

Knowledge, Attitude, and Practice towards Emergency Contraceptives use Among Negelle Health Science College Female Students, South Eastern, Ethiopia: a Descriptive Cross-Sectional Study, 2021

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Abstracts

Background: Emergency contraceptives is the only method women cause to prevent pregnancy after they have had unprotected sexual intercourse. About 7.2% of women will be sexually assaulted by a stranger and depending on the region; 23-36% of women will experience unwanted sex from an intimate partner.

Objective: To ascertain knowledge, attitude and practice towards emergency contraceptive use among female students in Negelle college of health sciences.

Methods: A descriptive cross sectional study design was carried out July 29 /2021 to September 31/2021.Data was collected through employing semi-structured self-administered questioner, and then the collected data was cleared, coded and analyzed by statistical packages for social sciences 26.0 version statistical software. Descriptive statistics were used for variables using statistical parameters of frequencies, and percentages, and were presented in table format. Factors with a bivariate test value ≤ 0.05 were included.

Results: The study was conducted on total sample of 152 participants, among the respondents, majority 131(86.2%) of them age was >20 years old. Above half 92(60.5%) of the study subjects was heard the cornerstones merit of contraceptives was to prevent pregnancy.82(53.9) respondents were agree about when having unintended sexual intercourse, they take ECPs.60 (39.5%) of the study subjects were agree about fear of side effects hinder them from not using ECPs.85(56.0%) were used EC pills after unprotected sexual intercourse. Age greater than twenty years and unmarried female students was predictors to have good knowledge about EC pills.

Conclusion and recommendations: A majority of this study subjects were came from urban area, and majority of the study subjects were bought EC from pharmacy from pharmacy and shop. Knowledge, attitude and practice towards EC among female students were high. Health care workers should have to escalate awareness of the usage of emergency contraceptive methods among female students.

Keywords: emergency contraceptive; knowledge; attitude and practice; female students; guji; ethiopia

Introduction

Albert Yuzpe first described the use of hormonal contraception regimen for post coital pregnancy prevention in 1972.Oral contraceptive pills have been used “Off label” for this purpose since that time. According to this approach the medication is taken in two doses. The first within 72 hours of unprotected intercourse and the second 12 hours after the first

[1].Emergency contraception can prevent pregnancy in women at risk of an unintended pregnancy. Also called “morning after” pills or post-coital contraceptives. They are safe for use by all women including those who cannot use ongoing hormonal contraceptive methods, they work by preventing or delaying the release of eggs from the ovaries (ovulation).Women that are already pregnant cannot benefit from ECPs. They do not prevent pregnancy if the sexual intercourse happens more

than 24 hours after taking ECPs. Without contraception, 8 out of 100 women have the likelihood of becoming pregnant if they have sex once during the second or third week of their menstrual cycle. ECPs are less effective in obese women (body mass index > 30 kg/m²) [2]. However, these women should not be denied the use of emergency contraception when needed. For maximal effectiveness, ECPs should preferably be taken as early as possible after unprotected intercourse and within 72 hours, particularly beneficial to women who want to use a highly effective, long-acting and reversible contraceptive method. Prevent pregnancy by altering the chemical nature of the sperm and egg to stop fertilization. As an emergency contraceptive method, copper-bearing IUD should be inserted within 5 days of unprotected intercourse [3]. Each year there are about 250 Million pregnancies globally and one third of these are unintended and 20% of these undergo induced abortion. In Low income countries, more than one third of the 182 million pregnancies are unintended; the fate of 19% will be induced abortion and 11% of this is unsafe. In low income countries, the women who do not use any contraceptive contribute to two third of unintended pregnancies, where more than 100 million married women have unmet need for contraception [4]. Oral pills and IUCDs are mainly used as EC 72 hours after sexual contact. EC is indicated after unprotected sexual intercourse, following sexual abuse, misuse of regular contraception, or non use of contraception [5]. In about half of all unwanted pregnancies, conception occurs due to inadequate guidance to use contraception effectively, including the users' inability to address their feelings, poor attitudes towards contraceptives, and lack of motivations. Despite the Ethiopian government's effort to prevent unwanted pregnancies and abortion among youths of age less than 24 years, the number of youths requesting termination of pregnancy is increasing annually [6]. Studies conducted in Ethiopia indicated that awareness of EC is less than 50% and utilization is below 10%. These limited studies conducted on the issue of EC in the country were mostly focused on university students, who are believed to have better overall knowledge than college students [7]. Consequences of unprotected sex, such as unintended pregnancy and unsafe abortion, can be prevented by access to contraceptive services including emergency contraception. Emergency contraception is a method used to avoid pregnancy after unprotected sexual intercourse unlike the regular methods of contraception that are taken before sexual contact. It has the potential, as the last resort, to avoid unwanted pregnancy and therefore abortion; a desirable goal especially when abortion is illegal. Oral contraceptive pills and IUCDs are mainly used as emergency contraceptives. When used within 72 hours after sexual contact pills have the capacity to prevent pregnancy by 75-85% and with the use of IUCDs unwanted pregnancy can be prevented by as much as 99%. This is especially significant for those young couples that opt not to use a long-term regular contraceptive method and their sexual behavior is rather unplanned, erratic and irregular [8].

Global and regional shows that 14 per 1000 incidence of unsafe and associated mortality in women aged 15 to 44 years in the year 2003 which accounts for 13% of all maternal deaths worldwide. In east Africa the incidence rate is 39 per 1000 and accounts for 17% of all maternal deaths in the region. More than half maternal deaths in Africa are due to unsafe that occurs in age below 25 years of age [9]. Worldwide, around 120 million women per year need contraception but they did not use it. Parallel with this, approximately 250 million pregnancies occur and one-third of them are unintended; out of them, 20% are terminated by induced abortion. Consequently, around 47,000 women die each year from complications of unsafe abortions [10]. In Ethiopia, unwanted pregnancy is a big problem; more than 60% of the pregnancies in adolescents are unwanted resulting from unprotected sexual intercourse which is an alarming figure, and most of these pregnancies particularly in adolescents end up with unsafe abortion. Unsafe abortion is one of the top causes incriminated in the high number of maternal morbidity and mortality in Ethiopia. According to a national survey on abortion conducted in 2000

by World health organization (WHO), abortion related mortality was 1,209 per 100,000 live births [11]. Unwanted pregnancy leading to unsafe abortion is one of the most important causes of maternal morbidity and mortality. Unsafe abortion is a major medical and public health problem in Ethiopia. Ethiopia has a high incidence of unwanted pregnancies and incomplete and unsafe/ septic abortions, particularly among adolescents. Several studies in the country have revealed that women who tend to undergo induced abortion are below the age of 30 years and are literate; many of whom being above the secondary educational level [12]. Unwanted pregnancy and its outward consequences on physical and psychological well being of adolescent girls and young adult women is a problem. Unwanted pregnancy is one of the main factors for unsafe abortion. Every year on average about 210 million throughout the world became pregnant. About 40-50 million of those women result to abortion, 30 million of them are in developing countries. Of 40-50 million abortions performed annually in the world, 20 million are thought to be unsafe [13]. Unsafe abortion due to an unplanned pregnancy is one of the main causes of maternal morbidity and mortality in Ethiopian women. Several studies in the country have revealed that women who tend to undergo induced abortions are below the age of 30 and above the secondary educational level. Young people today start sex before marriage. Thus, they face a greater risk of unintended pregnancy [14]. This study will be escalate the usage of emergency contraceptive methods which play a crucial role in limiting unwanted pregnancies and ultimately in reducing maternal mortality and morbidity rates.

Methodology

Study design, settings and participants

A descriptive cross-sectional study was conducted in ambo preparatory schools from July 29 /2021 to September 31/2021. The source population was female students that were included in the sample during data collection. The regular female students in Ambo preparatory schools were included in the study were included in the study. Female students that are not fulfill the inclusion criteria, who had psychiatric history; those unwilling to participate and those of students who were seriously ill were excluded.

Sample size determination and sampling procedure

The sample size was determined by using the single population proportion formula: The sample size was determined based on "P" value which was taken from Harar Regional State, Eastern Ethiopia, $P=0.719$, or 71.9 , $n = \frac{(Za/2)^2 P(1-P)}{d^2}$, $n = (1.96)^2(1-0.719) \times (0.719)/(0.05)^2 = 310$. Since the total number of female students in our study was less than 10,000, reduction formula (correction formula) were applied as follow; $n = \frac{n}{1+(n/N)}$, $n = 310 / (1 + (310/250)) = 138$. Non response rate = 10% (to minimize non response rate) = $138 + (138 \times 0.1) = 152$. So, the total sample size was = 152. A stratified random sampling technique was applied to select the study units. Stratification was done based on year and area of study, and then sample unit was taken by using simple random sampling system. Then the required sample size was selected by lottery method.

Variables of the study

The dependent variable of the study was knowledge, attitude, and practice towards EC, and independent variable were socio-demographic factors (age, educational status, monthly income, marital status, living condition), year of students at the school, source of information, being sexually active.

Data collection instrument and process

Data was collected by using face to face self-administered questionnaires which was prepared in English and translated to local language Oromiffa and then translated back to English. The questionnaire contains 5 parts. The first part of the questionnaire includes socio-demographic and socio-

economic status information such as age, educational status, monthly income, marital status, living condition, the second part shows sources of information for EC & sources of EC, Part three will be the knowledge of emergency contraceptive among female students, Part four will be the attitude towards emergency contraceptive among female students, Part five will include practice of EC among female students. Students were informed about the purpose of the study, importance of their participation, and objectives of the study. Verbal consent was obtained from the participant students whom information was obtained.

Data quality assurance

The questionnaire was developed in English and translated to Oromiffa and back-translation of the guide to English was carried out to ensure the accuracy of the translation. Finally, the questionnaires were gathered and checked for completeness by the principal investigator. The data collected was checked for completeness and consistency on a daily basis.

Data organization, presentation, and analysis

Data was entered and analyzed with statistical packages for social sciences 26.0 version statistical software. Descriptive statistics were used for variables using statistical parameters of frequencies and percentages, and are presented in table format. Both bivariate and multivariate analysis techniques were applied to identify the factors associated with knowledge towards EC. In this model, factors with a bivariate test value ≤ 0.05 were included.

Ethical considerations

Ethical clearance was obtained from Negelle College of health sciences for this study. During data collection the purpose of study was explained and the verbal consent was obtained from the respondents. Strict behind the scenes was assured through anonymous recording and coding of questionnaires and placed in safe place.

Operational Definitions

Attitude: Feeling of the people towards emergency contraceptive

Emergency contraceptive: A drug or device used after unprotected sexual intercourse to prevent pregnancy

Knowledge: Familiarity with emergency contraceptives information gained by experience or exposure

Practice: Engagement in sexual activities and utilization of emergency contraceptive.

Results

Socio-demographic characteristics

In this study out of the total interview guides of sample of 152 participants who were interviewed 152 were included in the analysis, then the response rate was 100%. Most of the respondents were unmarried 109(71.7), and Christians 69(45.4). Among the respondents, majority 131(86.2%) of them age was >20 years old. A majority 136(89.5) of our study subjects were from urban area (Table 1).

Variables	Category	Frequency	Percent
Age	≤ 20 years	21	13.8
	>20 years	131	86.2
Residency	Urban	136	89.5
	Rural	16	10.5
Marital status	Married	43	28.3
	Unmarried	109	71.7
Religion	Muslim	54	35.5
	Christian	69	45.4
	Others	29	19.1

Table 1: Socio-demographic characteristics of female students, NHSC, Southeastern, Ethiopia, 2021.

Source of information and EC toward emergency contraception

Regarding source of information, majority 62(40.8%) of respondents were acquire information from club in school/friends, and 41(27.0%) were hear from mass media followed by 23(15.1%) from parents.

Majority 58(38.2%) of the study subjects were bought EC from pharmacy, 56(36.8%) from pharmacy and shop followed by 31 (20.4%) from governmental health institution, and 53.35% from private clinic (Table 2).

Variables	Category	Frequency	Percent
Source of information	Mass media	41	27.0
	Parents	23	15.1
	Teachers in class	17	11.2
	Health worker education	9	5.9
	Club in school/friends	62	40.8

Source of EC	Pharmacy	58	38.2
	Shop	2	1.3
	Private clinic	5	3.3
	Governmental health institution	31	20.4
	Pharmacy and shop	56	36.8

Table 2: Source of information and EC among female students of NHSC, Southeastern, Ethiopia, 2021.

Knowledge of toward emergency contraception

A total of 91(59.9%) respondents had heard about EC, and majority 67(44.1%) of the respondents heard about pills types of contraceptives methods followed by 50 (32.9%). Above half 42(46.2%) of the study subjects was heard the cornerstones merit of contraceptives was to prevent pregnancy, and 21 (23.1%) prevent sexually transmitted infections. Slightly less than half 36(39.6%) of participants heard contraceptives

mostly required during raped followed by 31(34.1%) when condom breaks. A majority 39(42.9%) of respondents heard the recommended time to take ECPs was within 72 hours after sex, and 41(45.1%) heard the recommended number of dose was two. Above half 44(48.3%) of study subjects were heard the recommended time between the doses was 12 hours apart, and 51(33.6%) respondents had heard about IUDs, and 23(45.2%) heard the recommended time for IUCD on emergency contraception was within 5 day after sex (Table 3).

Knowledge questions	Frequency	Percent
Types of contraceptives methods you know		
Pills	67	44.1
Injection	21	13.8
IUDs	9	5.9
Condom	50	32.9
Others	5	3.3
Have you heard about contraceptives		
Yes	91	59.9
No	61	40.1
Advantage of EC		
Prevent pregnancy	42	46.2
Prevent STIs	21	23.1
Terminates pregnancy	18	19.7
I don't know	10	11.0
When EC required preventing unintended pregnancy?		
When raped	36	39.6
When condom breaks	31	34.1
When we miss pills	7	7.7
When there is no contraceptive	13	14.3
I don't know	4	4.3
Recommended time to take ECPs		
Within 24 hours after sex	19	20.9
Within 48 hours after sex	13	14.3
Within 72 hours after sex	39	42.9
At any time	8	8.8
Before sex	7	7.7
I don't know	5	5.4
Recommended number of dose		
One dose	32	35.2
Two dose	41	45.1
Three dose	11	12.0
I don't know	7	7.7
Recommended time between the doses		
12 hours apart	44	48.3
24 hours apart	28	30.8
I don't know	19	20.9
Have you heard about IUDs		
Yes	51	33.6
No	101	66.4
Recommended time for IUCD on emergency contraception		

Within 24 hours after sex	9	17.6
Within 72 hours after sex	12	23.5
Within 5 day after sex	23	45.2
I don't know	7	13.7

Table 3: Knowledge of EC among Female students of NHSC, South eastern, Ethiopia, 2021.

Attitudes toward emergency contraception

A total of 74(48.7%) of respondents were agree about increased accessibility of EC make women stop using other forms of contraceptive, and 57(37.5%) participants were agree that EC methods limited because they could have side effects. Majority 59(38.8%) of respondents were disagree that EC methods have an effect on future fertility, and 82(53.9%) respondents were agree about when having unintended sexual intercourse, they take ECPs. Half 75(49.3%) of study subjects were disagree that wide spread use of ECPs increase the prevalence of HIV/AIDS and other STIs,

and 56(36.8%) of respondents were disagree about advising close friend or relative have unintended sexual inter course to take ECPs. Above half 79(52.0%) participants were agree that use emergency contraception promotes promiscuity, and only 27(17.8%) respondents were agree that emergency contraception is one way of abortion. 60(39.5%) of the study subjects were agree about fear of side effects hinder you from not using ECPs, and only, 33(21.7%) participants were agree that emergency contraception affect ongoing regular methods of contraception negatively (Table 4).

Attitude idea	I agree	Neutral	I disagree
	N (%)	N (%)	N (%)
Increased accessibility of EC make women stop using other forms of contraceptive	74(48.7)	36(23.7)	42(27.6)
EC methods limited because they could have side effect	57(37.5)	49(32.2)	46(30.3)
EC methods have an effect on future fertility	48(31.6)	45(29.6)	59(38.8)
If you have unintended sexual intercourse, would you use ECPs	82(53.9)	29(19.1)	41(27.0)
Close friend or relative have unintended sexual inter course would you advice her to use ECPs	55(36.2)	41(27.0)	56(36.8)
Wide spread use of ECPs increase the prevalence of HIV/ AIDS and other STIs	26(17.1)	51(33.6)	75(49.3)
Use emergency contraception promotes promiscuity	79(52.0)	22(14.5)	51(33.5)
Emergency contraception is one way of abortion	27(17.8)	62(40.8)	63(41.4)
Fear of side effects hinder you from not using ECPs	60(39.5)	53(34.9)	39(25.6)
Emergency contraception affect ongoing regular methods of contraception negatively	33(21.7)	61(40.1)	58(38.2)

Table 4: Attitude of EC among Female students NHSC, South eastern, Ethiopia, 2021.

Practice of emergency contraceptives

A majority 53(34.9%) of participants were don't used EC due to privacy not kept and others, and 45(29.6%) fear of stigma followed by 31(20.4%) I do not want to use. Greater than half 92(60.5%) of participants were use EC within 72 hours if they had sexual intercourse accidentally, and

112(73.7%) respondents were take EC tablet two times after sexually intercourse. Half 79(52.0%) of the study subjects were used EC after heard from friend/male, followed by 57(37.5%) heard from friend/female, and 85(56.0%) were used EC pills after unprotected sexual intercourse (Table 5).

Practice opinions	Frequency	Percent
What makes you not using EC		
I do not know about EC availability	23	15.1
Fear of stigma	45	29.6
Privacy not kept and others	53	34.9
I do not want to use	31	20.4
When EC you used		
Within 72 hours	92	60.5
Within 24 hours	43	28.3
I do not know	17	11.2
How many time EC you used		
Once	40	26.3
Twice	112	73.7
Who told you to use EC		
Friend/female	57	37.5
Friend/male	79	52.0
Health worker	16	10.5
What you do after unprotected sexual intercourse?		

Terminate the pregnancy	29	19.1
I do nothing	20	13.2
Use EC pills	85	56.0
I don't know	18	11.7

Table 5: Practice of EC among female students of NHSC, South eastern, Ethiopia, 2021

Binary logistic regressions associated with knowledge of EC among female students

Only socio-demographic factors were associated statistically with knowledge about EC. From that age >20 years female students were

4.63 more likely to have good knowledge about EC (AOR=4.63, 95% CI: 3.861-9.15, p=0.006) than their counterparts, and unmarried female students were 2.96 more likely to have good knowledge about EC (AOR=2.96, 95% CI: 2.825-3.176, p=0.047) than married female students (Table 6).

Variable	Category	N (%)	AOR (95% C.I)	p-value
Age	≤20 years	21(13.8)	References	
	>20 years	131(86.2)	4.63(3.861-9.153)	0.006
Residency	Urban	16(10.5)	References	
	Rural	136(89.5)	1.25(1.035-1.429)	0.17
Marital status	Married	43(28.3)	References	
	Unmarried	109(71.7)	2.96(2.825-3.176)	0.047
Religion	Muslim	54(35.5)	References	
	Christian	69(45.4)	0.24(0.037-1.058)	0.74
	Others	29(19.1)	1.19(1.148-1.527)	0.076

Table 6: Socio-demographic factors associated with knowledge towards EC among female students of NHSC, South eastern, Ethiopia, 2021.

Discussion

Nowadays, ECPs have become more available in many developing countries. However, limited awareness and knowledge, as well as limited access, have hindered unmarried women from learning about ECPs, and using them worldwide, approximately 40 percent of the pregnancies (85 million) were unintended. Women with unintended pregnancy may face the choice between terminating the pregnancy or allowing unwanted birth [15]. Many of which are performed in unsafe conditions and others carry their pregnancies to term, incurring the risk of morbidity and mortality higher than those for adult women [16]. Emergency contraception is most useful when there is a failure of barrier methods such as slippage and breakage of condoms, or when sexual intercourse was unpremeditated [17].

The present study shown 71.7% of the respondents were unmarried and 89.5% of this study subjects were came from urban area was dissimilar with the study conducted in Women Seeking Induced Abortion in Public Hospitals, Eastern Tigray [18] showed the respondents' age was from 16 to 47 years old with mean and standard deviation of 25.2±6.95. Fifty-three percent of the respondents were rural dwellers. The differences was majority of this study subjects were lived in urban area, so there was no more socio economic problems as rural area which makes female married at teenage.

In current study 60.5% of the study subjects was heard the cornerstones merit of contraceptives was to prevent pregnancy was higher than the survey done in Dire Dawa 34.1%, Egypt 24.5%, Nepal 47%, South Africa 42% [19,20,21,22,23]. Because this survey was fully done on the health sciences students, so they had enough information about ECPs. This study was less than the study conducted in Ghana 69%, Mexico 72.3%, Hong Kong 70% and Canada 80% [24, 25, 26, 27]. The differences was in this study the access to family planning service of the reproductive rights of women and the tools used to prevent unintended pregnancy was low due to the students had have no plan to bring forth the children. The present study was in line with survey employed in Adama University 62.9%, Jimma University 58.9%, Debre Markos 62.5% [28, 29, 30]. Because of the study under taken on the similar study subjects, respondents who had adequate information about the ECPs.

The current study revealed that 44.1% of the respondents heard about pills types of contraceptives methods followed by 32.9% were consistent with the survey done in among Female Dangila Hidase High School Students [31] which showed utilization of contraceptive pills after unprotected sexual intercourse was the most widely known method. Because pills type of ECPs was easily accessible and not need skilled trainer to administer.

Regarding source of information, majority 40.8% of this respondents were acquire information from club in school/friends, and 27.0% were hear from mass media followed by 15.1% from parents was inconsistent with the survey employed in among Female Dangila Hidase High School Students [30] which showed the most common source of information was health workers (58.9%) followed by school (18.9%). Due to health care workers in this study perhaps not eager to counsel health sciences students due wrong perception, and majority of them hear from each others in tutelage place.

The present study revealed that 75(49.3%) of study subjects were disagree that wide spread use of ECPs increase the prevalence of HIV/AIDS and other STIs, 52.0% participants were agree that use emergency contraception promotes promiscuity, and 21.7% participants were agree that emergency contraception affect ongoing regular methods of contraception negatively were connate with the survey done in Jimma University [29] showed that wide spread use of ECs will increase the prevalence of HIV/AIDS and other STIs, emergency contraception promotes promiscuity, and emergency contraception will affect regular methods of contraception negatively. Because ECPs perhaps substantially elevated risk for HIV infections due to ECPs users perhaps didn't take care of themselves.

The current study showed 53.9% respondents had positive attitude towards ECPs was lower than the study conducted in Atse Yohannes preparatory School, Mekelle 64.9%, Adama University 62.9% [31, 28] of them had a positive attitude. Because of majority of them had no participate in sexual intercourse. This study was in line with the survey employed in Addis Ababa University 53%, Bahir Dar University 56.7% [32, 33]. Due likewise study area.

The prevalence of practice of ECs among sexually active respondents in this study was found to be 56.0% was higher than study done in Mexico 16.4%, Scotland 31.4%. Because this study may be comparable with the study done in Atse Yohannes preparatory School, Mekelle 53.5% [31]. This study was lower than the survey done in 73.4 % in Bahir Dar University, 75% in Addis Ababa University. Because of sample size was differences.

The knowledge of the respondents regarding the correct time for taking ECs in this study (60.5%) was lower than the survey conducted in Atse Yohannes preparatory School, Mekelle 67.4% [31]. Because our study subjects used not only ECPs but also condoms. The present study was higher than the survey done in Scotland (26.4%) [34], in Nepal 9.58% [22]. Due to variations of the study subjects.

The current study revealed that age >20 years female students were 4.63 more likely to have good knowledge about EC (AOR=4.63, 95% CI: 3.861-9.15, p=0.006) than their counterparts, and unmarried female students were 2.96 more likely to have good knowledge about EC (AOR=2.96, 95% CI: 2.825-3.176, p=0.047) than married female students were inconsistent with the survey conducted in Jimma University [29] showed respondents from medical and public health faculty and urban area were more likely to have heard of ECs. Because of unmarried female students was fear pregnancy and social stigma.

Conclusion and recommendations

A majority of this study subjects were came from urban area, and majority of the study subjects were bought EC from pharmacy and shop followed by from governmental health institution, and from private clinic. Slightly less than half of participants heard contraceptives mostly required during raped followed by when condom breaks. A total of respondents were agree about increased accessibility of EC make women stop using other forms of contraceptive, and participants were agree that EC methods limited because they could have side effects. A majority of participants were done used EC due to privacy not kept and others, and fear of stigma followed by I do not want to use. Knowledge, attitude and practice towards EC among female students were high. Age greater than twenty years and unmarried female students was predictors to have good knowledge about EC. Health care workers should have to escalate awareness of the usage of emergency contraceptive methods among female students.

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Conflict of interest

No conflict of interest

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