***Original Research Article***

**ATTITUDES TOWARDS UTILIZATION OF EMERGENCY CONTRACEPTIVES AMONG FEMALE UNDERGRADUATE STUDENTS, UNIVERSITY OF KABIANGA, KENYA**

**.**

Abstract

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| --- |
| **Background:****Emergency contraception is a contraceptive way that can be used to avoid pregnancy after unprotected sexual contact. Emergency contraceptive (EC) provide an important chance to prevent unplanned pregnancy after a regular method fails, no method was used, or when sex was forced (1)****The world health organization recommends the use of contraceptive pills, like progesterone preparations (levonorgestrel) and post-coital intra- uterine device (IUCD) insertion as EC. Young people including university students constitute an important population group under the risk of unmet needs concerning contraception. Unintended pregnancies amongst students at higher education institutions impact students’ academic success. Studies in the United States of America show that 80% of female students in higher education are active sexually. Female students are under the danger of unwanted pregnancies as a because of ineffective or non-usage of contraceptives. This may lead to failure completion of their education, may prevent sustaining of employment and making autonomous marital decisions (2)****Objective:****This study sought to determine the attitude and practice on emergency contraceptives among female undergraduate students at university of Kabianga, Kenya.** **Methods:****A descriptive cross-sectional study was used. The study population was 3803 and a sample size of 154 students was adopted. Stratified random sampling was applied to determine the selected sample. The students were stratified according to the year of study, each year of study formed strata. A sample proportionate to the study year and campus was picked. Data was obtained by self-administered questionnaires. Univariate analysis was used for various quantitative variables and results given using frequency tables, bar charts, pie diagrams. Bivariate analysis was applied to establish the test of association between demographic factors, knowledge and attitude on emergency contraceptives use of chi-square test at 5% significance level. In multivariate analysis the independent variable of knowledge and attitude on emergency contraceptive were obtained using logistic regressions.****Results:****The results for the logistic regression analysis indicated that a unit increase in age would lead to a unit decrease in attitude by 7.3%, a unit increase in the year of study would lead to a unit increase in attitude by 2.4%, a unit increase in religion would lead to a unit decrease in attitude by 28.4%, a unit increase in marital status would lead to a unit decrease in attitude by 5.9% and a unit increase in place of residence would lead to a unit decrease in attitude by 3.1%. The p-values revealed that age (p=0.741, or=0.930), year of study (p=0.908, or=1.024), religion (p=0.383, or=0.753), marital status (p=0.746, or=0.943) and place of residence (p=0.928, or=0.970) were not significantly associated with attitude. This implies that age, year of study, religion, marital status and place of residence do not influence the level of attitude on emergency contraceptive utilization.****Conclusion.****Overall, majority of the respondents had a favorable attitude (71.4%) towards ec and more than half (70.8%) indicated that using ec is better than using long term contraceptive methods.** **A number of them (58.4%) pointed out that they would use EC in case of an emergency. Of those who had ever heard of emergency contraception, 63.6% reported favorable attitudes toward emergency contraception compared to 28.6% who had unfavorable attitude.** |

*Keywords: attitudes, utilization, emergency contraceptives and female undergraduate students.*

1. Introduction

**Currently, many young people especially college students engage in sexual activity before marriage often without using contraception resulting in unwanted pregnancies in many countries. (3)**

**Despite the value of ec in reducing unintended pregnancy, research suggests that it may be underutilized and that EC may avert 60% to 80% of pregnancies that are unintended in women aged 18 to 24 and that it may also provide an alternative to the non-use of contraception or an option for those who use withdrawal as a method of birth control. (4)**

 **Unfortunately, abortion which is carried out by either an unskilled person or under unhygienic condition or in a sub-standard medical environment is mostly the outcome of this unplanned and unintended pregnancies. (5)**

**According to global estimates about 44 million pregnancies end in unsafe abortion per year. (4) all though Africa has low abortion rate compared to Latin America, the percentage of unsafe abortion of about 97% is staggering; especially in western Africa. (6)**

**In Nigeria and some other parts of Africa, results of studies done indicate that every year, unplanned and unintended pregnancies lead to at least 50 million abortions globally, several of which are unsafe and subsequently end in about 80,000 maternal deaths. (7)**

**In Kenya, the use of modern contraceptive methods has increased over the last decade from 32 percent in the 2003 KDHS to 53 percent in 2014, however, despite the increase in modern contraceptive use, the use of emergency contraceptive which is one of the modern contraceptive remains low among the youths at less than 0.5% with the injectables being the most commonly used form of modern contraception for youth at 19.9 %, followed by implants at 7.6%, male condoms at 3.3% female condoms at 0.5% .(8)**

**Studies conducted in Kenyan universities focused mainly on knowledge, attitude and perception of female students on general contraceptives and little emphasis on attitudes towards emergency contraceptives yet it offers women the last chance when the latter has failed.**

**Specific objectives of the study**

1. **To assess the attitudes of female undergraduate students towards Emergency contraceptives at university of Kabianga,**
2. **To assess the utilization of emergency contraceptives among female undergraduate students towards emergency contraceptives at university of Kabianga**

**Research questions**

1. **What are the attitudes of female undergraduate students on emergency contraceptives?**
2. **What is the practice of emergency contraceptives among female undergraduate students**
3. **2 Materials And Methods.**

**2.1 study settings.**

**The study was carried at university of kabianga, a public university in kenya which is situated in kericho west district, kericho county in the southern end of the rift valley region of kenya. It is 26 km from kericho town and 6 km off the main kericho - kisii road.**

 **Study population**

**The population of female students at university of kabianga stood at 3803 from all the four campuses namely main campus, kapkatet, sotik and town campuses as per 2019 admissions records.**

 **Inclusion criteria.**

**Undergraduate female students.**

**Exclusion criteria.**

**Students from the school of health sciences at Kapkatet campus were excluded from the study as they could have prior information by the virtue of their training. Students who did not consent to the study were excluded.**

**Study design and data collection.**

**Cross sectional design study was carried out in April 2019 among female undergraduate students from main campus and campuses. The sample size was reached at using fischer et al (1998) and the proportion of undergraduate students utilizing emergency contraceptives at 11.9%. (3). Since the target population was below 10000 the requisite sample size was adjusted to a sample size of 154. Stratified random sampling was then applied to select students from the three campuses. The students were stratified as per the year of study. The admissions office provided the number of students in each year and from which a sample proportionate to the study year and campus was chosen. (as shown below). Simple random sampling was subsequently applied to each strata in their respective campuses by way of picking of yes or no folded papers after end of lectures. Questionnaires were self-administered. The pre tested questionnaires were used to elicit responses on knowledge and attitude on emergency contraceptives.**

**Table.1 study sample frame**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year**  | **Sample size** | **Main campus** | **Sotik campus** | **Town campus** |
| **Fourth** | **39** | **35** | **1** | **3** |
| **Third** | **47** | **40** | **1** | **3** |
| **Second** | **42** | **37** | **1** | **4** |
| **First** | **26** | **19** | **2** | **6** |
|  |  |  |  |  |

* 1. **Data processing and analysis**

**Questionnaires were comprehensively checked by the researcher for quality and clarity of responses daily. Data was then entered into SPSS version 16.0 windows for statistical analysis. The data entered into epi info was stripped of their identifiers to ensure confidentiality of the subject data. The database was encrypted and password kept by the investigator. After data entry the questionnaire was kept in a safe cabinet under a lock and the key kept by the investigator. Data was then analyzed use of univariate analysis where frequency tables were generated, pie diagrams and bar charts, bivariate and multivariate analysis were applied to determine the association between knowledge and attitude on emergency contraceptives and other predictor variables using chi-square test at 5% significance level.**

* 1. **Ethical considerations.**

**Approval to carry out the study was sought from ethical review committee of university of Kabianga and was approved on 24th April 2019. (IERC an 0008).**

**Voluntary participation was emphasized through written informed consent after respondents had been properly explained to. Confidentiality was observed by the use of unnamed questioners. Data collected and the materials used to collect data were kept under lock and key by the researcher. The computer used was password protected.**

3. Results and discussion

1. **Results**

The response rate was optimum. Out of the 154 respondents who filled the questionnaires, 57 of them were between the ages of 22 – 23 years (37%) followed by those of 20 – 21 years 51(33.1%). This was then followed by respondents who are between the age of 24 – 25 years 28 (18.2%) followed by those who are between 18 – 19 years13 (8.4%) and those who were above 26 years 5(3.3%).

 **3.1 attitude towards emergency contraceptives**

The summary index of attitude was determined using the four indicators of EC. Two positive and two negative indicators were used to strike a balance between the responses. The indicators were categorized as yes or no. Those who selected yes for the positive indicators were considered as having favorable attitude and those who selected no were considered as having unfavorable attitude. Those who selected yes for the negative indicators were considered as having unfavorable attitude and those who selected no were considered as having favorable attitude. The responses on each attitudinal items were scored, tallied, and then the total of each respondent score was made to range between 0-4 (0-100%). A score of 50% and above was considered as “favorable attitude” whereas those scored below 50% of the total were thought of as having “unfavorable attitude”. (9)

Generally, most of the respondents had a favorable attitude (71.4%) on EC and more than half indicated using EC is better compared to using long term contraceptive method (70.8%). A number of them implied that they could use EC in case of a need (58.4%). Less than a half were of the feeling that EC do not damage one’s baby while breastfeeding (39.6%), majority indicated that they could recommend EC to others (70.1%). However cumulatively respondents were reported to having unfavorable attitude towards EC at 28.6% and about (29.2%) implied using ec is better than utilizing contraceptive method.

 **3.2 socio demographic factors associated with attitudes.**

Correlation analysis was done to determine the covariates which are significantly correlated to attitude and utilization of ECs. The covariates measured in the socio demographic factors were used as parameters that measure the given areas using Pearson chi-square at 5% significance level. The results depicted in the table below shows that there was no significant association between the attitude towards EC and religion, year of study, age, marital status and residence of respondents.

**Table 2. Association between socio demographic factors and attitude**

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Favorable attitude (n=110)Number (%) | Unfavorable attitude(n=44)Number (%) | Statistical test |
| Age  |
| 18 – 19 years | 9(8.2%) | 4(9.1%) | $$Χ^{2}=2.281, df=4,p=0.684$$ |
| 20 – 21 years | 37(33.6%) | 14(31.8%) |
| 22 – 23 years | 40(36.7%) | 17(38.6%) |
| 24 – 25 years | 19(17.3%) | 9(20.5%) |
| Above 26 years | 5(4.5%) | 0(0.0%) |  |
| Religion  |
| Catholic | 29(26.4%) | 15(34.1%) | $$Χ^{2}=4.337, df=3,p=0.227$$ |
| Protestant | 77(70.0%) | 27(61.4%) |
| Muslim | 1(0.9%) | 2(4.5%) |
| Atheist | 3(2.7%) | 0(0.0%) |
| Year of study |
| First | 19(17.3%) | 7(15.9%) | $$Χ^{2}=0.349, df=3,p=0.950$$ |
| Second | 29(26.4%) | 13(29.5%) |
| Third | 33(30.0%) | 14(31.8%) |
| Fourth | 29(26.4%) | 10(22.7%) |

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Favorable attitude (n=110)Number (%) | Unfavorable attitude(n=44)Number (%) | Statistical test |
| Place of residence |
| University hostels | 42(38.2%) | 17(38.6%) | $$Χ^{2}=0.186, df=2,p=0.911$$ |
| Private hostels/rentals | 64(58.2%) | 26(59.1%) |
| Home | 4(3.6%) | 1(2.3%) |
| Marital status |
| Married | 12(10.9%) | 3(6.8%) | $$Χ^{2}=1.596, df=3,p=0.660$$ |
| Single | 83(75.5%) | 37(84.1%) |
| Widow | 1(0.9%) | 0(0.0%) |
| Living with a partner | 14(12.7%) | 4(9.1%) |

**3.3 independent determinants of attitude**

Results for the logistic regression analysis showed that a unit increase in age would mean to a unit decrease in attitude of 7.3%, a unit increase in the of study year would lead to a unit fall in attitude by 2.4%, a unit increase in one’s religion would lead to a unit decrease in the attitude by 28.4%, a unit increase in marital status would amount to a unit decrease in the attitude by 5.9% and a unit increase in one’s residence would lead to a unit fall in attitude by 3.1%. The p-values showed that age (p=0.741, or=0.930), study year (p=0.908, or=1.024), religion (p=0.383, or=0.753), marital status (p=0.746, or=0.943) and one’s residence (p=0.928, or=0.970) were not significantly related to attitude. This means age, marital status, study year, religion, and one’s place of residence did not influence the level of attitude on emergency contraceptives.

|  |
| --- |
| **Table 3. Findings of logistic regression analysis on attitude** |
| Variable | Β | Wald’s statistics | Df | P-value | Or |
| Age | -.073 | .109 | 1 | .741 | .930 |
| Year | .024 | .013 | 1 | .908 | 1.024 |
| Religion | -.284 | .761 | 1 | .383 | .753 |
| Marital | -.059 | .105 | 1 | .746 | .943 |
| Residence | -.031 | .008 | 1 | .928 | .970 |
| Constant | -.100 | .012 | 1 | .914 | .904 |

1. Conclusion

Majority of the respondents had a favorable attitude (71.4%) towards EC.

Age, marital status, study year, religion, and one’s place of residence did not influence the level of attitude on emergency contraceptives.

Consent (where ever applicable)

Not applicable

Ethical approval (where ever applicable)

Approval to carry out the study was sought from ethical review committee of university of Kabianga and was approved on 24th April 2019. (IERC an 0008).

**List of abbreviations and acronyms.**

**Ec** emergency contraceptives.

**Kdhs** kenya demographic health survey.

**Rh** reproductive health.

**Ecps** emergency contraceptive pills.

**Iucd** intra uterine contraceptive device.

**Definition of terms**

**Youth:** world health organization (2006) defines youth or young adult as one who is 15-24 years.

**Adolescent:** who define adolescent as young people between age of 10 and 19 years.

**Emergency contraceptives:** who defines emergency contraceptives as a method of contraception that can be used to prevent pregnancy within the first 120 hours after unprotected sexual intercourse.

**Unintended pregnancy:**  the act of becoming pregnant without planning or waiting to become pregnant.

**Attitude:** hypothetical construct that represents an individual’s degree of like or dislike for something positive or negative views of a person, place something or event.

**Abortion:** deliberate termination of a pregnancy before term.

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Appendix

Questionnaire for respondents

Instructions

The purpose of this questionnaire is to determine the utilization of emergency contraception among university of kabianga undergraduate students in order to fulfill the academic requirements for a master of public health degree, you are hereby welcomed to respond to these questions. Please place a tick mark (√) in the box provided or write in the space provided.

Section a. Demographic information

1. Age in completed years...........................................................
2. Year of study

First second third fourth

1. Indicate your religion

Catholic protestant muslim atheist other (specify)

1. Specify your marital status

 Married single separated widow living with a partner

1. Place of residence

University hostels private hostels/rentals home other (specify)

1. Who do you live with

Friend relative partner parents/guardian

Section b. Knowledge

|  |
| --- |
| 1 ever heard about ec |
| Yes |
| No |
| 2 which one can be used as ec |
|  Combined oral pills |
|  Progestin only pills |
|  Estrogen only pills |
|  Iucd |
|  Herbal vaginal pessaries |
|  Monthly injectables |
|  I do not know. |
| 3 what do you think is the composition of drugs in ec  |
|  The same as in the regular contraceptives |
|  The same but a high dose in the same hormones |
|  Completely different from the regular contraceptives |
|  I do not know |
| 4 how long should the first dose of ec be taken |
|  Immediately after sex |
|  Within 24 hours after sex |
|  Within 72 hours after sex |
|  Within 4 - 6 days after sex  |
|  After a missed period |
|  I do not know |
| 5 how do emergency contraceptives work |
|  Induce abortion |
|  Prevents pregnancy |
|  Terminates early pregnancy |
|  I don't know |
| 6 how effective are ec |
|  Highly effective |
|  Effective |
|  Less effective |
|  Not effective |
|  I do not know |
| 7.do ec prevent one from contracting hiv/aids and stis |
|  Yes |
|  No |
| 8 what is the correct timeframe after sex |
|  If menstruation fails |
|  Within 72 hours |
|  Within 120 hours |
|  After 120 hours |
|  I don’t know |
| 9 which situations can ec should be taken |
|  When condom burst |
|  When there is missed pills |
|  When there is failure of contraception |
|  When there is infrequent sex |
|  When there is miscalculation of calendar method |
|  I do not know |
|  When forced to have sex |

Section c. Attitudes

Please tick (√) against each opinion.

|  |  |  |
| --- | --- | --- |
| Opinion | Yes | No |
| Using ec is better than using contraceptive method |  |  |
| In case of an emergency, i will use ec  |  |  |
| Ec can damage the baby when breastfeeding |  |  |
| It is dangerous to recommend ec to others |  |  |

Section d. Utilization

1. Are you sexually active?

Yes no

1. (a) have you ever used any form of emergency contraception?

 Yes no

 (b) if yes which form of emergency contraception?

 Oral pills intra uterine device

1. Rate the overall use of emergency contraceptives

 Frequently very frequently occasionally rarely never

 **Thank you for taking part in this study**