptives may discourage young women from using them even when there is an identified need.

This study established that the major sources of information about emergency contraceptives were friends and media (television, radio, magazines and newspapers). Other sources of information such as teachers, health workers, parents and guidance and counselling teachers - which are presumed to be more accurate - were minimally cited by respondents as the main source of information.. The challenge is that such sources of information (friends and media) may not necessarily be accurate and may convey skewed messages. Teachers and parents too who have no access to correct and up-to-date sexual and reproductive health information regarding contraception may continue to remain a barrier to adolescents in school. Thus, as access to modern media improves among adolescents and the increase in use of media as a

learning tool, there is a need for health professionals and reproductive health specialists to work closely with the media to ensure effective messaging on emergency contraceptives takes place.

More respondents in higher classes (Form 3 and 4) cited that they had been taught about emergency contraceptives in school. However, on further analysis of what was taught, it was established that the content was more of reproductive biology than on contraception and contraceptives. It is worth noting that Family Life Education, which would have taught reproductive health and family planning issues, was banned in Kenyan secondary schools for fear that it would increase immorality (31). [Studies, however, show no such association and that early sex education can in fact lead to postponement of sexual initiation (46, 47). As most adolescents' rely on their teachers and education system to provide them with reliable information and education, a school set-up offers a conduit through which accurate information on adolescent reproductive health, family planning and emergency contraceptives can be communicated.

Regarding the source of emergency contraceptives, both respondents who had used and those who had not used emergency contraceptives reported that pharmacies are the main sources of emergency contraceptives. More than 80% of emergency contraceptive users reported getting their supplies from pharmacies and 70% of respondents who had friends that had used emergency contraceptives reported that their friends had sourced them from pharmacies. The KDHS (2003) documents pharmacies/chemists to be the second most common source of FP pills among private health facilities after mission hospitals/health centres. The KDHS also found that users who obtain their family planning method from pharmacies were less likely to be informed about side effects or problems associated with the method (12). Most pharmacies may be business oriented and may not have time to talk about pertinent issues regarding use of emergency contraceptives by young people and much less to explore issues that lead to use of

emergency contraceptives. The absence of information from one of the major sources of emergency contraceptives could thus be a possible factor that contributes to the presence of misconceptions about emergency contraceptives. Further, this study established that there were problems of accessing ECs, resulting in some users sending their boyfriends, elder siblings, older girlfriends and even maids to pharmacies to purchase emergency contraceptives on their behalf. This implies that, even where information and counselling on ECs may be offered by pharmacists, the actual users may not have the opportunity to receive such information and counselling.

The researcher found that respondents still reported perceived difficulties in accessing emergency contraceptives from pharmacies and other health facilities. Some of the reasons cited were the attitude of the pharmacists, embarrassment of being associated with immorality and having engaged in sex and the cost of emergency contraceptives. Health worker attitude has been found to be a factor that limits access to reproductive health services. However, respondents who reported ever using emergency contraceptives said that it was easy to get emergency contraceptives. About a fifth of emergency contraceptive users though had used proxies (elder siblings, boyfriends, and even house-helpers to purchase them). This implies that whereas service provider bias towards providing emergency contraceptives to young people may be present, it may not be as high as perceived by adolescent girls in secondary schools.

Kenya was one of the first countries in Africa to adopt the use of a dedicated emergency contraceptive product (8) and further, unlike many other countries, has permitted the use of emergency contraceptives as an over-the-counter product. There have been various concerns about the availability of emergency contraceptives as over-the-counter drugs. These have included postulations that with the easy access there may be increased sexual activity by young people, lack of adoption of traditional and more effective contraceptive methods, a reversal in

the gains made in advocating for the use of the condom as a means of preventing STIs and possible misuse of ECs. In this study it was found that some respondents perceived that easy access to emergency contraceptives would increase promiscuity among young girls in school. Aziken et al (52) studying Nigerian undergraduate students similarly found that there was perceived fear, even among potential users, that emergency contraceptives may be misused if made available over-the-counter. However, several researches (one of which was a randomized, controlled trial) do not seem to support these perceptions. These studies have demonstrated that making emergency contraceptives more widely available does not necessarily increase sexual risk-taking or adversely affect regular contraceptive use (48, 49, 50).

The study found that 10.8% of the respondents had ever engaged in sex. Sexual activity in the adolescent period is associated with unwanted pregnancies that may lead to unsafe abortions, birth complications, dropping out of school, social, psychological and economic consequences. About half of all respondents who reported engaging in sexual activity also reported using emergency contraceptives. This could suggest that these sexual acts were unplanned. Further, these sexual acts were unprotected and therefore, come with the inherent risk of sexually transmitted infections such as HIV and HPV. It is prudent therefore, for school administrations or guidance and counselling teachers to strengthen information and counselling of students on the risks of unplanned sexual activity, what to do in case of such unplanned sexual activity and provision of information on the availability of emergency contraceptives and post exposure prophylaxis for HIV.

This study established that there was a low prevalence of emergency contraceptive use among adolescent girls in secondary school - only 4% of respondents had ever used emergency contraceptives. Other studies have found low prevalence of contraceptive/emergency contraceptive use among young girls. Most of these studies in Africa have been among post-

secondary school populations and document prevalence of EC use ranging from 7.4 to 14% (43, 44, 45).

In this study, despite most respondents saying they had not used emergency contraceptives, about half knew of friends who had used emergency contraceptives, with the majority knowing between one and five friends. There being a general tendency for young girls to underreport their sexual activity (29, 40) the actual prevalence may be postulated to be slightly higher than found. Despite the low reported prevalence of EC use, young girls in schools continue to engage in unplanned, unprotected sex and efforts should continue to be made to ensure that lack of information and where to access supplies does not serve as a barrier to young girls who may be in need of ECs as a result of unplanned, unprotected sex.

Respondents who had used emergency contraceptives reported ever having used them an average of three times in the past one year. In addition, more than half of users had used them more than once in each menstrual cycle. As use of emergency contraceptives may disrupt normal menstrual cycle, repeated use of emergency contraceptives within a cycle may result in higher failure rates [some ECs indicate that they should not be used more than once per year]. Such reported use (more than once per cycle) may be a pointer to the general misuse of ECs, lack of proper information and education and the need for more effective contraceptives among adolescent girls in secondary school.

Of respondents who had ever used emergency contraceptives, Postinor® was reported as the most frequently used product. It was also known as an emergency contraceptive by a high proportion of respondents who reported knowing about emergency contraception. Postinor® is a dedicated emergency contraceptive product that was introduced in the 1990's and later followed by Postinor 2®. There are other dedicated EC products in the country but these were

not widely known or used by respondents. In the past, efforts have been made both in the public and private health sectors to popularize Postinor 2® as a dedicated EC product (8) and hence its familiarity by more respondents. Currently there are more dedicated ECs brands registered and available for use in Kenya.

Regarding the attitude on emergency contraceptives, several variables were examined. These were attitude towards sex and pregnancy, the perceived appropriateness of emergency to young girls to young girls, whether respondents would use emergency contraceptives, whether respondents would recommend emergency contraceptives to friends and perceptions regarding access to emergency contraceptives by young people. Most respondents perceived sex as inappropriate for young people as there were associated consequences such as pregnancy and sexually transmitted infections both of which could lead to early dropping out of school. Most respondents also considered that it okay to start engaging in sex after the age of eighteen years or upon completion of secondary school education.

As consequences of early sexual activity, the risk of pregnancy was cited more often than the risk of sexually transmitted infections. Adolescent girls generally perceive themselves to be more at risk of pregnancy than STIs as a consequence of engaging in sex (51). This notion unfortunately predisposes young people to sexually transmitted infections because whereas they make efforts to prevent unwanted pregnancy (e.g. through taking emergency contraceptives or even illegal abortion), similar preventive measures against sexually transmitted infections (such as post-exposure prophylaxis for HIV and condom use) may not be undertaken.

While cost as a factor that limits access was identified by respondents (anecdotal reports indicate that the cost of dedicated emergency contraceptive products in Kenya ranges from Ksh. 100 and Ksh. 300), there were mixed responses regarding this cost compared to that of getting pregnant

while in school - bearing in mind that most girls that get pregnant drop out of school. Some were of the opinion that this cost could prevent some from accessing ECs while others felt that the cost should be deliberately made high so as to discourage young girls from engaging in unprotected sex with the knowledge that ECs will be a remedy. Currently, emergency contraceptives are provided free of charge in government institutions.

There was general consensus that despite sex occurring among adolescents in schools [a significant majority had friends who had engaged in sex], it was inappropriate at their age. . Despite the knowledge that colleagues and friends were engaging in sex, it was found that about a quarter of respondents had a negative attitude towards availability and use of ECs to young people who engaged in unprotected sex knowingly. This could have led to the misconception by some respondents that excessive use of emergency contraceptives would lead to “addiction to sex”. About half of respondents however, had positive attitudes towards availability and use of ECs by young people who had been forced into unprotected sexual intercourse.

A negative attitude towards the use of emergency contraceptives was found to be associated with a lack of knowledge on ECs. Most respondents who reported that they would not use ECs falsely believed that they were associated with adverse effects such as infertility. Attitude towards contraception has been found to be one of the factors that affect contraceptive use among young people (29) and thus change of attitude remains an area that needs to be addressed when dealing with adolescent sexuality.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. Adolescent girls in secondary schools were aware of emergency contraceptives and perceived them to be an important option for preventing unintended pregnancies. However, this knowledge was not accurate and misconceptions were found to abound regarding the adverse effects, efficacy, and access to emergency contraceptives.
2. Friends serve as a major source of information on emergency contraceptives. Teachers and parents are seldom the main source of information on emergency contraceptives.
3. There are perceived fears of side effects possibly as a result of unreliable information regarding emergency contraceptives. The perceived fear of side effects may limit the use of emergency contraceptives by young people in secondary school.
4. The chemist/pharmacist is the major source of emergency contraceptives for users. Non-users of emergency contraceptives also know the chemist/pharmacy as the source of emergency contraceptives.
5. There are perceived difficulties in accessing emergency contraceptives by adolescent girls in secondary school who may need them. Despite young girls knowing where they can get emergency contraceptives, some of their perceptions related to the health worker (e.g. that, being young, they may be asked too many questions by the healthcare worker and pharmacist regarding why they need ECs) and the cost of emergency contraceptives may limit adolescents' access to emergency contraceptives.
6. There is low prevalence of reported sexual activity among in-school adolescent girls and consequently low prevalence of EC use.

Recommendations

Policy making organs such as the Ministry of Health and the Division of Reproductive Health should review and develop policies that respond to the needs of adolescent girls, particularly those that provide for a framework for educating in-school adolescents on matters of sexual behaviours, pregnancy, contraception and STIs. Such policies will enable schools, middle level colleges and other youth organisations to have a basis upon which to educate young people on reproductive health issues.

As most young people are often willing to listen to and follow advice from their peers, the Division of Reproductive Health (Adolescent Sexual and Reproductive Health Department) with the support of nongovernmental organisations should strengthen peer education programs (such as those that exist in the Ministry of Youth and Social Services) by training them and supporting them to spreading correct messaging about emergency contraceptives and other sexuality related matters.

It is also recommended that the Teachers Service Commission in collaboration with the Kenya National Union of Teachers, Kenya Union of Post Primary Education Teachers (KUPPET) develop mechanism for updating teachers on reproductive health issues and empowering them to discuss sexual and reproductive health with their students.

The Ministry of Public Health and Sanitation, the Ministry of Youth and Social Services and non-governmental organizations running programs that provide information to young people on should focus on addressing misconceptions that young people have regarding emergency contraceptives, particularly those related to the perceived side effects of ECs.

As pharmacies were identified as the main source of ECs, the Ministry of Public Health, Ministry of Medical Services and its development partners should focus on them when designing programs aimed at communicating ECs to young users to ensure that pharmacy staff are able to provide basic counselling on contraception as well as make appropriate referrals to youth friendly centres, particularly for repeat users.

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APPENDIX I: QUESTIONNAIRE

INFORMED CONSENT EXPLANATION FORM

TITLE OF STUDY: Knowledge, attitude and use of emergency contraceptives among girls in secondary schools in Nairobi.

My name is Paul M. Nyachae, a postgraduate student at the Department of Community Health, University of Nairobi. I would like you to participate in a research study. The aim of this study is to establish the knowledge, attitude and use of emergency contraceptives among school girls. You will be required to respond to questions in a given questionnaire. This questionnaire asks questions related to knowledge, attitudes and use of emergency contraceptive and other sensitive information such as sexual behaviour. The purpose is to help us understand the knowledge, attitude and use of emergency contraceptives among young people. Before you participate it is very important that you understand the following principles that apply to all participants in the study.

Participation through the filling in of a questionnaire is entirely voluntary. Your confidentiality will be safeguarded: your identity and records relating to your participation will remain confidential; no names of any participant will appear in the final reports or publications resulting from this study. Giving honest information will help us arrive at correct conclusions and help in accurate interpretation of the research findings. You do not need to provide your names in this study.

If there is any part of this consent explanation that is not clear, you are free to ask the investigator before signing below. In case of any problem or concern, you may either contact my supervisors in the Department of Community Health or me on the following number: 0722337625 or the KNH Ethics and Research Committee at P.O. Box 20723, Tel 729300-9, Nairobi, Kenya.

PARTICIPANT

I have fully understood the objectives of the research and hereby sign as a show of willingness to voluntarily participate in this study.

Signature _____ Date _____

Instructions: Tick the appropriate answer(s) or indicate by writing in the appropriate spaces

Name of School _____

1. Date of Birth ____/____/____

2. Indicate your current class: (*Tick one*)

- 1. Form 1 []
- 2. Form 2 []
- 3. Form 3 []
- 4. Form 4 []

3. What is your religion?

- 1. Catholic []
- 2. Protestant []
- 3. Muslim []
- 4. Hindu []
- 5. Other _____

4. Have you ever heard about contraceptives?

- 1. Yes []
- 2. No [] ⇒ *Go to Question 6*
- 3. Don't know [] ⇒ *Go to Question 6*

5. Which contraceptives have you heard about (*Tick all that apply*)?

- 1. Natural method (safe period) []
- 2. Pills []
- 3. Condoms []
- 4. Withdrawal []
- 5. IUCD / Coil []
- 6. Injection []
- 7. Others (specify) _____

6. Have you heard of any drugs or substances that can be taken to prevent pregnancy **after** one has engaged in unprotected sex?

- 1. Yes []
- 2. No []
- 3. Do not know []

7. Have you ever heard of emergency contraceptives / emergency contraception?

- 1. Yes []
- 2. No [] ⇒ *Go to Question 11*

8. Which of the following drugs / substances have you have heard about? (*Tick all that apply*)

- | | |
|------------------------------|------------------------------|
| 1. Microlut® [] | 9. Lo-Rondal®, [] |
| 2. Microgynon® [] | 10. Nordette®. [] |
| 3. Microval® [] | 11. Norplant® [] |
| 4. Postinor® [] | 12. Jadelle® [] |
| 5. Plan B® [] | 13. Coil / IUCD [] |
| 6. Family planning pills [] | 14. "Morning after pill" [] |
| 7. Eugynon®, [] | 15. Other (specify) _____ |
| 8. Neogynon®, [] | _____ |

9. When did you first hear of emergency contraceptives (drugs/ substances that can prevent pregnancy taken after engaging in unprotected sex)? Date ____/____/____

- 1. 1 – 6 months ago []

	2. 6 – 12 months ago [] 3. 12 – 18 months ago [] 4. 18 – 24 months ago [] 5. More than 2 years ago []
10.	Where did you hear about emergency contraceptives drugs / substances (<i>tick all that apply</i>)? 1. Parents [] 2. Friends [] 3. Radio [] 4. TV/Video/Cinema [] 5. Magazines / Newspaper [] 6. School / Teacher [] 7. Hospital /health centre [] 8. Other (<i>specify</i>) _____
11.	In the last 6 months have you come across any information on emergency contraceptives (e.g. the ‘morning after’ pill, Postinor®, Plan B ® etc)? 1. Yes [] 2. No [] ⇒ <i>Go to Question 13</i>
12.	If Yes, where did you come across this information? 1. Parents [] 2. Friends [] 3. Radio [] 4. TV/Video/Cinema [] 5. Magazines / Newsletters [] 6. School / Teacher [] 7. Hospital /health centre [] 8. Other (<i>specify</i>) _____
13.	Have you ever had a boyfriend? 1. Yes [] 2. No []
14.	Do you currently have a boyfriend? 1. Yes [] 2. No []
15.	Have you ever engaged in sex with your current boyfriend or any other person? 1. Yes [] 2. No [] ⇒ <i>Go to Question 26</i> 3. Other (<i>specify</i>) _____
16.	Have you ever engaged in unprotected sex (sex without a condom)? 1. Yes [] 2. No. []
17.	Have you ever used anything to prevent pregnancy? 1. Yes [] 2. No [] ⇒ <i>Go to Question 19</i>
18.	What methods did you use? 1. Natural method (safe period) [] 2. Pills [] 3. Condoms [] 4. Withdrawal [] 5. IUCD / Coil [] 6. Injection [] 7. Other _____

19.	Have you ever used emergency contraceptives (drugs or substances that can prevent pregnancy after engaging in unprotected sex e.g. "morning after pills", Postinor [®] , Plan B [®] e.t.c)?
	1. Yes <input type="checkbox"/>
	2. No. <input type="checkbox"/> ⇒ Go to Question 26
20.	Which emergency contraceptives / substances have you ever used? _____ _____ _____ _____
21.	If yes, where did you get the emergency contraceptives from? 1. From Chemist / Pharmacy <input type="checkbox"/> 2. From Hospital / Health Centre <input type="checkbox"/> 3. From friend <input type="checkbox"/> 4. From parents / family members/relatives <input type="checkbox"/> 5. Other _____
22.	How easy was it to get the emergency contraceptives? 1. Quite easy <input type="checkbox"/> 2. Not easy <input type="checkbox"/> 3. Very hard <input type="checkbox"/>
23.	The last time you used emergency contraception, what made you seek it? 1. Had sex without protection (without using condom) <input type="checkbox"/> 2. Condom burst / slipped <input type="checkbox"/> 3. Was persuaded into having sex <input type="checkbox"/> 4. Was forced into having sex <input type="checkbox"/> 5. Other _____
24.	How many times have you ever used emergency contraceptives in the past 1 year? _____
25.	Have you ever used emergency contraceptives more than once in each menstrual cycle? 1. Yes <input type="checkbox"/> 2. No. <input type="checkbox"/>
26.	How soon after unprotected sex must emergency contraceptives be used in order for it to work? (<i>tick one response</i>) 1. Immediately after <input type="checkbox"/> 2. Within 24 hours after sex <input type="checkbox"/> 3. Within 72 hours after sex <input type="checkbox"/> 4. Within 120 hours after sex <input type="checkbox"/> 5. Within one week <input type="checkbox"/> 6. Until one's period <input type="checkbox"/> 7. Any time before the missed period <input type="checkbox"/> 8. Immediately after a missed period <input type="checkbox"/> 9. Do not know / not sure <input type="checkbox"/> 10. Other (<i>specify</i>) _____
27.	Which drugs can be used as emergency contraceptives? (<i>Indicate as many as you know</i>). _____ _____ _____
28.	Do you know any of your friend(s) who has / have ever used emergency contraceptives?

1. Yes If Yes, how many friends _____

2. No

29. Where did your friend(s) get the emergency contraceptives?

1. _____

2. _____

3. _____

4. _____

30. Knowing what emergency contraceptives are, would you ever use emergency contraceptives if you engaged in unprotected or unplanned sexual intercourse?

1. Yes If Yes, why? _____

2. No If No, why? _____

31. Do you know any place where one can get emergency contraceptives?

1. Yes

2. No ⇒ Go to Question 32

If Yes, indicate all the places that you know where one can get emergency contraceptives and whether they are bought or issued free? (tick appropriately)

Place	Issued free	Bought	Don't know if they are free or bought
Hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmacy / Chemist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health Centre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
School Clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32. Would you recommend emergency contraceptives to a friend who has engaged herself in unprotected / unplanned sexual intercourse?

1. Yes

2. No ⇒ Go to Question 34

33. Under what circumstances would you recommend emergency contraceptives?

1. If she was raped

2. If she willingly had UPSI

3. If she was forced into having sex

4. If a condom slipped or burst

5. Other _____

UPSI = Unprotected Sexual Intercourse.

34. Have you been taught about **contraceptives** in general while in secondary / high school?

1. Yes

2. No.

3. Cannot remember

35. Have you been taught about **emergency contraceptives** while in secondary / high school?

1. Yes

2. No.

3. Cannot remember

36. In your opinion, what factors may make it difficult for young girls in secondary school to access emergency contraceptives?

37.	In your opinion, what are some of the advantages of Emergency contraceptives to young girls like you? _____ _____ _____
38.	In your opinion, what are some of the disadvantages of Emergency contraceptives to young girls like you? _____ _____ _____
39.	What are some of the side effects of using emergency contraceptives? _____ _____

Thank you

APPENDIX II: FOCUS GROUP DISCUSSION GUIDE

Introduction

In this session we will be talking about emergency contraception in general. We will be exploring your knowledge, use and attitudes towards emergency contraceptives. Feel free to share your feelings on this topic knowing that you are free to stop participation in the discussion at any time.

What will be discussed in this session will be confidential and at no time will this information be used against you. Occasionally notes may be taken for purposes of transcribing the information.

Feel free to ask questions at any stage during the discussion.

Topic guide for focus group discussion

THEME	GUIDE QUESTIONS
Sex	<p>What do you think about young people having sex?</p> <p>PROBES:</p> <ul style="list-style-type: none"> - When to start sex? - What risks / dangers are involved ? - What can be done about these risks?
Pregnancy	<p>Following on what you said about pregnancy, what can one do about it?</p> <p>PROBES:</p> <ul style="list-style-type: none"> - What problems does pregnancy pose? - How can one prevent it? - What happens if one gets pregnant?
Contraception	<p>Following on what you said, what do you feel about the use of contraceptives by youth?</p> <p>PROBES:</p> <ul style="list-style-type: none"> - What methods are available? - Is it appropriate for young people like you? - When can one use? - Can they be used after sex? - Knowledge of any person using? - Are you taught about Contraceptives in school? - Any concerns regarding use of contraceptives in young people?
Emergency Contraception	<p>Following what you have said about emergency contraceptives /(substances that can be used to prevent pregnancy after engaging in sex)–</p>

PROBES

- What specific EC drugs have you heard about?
- What was the source of this information?
- Do you know of people who have ever used / use ECs?
- Are your friends using any of these ECs?
- Would you recommend EC's to a friend?
- Under what circumstances would you recommend?
- Do you have any concerns using ECs?



REPUBLIC OF KENYA

MINISTRY OF SCIENCE & TECHNOLOGY

Telegrams: 'SCIENCE TEL' Nairobi
Telephone: 07 318581
E-Mail: info@scienceandtechnology.go.ke

BOGOTHOUSE
HARAMBEE AVENUE
P.O. Box 9583-00700
NAIROBI

When replying please quote
Ref: MOST/13/001/37C/618/2

14th September 2007

Paul M. Nyachae
University of Nairobi
P.O. Box 30197
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on
*'Knowledge, Attitudes and use of Emergency Contraceptives among
Secondary School Students'*

I am pleased to inform you that you have been authorized to carry out
research in all Districts in Kenya for a period ending 30th July 2008

You are advised to report to the District Commissioners and the District
Education Officers before embarking on your research project

On completion of your research you are expected to submit two copies of
your research report to this office


**M. O. ONDIEKI
FOR PERMANENT SECRETARY**

Copy to

The District Commissioners

The District Education Districts

PROVINCIAL DIRECTOR OF EDUCATION - NAIROBI
P.O. BOX 10000
NAIROBI

THIS IS TO CERTIFY THAT:

Prof. Dr. Mr. Mrs. Miss PAUL M. NYACHAP

of (Address) UNIVERSITY OF NAIROBI
P.O. BOX 30197 NAIROBI

has been permitted to conduct research in

Location: ALL Districts

Province: ALL

on the topic KNOWLEDGE, ATTITUDES AND USE OF EMERGENCY CONTRACEPTIVES AMONG SECONDARY SCHOOL STUDENTS

for a period ending 30TH JUNE 2008

Research Permit No. MOST 13/001/37C 018
Date of issue 14.9.2007
Fee received SHS. 500.00



MINISTER SECRETARY
MINISTRY OF EDUCATION
SCIENCE AND TECHNOLOGY
M. O. ONDIEKI

Appointed FOR Permanent Secretary
Secretary of
Science and Technology