Research Article

Utilization and Associated Factors of Emergency Contraception among Female College Students in Addis Ababa, Ethiopia

Endalew Gemechu Sendo
Assistant Professor, Addis Ababa University, College of Health Sciences, School of Nursing and Midwifery, Addis Ababa, Ethiopia

Kassahun Fikadu
Department of Midwifery, College of Medicine and Health Sciences, Arba Minch University, Arba Minch, Ethiopia

ABSTRACT

Background: Increasing the access and availability of modern contraceptives with emergency contraceptives prevent unplanned pregnancy. In Ethiopia, the rate of unintended pregnancy is high among adolescents. The role of the Emergency contraceptive is confirming in the prevention of unplanned pregnancy and its sequels. However, the use of emergency contraceptives in cities like Addis Ababa is very-low. Given that unsafe abortion is the leading cause of maternal mortality, appropriate use of emergency contraceptives as back up for regular contraceptive is therefore needed.

Objective: This study has assessed the practice of emergency contraception and associated factors among female students in ALKAN Health Science Business and Technology (HSBT) College, Addis Ababa, Ethiopia.

Methods: An institution-based study among 271 female ALKAN Health Science Business Technology College, Addis Ababa campus students using a self-administered questionnaire. The study subjects were selected randomly using a stratified sampling technique. We used both descriptive summaries statistics and logistic regression to present the study findings.

Results: The majority (93.3%) had emergency contraceptives awareness. Among those who had heard about an emergency contraceptive, 81.5% had good emergency contraceptive knowledge. The magnitude of participants who had used emergency contraceptive was 12.9%, where oral pills (93.3%) were the most frequently used method. Factors significantly associated with the use of emergency contraception were user being sexually active [AOR=124.0, 95%CI=33.4-61.1)], age less than or equal to 20 years [AOR=5.7, 95%CI=2.35-3.91)], and being single [AOR=6.2, 95%CI= 1.91-20.0)].

Conclusion: Efforts should be made to educate college female students on emergency contraceptives usage in their formal lesson.

Keywords: Emergency contraceptive, College students, Addis Ababa

Abbreviations:

EC-Emergency Contraceptive

ECP- Emergency Contraceptive Pills

AOR-Adjusted Odds Ratio

Introduction

The risk of maternal morbidity and mortality because of unsafe abortion can be reduced using the use of emergency contraceptives [1]. If an emergency contraceptive is taken within 72 hours of unprotected sexual intercourse, it is effective in reducing the risk of unintended pregnancy by 75% to 99% [2,3].

Emergency contraception (EC) is a hormonal contraceptive that is prescribed to ensuing unprotected sexual intercourse, contraceptive failure, and forced unprotected sex or in circumstances of sexual assault [4].

There are two different forms of preparations, one is as an intrauterine device (IUD) and the other is as emergency contraceptive pills. It is medically safe and effective, only minor side effects like nausea and vomiting were reported [5]. Its effectiveness can be extended up to 120 hours [6]. On the other hand, the copper-releasing uterine device can decrease the risk of pregnancy by 99% [7].

Globally, about 842 million are using contraceptive methods while 270 million have an unmet need [8]. World Health Organization (WHO) indicates that 75% of sexually active women are at risk of unintended pregnancy because of not using contraceptive where one in four pregnancies being unplanned [9]. In developing nations, from the annual 121 million unplanned pregnancies, 61% ended medical abortion. In countries that restrict abortion, the percentage of unwanted pregnancy that resulted in abortion has increased from 36% in 1990-2004 to 50% by 2015-2019 [10]. The possible factors of unsafe abortion includes malnutrition, severe illness, and bleeding, and even death, as well as a cycle of high fertility [9], upholding a commitment to ensure access to emergency contraceptive into the health system is needed. About 3.4 million unsafe abortion occurs among adolescents each year, accounting for maternal morbidity and mortality including other illnesses [11]. In Sub-Saharan African countries including Ethiopia, low-cost and confidential access to contraceptives and counseling at school has been introduced to lower school dropouts and rate of adolescent pregnancy [12,13].

The Ethiopian demographic and health survey 2019(EDHS 2019) report indicated that the contraceptive prevalence (CPR) among married women is 41% [14]. Despite the increase in the

use of modern contraceptives, the rate of unintended pregnancy per 1000 women of reproductive age in Ethiopia ranges from 13.7 to 41.5% [15,16]. One-fourth of maternal death in Ethiopia is due to unsafe abortion and about sixty percent of obstetrics and gynecologic admitted cases of unsafe abortion could have been using emergency contraceptives [17]. Increasing access to emergency contraceptives and proper use of it plays a role to reduce unwanted pregnancy [18].

In a study conducted in Ethiopia among college students indicated that 84% of participants had awareness of EC while 75% had ever used it [19]. However, study conducted among private college undergraduate female students are scarce and often inconsistent. Therefore, this study aimed at assessing the practice of emergency contraception among female students in ALKAN HSBT College, Addis Ababa, Ethiopia, and further reveal the relationship between several factors associated with EC among college students.

Methods and Materials

Study Setting, Design and Period

An institution-based cross-sectional study was conducted from February to July 2018 in ALKAN HSBT College Addis Ababa campus. The college is a privately owned college under the ALKAN Private Limited Company (PLC) founded in December 2002. There were eight academic units (Midwifery, Public health, Nursing, Medical Laboratory, Pharmacy, Accounting, Management, Information technology, and Surveying) included in four faculties (health faculty, Medical Science Faculty, Business and social science faculty, and technology faculty. According to the statistics obtained from the office of registrars of the Addis Ababa campus, there were a total of 890(706 diploma and 184 degree) female regular students enrolled in 2017/2018 at Addis Ababa Branch [unpublished data]. Most of the students came from the rural areas of Ethiopia.

Study Population: The study participants were all regular diploma and undergraduate female students of ALKANHSBT College who registered for the academic year of 2018 in the Addis Ababa campus.

Sample Size Determination: A sample size of 271 female students was obtained using a single population proportion formula, [n = (Z α/2)2 p (1-p) / d2]. Where: n = Minimum sample size, $_{Z}a_{/2}$ = Z-value at 95% Confidence Interval [CI=1.96], p = Estimated prevalence rate in 33 % [0.33], d = Margin of error tolerated is 5% [0.05]. Since the total population was less than 10,000; nf =ni/1+ni/N =340/1+340/890=246 + 10% contingency = 271.The proportion of students who had good knowledge about EC (33 %) as determined by study conducted(20), among female college students in Dessie city, Ethiopia was considered for the present study.

Sampling Procedure: A stratified random sampling was applied to select study participants from the source population. According to the statistics obtained from the office of registrars of its Addis Ababa campus, there were 890 female undergraduate students in 2010; 706(79%) of them were diploma graduates and 184(21%) were a total of 890(706 degrees and 184 diploma) regular students enrolled in 2018. First, we divided the students into two strata, diploma and degree students. From each stratum, simple random sampling was used to select participants based on the proportion of the number of students in each stratum. Then, 271 students consented and included in the study.

Inclusion and Exclusion Criteria: Selected female students who gave their consent were eligible to participate in the study.

Data collection method

Measurements

The dependent variable in this study was limited to the use of Emergency Contraception (EC). Any previous history of EC utilization was also assessed. The question asked was *'' Have you ever used emergency contraception? ''Yes/ No''*. The independent variable included Socio-demographic characteristics (including age and marital status), and faculties, year of study, knowledge about EC, and being sexually active. Knowledge- questions were included in the questionnaire. In this study, the sexual experience was termed as penetrative penile-vaginal sex at least once.

A 10-item knowledge questionnaire adapted from the previous study(17) was used to measure Knowledge about EC. A score of 1 was given for correct answers and 0 for incorrect answers. The maximum score was 10 and the minimum score was 0. All participants who didn't answer correctly got a score of zero. The range of scores (0-10) was further divided into two groups. A scale from 0-5 scores was assigned to have poor knowledge, Participants scored 6 -10 were labeled to have good knowledge.

The questionnaire comprises three sections: Section I contains the socio-demographic characteristics of participants. Section II comprises of sexual behaviors of the study participants such as ever started sex, and knowledge about EC, and others. Section III contains EC usage related variables of the study.

Data were collected by two academic staff using an anonymous self-administered structured questionnaire. The questionnaire was prepared in English and then translated into Amharic (local language). We used the Amharic version to collect the data.

Data Quality control

Measures were taken to ensure the quality of the collected data. The questionnaire was pretested among students of a department that was not sampled for the study and necessary changes were then made to maximize the reliability of the questionnaire. In this study, the pre-test of the data collection instrument and training of data collectors were some of the methods used to improve reliability. Likewise, we maintained the confidentiality and anonymity of the study. The data were collected while students were in classrooms. Lastly, the questionnaires were checked for completeness by the principal investigators.

Data Analysis

We cleaned and entered data into EPI INFO version 3.5.4 and exported to statistical software packages (SPSS) version 20.0 for data analysis. The logistic regression model was used to examine the association between usages of EC and selected determinant factors. The degree of association between independent variables (including age, marital status, faculties, year of study, knowledge about EC, and being sexually active; and dependent variable (usage of EC) was computed using crude

and adjusted odds ratio with 95% confidence interval. Variables with a p-value of less than 0.02 on binary logistic regression were included in multiple logistic regressions. Statistical significance was set at $p<0.05$.

Results

Socio-Demographic Characteristics

TABLE 1 depicts the socio-demographic characteristics of the respondents. A total of 271 female students took part in the study. Most 218(80.1%) of students were from the degree program. Among the study population 110(40.6%) were from nursing, 69(25.5%) from public health, 35(12.9%) from a midwife, 57(21%) from Pharmacy departments, respectively. The mean (SD) age of the respondents was 21.3 (+1.8) years. One hundred nine (40.2 %) of them were Amhara by ethnicity. A significant number of participants (63.5%) were greater than 20 years of age (age range 18 – 25yrs). Most of them were single (85.6 %).

Knowledge of Emergency Contraception

As depicted in **TABLE 2,** of the total respondents, 62 (22.9%) of them reported that they had sexual experience. The majority of the respondents 93.3% (252/271) reported that they have heard about emergency contraception. Out of the 252 respondents who have heard of emergency contraception 48% (121/252) got the information from a formal education in the curriculum32.1% (81/252) from the media, 13.5% (34/252) from health workers, 4% (10/252) from internet sources and 2.4% (6/252) from their peers and friends. The majority of 81.5% (221/271) of the respondents reported knowledge of the correct methods of emergency contraception (See **TABLE 2**).

The Practice of Emergency Contraception

TABLE 3 displays the practice of emergency contraception of the respondents. Concerning practice, 12.9% (35/271) of the respondents reported that they had ever practiced emergency contraception. Of the respondents who had ever used EC, the majority of the 85.7% (30/35) used the correct methods and a large proportion of them (80%, 28/35) knew the correct time for taking emergency contraception. Most of the respondents (91.4%) took EC from pharmacies while 74.3% of them who used EC reported that emergency contraception is effective 75-99 %.

Factors Associated with the use of Emergency Contraception

Table 4 depicts the predictors of the Practice of emergency contraception. Factors significantly associated with the use of emergency contraception are use being sexually active [124.1(33.4-61.1)], age less than or equal to 20 years old

Table 1: Socio-demographic characteristics.

Characteristics	Number (%)
Age	
≤20 years	99(35.5)
Greater than 20years	172(63.5)
Mean (SD)	21.3(± 1.8)
Year of study	
1st year	87(32.1)
2nd year	66(24.4)
3rd year	85(31.4)
4th year	33(12.2)
Category	
Nursing	110(40.6)
Public health	69(25.5)
Midwifery	35(12.9)
Pharmacy	57(21)
Program	
Degree	218(80.1)
Diploma	53(19.5)
Ethnicity	
Amhara	109(40.2)
Oromo	79(29.2)
Tigrai	38(14)
Others (Walayita, Gurage&Silte)	45(16.6)
Marital status	
Single	232(85.6)
Married	39(14.4)

Table 2: Knowledge of emergency contraception.

Characteristics (n=271)	Number (%)
Sexually active	
Yes	62(22.9)
No	209(77)
Heard about Emergency contraception	
Yes	252(93.3)
No	18(6.7)
Knowledge about Emergency contraception	
Good Knowledge (6 -10 scores)	221(81.5)
Poor Knowledge (0 -5 scores)	50(18.5)
Cut off point: 60%	

Table 3: Practice of emergency contraception.

Characteristics (N=271)	Number (%)
Used Emergency contraception	
Used	35(12.9)
Not used	236(87.1)
Methods used (N=35)	
Post pills	30(93.3)
IUCD	4(1.5)
COC	1(0.4)
Time to take Emergency contraception (N=35)	
Correct response	28(80)
Incorrect response	7(20)
Sources of Emergency contraception (N=35)	
Pharmacies	32(91.4)
Private clinics	2(5.7)
Public health facilities	1(2.8)
Effectiveness of Emergency contraception (N=35)	
75-99%	26(74.3)
30-50%	5(14.3)
Not sure	4 (11.4)

[5.7(2.35-3.91)], and being Single [6.2(1.91-20.0)]. Having Knowledge about emergency contraception and year of studies was not significantly associated with the use of emergency contraception among the respondents.

Discussion

Almost a quarter (22%) of respondents reported that they were sexually active at the time of the study which was slightly lower than the findings of Adama University, 29.4% [20,21].

The majority (93.3%) of respondents reported that they ever heard about emergency contraceptives before the study which agrees with the study in the University of Nigeria and northwest Pennsylvani [22,23]. This figure was higher as compared to a similar population in Lagos, South-Western Nigeria, and Enugu, South Eastern Nigeria [24]. This finding was also higher than the previous study conducted in Dessie town of Ethiopia by Nibabe [20], which revealed that 69.9% of the respondents heard EC as it is something a woman could use soon after unprotected sexual intercourse. This study indicated high knowledge about EC in contrast to other previous studies, which might be because health science students were comparatively in a better educational level.

This study has identified formal education and health workers as the leading source of information about emergency contraception. These students had formal means of learning about such reproductive health matters as they are Health Science students. As a result, they depend largely on the information they acquire from a formal education in their curriculum.

The majority (81.5%) of the respondents reported knowledge of the correct methods of emergency contraception. The highest frequently recognized correct method of emergency contraception in this study was Post pills. This method seems to be the further most universally accessible in Ethiopia. A study conducted in the United Kingdom revealed that medically related students were significantly more knowledgeable on emergency contraception than their non - medical counterparts [25].

Table 4: Factors associated with Practice of emergency contraception.

Variable	Emergency contraception(N=271)		95% CI	95% CI
	Used	Not used	Crude OR	Adjusted OR
	N (%)	N (%)		
Age				
≤20 years	12(34.3)	87(36.9)	**2.1(1.53-2.36)**	**5.7(2.34-3.91)**
≥20 years	23(65.7)	149(63.1)	**1**	**1**
Sexually active				
Yes	35(100)	32(22.9)	**38.3(13.8-25.8)**	**124.1(33.4-61.1)**
No	0	209(77.1)	**1**	**1**
Marital status				
Single	25(71.4)	207(87.7)	**2.9(1.2-6.5)**	**6.2(1.91-20.0)**
Married	10(28.6)	29(12.3)	**1**	**1**
Year of study				
First-year	15(42.9)	73(30.9)	**1**	**1**
Second-year	5(14.3)	60(25.4)	0.4 (0.14-1.18)	0.6(0.15-2.34)
Third-year	11(31.4)	74(31.4)	0.7(0.31-1.68)	1.1(0.28-4.34)
Fourth-year	4(11.4)	29(12.3)	0.7(0.21-2.19)	0.3(0.57-1.76)
Knowledge of EC				
Good Knowledge	28(80.0)	193(81.8)	0.9(0.36-2.17)	1.2(0.35-3.91)
Poor knowledge	7(20.0)	43(18.2)	**1**	**1**

Amongst the sexually active participants, only 12.9% % had ever used ECP in the present study, which was lower than the study from Tanzania [26].

In our study, a high level of contraceptive knowledge didn't translate into its actual practice compared to a study done in Germany among adolescents that recommended accurate knowledge was necessary for the correct use of emergency contraceptives [27].

Nevertheless, our finding was relatively higher than the results that were obtained from studies done by Obiechina et al. in Nigeria(26), where 38.1% of participating students were aware of emergency contraception while only 8.5% of them had ever practiced it. Similar results were obtained from Nigeria in a study done by Adeyinka [28].

Eighty percent of the respondents reported on the correct use of EC regarding correct timing, which was not congruent with a study from Nigeria by Aziken [29], where only 18% of them reported that they knew the correct time frame for taking EC. Our findings showed that the majority (80%) of the respondents were knowledgeable about EC on the overall summary index for knowledge. This finding was higher than the finding obtained from the previous study conducted at the Adma University of Ethiopia. Factors significantly influenced their practice of EC were being sexually active [124.1(33.4-61.1)], age less than or equal to 20 years old [5.7(2.35-3.91)], and being Single [6.2(1.91-20.0)]. Similar factors were also identified by Aziken and colleagues in Benin City, Nigeria.

The most common method of EC involves taking an increased dose of oral contraceptive pills as soon as possible— optimally, within 72 hours (3 days)—after unprotected sex. A second dose is taken 12 hours later. Insertion of an intrauterine device within 5days of unprotected sex is another, less frequently used, method of EC. Although intrauterine devices are effective, and their use is an appropriate method for many women, pills are easier to administer and may be taken by a wider user group [30].

EC is a safe and effective post-coital contraceptive method that can decrease the danger of unplanned pregnancy after unprotected sexual intercourse or contraceptive failure by at least 75% to 89% if taken within 72 hours of sexual intercourse. Every year, unintended pregnancies lead to at least 20 million unsafe abortions, resulting in the death of some 80, 000 women. There is low utilization of EC, while awareness is relatively high [31].

The majority of students in tertiary institutions are single, young adults who easily fall prey to excitement coupled with the liberal nature of campus life that predisposes them to high-risk sexual behavior. Unlike public universities, private colleges in Ethiopia do not have accommodations for their students. Most of the students came from rural areas and were living in rented houses away from their supervising families, which could open a gate for having risky sexual practices [32,33].

Strength and Limitation of the study

This is one of the few studies focusing on the Knowledge and practice of emergency contraception among female students in Private colleges, in Ethiopia.

The cross-sectional nature of our study excludes about cause and effect relationship of the study variables.

The study was conducted in a single private teaching institution in Addis Ababa, Ethiopia. The Knowledge and Practice of EC

in health students is not reflective of the general population. But, similar teaching institutions in the study setting of the country may share some of its characteristics but they are by no means the same and so there is the need to exercise caution in generalizing our findings to all private Higher education institutions in Ethiopia.

The result of this study depended on the self-report of a sensitive topic- sexuality and Emergency contraception. As a result, there might be an influence of social desirability bias.

Conclusion

This study indicated good knowledge of EC amongst the study population while its utilization was quite low (12.9%). Hence, effort should be made to educate college female students on emergency contraceptives usage and other reproductive health issues in their formal lessons or curriculum.

Funding

Funding for this study was made possible through grants offered by ALKAN HSBT College.

Availability of Data And Materials

On presumable requests, the data sets used for analysis during the current study are available from the corresponding author.

References

1. Myer L, Mlobeli R, Cooper D, Smit J, Morroni C. Knowledge and use of emergency contraception among women in the Western Cape province of South Africa: a cross-sectional study. BMC Women's Health 2007; 7:14.
2. Ahmed FA, Moussa KM, Petterson KO, Asamoah BO. Assessing knowledge, attitude, and practice of emergency contraception: a cross-sectional study among Ethiopian undergraduate female students. BMC Public Health 2012; 12:110.
3. Adhikari R. Factors affecting awareness of emergency contraception among college students in Kathmandu, Nepal. BMC Women's Health 2009; 9:1-95.
4. Neinstein LS. Adolescent health care: a practical guide: Lippincott Williams & Wilkins 2008.
5. YAPICI G, ONER S, SASMAZ T, BUGDAYCI R, KURT AO. Contraception. Issues in adolescent health and development Contraception. Issues in adolescent health and development 15, 2004. Integr Gynecol Obstet J 2010; 36:1087-1092.
6. Schwarz EB, Gerbert B, Gonzales R. Need for emergency contraception in urgent care settings. Contraception 2007; 75:285-288.
7. Tamire W, Enqueselassie F. Knowledge, attitude, and practice on emergency contraceptives among female university students in Addis Ababa, Ethiopia. Ethiop J Health Dev 2007; 21:111-116.
8. Kantorová V, Wheldon MC, Ueffing P, Dasgupta AN. Estimating progress towards meeting women's contraceptive needs in 185 countries: A Bayesian hierarchical modelling study. PLoS medicine. 2020; 17:1003026.
9. Bellizzi S, Mannava P, Nagai M, Sobel H. Reasons for discontinuation of contraception among women with a current unintended pregnancy in 36 low and middle-income countries. Contraception 2020;101:26-33.
10. Bearak J, Popinchalk A, Ganatra B, Moller A-B, Tunçalp Ö, Beavin C, et al. Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990–2019. The Lancet Global Health 2020.
11. Darroch JE, Woog V, Bankole A, Ashford LS, Points K. Costs and benefits of meeting the contraceptive needs of adolescents. Guttmacher Institute 2016.
12. Duflo E, Dupas P, Kremer M. Education, HIV, and early fertility: Experimental evidence from Kenya. Am Econ Rev Insights 2015;105: 2757-2797.
13. Gunawardena N, Fantaye AW, Yaya S. Predictors of pregnancy among young people in sub-Saharan Africa: a systematic review and narrative synthesis. BMJ global health 2019; 4: 1499.
14. Institute EPH, ICF. Ethiopia mini demographic and health survey 2019: key indicators. EPHI and ICF Rockville, Maryland, USA 2019.
15. Beyene GA. Prevalence of unintended pregnancy and associated factors among pregnant mothers in Jimma town, southwest Ethiopia: a cross sectional study. Contracept Reprod Med 2019; 4:8.
16. Goshu YA, Yitayew AE. Prevalence and determinant factors of unintended pregnancy among pregnant women attending antenatal clinics of Addis Zemen hospital. PloS one 2019;14: e0210206.
17. Ebuehi O, Ekanem E, Ebuehi O. Knowledge and practice of emergency contraception among female undergraduates in the University of Lagos, Nigeria. East Afr Med J 2006; 83 :90.
18. Ojiyi E, Anolue F, Ejekunle S, Nzewuihe A, Okeudo C, Dike E, et al. Emergency contraception: awareness, perception and practice among female undergraduates in Imo State University, southeastern Nigeria. Ann Med Health Sci Res 2014; 4: 904-909.
19. Kassa GM, Arowojolu AO, Odukogbe AA, Yalew AW. Prevalence and determinants of adolescent pregnancy in Africa: a systematic review and Meta-analysis. Reproductive Health 2018; 15:195.
20. Teklemariam NW. Female college students' knowledge, attitude and practice towards sex and emergency. contraceptives.
21. Health FMo. Technical and procedural guidelines for safe abortion services in Ethiopia. Ethiopia Addis Ababa 2006.
22. Firdawek E, Aragu D, Kondale M. Knowledge, attitude and utilization of emergency contraception: a cross sectional study among female university and college students. Ethiopian J Reproductive Health 2012;6:37-45.

23. Gebreselassie H, Fetters T, Singh S, Abdella A, Gebrehiwot Y, Tesfaye S, et al. Caring for women with abortion complications in Ethiopia: national estimates and future implications. Int Perspect Sex Reprod Health 2010:6-15.

24. Miller LM. College student knowledge and attitudes toward emergency contraception. Contraception 2011;83 :68-73.

25. Nworah JO, Sunday UM, Joseph OU, Monday OO, Josephat CA. Knowledge, attitude and practice of emergency contraception among students in tertiary schools in Anambra State Southeast Nigeria. International J Medicine and Medical Sciences 2010; 2:001-4.

26. Beitz J, Hutchings J. Emergency contraception: a vital component of reproductive health programs. West J Med 2002; 176:152-154.

27. Liambila W, RamaRao S, Maina JW, Gathitu MW. Mainstreaming emergency contraception in developing countries: a toolkit for policymakers and service providers. 2013.

28. Sedgh G, Singh S, Hussain R. Intended and unintended pregnancies worldwide in 2012 and recent trends. Stud Fam Plann 2014;45:301-314.

29. Sedgh G, Singh S, Shah IH, Åhman E, Henshaw SK, Bankole A. et al. Induced abortion: incidence and trends worldwide from 1995 to 2008. The lancet 2012;379:625-632.

30. Shah IH, Åhman E. Unsafe abortion differentials in 2008 by age and developing country region: high burden among young women. Reproductive health matters. 2012;20:169-173.

31. Somba MJ, Mbonile M, Obure J, Mahande MJ. Sexual behaviour, contraceptive knowledge and use among female undergraduates' students of Muhimbili and Dar es Salaam Universities, Tanzania: a cross-sectional study. BMC Women's Health. 2014;14:94.

32. Tilahun D, Assefa T, Belachew T. Predictors of emergency contraceptive use among regular female students at Adama University, Central Ethiopia. Pan African Med J 2010;7.

33. World Health Organization. Unsafe Abortion: Global and Regional Estimates of the Incidence of Unsafe Abortion and Associated Mortality in 2008, Geneva: World Health Organization, 2011.

ADDRESS FOR CORRESPONDENCE:

Kassahun Fikadu, Department of Midwifery, College of Medicine and Health Sciences, Arba Minch University, Arba Minch, Ethiopia, Mobile: :+251920136228; E-mail: kasfika@gmail.com

Submitted: Oct 07, 2020; Accepted: Jan 04, 2021; Published: Jan 11, 2021