THE EFFECT OF EMERGENCY CONTRACEPTION USE ON CONDOM USE: A CROSS SECTIONAL SURVEY AMONG STUDENTS OF JIMMA TECHNICAL AND VOCATIONAL TRAINING COLLEGE, JIMMA, ETHIOPIA

Tesfaye Mohammed [1] Chalachew Teshale[2] Seid Musa[2] and [*]Shewatatek Gedamu[2]

[1]Jimma University specialized hospital, Jimma, Ethiopia,
[2]Jimma University, College of Public Health and Medical sciences, Jimma,
P.O. Box, 378, Jimma, Ethiopia,
* E-mail: gedamuwo@yahoo.com
gedamuwonde@gmail.com

Abstract

Background: The effect of a combined message to adolescents of promoting condom use with emergency contraception as back-up is not known.

Objective: This study was aimed to assess the effect of emergency contraception use on condom use among students of Jimma Technical and Vocational Training College.

Materials and Methods: A cross- sectional study was conducted from May-June 2011 on 422 Jimma Technical and Vocational Training College students who were available in the campus compound during data collection period. Data was collected by using self administered structured questionnaire, analyzed using SPSS soft ware version 16.0 (SPSS Inc., Chicago, IL, USA). Chi square test was calculated with 95% confidence intervals; P-values less than 0.05 were considered as statistically significant.

Results: Out of 422 respondents, 338 (80.1%) have heard about emergency contraceptives and friends were the main sources of information for 169 (50%) of respondents. The correct recommended time when to take emergency contraceptive pills after unprotected sexual intercourse were known by 164 (48.6%), whereas 175 (51.8%) knew the correct recommend dose and frequency. Condom was used as a preferred method by 327 (77.4%) of respondents to prevent unwanted pregnancy due to its double purpose, that is preventing both pregnancy and sexually transmitted diseases.

Conclusion: The result of this study showed that there was more awareness about condom than ECPS among the respondents and majority of the respondents had positive attitude about condom instead of ECPS because of its double benefit. Whereas partners trust and increase in sexual pleasure were the main reasons to prefer ECPS to condom.

Key words: Emergency contraceptive; Ethiopia; Condom; effect; regular birth control

Introduction

Emergency contraception, which prevents pregnancy after unprotected sexual intercourse, has the potential to significantly reduce the incidence of unintended pregnancy and the consequent need for abortion (1). Emergency contraception is especially important for outreach to the 4.5 million women at risk of pregnancy but not using a regular method by providing a bridge to use of an ongoing contraceptive method (2). Although emergency contraceptives do not protect against sexually transmitted infection, they do offer reassurance to the 8.6 million women who rely on condoms for protection against pregnancy in case of condom slippage or breakage (3,4).

World Health Organization estimates that 84 million unwanted pregnancies occur annually worldwide (5). Most of these results are from none use of contraception or from noticeable contraceptive failure, such as condom breakage, slippage, or incorrect use and could be prevented with the use of emergency contraception(6). Unintended pregnancy poses a major challenge to the reproductive health of young adults (7). A worldwide

study conducted by the WHO to assess the reproductive needs of the population found unexpected discrepancy between the young people's familiarity with modern contraception and on the other hand the high levels of unwanted pregnancy and unsafe abortion experienced by them. Worldwide millions of women who could benefit from emergency contraception have never hearted of it (8,9).

In case of unintended or unwanted pregnancies, abortion is the most practiced approach to intervene (10). Unsafe abortion is one of the top causes incriminated in the high number of maternal morbidity and mortality (11). Unsafe abortion is a major medical and public health problem in Ethiopia. Ethiopia has a high incidence of unwanted pregnancies and unsafe abortions, particularly among adolescents (12).

School based HIV prevention studies have had mixed results in terms of ability to influence risky sexual behavior. The effect of a combined message to adolescents of promoting condom use with emergency contraception as back-up is not known. Family planning services have recently begun to make targeted efforts to involve male partners in pregnancy and STD-prevention efforts, and research has likewise started to examine various aspects of male involvement, particularly concerning condom use. Since providing up to date information to consumers on correlation of emergency contraception use with that of condom use, is one of the measures taken to combat the effect of one on the other. Therefore this study aimed to assess the effect of emergency contraception use on condom use.

materials and method

Study area

The study was conducted in Jimma Technical and Vocational Training College which found in Jimma town 335km away from the capital city Addis Ababa, South west Ethiopia .

Study design

Cross-sectional quantitative study was conducted on 422 students from May-June 2011. All regular students of Jimma Technical and Vocational Training College were taken as source population. The study population was those students who were available in the campus compound during data collection period

Sample size and Sampling technique

Since there was no prevalence related to this study sample size was determined by taking prevalence rate (p) 50%, confidence interval of 95% and 5% margins of error; and it was found to be 422(including 10% non response rate).The total number of students who answered the questionnaire was 422. A stratified random sampling technique was applied to determine the sample size from the source population. The respondents were divided in to three strata by their level of study. Simple random sampling method was used to select participants from each stratum based on the proportion of the number of students in each stratum.

Data collection technique

Data was collected by using self administered structured questionnaire which was prepared in English.

Data analysis:

Data were thoroughly scrutinized for errors and proper coding before subjected to statistical analysis and analyzed using SPSS soft ware version 16.0 (SPSS Inc., Chicago, IL, USA).The associations of risk factors were analyzed by chi square test (X^2) and result was presented by using appropriate tables.

Data quality control

To increase the quality of the data a brief explanation was given to respondents before the data collection. The questionnaire was pre tested, necessary corrections were made and Completeness and consistence of the questionnaire was checked on daily base.

Ethical consideration:

A formal letter was obtained from Jimma University SRP ethical committee and given to administrative body of Jimma Technical and Vocational Training College. Consent was obtained from each respondent. The purpose of the study was explained to all study participants and they were also informed that all of their responses are confidential and unidentified.

Results

A total of 422 students' age range 15-49 years old were participated and the response rate was 100%. About 227(53.8%) of the respondents were male. The commonest age groups were 20-24 years which accounts for 48.6%. On the basis of respondents religion distribution majority of the study subjects 222 (52.6%) were orthodox, 117(27.7%) were Muslim and 39(9.2%) were protestant. Most (83.4%) of students were not married (it includes single and those have boyfriend /girlfriend). Among 422 respondents 298 (70.6%) of them were year I students and followed by year II, which is 108(25.6%). Among respondents 304 (72.1%) have been found to be sexually active (Table 1).

In this study 338(80.1%) of the students had ever heard of emergency contraceptives. Among the respondents who had ever heard of emergency contraceptives, 169 (50%) reported that their main sources of information were their friends and 164 (48.6%) knew the correct recommended time to take ECPS after unprotected sexual intercourse. Majority of the respondents 175 (51.8%) knew the correct recommend dose and number of hours apart between the doses, and 230 (68%) knew the availability of ECPS from pharmacy (Table 2).

Concerning the attitude of respondents, 236 (69.8%) students had opinion to use ECPs or recommend their sexual partner to use ECPs in unintended sexual intercourse, 188(55.6%) of the respondents had outlook that wide spread use of ECPs would increase the prevalence of HIV/ AIDS and other STIs, 185(54.7%) of the respondents had thought that availability and accessibility of ECPs may promote sexual risk taking behavior, 183(54.1%) of the respondents had not thought as ECPs was one way to induce abortions, 109 (32.2%) and 162(47.9%) of the respondents were not sure that ECPs are more safe and ECPS would affect ongoing regular methods of contraception respectively (Table 3).

On this study most of the respondents 337 (80.3%) were preferred to use condom and only 51 (12%) of the respondents were preferred to use ECPs to prevent pregnancy and it is significantly associated with religion and college level of study (Table 5). The awareness of respondents to emergency contraceptives also significantly associated with productive age group (Table 4).Among the respondents who had ever heard of ECPs, 132 (40.83%) of them had ever used it and the trend of ever use of ECPs were significantly associated with productive age group and college level of study (Table 6).

The main reasons of students who had preferred condom to prevent unintended pregnancy were:(i) condom can prevent both pregnancy and STDs as a result of unplanned sexual intercourse, (ii) is more available than ECPs, (iii) they didn't know about ECPs and (iv) they didn't want to use ECPs/OCPs for fear of side effect**s** and it accounts 301(92%), 53(16.2%), 10(3.1%) and 14(4.3%) respectively**.** The reason behind preference of ECPs for 51(12%) of the respondents were; (i) Trust each other 46(90.1%),(ii) It increases my sexual pleasure 23(45%),(iii) Taking ECPs is convenient 20 (39.2%), (iv) ECPs can be used as replacements for OCPs 18 (35.2) and (v) My partner do not accept in using Condom 5 (9.8%)(Table 7).

Discussion

From the total number of study subjects about 304 (72.1%) reported that they are sexually active. Similar results were reported by different studies among Nigerian university students (13,14).

three hundred thirty eight (80.1%) of the students have heard about emergency contraceptives, most of the respondents 50% had information about ECPS from friends and 28.4% from health education. These results were higher when compared to one study conducted among University students in Uganda which was less than half (45.1%) of the students had ever heard about Emergency contraception and their most common source of information were friends (34%) and health institutions (24.8%) (15).

One hundred sixty four (48.6%) from those who have heard about emergency contraceptives, have identified the recommended time to take ECPs after unintended sexual intercourse. This finding was higher when compared to another study conducted in Nigeria where 18% the respondents know about the correct time frame when to be used. However, this finding was more or less similar to other several studies conducted in higher institutes in South Africa, Ghana, Nigeria and other developing countries reported(16–18).

Among those students who have heard about emergency contraceptives, most of the respondents 68 % had knowledge about the availability of ECPS from pharmacy 11.9%, from Hospital and 17.5% from health center. When this result was compared with one study conducted in students of Jamaica 87% of students know ECPs were available in pharmacies, 69% in health centers and 60% from hospitals(19). This difference might be due to our level of development in disseminating health related information to the final users and motivation of the students in searching for new knowledge other than their field of study.

There were some beliefs in using ECPS; 69.8% of the respondents were used when they have had unintended sexual inter course which was higher than a study done in Hong Kong, where only 2.5% had used for this purpose.

On this study 45.9% of the respondents didn't want to use ECPs for fear of side effects and the result was comparable with the same study conducted in Hong Kong where 41.8% did not use it because they were willing to take the risk of pregnancy (20).

Most of the respondents 54.7% believed that ECPS promotes promiscuity and 13% had opinion as it was one way of abortion. About 55.6 % of the respondents believed that wide spread use of ECPS would increase the prevalence of HIV /AIDS and other STIs. When this result was compared with one study conducted in Addis Ababa University, Ethiopia, only 17% of respondents had reported problems with emergency contraceptives and some of their reasons were; it causes health problems and unpleasant side effects, it might cause more STI and HIV/AIDS infections due to non use of condoms, it would increase promiscuity and it could fail and will be completely useless after having sexual contact (21).

These findings showed that the preference of using condom to prevent pregnancy rate of about 80.3%. However, emergency contraceptive preference was low (12%). Most important reasons of students who had preferred condom to prevent unintended pregnancy were:(i) condom can prevent both pregnancy and STDs as a result of unplanned sexual intercourse, (ii) is more available than ECPs, (iii) they didn't know about ECPs and (iv) they didn't want to use ECPs for fear of side effect**s** and it accounts 301(92%), 53(16.2%), 10(3.1%) and 14(4.3%) respectively**.** Some of the respondents didn't want to use ECPs due the fact that there is low promotion and availability, fear of side effects and believed that it could not prevent both HIV/AIDS and STDs. There were also reasons among students those prefer ECPS. However a considerable proportion 46(90.1%) and 23 (45%), partner trust and increase in sexual pleasure were the main reasons respectively. This showed that emergency contraceptive use was lower than condom among students of Jimma Technical and Vocational Training College students. This should be encouraged since using condom had double benefits.

Positive attitude towards utilization of ECPs was statistically associated among respondents of productive age group. Positive responsiveness (knowledge) of ECPs was statistically associated among respondents of productive age group and college level of study.

Conclusions

In this study the Productive age group and college level of study were found significantly associated with the effect of emergency contraception use on condom utilization. The result of this study showed that there was more awareness about condom than ECPS among the respondents and majority of the respondents had positive attitude about condom instead of ECPS because of its double benefit. Whereas partners trust and increase in sexual pleasure were the main reasons to prefer ECPS to condom.

Recommendations

Based on the finding of this study, most of the study participants are utilizing condom as preventing mechanism to prevent both unplanned pregnancy and sexually transmitted disease. There must be also awareness creation and promotion on the use of emergency contraceptive pills appropriate use to prevent unplanned pregnancy in case of failure of condom, which might be due to rupture while use.

Acknowledgements

The authors would like to thank Jimma University, College medical and health sciences for financial support to execute this research work.

CONFLICT OF INTERST

The authors confirm that this article content has no conflict of interest.

Competing Interests

The authors declare that they have no competing interests

Authors' contributions

These authors (TM and CT) contributed equally to this work.

The authors (SG and SM) contributed in editing and finalizing the paper for publication

References

[1] Trussell J, Stewart F, Guest F, Hatcher RA. Emergency contraceptive pills: a simple proposal to reduce unintended pregnancies. Fam Plann Perspect. 1992 Dec;24(6):269–73.
[2] Mosher WD, Martinez GM, Chandra A, Abma JC, Willson SJ. Use of contraception and use of family planning services in the United States: 1982-2002. Adv Data. 2004 Dec 10;(350):1–36.
[3] Stewart F, Trussell J, Van Look P. Emergency contraception. In Hatcher RA, Trussell J, Nelson A, Cates W, Guest F, Stewart F, Kowal D. Contraceptive Technology: N Y NY Ardent Media. 2007;Nineteenth Revised Edition.
[4] Glasier A. Emergency postcoital contraception. N Engl J Med. 1997 Oct 9;337(15):1058–64.
[5] WHO. A tabulation of Available data on the frequency and mortality of unsafe abortion. 2ndEdition, WHO division family health and safe mother hood program,. Geneva. 1994;2nd edition:243–7.
[6] International Consortium for Emergency Contraception. Medical and service Delivery guidelines; Consortium for emergency contraception pills; Wash DC USA. 2003;2nd edition.
[7] Akani C, Enyindah C, Babatunde S. Emergency contraception: knowledge and perception of female undergraduates in the niger delta of Nigeria. Ghana Med J. 2008 Jun;42(2):68–70.
[8] Free C, Lee RM, Ogden J. Young women's accounts of factors influencing their use and non-use of emergency contraception: in-depth interview study. BMJ. 2002 Dec 14;325(7377):1393.
[9] Tilahun D, Assefa T, Belachew T. Knowledge, attitude and practice of emergency contraceptives among adama university female students. Ethiop J Health Sci. 2010 Nov;20(3):195–202.
[10] John PS, Tekle-Ab M, Haileyesus G. Expanding contraceptive choice in Ethiopia. 2002.
[11] Tefera N, Mingistu G, George M. National population policy of Ethiopia, women in Ethiopia UNFPA in Ethiopia. 1994;9–13 and 35–8.
[12] Tadesse E, Yoseph S, Gossa A, Muletta E, Pogharian D, Ketsella K, et al. Illegal abortions in Addis Ababa, Ethiopia. East Afr Med J. 2001 Jan;78(1):25–9.
[13] Mansoor AB, Fungladda W, Kaewkungwal J, Wongwit W. Gender differences in KAP related to HIV/AIDS among freshmen in Afghan universities. Southeast Asian J Trop Med Public Health. 2008 May;39(3):404–18.

[14] Sekirime WK, Tamale J, Lule JC, Wabwire-Mangen F. Knowledge, attitude and practice about sexually transmitted diseases among university students in Kampala. Afr Health Sci. 2001 Aug;1(1):16–22.
[15] Byamugisha JK, Mirembe FM, Faxelid E, Gemzell-Danielsson K. Emergency contraception and fertility awareness among university students in Kampala, Uganda. Afr Health Sci. 2006 Dec;6(4):194–200.
[16] Roberts C, Moodley J, Esterhuizen T. Emergency contraception: knowledge and practices of tertiary students in Durban, South Africa. J Obstet Gynaecol J Inst Obstet Gynaecol. 2004 Jun;24(4):441–5.
[17] Baiden F, Awini E, Clerk C. Perception of university students in Ghana about emergency contraception. Contraception. 2002 Jul;66(1):23–6.
[18] Ogbuji CQ. Knowledge about HIV/AIDS and sexual practice among University of Ibadan Students. Afr J Med Med Sci. 2005 Mar;34(1):25–31.
[19] Sorhaindo A, Becker D, Fletcher H, Garcia SG. Emergency contraception among university students in Kingston, Jamaica: a survey of knowledge, attitudes, and practices. Contraception. 2002 Oct;66(4):261–8.
[20] Lee S, Wai M, Lai L, Ho P. Women's knowledge of and attitudes towards emergency contraception in Hong Kong: questionnaire survey. Hong Kong Med J. 1999 Dec;5(4):349–52.
[21] Wegene T, Fikre E. Knowledge, attitude, and practice on emergency contraceptives among female university students in Addis Ababa, Ethiopia. Ethiop J Health Dev. 2007;21(2):111–6.

Table: 1 Socio- demographic and characteristics of students in Technical and Vocational Training College, June-May, 2011.

Characteristics	Number (N)	Percent (%)
Age		
15-19	113	26.8
20-24	205	48.6
25-30	91	21.6
31-49	13	3.1
Total	422	100
Sex		
Male	227	53.8
Female	195	46.2
Total	422	100
Marital status		
Has a boy friend /girlfriend	82	19.4
Single	270	64
Married	64	15.2
Divorced	4	0.9
Widowed	2	0.5
Total	422	100
level of study		
level I	298	70.6
level II	108	25.6
level III	16	3.8
Total	422	100
Religion		
Orthodox	222	52.6
Muslim	117	27.7
Protestant	39	9.2
Catholic	38	9
Other (specify)*	6	1.4
Sexual activity		
Sexually active	304	72.1
Sexually not active	118	27.9
Total	422	100

*Jehovah's, Adventist

Table 2: Knowledge of ECPs methods among students in Jimma Technical and Vocational Training College, June-May 2011.

Recommended time to take ECPs	**Number (N)**	**Percent (%)**
Within 24 hours after sex	79	23.4
Within 48 hours after sex	32	9.5
Within 72 hours after sex	164	48.6
I don't know	63	18.6
Total	338	100
Recommended dose and number of hours apart between the doses		
One tablet two times 12 hours apart	175	51.8
One tablet two times 24 hours a part	39	11.5
I don't know	124	36.7
Total	338	100
Sources of information about ECPs		
Friends	169	50
Health Education	96	28.4
Radio and TV	93	27.5
Relatives	40	11.8
Others	19	5.6
Sources of ECPs		
Pharmacy	230	68
Health center	59	17.5
Hospital and others**	49	14.5
Total	338	100

** Family guidance, private clinic

Table 3: Attitudes towards ECPs among the students of Technical and Vocational Training College, June-May, 2011.

Attitudes towards ECPS	**Yes**		**No**		**Not sure**	
	Number	(%)	Number	(%)	Number	(%)
If I have unintended sexual intercourse, I would use ECPs or recommend to use ECPS for my female sexual partner.	236	*69.8*	42	12.4	60	17.8
Wide spread use of ECPs will increase the prevalence of HIV/ AIDS and other STIs.	188	55.6	81	23.9	69	20.4
Availability and accessibility of ECPs may promote sexual risk taking behavior	185	54.7	72	21.3	81	23.9
Emergency contraception is one way of abortion	44	13	183	54.1	111	32.8
ECPs are safe	74	21.9	155	45.9	109	32.2
ECPS will affect ongoing regular methods of contraception negatively	79	28.7	80	23.7	162	47.9

Table 4: General awareness of ECPs by some selected variables among students in Technical and Vocational Training College , June-May, 2011.

Variables	Heard ECPs		Not heard ECPs		Total		X^2	P- value
	No	%	No	%	No	%		
Age								
15-19	82	24.3	31	36.9	113	26.8	25.078	< o.ooo1
20-24	155	45.9	50	59.5	205	48.6		
25-30	89	26.3	2	2.4	91	21.6		
31-49	12	3.6	1	1.2	13	3.1		
Total	338	100	84	100	422	100		
Religion								
Orthodox	187	55.3	35	41.7	222	52.6	1.365	0.2428
Muslim	98	28.9	19	22.6	117	27.7		
Protestant	24	7.1	15	17.9	39	9.2		
Catholics	26	7.7	12	14.3	38	9		
Others	3	0.9	3	3.6	6	1.4		
Total	338	100	84	100	422	100		

Table 5: ECPs or condom preference to prevent pregnancy by some selected variables among students in Technical and Vocational Training College , June-May, 2011.

Variables	Preferred ECPs		Preferred condom		Total		X^2	P- value
	No	%	No	%	No	%		
Age								
15-19	16	31.7	91	27.1	107	27.6	0.111	= 0.7386
20-24	21	40	173	51.3	194	50		
25-30	11	21.7	69	20.4	80	20.7		
31-49	3	6.6	4	1.2	7	2.1		
Total	51	100	337	100	388	100		
Religion								
Orthodox	27	52.9	181	53.7	208	53.6	4.046	= 0.0443
Muslim	9	17.6	111	33	120	30.9		
Protestant	4	7.8	23	6.8	27	7		
Catholics	10	19.6	19	5.6	29	7.4		
Others	1	1.9	3	0.9	4	1		
Total	51	100	337	100	388	100		
College levels								
Level I	30	58.8	244	72.2	274	70.6	13.882	= 0.0002
Level II	18	35.2	90	26.7	108	27.8		
Level III	3	5.9	3	0.9	6	1.5		
Total	51	100	337	100	388	100		

Table 6: utilization of ECPs by some selected variables among students in Technical and Vocational Training College, June-May, 2011.

Variables	Used ECPs		Not used ECPs		Total		X^2	P- value
	No	%	No	%	No	%		
Age								
15-19	23	17.4	59	28.6	82	24.3	41.838	< 0.0001
20-24	43	32.6	112	54.4	155	45.9		
25-30	57	43.2	32	15.5	89	26.3		
31-49	9	6.8	3	1.5	12	3.6		
Total	132	100	206	100	338	100		
Religion								
Orthodox	77	58.3	110	53.4	187	55.3	2.425	= 0.1194
Muslim	31	23.5	67	32.5	98	28.9		
Protestant	15	11.4	9	4.4	24	7.1		
Catholics	9	6..8	17	8.3	26	7.7		
Others	-	-	3	1.5	3	2.1		
Total	132	100	206	100	338	100		
College levels								
Level I	41	31.1	173	83.9	214	63.3	7.479	= 0.0062
Level II	79	59.8	28	13.6	107	31.7		
Level III	12	9.1	5	3.8	17	12.9		
Total	132	100	206	100	338	100		

Table 7: Reasons of preference of ECPS and condom to prevent unintended pregnancy among students of Technical and Vocational Training College, June-May, 2011.

Opinion	Number	Percentage
Reasons to preferred condom		
It can prevent both pregnancy and STDs	301	92.0
It is more available than ECPs	53	16.2
I don't know about ECPs	10	3.1
I don't want to use ECPs/OCPs for fear of side effects	14	4.3
Others *	6	1.8
Total	327	117.4
Reason to preferred ECPS		
It increase sexual pleasure	23	45.0
Taking ECPs is convenient	20	39.2
My partner do not accept in using Condom	5	9.8
Trust each other	46	90.1
ECPs can be used as replacements for OCPs	18	35.2
Others**	1	1.9
Total	51	221.5

*cost

** Allergy, culture