

## Use of emergency contraceptive in prevention of unintended pregnancy among students at Mount Kenya University

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### Abstract

*Indigenous women have high rates of unintended pregnancy and may face increased risks for morbidity and mortality related to unsafe abortion. This study examined the use of emergency contraceptives and factors influencing their use among female students of Mount Kenya University (MKU). A descriptive cross-sectional study was undertaken. The target population was 824 female students of MKU Kigali campus. A sample of 263 female students was enrolled in this study. A self-administered questionnaire was used to collect data. The findings revealed that, although 50.7% of respondents faced contraceptive risks, only 30.6% of them used EC. The most used EC methods were pills (97, 9%). The factors contributing to non-use of EC among MKU female students, included the lack of knowledge on EC (86.2%), fear of side effects (58.7%), and not knowing where to get it from (43.1%) as well as religious considerations (22%), culture not supporting the use of EC (93.2%). The majority of the respondents were aged between 21 and 35 years old, 90.1% were Christians; 62.7% are living in urban area, 59.7% were single; 31.2% being married. It has also been found that 58.6% of respondents have not been pregnant yet and 34.6% had 1 to 2 pregnancies. The training on EC should be organized for students and indigenous population on sexual and reproductive health in order to increase awareness and use of EC. An advocacy should be done on emergency contraceptive pills at schools to increase their accessibility in case of need.*

**Key words:** Emergency Contraceptives, Unintended Pregnancies, Female Students, Religious Beliefs, Culture, Sexual and Reproductive Health

### Introduction

Indigenous women have high rates of unintended pregnancy and may face increased risks for morbidity and mortality related to unsafe abortion. Unintended pregnancies contribute towards accelerated population growth (MOH, 2010), and lead to closely spaced pregnancies and births, early childbearing and abortions (Basinga et al., 2008). Unintended pregnancy (both unplanned and unwanted) among university students is a common public health problem worldwide. These in turn contribute to high maternal and infant mortality (Mackenzie et al., 2011).

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Worldwide, about 44 million pregnancies end in abortion each year (Cheng et al., 2013). Although there are obviously variations between nations, there are approximately 50 million pregnancies terminated in abortion each year due to EC. In the United Kingdom, over 180,000 pregnancies are aborted annually. There are approximately 610,000 abortions performed in Nigeria annually, 60% of which are believed to be unsafe. In the United States, almost 50% of pregnancies are unwanted. Given these figures, the need for emergency contraception cannot be over emphasized, and yet emergency contraception has been called the best-kept contraceptive secret, typically unavailable to women in developing countries. There are an estimated 120 million women in developing countries who do not practice family planning (RCOG, 2003; Mackenzie et al., 2011).

The standard approach to this problem has been primary prevention (contraception), backed up by induced abortion (Cheng et al., 2013). This would suggest that knowledge of, and access to, emergency contraception (EC) is an area that needs to be developed (RCOG, 2003). EC implies something not to be used routinely (there are far more effective methods for regular contraception) but which can still prevent pregnancy if other options have failed or regular contraception was not used. Increased access to reproductive health services has helped to rapidly expand women's use of contraceptives to prevent unwanted pregnancy. Yet unintended pregnancy and unplanned births are widespread. The growth of population, rights of women to choose the time of motherhood, high prevalence of HIV disease, as well as the strong religious and political debate about abortion has created more attention and research momentum toward contraception science (Sweileh, et al., 2015). Furthermore, the economical and emotional burden of high rates of unintended pregnancies (UP) had drawn more attention and interest in novel and practical contraceptive methods to avoid UP.

Currently there are several different natural, hormonal, mechanical and surgical methods for contraception that made a significant worldwide reduction in UP and illegal abortion . However, despite the great advancement in contraception science and technology, no contraceptive method is 100% effective in preventing pregnancy all the time (Stocco et al., 2015). Furthermore, women might have sexual intercourse at unexpected times or they might be forced to have sex such as in rape situations. A practical contraceptive choice for women in such situations is the use of emergency contraceptive (EC) method. Emergency contraception can prevent pregnancy when

taken within 120 hours of unprotected intercourse (Polis et al., 2013) . EC is especially important for outreach to the 4.6 million women at risk of pregnancy but not using a regular method by providing a bridge to use of an ongoing contraceptive method(Cheng et al., 2013). The effectiveness of emergency contraception has been estimated at 75% for the Yuzpe combination hormonal regimen and 85% for levonorgestrel alone. Furthermore, the method is more effective the sooner it is taken (Shoveller, et al., 2004). EC is widely available in Western European and in China. However, use of this method is rising rapidly in developing countries. For example, the 2008-2009 DHS (Demographic and Health Survey) data showed that 22% of unmarried sexually active women in Albania had ever used EC. In Colombia, Kenya, and Nigeria, according to data from DHS, 10% to 16% of unmarried sexually active women ever used EC. This proportion in Peru was 35% in 2010 (Cheng et al., 2013).

Several types of emergency contraception regimens exist, including an estrogen-progestin combination (sometimes called “combined regimen” or “Yuzpe regimen”), levonorgestrel alone, and mifepristone. These emergency contraceptive pills are also called morning after pill (Sweileh et al., 2015). An alternate method of emergency contraception is post-coital insertion of a copper-bearing intrauterine device (IUD).

## **Methods**

A descriptive cross-sectional study design was used to portray the profile of events about the EC use among university students and identifying problems with EC use at MKU based on recommendations of Levin (2006) who highlights that cross-sectional studies are carried out at one time point or over a short period and are used when the purpose of a study is descriptive. Based on the total number of female students at MKU of 824 headcounts, a sample 263 female students was calculated by using Roasoft software, based on a 95% confidence interval and 5% margin of error; noting that sampling is a process of selecting a number of study units from a defined population (Corlien et al, 2003). After getting ethics approval, the data collection processes was implemented. The data were collected from the 10<sup>th</sup> to the 30<sup>th</sup> October 2015. Self-administered questionnaires were given to selected females students randomly based on computer-generated random numbers for each strata of MKU students in Kigali Campus. The enrollment continued until the number of each quota was reached.

## Results and discussion

### *Risky events and the use of emergency contraceptive pills*

This section presents the risks experiences among the female students, how they used EC, the types of EC methods, availability of the EC chosen, and the factors that contributed to non-use of EC.

**Table 1: Number of female students reporting risky event (N=263)**

<b>Contraception risk event</b>	<b>Female students</b>	<b>Percentage</b>
Unsafe sex without condoms	65	24.7
Condoms'breaking	25	9.5
Forgot taking the pill	51	19.4
Injection missed or delayed	16	6.1
No EC risk experience	106	40.3
<b>Total</b>	<b>263</b>	<b>100.0</b>

The above table shows that about 60% of female students had experienced events that could lead to a pregnancy. While 106 (40.3%) did not experience any risk, over 40% faced two major risks, namely, sex without using a condom and condom breaking during the sexual activities.

As shown, in the flowing table, among those who experienced risk of pregnancy, the majority did not use EC.

**Table 2: Number of female students according to the use of EC after EC risk experience**

<b>Use of EC among who had experienced EC risk</b>	<b>Respondents</b>	<b>Percentage</b>
Yes	48	30.6
No	109	69.4
<b>Total</b>	<b>157</b>	<b>100.0</b>

The above table shows that only 48 (30.6%) of female students used EC after experiencing meeting an EC risk. The types of EC methods used are detailed below.

**Table 3: Female Students with respect to types of EC used (N=48)**

<b>Methods of EC Used</b>	<b>Female students</b>	<b>Percentages</b>
Pills	47	97.7
IUDs	1	2.1
<b>Total</b>	<b>48</b>	<b>100.0</b>

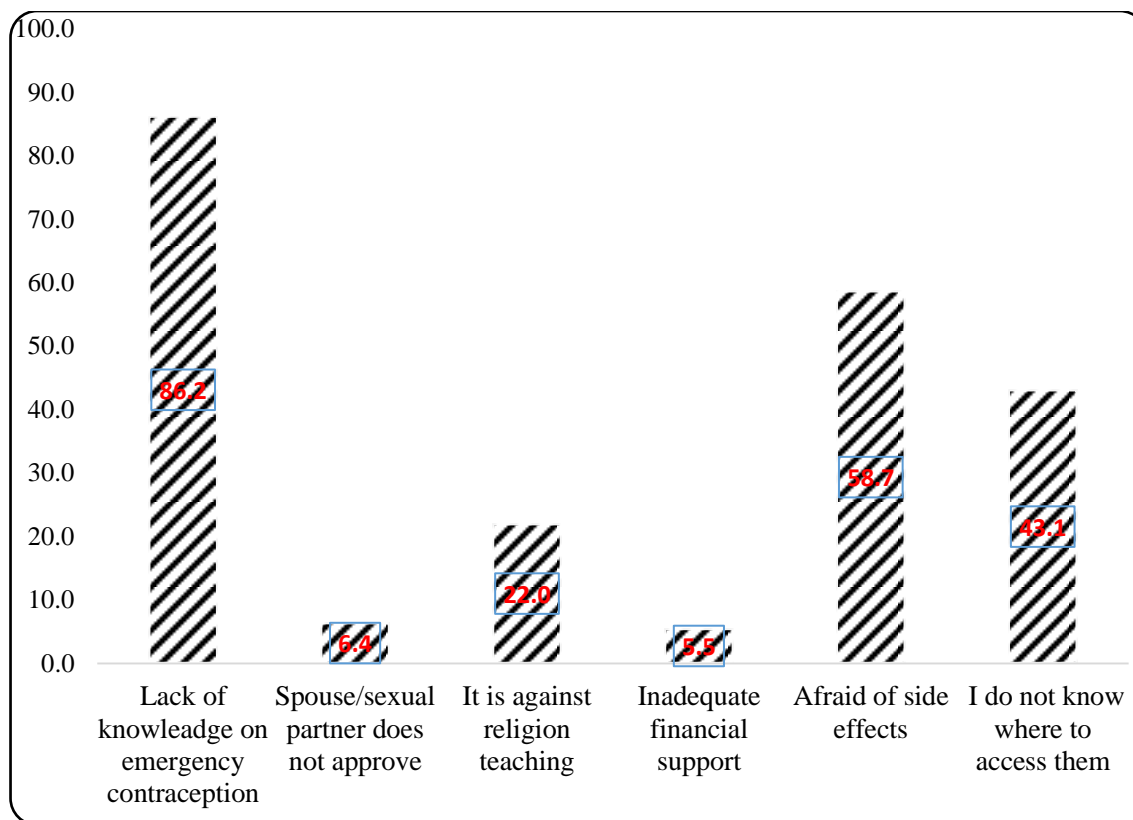
The above Table 3 shows the overwhelming majority of students who used EC, they used pills, and only one person used an IUD. The sources of the EC products were diverse as shown below.

**Table 4: The sources of the EC students used (N= 48)**

<b>Sources of EC</b>	<b>Students</b>	<b>Percentage</b>
Hospital/Health institutions	2	4.2
Drug vender/pharmacy	45	93.8
Community Based Distributors agents (CHWs)	1	2.1
<b>TOTAL</b>	<b>48</b>	<b>100.0</b>

Although the majority got the EC pills from pharmacies or drug stores (45=93.8%), 2 students reported getting theirs from hospitals while 1 obtained it from a community health worker.

Students who had not used EC were asked to state why they did not do so. The following figure summarizes their answers.



**Figure1. Factors contributing to nonuse of EC among students (N=109)**

The findings revealed that the majority of students lacked knowledge about EC that is 94 students (86.2%); while 64 students (58.7%) said they were afraid of side effects, 47 (43.1%) students revealed that EC was unavailable to them. Twenty two percent of students (24 students) confirmed that EC use was against their religion teaching, 6.4% of respondents (7 students) said that their partners did not approved that and 5.5% did not use EC because of lack of funds to purchase them.

***Prevalence of EC use among the female students of MKU***

The study finding revealed that 50.7% of female students faced EC risks. Among them, only 30.6% of female students used EC after meeting an EC risk (Table 2). The findings from other similar studies found that 44.7% had sexual experience; but protected sexual experience with contraceptives was reported by 64.3% of respondents (Jacob et al., 2015). In other study, 67% of the respondents were sexually active and only 39.9% had used emergency contraception (EC et al.,

2014). In Ethiopian university, 44.4% of sexually active female students used EC at least once after unprotected sexual intercourse and of these, 53% used EC pills and 6% used IUDs. More than 35% of respondents used EC twice or more and 28.6% of sexually active female students were unable to use EC (Hailemariam et al., 2015). These findings differ from findings from other indigenous communities such as in Bangladesh where the practice of withdrawal and the use of intra-uterine devices and other implants have never been performed among the respondents (Thorvaldsen and Islam, 2012).

### ***The types of emergency contraceptives used by MKU female students***

The study finding highlighted that 30.6 % of the students who used EC (Table 2) most utilized pills (97.9%) as presented in Table 3. Only 2.1% of MKU female students used IUDs. The similar studies found that 77% used EC pills and 10% used IUDs (Jacob et al., 2015), (EC et al., 2014). Michael also found among 35% respondent used contraceptive methods at Tanzania and 73% modern contraceptive methods (Michael, 2012).

### ***Factors contributing to use of EC among MKU female students***

The cone diagram presents the female students according to the factors that contributed to non-use of EC after experiencing an EC risk. The findings revealed that the majority of female students miss information on EC 94 female students (86.2%), 64 students (58.7%) are afraid of side effects, 47 (43.1%) students revealed that EC was unavailable to them (Figure 1).

With regard to number of pregnancies, 58.6% of female students have not been pregnant yet and 34.6 % had 1 to 2 pregnancies. Religion teaching may affect the non-use of FP methods, particularly because the Catholic Church forbids the use of contraceptives. The findings from this study revealed that 90.1% of female students are Christians and 9.5 % are Islamic. Arinze-Onyia, and co-workers reported that the majority of respondents (99.1%) were Christian including 52.9% Catholic, 25% Pentecostal and 22.1% Protestant (Onyia, Aguwa, & Nwobodo, 2014). Religious beliefs have been confirmed as factors contributing to non-use of FP method by 22.0 % of respondents in study done at Tanzania on use of contraceptives (Michael, 2012).

The residence of someone can influence the prevalence rate of FP method use (MOH, 2010) . The findings from this study revealed that the majority of respondents (62.7%) are living in urban

area. The findings from Tanzania revealed that 70.3% of the respondents were peasants and were the largest group of non-users of contraceptive methods (71%) (Michael, 2012). The participants who did not use the EC after experiencing EC risk were 69.4%. The reasons and or factors contributing to non-use of EC among MKU female students included the lack of knowledge on EC (86.2%), fear of side effects (58.7%), and not knowing where to get it from (43.1%) as well as religious considerations (22%), culture not supporting the use of EC (93.2%). In a similar study at Wachamo University, the reasons stated by female students for not using EC after unprotected sex were inconvenient time of the service at health facilities (91.6%), EC was not available at the time 66.6%, health facilities were too far (41.6%) and fear of social stigma (41.6%) (Hailemariam et al., 2015). In other settings, it was found that the non-use of contraceptives was related to refusal of partners (69.3%), non-availability (93%) and religious beliefs (78%) (Michael, 2012). Similarly, a study among Mru (Bangladesh indigenous people) revealed that place of residence, religion, age, education level, distance to service providers, and limited access to information or mass media were factors that contributed to non-use of contraceptives (Thorvaldsen & Islam, 2012). A study conducted among New Mexico pharmacists found that 36% of respondents incorrectly believed emergency contraception was the “abortion pill” and terminated a pregnancy. One of pharmacist’ main barriers to the provision of emergency contraception was religious opposition to use of the product (Young, Griffin, & Vest, 2013).

The findings from this study should be considered bearing in mind that this was a cross-sectional study at one campus. Therefore, the findings are not representative of the situation among all students and are not a permanent feature; the situation may have changed.

## **Conclusion**

The purpose of this study was to determine the use of emergency contraceptive methods and factors that influence their use among female students attending Mount Kenya University. The study findings revealed that although 50.7% of respondents met contraceptive risks, only 30.6% of them used EC; and that the most used EC methods were pills (97, 9%) they got them from pharmacies (93.8%). The factors contributing to non-use of EC among MKU female students include: Lack of knowledge on EC, fear of side effects, not knowing where to find EC products, and religion.



It is recommended that educational interventions be implemented in order to improve the knowledge of female students on the use of EC as well as on sexual and reproductive health. The training on EC should be organized for students and Indigenous population on sexual and reproductive health, and use of EC to increase awareness and use of EC. An advocacy should be done on emergency contraceptive pills at school to increase their accessibility in case of need.

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