

**PERSPECTIVES AND UTILIZATION OF EMERGENCY
CONTRACEPTIVE PILLS BY FEMALE STUDENTS OF PUBLIC MIDDLE
LEVEL COLLEGES IN ELDORET MUNICIPALITY.**

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MOI UNIVERSITY

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DECLARATION**DECLARATION BY THE CANDIDATE**

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
DHS	Demographic Health And Survey
EC	Emergency Contraceptives
ECPs	Emergency Contraceptives Pills
EDHS	Ethiopia Demographic Health Survey
FDA	Food and Drug Administration
FDGs	Focus Group Discussions
FHI	Family Health International
FIGO	International Federation of Gynecology and Obstetrics
HIV	Human immune Deficiency Syndrome
ICEC	International Consortium for Emergency Contraceptives
IREC	Institutional Research and Ethics Committee.
IUD	Intra Uterine Device
KAP	Knowledge Attitude and Practice
MTRH	Moi Teaching and Referral Hospital
N	Desired Sample size
NCHRBS	National College Health Risk Behavior Survey
OC	Oral Contraceptives
PATH	Program for Appropriate Technology in Health
Plan B	Progestrine Only
RH	Reproductive Health
RVTI	Rift Valley Technical Institute
RU486	Mifepristone
SPH	School of Public Health
SPSS	Statistical Package for Social Scientists
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections
TPB	Theory of Planned Behaviour
UNFPA	United Nations Population Fund
WHO	World Health Organization

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OPERATIONAL DEFINITION OF TERMS

1. **Abortifacient-** A drug or other agent used to cause abortion
2. **Attitude** – Are opinions, out looks, values, position and intentions of the study subjects towards the utilization of EC methods. Study subjects who have concerns and negative opinions about ECs and responded negatively for attitude items were regarded to have negative or unfavorable attitude towards EC. While those who had positive outlook towards EC and responded to the attitude questions positively were considered to have a positive attitude towards Ec.
3. **Conception-** The process by which a sperm unites with an egg.
4. **Emergency contraceptives-** Contraception methods that can be used by women following unprotected intercourse or if the women had a contraceptive accident such as leakage or slippage of condom to prevent an unwanted pregnancy.
5. **Emergency contraceptive pills (ECPs)** - Are hormonal postcoital methods of birth control consisting of a combination of estrogen and progestin or progestin alone.
6. **Implantation** –Is When a fertilized egg embeds into the endometrial lining of the uterus.
7. **Intrauterine device (IUD)** - A birth control method involving the insertion of a device into the uterus.
8. **Knowledge of Ec-** Is awareness of the presence of the emergency contraceptive methods, type of Emergency Contraceptives methods, their

sources, drug content, and the ability to identify when to take EC after unprotected sex, situations to take EC and mechanism of action.

9. **Perspective** – A way of thinking, awareness, understanding, overall outlook or particular attitude towards EC among the respondents.
10. **Postinor-** is an emergency contraceptive pill that can be used after unprotected sex or where a contraceptive method has failed. Is often called "the morning-after pill".
11. **Public middle level colleges-**These are government sponsored institutions of higher learning offering courses ranging from certificates to diplomas and usually range from teacher training colleges, vocational and technical institutions, examples present in Eldoret municipality are, Eldoret Polytechnic, Rift Valley Technical Institute and Kenya Medical Training Institute.
12. **Utilization of EC-** Skill or ever use of EC on the basis of their knowledge when the study subjects are exposed to unprotected sexual intercourse to prevent an unintended pregnancy.

ABSTRACT

Introduction

Emergency contraceptive pills (ECPs) are oral contraceptive pills that a woman can take within 72 hours after unprotected sexual intercourse to reduce her risk of becoming pregnant. Although not as effective as a regular method, this emergency contraception can prevent unwanted pregnancy among women who have been sexually assaulted, experienced a contraceptive failure, forgotten to use a regular contraceptive method or used it incorrectly.

Objectives

To determine the perspectives on the utilization of Emergency Contraceptives among female students of middle level public colleges in Eldoret Municipality, Kenya.

Study area: Middle Level Public Colleges in Eldoret Municipality: Eldoret polytechnic and Rift Valley Technical Institute.

Study design This was a cross sectional study design where the interaction with the respondents took place once and generated information about perspective on utilization of emergency contraceptive pills among female students.

Study population: Female college students above 18 years from both the institutions Eldoret Polytechnic and Rift Valley Technical Institute.

Sampling procedure: Stratified random sampling was applied to the selected sample of 329 from the study population of 2,298 who were stratified per their year of study. Simple random sampling was then applied to each strata (year of study).

Data collection : The survey was conducted using semi structured questionnaire among 329 female students of both institutions that were selected proportional to the size of number of female students and six FGDS were held to complement the self administered questionnaires.

Results

Out of the total 329 female college students 174(53%) were aware of emergency contraceptives pills There was significant association between age and awareness of emergency contraceptives. Specific knowledge on the correct timeframe and correct drug composition was low with 18% and 23% respectively. The most common source of information on ECPs was female friends.57% had positive attitude in terms of willing to recommend ECP to a friend. Utilization of emergency contraceptive was low with 35% indicating that they ever used emergency contraceptive pills, and private pharmacy was the most used source for emergency contraceptives pills.

Conclusion

Basic awareness of emergency contraceptive was low, for those who were aware specific knowledge regarding correct time limit, drug composition was poor, Majority of students had positive attitude and were willing to recommend ECP to a friend. Utilization of emergency contraceptive was low. Private pharmacy was the most used source of purchase.

Recommendation

The government and the private stakeholders should design strategies to provide appropriate information and improve access to ECP s in the country in general and colleges in particular to enhance the appropriate awareness of EC among young women. There is need for, promotion and enhancement of peer education and counseling on emergency contraceptives among students of college institutions.

CHAPTER ONE

1.1 Introduction

Emergency contraception is a way to prevent pregnancy after unprotected sex. Often referred to as the morning-after pill or emergency contraceptive pills (ECPs), they are hormone pills that can be taken up to 72 hours after having unprotected sex^[1].

Emergency contraceptive pills are a higher dose of regular oral contraceptives that have been proven to prevent pregnancy by between 75 and 95 percent if taken within 72 hours of unprotected intercourse^[2].

Emergency contraception adds an important option for helping sexually active adolescents and young women avoid unintended pregnancy. Many young women are at high risk of unintended pregnancy. They have limited knowledge of contraception and generally lack access to services or do not feel comfortable using these services⁽³⁾. According to the Demographic and Health Surveys (DHS) in Ghana (1998), Kenya (1999), Namibia (1992), and Brazil (1996), the proportion of currently pregnant women under age 20 who reported that their pregnancies were miscalculated or unwanted was 46 percent, 50 percent, 55 percent, and 58 percent, respectively. The steadily decreasing age of menarche and increasing age of marriage have created a widening window of time for premarital sexual intercourse and pregnancies^[4].

More than 100 million women in developing countries or about 17 percent of all married women would prefer to avoid a pregnancy but are not using any form of

family planning. Demographers refer to these women as having an “Unmet need” for family planning. In some countries, however, particularly in sub-Saharan Africa, unmet need remains persistently high (more than one-fifth of married women⁽⁵⁾).

Younger women are more likely than older women to have unplanned and sporadic sex, use contraception ineffectively, and lack information on contraceptive methods, thus increasing their chances of having an unplanned pregnancy⁽⁶⁾. Unintended pregnancy poses a major challenge to the reproductive health of young adults in developing countries. Some young women with unintended pregnancies obtain abortions many of which are performed in unsafe conditions and others carry their pregnancies to term, incurring risks of morbidity and mortality higher than those for older women^[7].

Emergency contraceptive pills help prevent pregnancies and thus avert abortion and pregnancy-related illness and death, to which young women are more susceptible than older women^[8]. Over the past two decades, Kenya has made significant advances in its efforts to expand awareness, availability and use of ECP⁽⁹⁾. It has been widely available through commercial channels since 1992, when the ECP *Postinor* was first registered and distributed in select pharmacies and health outlets. In 1996, the International Consortium for Emergency Contraception (ICEC) and its partners launched a campaign to broaden EC access in the country, strengthening private sector distribution networks and successfully registering *Postinor 2* a years later⁽¹⁰⁾.

In Kenya Emergency Contraceptives were relatively unknown and a potentially controversial public health issue. Unlike Sri Lanka where a majority of the providers had prior knowledge of EC, less than 50 percent of service-providers and only 10 percent of clients knew about EC. Postinor, an older version of EC, was already available as a 10-tablet pack for EC, and regular Oral Contraceptive (OC) pills were also being prescribed for use as EC. However, the results of a survey showed that the knowledge about the proper prescription of combined pills as EC was poor and there was no uniformity in the dosage used^[11].

Young women are an important target group for improving access to all forms of contraceptives, including emergency contraception, given their high rate of unintended pregnancy. Healthcare providers should encourage use of emergency contraceptive pills as a backup after recognizable failure of barrier methods or other hormonal contraceptive methods, and should expect that women may need emergency contraceptive pills multiple times during their reproductive years^[12].

1.2 Problem Statement

Trends in sexual activity of young people is increasing in the world, but more so in developing nations. Premarital sexual activity is common in many parts of the world and is reported to be on the rise in all regions. In many countries, young women and men are under strong social and peer group pressure to engage in premarital sex⁽¹³⁾. Although emergency contraception has been available in many countries for the last three decades, it remains relatively unknown and underused or misused in those countries and the potential for routine use also raises significant questions about safety⁽¹⁴⁾.

Even when young women are aware of their contraceptive choices, they face many obstacles in obtaining accurate information and access to contraceptives. A review of the evidence shows that young women restricted access to emergency contraception is due to their lack of awareness of Emergency Contraceptive Pills; barriers to their use of family planning clinics, includes: embarrassment, lack of familiarity with the clinics, and inconvenient clinic hours, fear of a pelvic examination and provider attitude ⁽¹⁵⁾.

The 2003 Kenya Demographic and Health Survey indicated that nearly 20 percent of births in Kenya are unwanted and a further 25 percent are mistimed (wanted later). It is estimated that, on average, 172,000 abortions are procured annually in this country. This translates to 25 abortions per 1000 females and 16 abortions to every 100 live births among females of reproductive age. It is estimated that 14 percent of maternal deaths in the East Africa region are as a result of abortion. In Kenya, 35% of maternal deaths are attributable to unsafe abortion ⁽¹⁶⁾.

Knowledge and practice on emergency contraception are particularly important because of high rates of unwanted pregnancy .In Kenya there are few studies on perspectives of utilization of emergency contraceptives among young women. There is need therefore to know these perspectives in order to formulate strategies to educate use of Emergency contraceptives accurately through medical and informational sources ⁽¹⁷⁾.

1.3 Justification

Women in the younger age group are twice as likely to be affected by complications related to childbirth compared to other age groups. Making young women aware about EC (emergency contraception) may help to prevent unwanted pregnancies and promote safe sex. Emergency contraception is useful for women who have had unprotected sexual intercourse, contraceptive failure or for those who are inconsistent in contraceptive usage and victims of sexual assault. Taken after an act of unprotected sex, it could potentially avert many of the millions of unintended pregnancies ⁽¹⁸⁾.

College students form an important high risk group for unplanned pregnancies in Kenya and as such they should attract attention. Majority resides in the hostels where there is no parental supervision and as such they freely associate with one another and may engage in premarital sex.

Emergency contraception is essentially female driven, therefore its use and success rests mainly on how women perceive and practice it ⁽¹⁹⁾.

Most studies conducted on the issue of EC in the country have only focused on female students at University level only. Therefore, this study of students at middle level institutions this study attempted to fill the gap in the previous studies. The study conceptualized that majority of young women are sexually active and engaged in unprotected sex and may or may not use emergency contraceptive methods. The study was to enquire about student's awareness of emergency contraceptives when

necessary and their sources of relevant information and their attitudes towards its use.

The results would help in, education initiatives on awareness and safe use of ECP and strategic planning through key players to make emergency contraceptive readily available to the students and other groups of youths in the country. This would reduce unplanned/unwanted pregnancies, unsafe abortion and its complication.

1.4 Research Questions

1. What is the level of awareness of emergency contraceptives among female students of middle level public colleges Eldoret Municipality, Kenya?
2. What is the attitude of female students of middle level public colleges Eldoret Municipality towards emergency contraceptives use?
3. What is the level of utilization among female students of public middle level colleges?

1.5 General Objective

To assess the perspectives on the utilization of Emergency Contraceptives among female students of middle level public colleges in Eldoret Municipality, Kenya.

1.6 Specific Objectives

1. To determine the level of awareness of emergency contraceptives among female students of middle level public colleges in Eldoret Municipality.
2. To assess the attitude of female college students towards Emergency contraceptives middle level colleges in Eldoret Municipality.

3. To determine the utilization of Emergency contraceptives among female college of middle level public colleges students Eldoret Municipality.

CHAPTER TWO

2.1 Literature Review

2.1.1 Perspectives of emergency contraceptive use

2.1.1.1 Knowledge of Emergency Contraceptive Pill

Since the ECP is an emergency method with recommended use within 3 days, knowledge and acceptance of it need to be high, and it must be easily available. Studies in different countries have shown high awareness of ECP among adolescents and college students. However, the same studies also showed that more specific knowledge such as time limits, efficacy, how the regimen works and where ECP can be acquired, are frequently lacking⁽²⁰⁾.

Several knowledge-related factors have been shown to be predictive of willingness to use ECPs or future use of ECPs. These knowledge related factors include, time limit for ECP use, indications for ECP use, mechanism of action and drug composition⁽²¹⁾.

2.1.1.2 Attitudes towards Emergency contraceptive Pill

Attitude is a construct common to several of the most widely used health behavior theories, and having a positive attitude toward ECP availability has been predictive of use. In a 2004 Swedish study, positive attitudes about ECPs gaining over the counter status was predictive of future use of ECPs among women⁽²²⁾.

2.1.2 Emergency Contraceptive utilization

EC pills work in various ways depending on the time in a woman's cycle when she has sexual intercourse.

Emergency contraceptives mechanism of action involves:

- Inhibit or delay ovulation.
- Inhibit/slow down transportation of egg/sperm through the fallopian tubes; hence preventing fertilization.
- Prevent implantation ⁽²³⁾.

Types of emergency contraceptives

There are three methods of emergency contraception

High dose of estrogen-progestin pill

Morning-after pill is a high-dose combination of estrogen and progestin that is taken twice in a 12-hour period. Morning-after pill is intended to prevent conception from taking place, not to abort an established pregnancy.

The most common side effect of the morning-after pill is nausea and vomiting-- which can be severe. Many physicians will prescribe anti nausea medication to be taken an hour before starting the contraceptive regimen. If vomiting occurs less than an hour after taking the first dose of contraceptive pills, the dose should be repeated. The nausea usually subsides within 24 hours after starting the pills ⁽²⁴⁾.

High-dose progestin-only pill

A high-dose, progestin-only morning-after pill is also available by prescription. It contains no estrogen.

IUD insertion

A copper-containing IUD inserted within five days of unprotected intercourse can prevent implantation of a fertilized egg in the uterus, as well as provide long-term contraception from that time forth.

Advantages of emergency contraception

- These methods are quite effective(95%).
- The IUD method provides long-term contraception.
- They prevent having to face the difficult decisions that come with unwanted pregnancy

Disadvantages

- Except for the IUD, these methods don't provide ongoing contraception.
- No form of emergency contraception can prevent sexually transmitted infection.
- They are not 100 percent effective ⁽²⁵⁾.

Emergency Contraception is indicated to prevent pregnancy after unprotected or inadequately protected sexual intercourse, including:

- 1) When no contraceptive has been used.
- 2) When there is a contraceptive failure or incorrect use, including:
 - a) Condom breakage, slippage, or incorrect use.
 - b) Dislodgment, breakage, tearing or early removal of diaphragm or cap.

- c) Failed coitus interrupts (e.g., ejaculation in vagina or external genitalia)
 - d) Failure of a spermicidal tablet or film to melt before intercourse
 - e) Mis calculation of the periodic abstinence method or failure to abstain on fertile day of cycle.
 - f) IUD expulsion
- 3) In case of sexual assault when the women was not protected by an effective contraceptive method.

Unlike the morning-after pill, an IUD does not stop the ovaries from releasing an egg. The IUD can prevent an egg from being fertilized and it can stop a fertilized egg from attaching itself to the wall of the uterus⁽²⁶⁾.

Emergency contraception is not as good at preventing pregnancy as other methods of birth control such as birth control pills taken regularly⁽²⁷⁾.

2.1.3 Emergency contraception in Kenya

The need for EC is evident. Over the past two decades, Kenya has made significant advances in its efforts to expand awareness, availability and use of EC. It has been widely available through commercial channels since 1992, when the ECP *Postinor* was first registered and distributed in select pharmacies and health outlets. In 1996, the International Consortium for Emergency Contraception (ICEC) and its partners launched a campaign to broaden EC access in the country, strengthening private sector distribution networks and successfully registering *Postinor 2* a year later⁽²⁸⁾.

Awareness and use of EC in Kenya remains relatively low. According to the 2003 Kenya Demographic and Health Survey, EC is the least known modern

contraceptive method, with less than a quarter of all women (23.7 percent) identifying it as an option and only 2.8 percent reporting ever use. Knowledge of EC in urban areas among certain cohorts of women is thought to be much higher than the national average but this knowledge is scant and often incorrect and has therefore not translated into use. A study in Nairobi among university students found that nearly 50 percent of young women (aged 14-25) knew of EC, only 8.7 percent reported that they or their friends had ever used it, and less than half of the respondents (43 percent) demonstrated correct knowledge of the appropriate timing and conditions for use ⁽²⁹⁾.

2.1.4 Side Effects of Emergency Contraceptive use

No deaths or serious complications have been causally linked to emergency contraception. Side effects of both regimens include nausea, vomiting abdominal pain, fatigue, headache, dizziness, breast tenderness, and irregular vaginal spotting or bleeding. No evidence exists to indicate that ECPs are dangerous under any known circumstances or in women with any particular medical condition ⁽³⁰⁾.

2.1.5 College women and Emergency Contraceptive Pills.

When examining specific populations and their knowledge and experiences with Emergency contraceptive pills, college women deserve special attention due the many unique factors contributing to their elevated risk for unintended pregnancy. Currently, women comprise 57 percent of the 17.5 million students attending degree-granting institutions of higher education in the United States ⁽³¹⁾. In some women, attending college seems to trigger sexual risk taking or alcohol use; behaviors that place women at risk for unintended pregnancy. A recent review of

emergency contraception literature from developed and developing countries indicates that awareness is generally low but slowly increasing. Even where the concept of emergency contraception is known, knowledge of accurate use of the method is very low ⁽³²⁾.

Surveys among colleges and postsecondary students in several African countries found that while a quarter to three-quarters of female youth had heard of emergency contraception, accurate knowledge about its use was minimal. In one study in Nigeria, 75 percent of students surveyed were aware of emergency contraception, but only 12 percent knew that the first dose of Emergency Contraceptive Pills should be taken within 72 hours of unprotected intercourse ⁽³³⁾. In a Ghana study, only 11 percent of the students surveyed (22 of 196 surveyed) knew the correct timeframe for starting Emergency Contraceptive Pill ⁽³⁴⁾.

In Kenya there are few studies on perspectives of utilization of emergency contraceptives among young women. There is need therefore to know these perspectives in order to formulate strategies to educate use of Emergency contraceptives accurately through medical and informational sources.

Little is known about the perspectives of utilization of ECP availability on its use in the middle level college student population women.

Emergency contraception could fill an important gap for women who have had unplanned intercourse (including women who are raped or have coerced sex), have

experienced a contraceptive accident, or have neglected to use an ongoing, contraceptive method.

The study was to enquire about student's willingness to use emergency contraceptives when necessary and their sources of relevant information and available methods. The results was to help in policy formulation in respect to its sale over the counter, education initiatives on awareness and safe use of ECP and strategic planning through key players to make emergency contraceptive readily available to the students and other groups of youths in the country and this would reduce unplanned/unwanted pregnancies, unsafe abortion and its complication.

2.1.6 Conceptual framework

Conceptual framework that can be used to model emergency contraceptive decision-making process is the theory of planned behaviour (TPB). This theory states that personal and social beliefs and values determine personal attitudes and perceived social expectations ("subjective norms") and that various additional factors can influence perceived behaviour control. Attitudes, subjective norms, and perceived behaviour control in turn influence behavioural intention, which then influences actual behaviour⁽³⁵⁾.

Subjective norms involve influence by a group of individuals (family or female friends, boyfriends and community members) and the desire to comply with them towards emergency contraceptives. Attitudes may include factors such as efficiency and effectiveness of emergency contraceptives or adverse effects of its use. Perceived behavioural control may include barriers such as embarrassment,

confidentiality and financial constraints in accessing emergency contraceptives. Behavioural intention may then be intention to use emergency contraceptive, and then after the actual use.

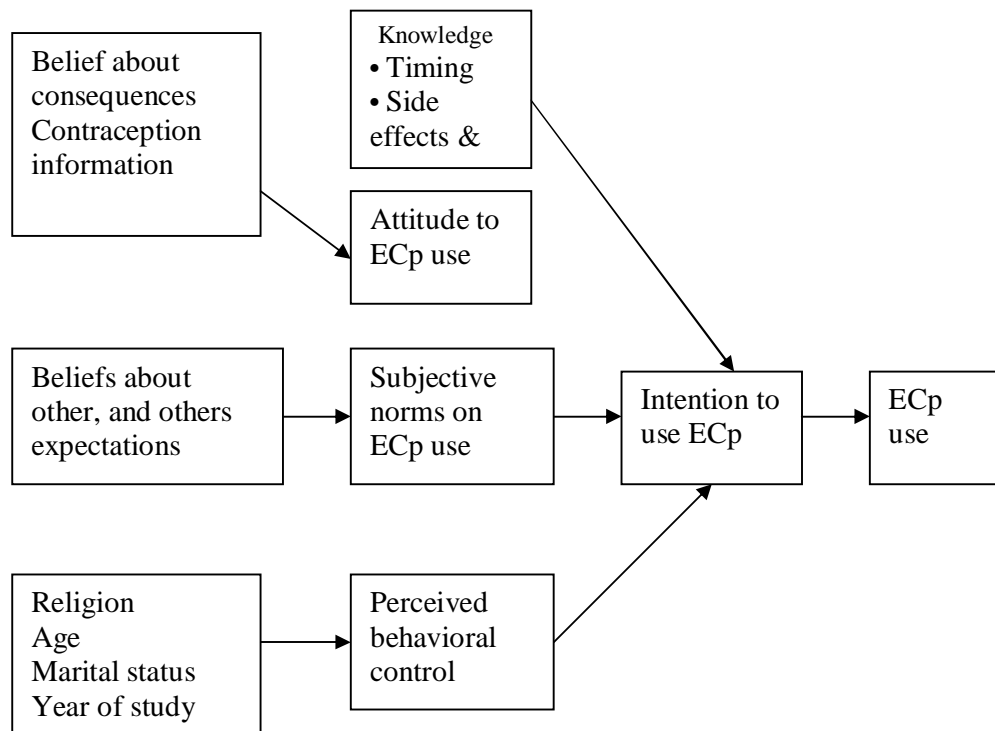


Figure 1. CONCEPTUAL MODEL: THEORY OF PLANNED BEHAVIOR ⁽³⁵⁾.

CHAPTER THREE

3.1 METHODOLOGY

3.1.1 Study area

The study was carried out among middle level public colleges in Eldoret Municipality. There are three public middle level colleges in Eldoret municipality, and these are Eldoret polytechnic, Rift Valley Technical Institute and Kenya Medical Training College. Kenya Medical Training College was excluded from this study this was because majority of the students were aware of emergency contraceptives from their academic courses. , and therefore their participation could elicit biasness .Eldoret municipality is an administrative centre of three districts; these are Uasin Gishu North, Uasin Gishu East and Wareng Districts. Both institutions run various programs including certificates, diplomas and higher diplomas. Eldoret Polytechnic and Rift Valley Technical Institute were among the largest colleges within the area of Eldoret Municipality.

3.1.2 Study population

The study population stands at 2,298 female college students of age 18 to 24 years from the two middle level public colleges these are Eldoret Polytechnic with 1700 and Rift Valley Technical Institute having 598 as per 2008 admissions records. (Table3.0) .both the two institutions form a large part of the female population in the area who use emergency contraceptives.

3.1.3 Study design

Cross sectional study design was administered in which both quantitative and qualitative study methods were applied through self administered questionnaires and focus group discussions.

3.1.4 Sample size determination

There is no sufficient information on prevalence of awareness of Emergency contraceptive pills among young women in public middle level colleges. Fischer's Formula of 0.5 probability was assumed therefore at 95% confidence interval and sampling error of 5% was used to calculate the sample size.

Where:

N The desired sample size

Z The corresponding value confidence level of 95% in the normal distribution table.

P The proportion in the target population estimated to have a characteristic being measured that is awareness of emergency contraceptive. The characteristics being estimated has not been studied and calculated hence an estimate of 50% is used.

Q $1 - p$

D The level of statistical significance set, which was = 0.05

$$(N) = Z^2 (PQ) / D^2$$

$$N = (1.96)^2 \times 0.5(0.5) / (0.05)^2$$

Sample size N = 384 respondents

N = 384 had the population been more than 10,000.

But the sampling frame consisted of 2,298 people. This was controlled for using the formula:

$$nf = \frac{n}{1 + n/N}$$

Where: -

- nf is the desired sample size when target population is less than 10,000
- n is the desired sample size when population is greater than 10,000
- N is the estimate of the population size

Therefore the sample size was:

$$\frac{384}{1 + 384/2298}$$

$$= 329 \text{ respondents.}$$

3.1.5 Sampling procedures.

Stratified random sampling was used to select female students from both Eldoret polytechnic, Rift Valley Technical Institute. The female students were stratified according to their years of study. From each strata (year of study), sample size of each strata was determined proportionately to the study population of the strata. A list of female students was made, and table of random numbers were used to identify students blindly who could be included to the sample.

Table 3.0 Female Student's distribution as per the institution

Year	Eldoret Polytechnic	Rift Valley Technical Institute	Total	Percentage
One	590	206	796	34.6
Two	604	168	772	33.6
Three	506	224	730	31.8
Total	1700	598	2,298	100

Table 3.1 Sample size distribution between each year of study.

	Eldoret Polytechnic	Rift Valley Technical Institute	Total	Percentages
Year 1	84	30	114	34.6
Year 2	82	28	110	33.6
Year 3	77	28	105	31.8
Total	243	86	329	100

3.1.6 Inclusion criteria

Female students who were above 18 years from the public middle level colleges in Eldoret Municipality were eligible for recruitment into the study.

3.1.7 Exclusion criteria

Female students who were not willing to participate and did not consent were excluded from the study. Female students below 18 years were also excluded.

3.1.8 Recruitment and training of research assistants

Research assistants were recruited and trained on how to conduct focus group discussions, quality control and ethical issues.

3.1.9 Pretesting of the study instruments

Upon obtaining consent from the school principal, twenty questionnaires were pre-tested in one of the non- participating school; this was Elgon View College. The questionnaire items were then reviewed and rephrased to ensure quality and consistency. Arrangements were then made for fieldwork.

3.2.0 Data collection procedures

Three hundred and twenty nine self-administered questionnaires were given to 329 students .The questionnaires elicited responses on the awareness, attitudes, and utilization of emergency contraceptive pills. Six focus group discussions (three per participating institution), and in each institution, one focus group discussion per the year of study .each focus group discussion had 12 participants randomly selected. The researcher with the help of the research assistants guided the discussions on various themes related to Emergency contraceptive pills among female college students. The themes were knowledge and attitudes on emergency contraceptives, female college students' experiences on emergency contraceptive utilization.

Roles and responsibilities of the researcher and research assistants

The researcher was involved in conducting the focus group discussions, handing out the questionnaires to the participants and ensuring quality of the questionnaires.

Data cleaning

All the questionnaires administered were thoroughly checked by the researcher and his assistants to ensure quality and clarity of responses daily. The focus group discussions were guided along the thematic areas to avoid irrelevant contributions as well as enhance accrual of optimal benefits from the interactive sessions as per the study objectives.

Data Analysis

Quantitative data was coded cleaned and analyzed in Statistical Package for Social Scientists (SPSS). It was done by running frequencies and chi square among various reported cases or variables.

The qualitative text was compiled from field notes from six focus group discussions. The text was then coded to facilitate clustering of information that belonged together by theme and by research question.

3.2.1 Bias minimization

Bias was minimized through training of research assistants. Sampling was done directly from the admission records, the questionnaire was pre tested prior to use and proper explanation of the study was given to the respondents before response.

Standardized quantitative data management and analysis procedures were observed by use of scientifically tested and accepted Statistical Package for Social Scientists (SPSS) version 12.

In qualitative data collection, proper guidance from researcher to the group members was used in describing rich details regarding knowledge, attitudes, and experiences.

3.3.0 Ethical consideration

Clearance was sought from the School of Public Health through the Head of Department of Health Management, District Education Office and from both Eldoret polytechnic and Rift Valley Technical Institute prior to the commencement of the study. An approval from the Institutional Research and Ethics Committee (IREC) of Moi University and Moi Teaching and Referral Hospital (MTRH) was obtained prior to the commencement of the research.

The study participants were informed about the purpose of the study and the importance of their participation in the study. Names of the respondents were not used; instead reference numbers were used to distinguish them and the institution they came from (see Appendix 3). The study subjects were informed that their participation was voluntary. After assuring the confidentiality nature of responses and obtaining informed consent from the study subject, the questionnaires were distributed among the selected female students only by the research assistants in collaboration with the instructors in their respective years of study. Feedback would be communicated to the respective institutions, upon successful defence and thesis acceptance. This would enable the respective institutions to consider the recommendations made herein.

3.4.0 Limitations

The study was done on middle level public college students only and may not provide a full picture for all females in that age category. The study also concentrated more on emergency contraceptive pills only. Self-reported information is subject to reporting errors, missed values and biases. Since the study touches sensitive issues the possibility of under estimation cannot be excluded, even though the study was anonymous.

CHAPTER FOUR

4.1 Results

The study was conducted between February 16th and 31st March 2009. A total of three hundred and twenty nine female students of the selected two public middle level colleges in Eldoret municipality participated in the study with a no response rate of zero. A proportion of 74 percent (243) were from Eldoret Polytechnic and the remaining 26 percent (86) were from Rift Valley Technical Institute. Six focus groups discussions were conducted, three per institution with twelve participants per each group.

4.1 Demographic characteristics

Table 4.1 *Demographic characteristics*

Demographic characteristics		Frequency	Percentage
Age	18-21	178	54.2
	22-25	98	29.7
	26-29	53	16.1
	Total	329	100
Religion	Catholic	122	37.2
	Protestant	194	58.9
	Muslim	13	3.9
	Total	329	100
Marital status	Married	49	14.8
	Single	280	85.2
	Total	329	100
Year of study	One	114	34.6
	Two	110	33.6
	Three	105	31.8
	Total	329	100
Institution	Eldoret polytechnic	243	74
	RVTi	86	26
	Total	329	100

According to the survey findings, age of the study subjects ranged from 18-25 years and above. As shown in Table 4.1, more than half (54 percent) of the respondents were age 18-21, ages 22-24 were 30 percent and 16 percent were age 26-29. The married respondents accounted for only 15 percent while those who were single were about 86 percent.

4.2 Awareness and knowledge of emergency contraceptives

Table 4.2 Knowledge of regular contraceptives

	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency) %	(Frequency) %	(Frequency)%
Oral pills	(53) 22	(28) 33	(81) 25
Condoms	(104) 43	(30) 35	(134) 41
Calendar	(15) 6	(5) 6	(20) 6
Norplant	(26) 11	(7) 8	(33) 10
IUD	(13) 5	(6) 7	(19) 6
Female condom	(5) 2	(3) 3	(8) 2
Withdrawal	(25) 10	(6) 7	(31) 9
Do not know	(2) 1	(1) 1	(3) 1
Total	(243)100	(86)100	(329)100

Condom was the most popular method known by the students Table 4.3 shows that, 97 percent of female students in the study knew at least one regular contraceptive method. Accordingly, condoms 41 percent, oral contraceptive pills (25 percent), Norplant (10 percent) and withdrawal (6 percent) were the methods most frequently mentioned by the majority of students.

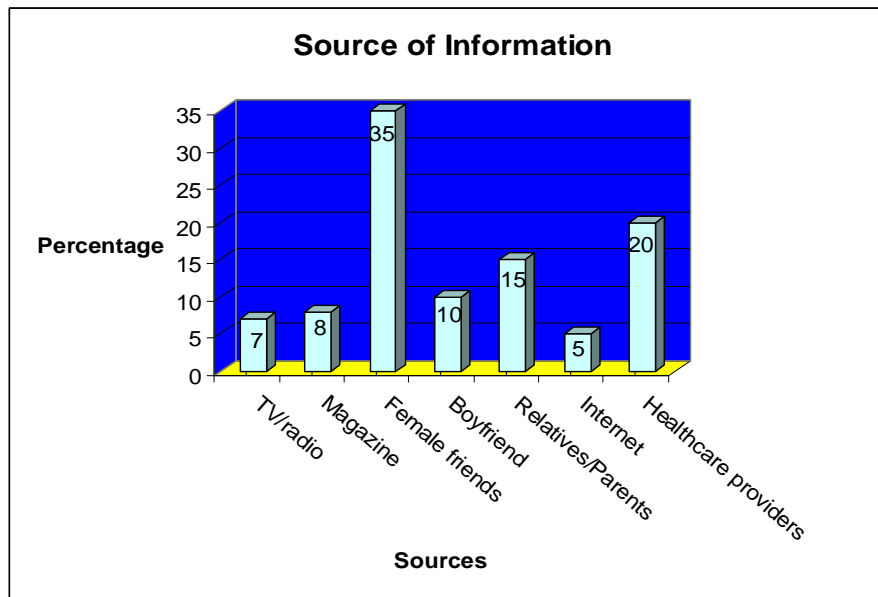
Table 4.3 Awareness of emergency contraceptives

Emergency contraceptive	Institution		Total
	Eldoret polytechnic	RVIT	
	Frequency) %	%(Frequency)	(Frequency) %
Yes	(130) 53	(44) 51	(174) 53
No	(113) 47	(42) 49	(155) 47
Total	(243)100	(86)100	(329)100

Out of 329 students only 53 percent of the students were aware of emergency contraceptives, while 47 percent were not aware of emergency contraceptives as shown in (table 4.3)

The focus group discussion revealed that half of the participants (eighteen from Eldoret polytechnic and eighteen from RVTI had heard of EC while the remaining students were completely unaware of emergency contraceptive.

Percentage distribution on the first source of information.

**Figure 4.1 First source of information**

Out of the 174 students who were aware of emergency contraceptives 35% indicated female friends as the first source of information. (Figure 4.1)

To ascertain the level of female students' knowledge about EC, four specific knowledge assessment questions on the, correct timing to be taken after unprotected intercourse, its mechanism of action, drug composition and indication of use were asked for those respondents who have heard or were aware of EC.

Table 4.4 Mechanism of action of EC

	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency) %	(Frequency) %	(Frequency) %
Prevents pregnancy	(102) 78	(34) 77	(136) 78
Induced abortion	(17) 13	(6) 13	(23) 13
Prevents STIs & HIV Aids	(5) 4	(2) 5	(7) 4
Don't know	(6) 5	(2) 5	(8) 5
Total	(130) 100	(44) 100	(174) 100

In table 4.4, concerning the mechanism of action 78 percent of the students indicated that emergency contraceptives prevented pregnancy from occurring, 13 percent indicated that it induced abortion, 4 percent indicated it prevents STI & HIV from occurring. While another 5 percent were uncertain of its action.

In the focus group discussions, with regard to the mechanism of action of ECs four students of those heard about EC agreed that it dislodge the embryo after the implantation has taken place and considered it as an induced abortion.

Only 10 students from Eldoret Polytechnic stated that it inhibit ovulation and prevent implantation

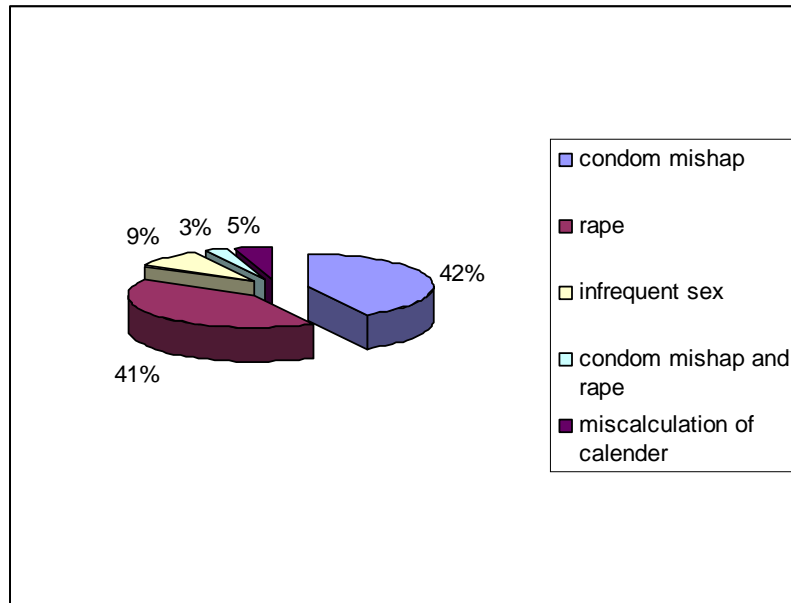


Figure 4.2 Indications for emergency contraceptive pills use.

Awareness of the circumstances by which under which emergency contraceptives might be needed varied among respondents as shown in the figure 4.2, with condom slippage or accidental breakage and forced sex or rape were the most cited indications with 42.percent .

Table 4.5 Correct time limit of emergency contraceptive efficacy

Time limit	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency)%	(Frequency)%	(Frequency)%
24 hours to 72hours	(22) 17	(9)20	(31) 18
48 hours	(10) 8	(3) 7	(13) 7
3 days to 1 week	(11) 8	(3) 7	(14) 8
Immediately after sex	(76) 58	(26)59	(102) 59
Don't know	(11) 8	(3)7	(14) 8
Total	(130)100	(44)100	(174)100

In table 4.5 only 18% of the respondents indicated correctly that the correct time limit for emergency contraceptive use was within 24 to 72 hours.

Table 4.6 Drug composition of emergency contraceptive

Drug composition	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency) %	(Frequency) %	(Frequency) %
Same as regular pill	(35)27	(12)27	(47)27
Regular pill with a higher strength	(30)23	(10)23	(40)23
Different from regular pill	(56)43	(19)43	(75)43
Don't know	(9) 7	(3) 7	(12) 7
Total	(130)100	(44)100	(174)100

In table 4.6, 23% of the students indicated correctly that ECPs was same as regular contraceptive pills but higher dose while 7 % were not sure of the drug composition.

In the focus group discussion it was observed that there was misunderstanding about the drug composition of ECPs .Majority of those who had heard about EC thought

that it was completely different from the regular contraceptives hormonal composition.

4.3 Attitude towards emergency contraceptive

Table 4.7 Recommend to Emergency contraceptive pill to a friend

Recommend to a friend	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency) %	(Frequency) %	(Frequency) %
Yes	(74)56	(25)57	(99)57
No	(56)43	(19)43	(75)43
Total	(130)100	(44)100	(174)100

57 percent of the respondents would be willing to recommend ECP to their friend as shown in table 4.7.

From the focus group discussion, those who were willing recommend emergency contraceptive to their friend, five students indicated that it was safer to use than regular contraceptives; three students indicated that they could recommend EC to a friend as it was more convenient than regular contraceptives especially in emergencies.

Those students who expressed their concern about EC indicated that worries about its side effects would prevent them from recommending Ec to their friends. Two students expressed that the availability of EC would encourage promiscuity among students in colleges.

Table 4.8 Encourage sexual intercourse without using condom

EC Encourage unprotected sex	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency) %	(Frequency) %	(Frequency) %
Yes	(50)38	(17)39	(67)39
No	(80)62	(27)61	(107)61
Total	(130)100	(44)100	(174)100

In table 4.8, 40% indicated that the availability of emergency contraceptive method could encourage sexual intercourse without use of condom, while 60 percent indicated that it would not.

From the focus group discussion, students also felt that frequent use of EC might weaken the interest of young women on other regular methods, including condom and might encourage unprotected sex and as a result lead to increased exposure to STDs in general and HIV/AIDS in particular

“Once male partners know the availability of the method, they may persuade or impose their female partners to use it frequently and may expose them to STDs, even HIV/AIDS” (A student from Eldoret polytechnic)

Table 4.9 Support the idea of over the counter availability

Support over counter availability	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency) %	(Frequency) %	(Frequency) %
Yes	(60)46	(20)45	(80)46
No	(70)54	(24)55	(94)54
Total	(130)100	(44)100	(174)100

In table 4.9, 46% of the students indicated that they supported emergency contraceptive availability over the counter while 54% disapproved the availability over the counter.

In the focus group discussions, some students indicated that over the counter availability could lead to misuse and may be used as a substitute for other contraceptive methods. Other students indicated that there was need for more information before selling them over the counter. Others feared side effects of the drug because of its high hormonal dose as compared to the regular contraceptive.

Other students indicated that over the counter availability could help those women who are in need and prevent pregnancies and subsequent abortion, especially for those women who have experienced forced sex or rape

4.4 Utilization of emergency contraceptives

Out of female students 329 students, 144 (44 percent) had ever had sexual intercourse, while (211) 56 percent had never had sexual intercourse.

Table 4.10 Sexual experience

Ever had sex	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency) %	(Frequency) %	(Frequency) %
Yes	(105)43	(39)45	(144)44
No	(138)57	(47)55	(185)56
Total	(243)100	(86)100	(329)100

Out of the 329 students 44percent of the female students ever had sex, while 56 percent never heard sex. (Table 4.10)

Table 4.11 Contraceptive experience

ever used contraceptive	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency) %	(Frequency) %	(Frequency) %
Yes	(94)89	(29)74	(123)85
No	(11)11	(10)26	(21)15
Total	(105)100	(39)100	(144)100

In table 4.11, 85% of those who were sexually experience had ever used a contraceptive method, while 15 % had never used any contraceptive method.

Table 4.12 Type of contraceptive ever used

Type of contraceptive	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency) %	(Frequency) %	(Frequency) %
Oral pills	(8) 9	(3) 9	(11) 9
Condoms	(45)49	(17)53	(62)50
Calendar	(15)16	(5) 16	(20)16
IUD	(5) 5	(3) 9	(8) 7
Female condom	(4) 4	(1) 3	(5) 4
Withdrawal	(14)15	(3) 9	(17)14
Total	(91)100	(32)100	(123)100

Majority of the students (50%) had used condoms, followed by calendar method and withdrawal with 16 percent and 14 percent respectively. As shown in table 4.12.

Table 4.13 Emergency contraceptive pill experience

Emergency contraceptive use	Institution		Total
	Eldoret polytechnic	RVIT	
	(Frequency) %	(Frequency) %	(Frequency) %
Yes	(38)36	(12)32	(50)35
No	(68)64	(26)68	(94)65
Total	(106)100	(38)100	(144)100

On utilization of emergency contraceptives, 35 percent of students who were sexually experience indicated that they had used emergency contraceptives as shown in table 4.13.

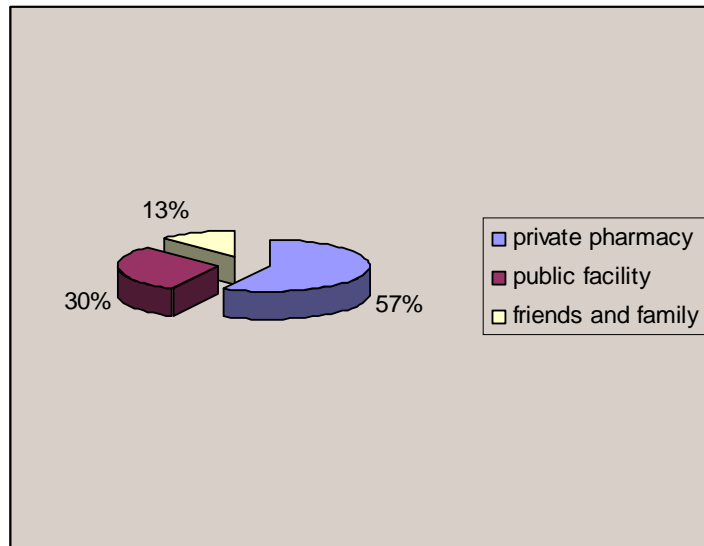


Figure 4.3 Source of emergency contraceptive pills.

Fifty seven percent of the students identified private pharmacy as their source of purchase, while 30 percent got emergency contraceptive from public facilities 10.percent indicated that they got emergency contraceptive from their friends as shown in figure 4.3.

In the focus group discussions among female students, several students claimed that they preferred to buy their contraception from pharmacy rather than face disapproval at the reproductive health and public health clinics, where contraception is free.

To establish whether respondents awareness of emergency contraceptive was influenced by demographic factors Pearson chi square was used and p values <0.05 were consider to predict the outcome awareness.

Table 4.14 Factors associated with awareness of emergency contraceptives

Age	Awareness of EC			
	Yes	No	Total	p value
18-21	82	96	178	0.02
22-25	55	44	99	
26-29	37	15	52	
Total	174	155	329	
Year of study				
Year 1	59	54	113	0.831
Year 2	61	50	111	
Year 3	54	51	105	
Total	174	155	329	
Marital status				
Single	145	131	276	0.624
Married	29	24	53	
Total	174	155	329	
Religion				
Protestant	65	58	123	0.563
Catholics	102	91	193	
Muslims	7	6	13	
Total	174	155	329	
Institution				
Eldoret polytechnic	130	113	243	0.161
RVTI	44	42	86	
Total	174	155	329	

Age was the only factor significantly associated with awareness of emergency contraceptives with p value of <0.05 . students who were between the ages of 22-25 were 3 times more likely to be aware of emergency contraceptives, 95% CI (1.546-5.261) while 26-29 years and above were 2 times more likely to be aware of emergency contraceptives.95%CI (1.022-3083) than 18-21 year old students.

Table 4.15 Factors associated with attitude towards recommending emergency contraceptive pill to a friend.

Age	Recommend to a friend			p value
	Yes	No	Total	
18-21	50	43	93	0.224
22-25	32	20	52	
26-29	14	15	29	
Total	96	78	174	
Year of study				
Year 1	35	25	60	0.575
Year 2	33	25	58	
Year 3	28	28	56	
Total	96	78	174	
Marital status				
Single	87	60	147	<0.001
Married	9	18	27	
Total	96	78	174	
Religion				
Protestant	36	29	65	0.360
Catholics	55	47	102	
Muslims	5	2	7	
Total	96	78	174	
Institution				
Eldoret polytechnic	71	57	128	0.913
RVTI	25	21	46	
Total	96	78	174	

Marital status and sexual experience was significantly associated with the attitude of willing to recommend emergency contraceptive to a friend With a p value of <0.001. Married students were 3 times less likely to recommend Emergency contraceptives to a friend with OR of 0.358 at 95% CI(0.202-0.635) than those who were single.

Table 4.16 Factors associated with utilizations of emergency contraceptives pills

Age	Utilization of EC			p value
	Yes	No	Total	
18-21	23	54	77	0.759
22-25	13	31	44	
26-29	6	17	23	
Total	42	102	144	
Year of study				
Year 1	17	33	50	0.226
Year 2	13	36	49	
Year 3	12	33	45	
Total	42	102	144	
Marital status				
Single	38	80	118	0.117
Married	4	22	26	
Total	42	102	144	
Religion				
Protestant	12	41	53	0.275
Catholics	27	58	85	
Muslims	3	3	6	
Total	42	102	144	
Institution				
Eldoret polytechnic	33	74	107	0.168
RVTI	9	28	37	
Total	42	102	144	
Ever used contraceptive				
Yes	26	44	70	<0.001
No	16	58	74	
Total	42	102	144	

Ever use of contraceptive was significantly associated with utilization of emergency contraceptive with a p value of <0.001. students who never used contraceptives were 5 times less likely to have utilized emergency contraceptive with OR of 0.584, 95% CI (0.378-0.902) than those who ever used any contraceptives.

CHAPTER FIVE

5.1 DISCUSSION

5.1.1 Awareness

Concerning knowledge of regular contraceptives, majority (99 percent) of the female students knew at least one method of regular contraception. This was similar to findings at Addis Ababa post secondary institutions with 99.7 % having knowledge of at least one method of contraception ⁽³⁶⁾.

Findings of this study, indicated that 53 percent of the students had about EC this was less than the findings among South West Nigerian college female students with 75.7 percent ⁽³⁷⁾.

On the source of information, female friends were the main source of first information, this was similar to findings of studies on post secondary school female students in Nigeria and university students in Kenya ⁽³⁸⁾.

The findings of this study revealed that detailed knowledge of EC methods was lacking among female college students as observed from their responses on correct time limit for EC use, mechanism of action of Ec, drug composition of Ec and indications for the use of ECPs. The reason for lack of detailed knowledge could be linked to the first source of information. Majority of the students got their first source of information from female friends who would not have accurate knowledge on the emergency contraceptive.

18 percent indicated the correct time limit for use of Ec , these findings of was less than the results obtained in the study among Jimma University female students with 49.2 percent ⁽³⁹⁾.

Regarding drug composition, 23 percent indicated correctly that it was similar to regular contraceptives but higher dose. These findings were higher than those in Ethiopia post secondary schools where only 13 % indicated correct drug composition ⁽⁴⁰⁾.

Majority of the students cited emergency contraceptive could be used after condom breakage and rape. This was similar to findings in Nigeria in which both condom brakeage and sexual assault or rape was mostly cited indications of use ⁽⁴¹⁾.

5.1.2 Attitudes towards emergency contraceptives

The findings revealed that 57 % of the students recommended ECP to their friends. This was less than the study findings on female students of Bahir Dar University, with (86.1%) indicating that they could recommend emergency contraceptives to their friends ⁽⁴²⁾.

Majority of the students (61%) also indicated that emergency contraceptive availability could not decrease the use of condom .This was similar to the findings from Cameroon in which (62 %) of students saw ECP availability could not decrease use of condom. ⁽⁴³⁾

Though some students from the focus group discussion indicated that the main objective of condom use was to prevent HIV and so the availability of ECPs could not discourage the use of condoms; if the users understand that ECPs do not prevent HIV infection.

Forty six percent supported the idea of emergency contraceptive being available over the counter. This was lower than findings from Ethiopia where 52.1% of respondents support the idea of availing EC over the counter ⁽⁴⁴⁾. This could be due to miss information by the media on unfounded allegations that ECP over the counter availability fuels frequent and risky sexual behavior among young women.

5.1.3 Emergency contraceptives utilization

In this study, out of the total 329 female students 44 percent ever had sexual intercourse. This was similar to the findings at Jimma University where 41 percent of the respondents ever had sexual intercourse ⁽⁴⁵⁾.

The contraceptive ever use rate in this study was 85percent. This finding was higher than that conducted in Addis Ababa Post secondary students with (60 percent ⁽⁴⁵⁾).

The use and non use of emergency contraceptive was associated with contraceptive experience with p value (<0.05), this agreed with findings from South west Nigeria ⁽⁴⁶⁾.

5.2 CONCLUSION

5.2.1 Awareness

The result showed low level of awareness of Emergency Contraceptive Pill. Lack of detailed knowledge such as correct time frames, effectiveness and mechanism of action was present. Friends were an important source of Ec information.

5.2.2 Attitudes

Although respondents raised concerns on emergency contraceptives majority had positive attitude, towards recommending emergency contraceptive to a friend, majority of the students did not support emergency contraceptive availability over the counter.

5.2.3 Utilization

Utilization of emergency contraceptive among the students was low. Private pharmacy was found to be the main source of purchase for emergency contraceptive pills .

5.3 RECOMMENDATIONS

The findings of the study indicate the need for the government and other stakeholders to:

1. Design strategies to provide appropriate information and improve access to ECPs in the country in general and colleges in particular to enhance the appropriate awareness of EC among young women.

2. Promote and enhance peer education and counseling among students of college institutions, through conducting seminars and workshops on emergency contraceptives pills.

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Appendix 1

CONSENT FORM

STUDY TITLE: FEMALE STUDENTS OF PUBLIC MIDDLE LEVEL COLLEGES' PERSPECTIVES ON EMERGENCY CONTRACEPTIVE PILLS UTILIZATION IN ELDORET MUNICIPALITY
INVESTIGATOR: ALLAN YEGON

**MOI UNIVERSITY,
 SCHOOL OF PUBLIC HEALTH,
 BOX 4606, ELDORET.**

Purpose and background:

This study is an academic requirement for a Master of Public Health degree program. However, findings will be disseminated to relevant authorities and other stakeholders with specific recommendations to help highlight the perspectives of utilization of emergency contraceptives among female collage students

Procedure:

It will involve a self-administered questionnaire in which the researcher or research assistants will hand out questionnaires with the female students of the respective colleges.

Benefits:

The findings and recommendations of the study will benefit the government and other stakeholders in the need for sex education to be adopted in the institutions curriculum.

Risk:

There is no risk to the respondent by choosing to participate in the study

Confidentiality:

All information will be treated with total confidentiality. And no names will be used for identification.

Right to refuse or withdraw:

The subject's participation in the study is entirely voluntary and one is free to refuse to take part or withdraw at any stage of study without any consequences.

***For participant* If you consent, please indicate so by signing this form:**

I willfully agree to participate in this study: SIGNATURE

DATE

.....

Appendix 3**SAMPLE QUESTIONNAIRE FOR FEMALE COLLEGE STUDENTS****DATE:** _____ **REF. NO:** _____ **LOCATION:** _____

INVESTIGATOR: ALLAN YEGON,
 MOI UNIVERSITY,
 SCHOOL OF PUBLIC HEALTH,
 BOX 4606, ELDORET.

STUDY TITLE: FEMALE STUDENTS OF PUBLIC MIDDLE LEVEL COLLEGES' PERSPECTIVES ON EMERGENCY CONTRACEPTIVE PILLS UTILIZATION IN ELDORET MUNICIPALITY

INTRODUCTION

Having consented to participate in this study whose purpose is to fulfil the academic requirements for a Master of Public Health degree, you are hereby welcomed to respond to these questions while seeking for clarification from the interviewer where necessary. Thank you for agreeing to participate and affirming by appending your signature on the consent form herewith attached.

1. Demographic data

- a. Age in years _____
- b. Institution _____
- c. Year of study
 First
 Second
 Third _____
- d.) what is your religion?
 Catholic
 Protestant
 Other
- e) Marital status?
 Married
 Single

2. Knowledge of EC

- a. Which contraceptive methods do you know?
- Oral pill
 - Condom
 - Female sterilization
 - Injection
 - Emergency contraceptive pills
 - Intra Uterine device
 - Other (specify) _____
- b. What are your sources of information on emergency contraceptives?
- Parents
 - Internet webpage
 - Boyfriend/partner
 - Female friends
 - Magazines/newspapers
 - Other (specify) _____
- c. What is the mechanism of action of emergency contraceptive pills?
- Prevent pregnancy from occurring
 - Induced abortion
 - Prevent pregnancy and induced abortion
 - Don't know
 - other, specify _____
- d. What is the correct timing of emergency contraceptive pills use?
- 24 hours to 72hours
 - 48 hours
 - 3 days to 1 week
 - Other (specify) _____
- e. Is emergency contraceptive drug composition same as that of oral contraceptives?
- The same as in the regular contraceptive pills?
 - The same but a high does in the same hormones?
 - Completely different from the drug of regular contraceptives?
 - Don't know?

3. Attitudes to EC use.

- a. Would you recommend emergency contraceptive pills to your friend?
- Yes
 - No
 - Don't know
- b. Do you support emergency contraceptive availability over the counter?
- No
 - Yes
 - Other (specify)_____
- c. Has emergency contraceptive pills use increased the probability of engaging in unprotected sex?
- Yes
 - No
 - Don't know
 - Other (specify)_____

4. Emergency contraceptive practices

- a. Ever heard sexual intercourse?
- Yes
 - No
- b. Have you ever used contraceptives?
- Yes
 - No
- c. If yes which one?
- Oral pill
 - Condom
 - Female condom
 - Calendar method
 - withdrawal
 - Intra Uterine device
- d. Have you ever used emergency contraceptives pills?
- yes
 - no
- e. Where do you get emergency contraceptive pills?
- Private pharmacy
 - Public facility (clinics, district hospitals
 - Elsewhere (specify)_____

Appendix 4**DATE:** _____ **REF. NO:** _____ **LOCATION:** _____**SAMPLE INTERVIEW GUIDE FOR FOCUS GROUP DISCUSSION****STUDY TITLE: FEMALE STUDENTS' PERSPECTIVES ON THE UTILIZATION OF EMERGENCY CONTRACEPTIVES IN ELDORET MUNICIPALITY PUBLIC MIDDLE LEVEL COLLEGES, UASIN GISHU DISTRICT****INVESTIGATOR:** ALLAN YEGON,
MOI UNIVERSITY,
SCHOOL OF PUBLIC HEALTH,
BOX 4606, ELDORET.**INTRODUCTION**

Having consented to participate in this study whose purpose is to fulfill the academic requirements for a Master of Public Health degree, you are hereby welcomed to participate in this discussion. The discussions will be moderated by the investigator and his assistant in the most appropriate language to you. Thank you for agreeing to participate and affirming by appending your signature on the consent form herewith attached.

1. How do you get information on Emergency contraceptives?
2. Which source is most often used to acquire emergency contraceptives?
3. What is the drug composition of emergency contraceptive pills?
4. What is the correct timing of emergency contraceptive pills?
5. What is mechanism of action of emergency contraceptive pills?
6. Would you recommend emergency contraceptive pills to your friend?
7. Does the availability of emergency contraceptive increase sexual activity without using condom?