



**ASSESSMENT OF KNOWLEDGE, ATTITUDE, PRACTICE AND
MAGNITUDE OF UNMET NEED FOR EMERGENCY
CONTRACEPTIVE USE AMONG GRADE TEN TO GRADE TWELVE
FEMALE STUDENTS OF ADIGRAT AGAZI HIGH SCHOOL,
ADIGRAT, HIGH SCHOOL, ADIGRAT, TIGRAY, ETHIOPIA, 2008.**

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ABSTRACT

Background: The need for Emergency contraceptive is clearly demonstrated by the occurrence of unwanted pregnancy and induced abortion. However, Abortion is reported as a major cause for maternity ward admissions and also maternal deaths. **Objective:** This study aims to assess knowledge, attitude, practice, and magnitude of unmet need for emergency contraception use among grade ten to - twelve female

students at Adigrat Agazi high school, Adigrat, Tigray, Ethiopia. **Methods:** A cross sectional descriptive study was conducted. A total of 321 female students who are attend from grade ten to twelve of Adigrat Agazi high school, Adigrat, Tigray, Ethiopia were completed the self-administrated structured questionnaire, in October, 2008. The Statistical Package s for Social Sciences (SPSS) version 16 was used for the ANOVA analyzes and results were presented in number in numbers, percentages, means, and standard deviations. The cut-off 5% level of significance was taken to see the difference between groups. **Result:** Three hundred and twenty high school female students grade 10-12 at Adigrat Agazi high school were participated in the study. Of which 317 (98.8 %) fill the questionnaire completely. This result also showed that the mean age participants were 18.7 years. Grade 10 students, Grade 11 and Grade 12 students accounted for 145 (45.7%), 55 (17.3%) and 117 (36.9%)

respectively. Of the total 317 respondents 148 (47%) had concern towards emergency contraceptives. This study finding indicated that abortion in the previous time accounts 28 (8.8%) and among those who had abortion 19 said once and the rest 9 said twice. Furthermore, unwanted pregnancy was 34 (10.7%) and rape, failure of condom and pressure were accounted for 11, 13 and the rest 10 respectively. **Conclusion:** Formulating and designing appropriate and integrated intervention strategy are effective to achieve the desire change on unwanted pregnancy and abortion in the study community. Strengthening advocacy and information education and communication to increase awareness and knowledge of students about emergency contraceptive methods. The Woreda health office should give high emphasis on the family planning service on high school students because they can act as a media to transmit for the community.

KEYWORDS: Knowledge, Attitude, practice, Magnitude, Unmet need, Emergency, Contraception, Grade ten to twelve, Female students, Agazi high school, Adigrat.

INTRODUCTION

Despite surprising technological advancement in modern contraception methods still unintended pregnancy is a worldwide problem that affects women, their families and the societies as a whole (Singh et al, 2006; Kababaihan,2007).Unintended pregnancy can result from contraceptive non use, contraceptive methods failure and less commonly from rape. Induced abortion is a frequent consequence of unintended pregnancy and can cause serious negative health effects, permanent disabilities and even maternal deaths (Warriner and Shah, 2006).Regardless of the cause, unintended pregnancy and negative consequences can be prevented by access to contraceptive services, including emergency contraception and by respecting the contraceptive convention as well as by respecting the right of women (Shorto, 2006). Worldwide more than a quarter of women who become pregnant have either an abortion or an unwanted birth (Alan Gutmacher Institute, 1999). Worldwide more than a quarter of women who become pregnant have either an abortion or an unwanted birth (Alan Gutmacher Institute, 1999). In developed countries of the 28 million pregnancies occurring every year. An estimated 49% are unplanned and 36% end in abortion. In developing countries of the 182 million pregnancies occurring every year, an estimated 36% are unplanned and 20% end in abortion. In developed countries of the 28 million pregnancies occurring every year, an estimated 49% are unplanned and 36% end in abortion (WHO, 2003). In developing countries of the 182 million pregnancies counting every year, an

estimated 36 % are unplanned. And 20 % end in abortion. WHO estimated that almost 20 million unsafe abortions occur each year, 19 million from developing countries, of the estimated 600,000 annual pregnancies related deaths world wide, about 13% /78,000/ are related to complications of unsafe abortion(Alan Gutmacher Institute,1999). In 2000, there were 19 million unsafe abortions worldwide and there were an estimated 30,000 deaths due to unsafe abortion and over 40% of abortion deaths were in Africa (International Planned Parenthood Federation Africa Region, 2002). In Ethiopia Maternal deaths associated with complications of pregnancy and delivery is one of the highest in the world i.e. 673 per 100,000 million live births (Central Statistics Authority, 2005). Complications of unsafe abortions are estimated to account for about 32% of maternal deaths. Induced abortion, performed by un qualified persons under unsafe condition was around 30% as studies has indicated in 2000 in Addis Ababa and its surrounding and it was responsible for 54% of maternal deaths (Mekbib et al, 2000).

It is not uncommon to find that many of the obstetric admissions are for complications of unsafe abortion which undoubtedly comprises other maternity and emergency services (Jamison et al, 2006). The treatment of abortion complications in hospitals consumes significant share of resources including hospital beds, blood supply and medications. Thus the consequences of unsafe abortions place great demand on the scarce clinical material and financial resources of hospitals (Federal Republic of Ethiopia Ministry of health, 2001). In about half of all unwanted pregnancies, conception occurs despite the use of some sort of contraception due to inadequate guidance to use contraception effectively, including addressing feelings, attitudes and motivations of users. No contraceptive method is 100% effective (Purl, 1997).

One solution to decrease unwanted pregnancy after the occurrence of unprotected sex secondary to contraception non use, contraception failure and rape is familiarizing clients and also providers about emergency contraception methods (Glassier, 2000). Emergency contraception refers to the contraception methods that can be used by woman in the 1st few days following unprotected intercourse to prevent unwanted pregnancy. The need for EC is clearly demonstrated by the occurrence of unwanted pregnancy and induced abortion. If EC were easily available and distributed through clinics and non clinic channels along with appropriate advocacy and IEC activities millions of unwanted pregnancy and abortions could be averted (Family Health International, 2001).World health organization estimated that

almost 20 million unsafe abortions occur each year. 19 million are from developing countries. Of the estimated 600,000 annual pregnancies related death worldwide, about 13% (78,000) are related to complication of un safe abortion. In 2000 there were 19 million unsafe abortion worldwide & there were an estimated 30, 000 deaths due to unsafe abortion & over 40% of abortions deaths were in Africa (International Planned Parthenhood Federation Africa Region, 2000).

In Ethiopia even if it was said that health care providers were advising a high dose of combined oral contraceptives for emergency, 1997 reproductive health need assessment revealed that very few health providers knew about EC in Ethiopia. In Ethiopia maternal deaths associated with complication of Pregnancy is one of the highest in the world i.e. 673 per 100,000 live births (Central Stastical Authority, 2005). Complication of unsafe abortion are Estimated to account for about 32% or material deaths (Mekibib et al, 2000). Induced abortion performed by un qualified persons under unsafe condition was around 30% as studies has indicated in 2000 in Addis Ababa and its surroundings and it was responsible for 54 % of the maternal deaths (Mekibib et al,2000). It is not uncommon to find that many of the gynecology admissions are for complication of unsafe abortion which undoubtedly comprises other maternity and emergency services. The treatment of abortion complication in hospitals consumes significant share of resource including hospital beds, blood supply and medication. Thus the consequences of unsafe abortions place great demand on the scarce clinical & financial resources of hospitals (Federal republic of Ethiopia Ministry of Health, 2001). In about ½ of all unwanted pregnancies, conception occurs despite the use of some sort of contraception due to in adequate guidance to use contraception effectively, including addressing feelings, attitudes & motivations of users. No contraception method is 100% effective (Purl, 1997).

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clinics channels along with appropriate advocacy and IEC activities, millions of unwanted pregnancy and abortion could be averted.

In Ethiopia, even if it was said that health care providers were advising a high dose of combined oral contraceptives for emergency purposes before the introduction of the dedicated product called postinor-2 tablets, the 1997 Reproductive health (RH) need assessment revealed that very few health providers knew about EC in Ethiopia. The study was meant to teach the double role of coital dependent methods i.e. condoms and EC either individually or as a dual protection to reduce the risk of both HIV/STI transmission and unwanted pregnancy. Two years later the ESOG in the 7th annual conference strongly recommended that EC promotion and use in the country would reduce unwanted pregnancies, which would have ended in unsafe abortion and its complications (Addis, 2003). Unmet needs for family planning of Tigray region was assessed in the DHS 2005 survey as the number of currently married mothers, who want to delay their next birth for 2 or more years or cease to bear any further children was comparatively better than other regions with 40.6% of currently married women's family planning needs being met. However, lessons could still be learned from Addis Ababa, which achieved 84.8% coverage of family planning needs being met (Central Statistical Authority, 2005).

In the study area Adigrat town the family planning coverage is 59% and unsafe abortion are 438, of this 9 are septic abortion (annual adigrat hospital report of 1999 E.C). Abortion is reported as a major cause for maternity ward admissions and also maternal deaths. And so, EC knowledge and also good access will help to avert this situation. Since there was no similar study conducted on this area, our study try to fill the gap by assessing KAP and the unmet need of EC in Adigrat Agazi high school and also suggests possible means of information, dissemination and increasing awareness among the people and recommend for planners and program managers to design strategies for preventing unwanted pregnancies by improving access to emergency contraceptive. Therefore, the aims of this study was to assess knowledge, attitude and practice, and magnitude of unmet need for emergency contraception use among grade ten to grade twelve female students of Adigrat Agazi high school ,Adigrat, Tigray, Ethiopia.

2. METHODS AND MATERIALS

2.1. Study design and period

Adigrat is a city and separate woreda in the Tigray Region of Ethiopia. Located in the east zone of Tigray with an elevation of 2457 meters above sea level, below a high ridge to the west, Adigrat is the last important Ethiopian city south of the border with Eritrea, and is considered to be a strategically important gateway to Eritrea and the Red Sea. Adigrat was part of Ganta Afeshum woreda before a separate woreda was created for the city. Agazi high school is one of high school found in Adigrat. The study was conducted among female students who are grade ten to grade twelve who are attended at Agazi high school, Adigrat, Ethiopia. The data was collected during October, 2008.

2.2. Study Design

A cross sectional descriptive study was conducted to assess knowledge, attitude and practice, and magnitude of unmet need for emergency contraception use among grade ten to grade twelve female students of Adigrat Agazi high school, Adigrat, Tigray, Ethiopia.

2.3. Source and Study Population

Female students who are attended at Agazi high school, Adigrat, Ethiopia were the source population. The total numbers of female students who are grade ten to grade twelve who are attended at Agazi high school, Adigrat, Ethiopia was 321. The participants who are volunteer to fill the provided questionnaire were included, whereas, those who are not willing to give response were excluded.

2.4. Sample size and sampling procedure

Sample size were determined by the formula for single population proportions, using the following formula

$$n = \frac{Z^2 P (1 - P)}{d^2}$$

Where n = minimum sample size for a population >10,000, Z = Confidence certainty used as 95 % = 1.96, P = prevalence that estimate maximum sample size (50 %) = 0.5, D = marginal error = 0.05; $n = \frac{(1.96)^2 \times 0.5 (1 - 0.5)}{(0.05)^2} = 384$

However, the total population is $< 10,000$ that is $N = 1766$ we used the formula. Therefore, we used, $NF = \frac{n}{1 + n}$

$= 315$, finally, 2 % of non respondents was $=6$ then $NF = 6 + 315 = 321$ was our final sample size.

N

From the four high schools in Adigrat town, we selected Agazi high school by lottery method, this high school has 1766 female students from 10-12. Then by using systematic random sampling we calculated the k-value i.e. $k = \frac{1766}{321} = 6$.

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Then we have administered questionnaire every sixth students after being arranged by chair. Sampling technique done every six students. According to the recommended sample size for performing factor analysis is 10 times the number of the items (Polit and Beck, 2010), systematically were supposed to participate in the study. Therefore, 321 female students who are grade ten to grade twelve who are attended at Agazi high school, Adigrat, Ethiopia completed in responding to the structured self administrated questionnaire.

2.5. Instrument and Measurement

A structured self administrated questionnaire was used by trained data collectors to assess knowledge, attitude and practice, and magnitude of unmet need for emergency contraception use among grade ten to grade twelve female students of Adigrat Agazi high school, Adigrat, Tigray, Ethiopia. To include the desired variables and ensure reliability and validity of the collected data, subject matter experts have been made to review the questionnaire.

2.6. Data Collection, Analysis and Presentation

The structured self administrated questionnaire was distributed to female students who are grade ten to grade twelve who are attended at Agazi high school, Adigrat, Ethiopia. The collected data was checked for completeness and consistency. The data collected from Agazi high school was compiled, processed and analyzed using master chart.

2.7. Data Quality Control and Assurance

Both data collectors and supervisor were taken training for one day in order to ensure the consistency of the structured self administrated questionnaire. The principal investigators reviewed the respondent interview questionnaire for completeness of the collected data. All questionnaire used for the data collection were kept sequentially. The data was stored in safe and secure place.

2.8. Ethical consideration

The study protocol was reviewed and approved by the Ethical Review Committee of Mekelle University College of health sciences, school of public health. Then, a briefly note explaining knowledge, attitude and practice, and magnitude of unmet need for emergency contraception use among grade ten to grade twelve female students of Adigrat Agazi high school, Adigrat, Tigray, Ethiopia and the aim of the study was written on the first page of the structured interview questionnaire to create an understanding about the purpose and its importance of participating in the study. Only participants consented to participate in the study replied the completed structured interview questionnaire. Data was collected anonymously and used mainly for the research purposes.

RESULTS

A total of 321 high school female students grade 10-12 from Agazi have participated in the study. The response rate was 98.8 %. The mean age participants were 18.7 years. Grade 10 students, Grade 11 and Grade 12 students accounted for 145 (45.7%), 55 (17.3%) and 117 (36.9%) respectively. More than one third 283(98.2%) of them were orthodox whilst 14(4.4%) were Muslim in religious status. One hundred and twenty one (38.1%) of the participants were low income families (they earn less than 150 Ethiopian Birr per month) [Table 1].

Table 1: Socio demographic characteristic of female students in Agazi high school grade 10-12, Adigrat, Tigray, Ethiopia, 2008.

Variable	Number	Percentage
Age		
15-19	215	67.8
20-24	98	30.9
> 24	4	1.2
Educational status		
Grade 10	145	45.7
Grade 11	55	17.3
Grade 12	117	36.9
Marital status		
Married	36	11.3
Unmarried	273	86.1
Divorced	0	0
Married but lives separately	8	2.5
Religion		
Orthodox	283	98.2
Muslim	14	4.4
Protestant	4	1.2

Catholic	16	5
Residence		
Urban	251	79.1
Rural	66	20.8
With whom she live		
Both parents	192	60.5
One parents	40	12.6
Friends	10	3.1
Alone	29	9.1
Relative	46	14.5
Self income		
Yes	67	21.1
No	250	78.9
Family educational status		
Father		
Illiterate	75	23.6
Can read and write	144	45.4
Primary school	54	17
Secondary school	31	9.7
Post secondary school	13	4.3
Mother		
illiterate	129	40.6
can read and write	115	36.2
primary school	38	11.9
secondary school	23	7.2
post secondary school	12	4.1
Family monthly income		
< 150 Eth Birr	121	38.1
151-250 Eth Birr	64	20.1
251-500 Eth Birr	48	15.1
501-1000 Eth Birr	36	11.4
> 1000 Eth Birr	48	15.1

This study result revealed that the majority 223 (70.3%) of the participants have ever been informed regarding Emergency contraceptive. Among these, 56 (25%) were heard about the benefit of Emergency contraceptive before 6 months, 92 (41%) 6 to 11 months and the remaining 75 (34%) between 1-5 years ago. Health institution, friends and relatives, media and formal class accounted for 61 (27.4%), 29 (13%), 72 (32.3%) and 61 (27.4%) were source of information to heard about emergency contraception respectively. One hundred and ninety-nine (86%) of participants were respond that emergency contraceptive should take after unsafe sex. However, 195 (87%) of the respondents EC is effective if it is taken properly. Regarding sources for emergency contraceptives, the majority 194 (27%) of participants were took emergency contraceptives from Governmental hospitals and health centers, followed by private health institution 26 (12%) [Table 2].

Table 2. Awareness and knowledge of emergency contraception in Agazi high school female students, Adigrat, Tigray, Ethiopia, 2008

Variable	Number	Percentage
Ever heard about Emergency contraception	223	70.3
The 1st time she heard about emergency contraceptive		
less than 6 months ago	56	25
6-11 months ago	92	41
1-5 years ago	75	34
Source of information about emergency contraception		
Health Institution	61	27.4
Mass medias	72	32.3
Formal education	61	27.4
Friends and relatives	29	13
Place from where ECP obtained		
Public Health centers and Hospitals	194	78
Private Clinics	26	12
Super markets	0	0
Others (school)	3	
ECP work if there is menstruation delay		
Yes	37	17
No	114	51
I don't know	72	32
Time at which ECPs should be taken after unprotected sex		
Immediately after un protected sex	60	27
24 hrs	120	54
5 day	11	5
1 week	20	9
At any time	12	5.4
Effectiveness of emergency contraception		
≥ 75%	195	87
50-74%	19	9
<50%	9	
Side effect of emergency contraceptive		
very safe	53	24.5
safe	68	30.5
un safe	63	28.3
I don't know	39	17.5
What type of drugs are EC		
The same as other pills	112	50.2
The same but high dose	22	9.9
In the form of inject able	58	26
IUCDs	11	
I do not know	20	9

This result shows that the majority 148 (47%) of participants had concern towards emergency contraceptives. Forty-six (31.1%) were complained that EC will get unwanted pregnancy in the future. The result also indicated that participants preferred that EC provided by doctor,

nurse social worker, Midwife accounted for 117 (36.9%), 51 (16.1%), 80 (25.2%), and 48 (15.1%), respectively [Table 3].

Table 3: Attitude of Agazi high school female students towards emergency contraception, Adigrat, Tigray, Ethiopia, 2008.

Variable	Number	Percentage
any concerns towards emergency contraceptive		
- Yes	148	47
- No	169	53
Concerns about E.C		
- It may cause health problem	13	
- It may hurt in case if it does not work	9	
- It may result in complain of get pregnant in the future	46	31.1
- Its use may be illegal	20	13.5
- If men know the presence of E.C then would exert pressure on women to use it	17	
- some women may use it frequency instead of using regular contraception	24	16.4
- Other specify	1	
- I don't know	18	
Person preferred to provide E.C		
- Doctor	117	36.9
- Nurse	51	16.1
- Social worker	80	25.2
- Mid wife	48	15.1
- Pharmacists	18	1.8
- Others	3	0.9
Intention to use /recommend/ E.C for you & friends		
- Yes	69	21.8
- not sure	248	78.2

Based on the utilization of Emergency contraceptive, the majority 67 (30%) of participants gave a response that they have ever been in a need of EC, but only 51 (22.9%) have used it. Of those respondents who have ever used 19 said once, 20 (39.2%) twice and the rest 12 used more than two times. The finding also shows that the regular contraceptive users who are used emergency contraceptive were 33 (64.7%). However, 12 were used pills and 21 (63.6%) were inject able. Of the total 317 respondents 148 (47%) had concern towards emergency contraceptives. This study finding indicated that abortion in the previous time accounts 28 (8.8%) and among those who had abortion 19 said once and the rest 9 said twice. Furthermore, unwanted pregnancy was 34 (10.7%) and rape, failure of condom and pressure were accounted for 11, 13 and the rest 10 respectively.

Table 4. Utilization of EC among Agazi high school female students, Adigrat, Tigray, Ethiopia, 2008

Variable	Number	Percentage
Ever been in a need to E.C		
• Yes	67	30
• No	156	70
Ever used E.C pills		
• Yes	51	22.9
• No	172	77.1
Person who recommended E.C for client		
Girl	10	
Boy friend	6	
Health personnel	35	68.6
Reason for using E.C		
• Contraception not used	14	
• Error in period calculation	12	
• Condom broken and slipper	11	
• Pressure by male to have sex	14	
Regular contraception after the E.C		
• Yes	33	
• No	18	64.7
Types of Regular contraception used		
• Pills	12	
• Inject able	21	63.6
Preferred place for E.C distribution		
• Public Hospital	65	29.1
• Health center	120	56.5
• Private Hospital	10	
• Traditional birth Attendance	13	
• School	7	
Abortion encountered		
• Yes	28	8.8
• No	289	91.2
Frequency of Abortion		
• Once	19	
• Twice	9	
Encountered un wanted pregnancy		
• Yes	34	10.7
• No	283	89.3
Reason for un wanted pregnancy		
• Rape	11	
• Failure of condom	13	
• Pressure from partner	10	

Table 5: odds ratio to see the association b/n emergency contraception awareness and socio demographic, economic and other characteristic of Agazi high school female students, Adigrat, Tigray, Ethiopia, 2008.

Variable	Knowledge	
	Yes	No
Age		
15-19	147(65.4%)	68(31.6%)
20-24	72(63.5%)	26(26.5%)
>24	4	
Education		
Grade ten	111(76.6%)	34(23.4%)
Grade eleven	39(70.9%)	16(29.1%)
Grade twelve	73(62.4%)	44(37.6%)
Marital status		
Married	42(91.3%)	21
Unmarried	181(66.3%)	92(33.7%)
Income (Self income)		
Yes	52(77.6%)	15
No	171(68.4%)	79(31.6%)
Family Income		
<150		
151 – 250	164(70.4%)	69(29.6%)
251 – 500		
501 – 1000	59(70.2%)	25(39.8%)
>1000		

4. DISCUSSION

The result of our study showed that age has a positive influence in the awareness of emergency contraception methods but our study did not show statically significant difference in educational status among the three grades. This can be due to the recent (this year) allocation of clinical nurse in this high school. This study showed that those students who have married had better awareness on emergency contraceptives than unmarried. This study result indicated that those students who have self income had better awareness to emergency contraceptives. Different studies in various part of the world have found that higher self income significantly increase the likely hood of practicing different type of modern contraceptive methods.

Out of a total 317 female students 223 (70.3%) of them had heard emergency contraceptives. This result is better than study done in South Africa which was 22.8% out of 1068 female clients¹⁴. But their knowledge was superficial because only 22(9.97%) of those who have heard about emergency contraceptives provided correct answer for the question what type of

drugs are emergency contraceptives. Among the participants, 33(64.7%) knows at least one type of modern contraceptives means and this finding is much less than the DHS Ethiopia 2005 report i.e. 87%.

148 (47%) of the participated students have identified concerns about emergency contraceptives may affect health, hurt the fetus if it does not work and also may result in problem to get pregnant in the future .69 (21.8%) of the respondents said they can use and recommend emergency contraceptives if it is available which is much less than the study done in Mexico city that is 84%. This reflects they have lack of knowledge or understanding about the side effects of emergency contraceptives. Providing enough information on emergency contraceptives methods can alleviate their fears and clients would be willing to use or recommend it.

The utilization of emergency contraceptives methods was 51 (22.9%) which is much better than the study done in Kenya, Nairobi 16%.From this study result those who have ever encountered un wanted pregnancy were 34(10.7%) which is less than the data estimated of unwanted pregnancies in Ethiopia that is 40 -41%.The un wanted pregnancy in our study area was because of failure of condom 13(38.2%),rape 11(32.4%),and pressure from partner 10(29.4%). Of those 28 student who had ever faced abortion, 16 (57.1%) of them had not heard about emergency contraceptives methods.

5. CONCLUSION

In the study there is significant number of an intended or unwanted pregnancies occurring due to reasons like rape, condom failure and partner pressure. Even if emergency contraception was available in the selected governmental health facilities. The study showed that there is superficial awareness and less utilization of emergency contraceptive methods among the study participants.

Hence, a lot of educational and motivational activities and improvement in family planning services are needed to promote the use of emergency contraceptives and reduce high rate of unwanted pregnancies and its consequences and also adding emergency contraceptive methods to the modern contraceptive method mix can be one solution to the problem.

In the study the students have superficial awareness about emergency contraceptive methods. of those who were aware about the availability of emergency contraceptive the majority lack

the knowledge on what type of drugs are emergency contraceptive and there are students who have negative attitude about emergency contraceptives. If the students had enough/deep/awareness and knowledge about emergency contraceptives unwanted pregnancies and their consequence would have been reduced substantially.

The nurse who is assigned in the high school should create awareness about emergency contraceptive methods for the students and this may further help to disseminate the information to the family. As the study clearly indicated there is superficial knowledge and low utilization of emergency contraception.

To improve this situation the following recommendations are made. Strengthening advocacy and IEC (information education and communication) to increase awareness and knowledge of students about emergency contraceptive methods. Motivating and training for the nurse who are assigned in the high school about emergency contraceptives and at large family planning services. The Woreda health office should give high emphasis on the family planning service on high school students because they can act as a media to transmit for the community. Not only female students but also the male students should be aware on family planning services. This can reduce unwanted pregnancies that was related to partner pressure and rape.

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AUTHORS' CONTRIBUTION

Development of the original idea and protocol, data abstraction and analyses, writing the Manuscript: Molla Teferi and Mach Tsadik and Development of the protocol, overall guide data abstraction, preparing the manuscript: Molla Teferi and Addis Adera.

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REFERENCE

1. Addisu, C. EC in Ethiopia. Emergency Contraceptive (EC) Afrique bulletin, 2003; 1: 10.
2. Alan Guttmacher Instituted (AGI). Induced abortion worldwide: sharing responsibility women. Society and abortion worldwide. Alan Guttmacher Institute., 1999; 5.

3. Central statistics authority (CSA). Ethiopian demographic and health survey. Addis Ababa, Ethiopia, 2005; 232: 58-64.
4. Ethiopia society of obstetrics and Gynecologist (ESOG) in collaboration with MoH and EC Afrique. EC training curriculum for mid level health workers in Ethiopia, Oct 2004.
5. Federal republic of Ethiopia Government Ministry of Health. Guideline on post abortion cares for health service providers in Ethiopia, 2001.
6. Family Health International. Emergency contraceptive pills. Net work, 2001; 21(1): 8-16.
7. Glassier, A. Emergency contraception. British medical bulletin, 2000; 56(3): 729 – 738.
8. International Planned Parenthood Federation Africa Region. Unsafe abortion and post abortion family planned in Africa, the Mauritius conference, 2000; 1–10.
9. Jamison DT, Breman JG, Measham AR, et al., editors. Wendy J. Graham, John Cairns, Sohinee Bhattacharya, Colin H. W. Bullough, Zahidul Quayyum, and Khama Rogo Chapter 26 Maternal and Perinatal Conditions. Washington (DC): World Bank; 2006. <http://www.ncbi.nlm.nih.gov/books/NBK11742/>
10. Kababaihan, L. Reproductive Health, Rights and Ethics Center for Studies and Training (ReproCen), and CRR, Imposing Misery: The Impact of Manila's Ban on Contraception, Quezon City, Philippines: Likhaan; Manila, Philippines: ReproCen; and New York: CRR, 2007. <http://www.reproductiverights.org/sites/crr.civicactions.net/files/documents/imposingmiseryupdated.pdf>
11. Kumbi, S. A first for Ethiopia. EC Afrique bulletin, 2003; 2(3): 4.
12. Mekbib, T., Yoseph, S., Gebrehiwot, Y. A database on abortion literature review Ethiopian society of obstetrics and Gynecology (ESOG), 2000; 11–15.
13. Mekbib, T., Gebrehiwot, Y., Fantahun (2002). Report of survey of unsafe abortion in health facilities in Ethiopia, Ethiopian society of obstetricians and Gynecologists (ESOG), May 2002.
14. Malleson, RM. Emergency contraception: A simple, safe, and effective approach to preventing pregnancy after unprotected intercourse .Issue: BCMJ, 2002; 44(1): 30-35. Reterived from <http://www.bcmj.org/article/emergency-contraception-simple-safe-and-effective-approach-preventing-pregnancy-after-unprot>.
15. Okonofua, F. E. Unsafe abortion in Africa. Africa journal of reproductive health, 2004; 8(1): 12 – 32.
16. Purl, CP. Emergency contraception. ICMR bulletin, 1997; 27(3): 19 – 30.
17. Singh,S., Juarez,F., Cabigon,J., Ball,H., Hussain,R., Nadeau,J(2006). Unintended Pregnancy and Induced Abortion in the Philippines: Causes and Consequences, New

- York: Guttmacher Institute, 2006. <https://www.guttmacher.org/pubs/2006/08/08/PhilippinesUPIA.pdf>
18. Shorto, R (2006). Contra-Contraception (accessed on May 7, 2006).http://www.nytimes.com/2006/05/07/magazine/07contraception.html?pagewanted=print&_r=0
 19. Terki, F., Malhora, U. Emergency contraception. Medical and service delivery Guidelin, international Planned Parenthood federation, 3rd ed., 2004; 252 – 267.
 20. The international consortium for Emergency Contraception. Emergency contraceptive pills; medical and services delivery guidelines 2nd ed, 2004; 7 -12.
 21. Warriner, IK., Shah, IH. Preventing Unsafe Abortion and its Consequences: Priorities for Research and Action, New York: Guttmacher Institute, 2006; ISBN: 0-939253-76-3 Reterived from [http://www.who.int/reproductive health/publications/unsafe-abortion/0939253763.pdf](http://www.who.int/reproductive_health/publications/unsafe-abortion/0939253763.pdf)
 22. World Health Organization (WHO). Global and regional estimate of unsafe abortion and association movement in 2000, unsafe abortion 4th Ed, Geneva, 2004; 10-16.
 23. WHO. Unsafe abortion: global and regional estimates of incidence of unsafe abortion and associated mortality in 2003;- 5th ed. ISBN 978 92 4 159612 1 NLM classification, 2003; WQ 440.