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ISSN: 2161-0711

## **Journal of Community Medicine & Health Education**

The International Open Access  
Journal of Community Medicine & Health Education

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Digital Object Identifier: <http://dx.doi.org/10.4172/2161-0711.1000>

# Factors Associated with Knowledge, Attitude and Practice towards Emergency Contraception among Female Clients of Ethiopian Immigration and Nationality Affairs Office

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## Abstract

**Background:** Proper knowledge, attitude and practice of contraceptives prevent occurrence of undesirable outcomes of the unintended conceptions.

**Objective:** The aim of this study was to assess the level and factors associated with knowledge, attitude and practice of emergency contraception.

**Methods:** An institution based cross sectional study design was conducted among 416 female clients of Ethiopian immigration and nationality affair office in Addis Ababa in 2013. Study participants were selected by systematic random sampling technique. Face to face interviewer administered structured questionnaire was employed to collect data on their socio-demographic and reproductive health issues. Both binary and multiple logistic regressions were done and statistical significance was considered based on 95% CI of odds ratios and P- Value <0.05.

**Result:** Only 40.1% of the participants had ever heard about emergency contraceptive of whom 47.3% were found to be knowledgeable rated based on multiple knowledge questions. Around 39.4% had positive attitude towards emergency contraceptive. Only 9.3% of the sexually active participants have ever used emergency contraceptive. Lack of knowledge about the method was major barrier for not using emergency contraceptive. Age 20 and above years [AOR=7.20, 95% CI=1.26, 41.08], being married [AOR=12.49, 95%CI=1.81, 86.47] and ever used emergency contraceptive [AOR=5.26, 95%CI=1.05, 26.54] were significant predictors to knowledge of emergency contraceptive while having adequate knowledge about emergency contraceptive [AOR=5.08,95%CI=1.19,21.56] and ever used contraceptive [AOR=13.7, 95% CI=2.66, 70.59] were significant predictor for use of emergency contraceptive.

**Conclusion:** The level of knowledge, attitude and practice towards emergency contraceptive is very low depicting potential of emergency contraceptive to prevent unintended pregnancies and their complications is far from being realized. Hence, awareness creations accompanied by availing necessary supplies are needed to raise knowledge and practice of emergency contraceptive among female adolescents departing to different nations.

**Keywords:** Emergency contraception; Knowledge; Attitude; Practice; Addis Ababa; Ethiopia

## Introduction

Emergency contraception (EC) is a method used for prevention of unintended conception in the first few days after unprotected intercourse or accident such as leakage/slippage of condom and rape [1].

Each year 120 million women worldwide need contraception but unable to use [2]. This unmet need leads to unintended pregnancy, abortion and limitation of women's ability to achieve educational, employment and economic goals. In developing countries, about one in six married women faces an unmet need for contraceptive they prefer not to become pregnant but are not using any form of contraception [2,3].

Globally it is estimated that over 100 million acts of sexual intercourse take place each day resulting in around 1 million conceptions of which about 50% are unplanned and 25% definitely unwanted [4,5]. Globally around 80 million pregnancies each year are unintended 39 % of those are in Africa and more than one-half result in induced abortion and nearly half of them are unsafe [2]. Unsafe abortion accounts 13 % maternal death and long-term complication for some 5 million survivors [6].

Many adolescent females are at high risk of unintended pregnancy due to their limited knowledge of contraception and access to services. Proper knowledge and ultimate use of EC prevents unintended

pregnancy and the risks that adolescent pregnancy poses for mother and child, including abortions. In addition, providing ECs can bridge adolescents to other reproductive health (RH) services [7].

Despite the fact that different modern contraceptives exist worldwide, the problem of unintended pregnancy still exists, which could be due to gap in awareness, negative attitudes towards contraception, low accessibility, failure of contraceptives or sexual assault [8]. Finding on knowledge, attitude and practice (KAP) towards emergency contraception (EC) in Ethiopia at Jimma hospital women who seeks abortion shows 8% of the study participants know of EC, of these 63% identify the correct time limit to take EC and all of the women had positive attitude towards EC, but none of them used EC [9].

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**Received** June 23, 2014; **Accepted** August 27, 2014; **Published** August 29, 2014

**Citation:** Bugssa G, Kahsay T, Asres A, Dimtsu B, Tsige Y (2014) Factors Associated with Knowledge, Attitude and Practice towards Emergency Contraception among Female Clients of Ethiopian Immigration and Nationality Affairs Office. J Community Med Health Educ 4: 305. doi:10.4172/2161-0711.1000305

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Current evidences indicate that immigrant and refugee women have poorer health outcomes and are at a greater risk of developing adverse health conditions than native-born women [10]. Accordingly, there are considerable variations between immigrants and non-migrants in use of contraceptive methods [11]. There are evidences that immigrant and refugee women have higher rates of unmet need for contraception, unintended pregnancy and abortion than native-born [12].

As a study in Canada showed, most immigrants from developing countries come from countries where they unmet needs for contraception is highly prevalent (5%-40%). Rates are highest in sub-Saharan Africa, among young women, rural, uneducated and poor women are also often unaware of EC [13].

Despite the technological advancements in modern contraception methods, unintended pregnancy is still a big problem in Ethiopia. More than 60% of the pregnancies in adolescents are unintended result from contraception non-use, contraception method failure and rape [14,15].

Majority of clients of Immigration and nationalities office are female adolescents who look for passports to migrate/depart to Middle East countries in search of different jobs [16]. The most common problem related to migrant workers in the Middle East is the abuse of domestic workers engaged in menial work. Currently, labor exploitation is the largest human trafficking concern in the Middle East, but trafficking for the purpose of the sex trade is a phenomenon that has grown in the last decades [17].

As different Medias and literatures illustrate immigrant and refugee women are at risk to sexual violence during their voyage to different countries by smugglers at transport, others face sexual violence upon arrival by their employers i.e., men. Besides, they do not have access to health services due to different factors and hence they are obligated to suffer with unintended pregnancy and give birth or they try to abort and lead to different complications. Nonetheless, no studies have investigated the level of knowledge and practice towards EC among those migrating abroad. Therefore, this study was designed to investigate the level of knowledge, attitude and practice towards emergency contraception among female clients of Ethiopian immigration and nationalities affair who were on process to migrate abroad looking for different jobs. Moreover, this study will have paramount importance for the government and in particular for the policy makers to carefully design educational programmes so as to improve knowledge and bring attitudinal change on use of emergency contraception among adolescents.

## Methods

The study was conducted at Ethiopian Immigration and nationality affairs office (EINAO), based in Addis Ababa, the capital city of Ethiopia. The office was established to provide Visa/ passport service in 1895. Accordingly, passport/visa national identification for all Ethiopian citizens is being provided by the office. The clients of the office come from all parts of the country and majority are females who plan to depart/migrate to different Middle East countries [16].

An institution based cross - sectional study design was conducted from March 2013 to June 2013 among female clients of EINAO. The source populations were all Ethiopian females aged 15-49 years attending the office. The sample size was determined using single population proportion formula and assuming the proportion of female clients who are aware of ECs is to be 50% and a non-response rate of 10%, the total sample was calculated to be 423. Study participants were selected by systematic random sampling technique at the exit

from passport process based on waiting card number that was serially arranged. Since there are fixed number of clients served on daily basis and no cyclic pattern of clients throughout the week, one week of the month was randomly selected for the study. Based on the weekly service data, the sampling interval ( $k^{\text{th}}$ ) value was determined by dividing average total number of females in passport process during the week to the required sample size. Consequently, around 7, 308 females come to the office per week, so  $K^{\text{th}}$  value was calculated  $7308/423=17^{\text{th}}$  as sampling interval. The first participant in the sample was chosen by lottery method from the sampling interval in the exit of the office. Then every 17<sup>th</sup> client was selected for the study and in case the 17<sup>th</sup> value becomes male or involuntary to participate the next female was interviewed as a substitute.

Data were collected on dependent variables; Knowledge, attitude and practice of emergency contraceptives and explanatory variables including educational status, marital status, ethnicity, occupation, previous use of modern contraceptives, presence of open discussion about contraceptive with family or friends, obstetric history, sexual pattern and EC source of information. The tool was adapted from similar studies on knowledge attitude and practice of general contraception and emergence contraceptives [8,9,18]. The questionnaire was translated into Amharic (the Ethiopian national language) and then retranslated back to English to check its consistency. The Amharic version was pre-tested among clients at the office a week before the actual data collection, so that modifications were made.

Data quality was maintained by proper recruitment, training, and supervision of data collectors. The collected data were checked for completeness, accuracy and consistency by principal investigators and corrective measures were taken. Data were entered to EPI Info version 3.5.1 software and analyzed using SPSS version 16.0 statistical programs. The data were cleaned and descriptive statistics using frequencies for each variable was computed. Besides, bivariate and multiple regression analyses were carried out to identify independent predictors by controlling for possible confounders. During the analyses, 95% CI for odds ratio (OR) and P-value <0.05 were used in declaring statistical significance.

The study was conducted after approval by the Institutional review board of college of health science, Addis Ababa University. Informed verbal consent of participation was sought before commencing interview.

## Result

### Socio-demographic characteristics of study participants

A total of 416 females participated in the study making response rate of 98.1%. The age of the respondents ranges from 15 to 33 years with mean age of  $22.19 \pm 3.57(\text{SD})$  years. Majority (45.7%) of the respondents fall in to the age group between 20 and 24 years; 101 (24.3%) were between 10 and 19 years; and those above 24 years of old were 125 (30.0%). For the religious breakdown of the respondents, 208 (50%) were Orthodox Christians followed by Muslims 156 (37.5%), Protestant Christians 45 (10.8%), and 7 (1.6%) with other affiliations. The educational level of the respondents varied from unable to read and write (17.5%), primary education (1- 8<sup>th</sup> grade) (47.1%), secondary school (9<sup>th</sup> -12<sup>th</sup> grade) (30.8%) to higher education (4.6%).

Regarding the marital status of the respondents, 276 (66.3%) were single, 129 (31.0%) married, and 11 (2.6%) were divorced at the time of the study. Majority, 145 (34.9%) were from Amhara ethnic group followed by Oromo, Tigray, and Gurage which accounted for 143 (34.4%), 48 (11.5%), and 40 (9.6%), respectively. Two hundred twenty

two (53.4%) of the respondents were rural residents; and 172(41.3%) of the respondents were students, 86(20.7%) house wife, 75(18.0%) house maid while the rest (20.0%) were involved in private business, merchandize activities, employed in government institutions or had no work.

Concerning the sexual practice of the study participants, 268 (64.4%) of them ever had sex. Of those, 64 (23.9%) had ever practiced unprotected sex which resulted in 35 (54.7%) of unintended pregnancy. One hundred twenty six (47.0%) of the respondents had ever been pregnant in their life time. Around 63 (50.0%) of the pregnancies were unplanned and 26 (41.3%) had practiced induced abortion (Table 1).

### Knowledge towards emergency contraceptives

Knowledge of the study participants towards ECs was assessed. Accordingly, 167 (40.1%) of the respondents had ever heard about EC. Health institutions for 84(50.3%), friends for 62(37.1%), schools for 34(20.5%), radio for 33(19.8%), television for 18(10.8%) and family members for 10(6.0%) were the common source of information for the respondents. Out of the clients who have ever heard of EC, 134(80.2%) had ever heard about pills and 21(12.6%) knew both pills and IUCD as

methods of EC. Majority (67.7%) of the respondents stated that they could get ECs from Health center, 55.1% from Pharmacy, 12.0% from Hospital, and 11.4% from private clinics/dispensaries/drug vendors.

Of those who had ever heard about pills as an EC method, 72(46.4%) correctly identified the recommended the time limit (72 hours) for emergency contraceptive pills after unprotected sexual contacts whereas 46 (29.7%) gave different incorrect responses and the rest (23.9%) responded that they do not know when to take it. Besides, the knowledge of the participants on the total doses of ECs was assessed. Accordingly, majority (45.2%) of the respondents identified the recommended (two) doses correctly. However, 15 (9.7%), 2 (1.3%), and 68(43.9%) reported as one dose, three doses, and do not know the dose at all, respectively. In a similar fashion, only 38(27.1%) of the respondents identified the recommended time between doses. Meanwhile, of those who had ever heard about IUCD as EC, only 13(61.9%) could tell the correct timing of administration of the IUCD.

Of the study participants, 142(85.5%) identified rape as the main warrant for use of ECs and 69 (41.3%), 62 (37.1%), 10 (6.0%) of them mentioned missed intake of pills, condom rupture during intercourse, IUCD removal from its proper place as the main factors which initiates them to use ECs, respectively. Majority (65.9%) of the respondents had not awareness to prevention of unintended pregnancy after unprotected sex while 39 (23.4%) of the respondents believed that ECs are helpful for abortion and 16 (9.6%) reported that EC prevents from sexually transmitted infections (STIs). The overall summary index for knowledge about EC disclosed that only 79 (47.3%) were knowledgeable.

### Attitude towards emergency contraceptives

Of the 416 respondents, majority (87.5%) of them agreed to use ECs and 353(84.9%) of them gave their opinion to advise and recommend their friends or relatives to use ECs. Two hundred sixty (62.5%) of respondents believed that taking ECs after an episode of unprotected sexual intercourse can prevent from unintended pregnancy. In contrast, 271(65.1%) of the study participants believed that taking ECs is sin and 135(32.5%) of them reported that ECs cause sterility. One hundred eighty (43.3%) stated that ECs may hurt the fetus in case if it fails to work and 158(38.0%) thought that wide spread use of ECs will increase the prevalence of HIV/AIDS and other STIs due to non consistent use of condom. One hundred twenty two (29.3%) of the participants also claimed that ECs promotes promiscuity. However, 309 (74.3%) agreed to use EC in the future, if situations to use the methods will happen to prevent unintended pregnancy. Summary index indicates 164(39.4%) of the respondents had positive attitude towards ECs.

### Utilization of emergency contraceptives

Of the 416 respondents, 268(64.4%) stated that they currently practice sexual intercourse (are sexually active). Sixty four (23.9%) of these sexually active individuals had ever episodes for unprotected sex of which 26 (40.6%) were due to rape and 38(59.1%) were because of condom slippage or forgotten pills during sex.

Regarding ECs utilization of the study subjects, 25(9.3%) of those who were sexually active had ever used ECs to prevent unintended pregnancy. Of those who used oral pills as EC, 16 (64%), 6 (24%), and 3 (12%) them were recommended by their boyfriends, girl friends, and health professionals, respectively. Of those sexually active study participants who did not use EC, majority (65.6%) of them reported that lack of knowledge as main factor for not using the EC while inaccessibility of EC, no desire to use and opposition from partners accounted for 12(18.8%), 6(9.4%), and 4(6.2%), respectively.

Variables	Frequency (Percent)
<b>Ever had sex(N=416)</b>	
Yes	268 (64.4)
No	148 (35.6)
<b>Age at first sexual practice(N=268)</b>	
Less than18 years	151 (56.3)
18 and above	117 (43.7)
<b>Ever had unprotected sex(N=268)</b>	
yes	64 (23.9)
No	204 (76.1)
<b>Consequence of unprotected sex**</b>	
Unintended pregnancy	35 (54.7)
Stress	22 (34.4)
Nothing	11 (17.1)
STI	3 (4.7)
<b>Outcome of Unintended pregnancy (N=35)</b>	
Birth	16 (45.7)
Induced abortion	4 (11.4)
Safe abortion	15 (42.9)
<b>Ever had been pregnant (N=268)</b>	
Yes	126 (47.0)
No	142 (53.0)
<b>Age at first pregnancy (N=126)</b>	
15 – 19	106 (84.1)
20 -24	17 (13.5)
>24	3 (2.4)
<b>Ever had Unintended pregnancy (N=126)</b>	
Yes	63 (50.0)
No	63 (50.0)
<b>Eve practice induced abortion (N=63)</b>	
Yes	26 (41.3)
No	37 (58.7)
<b>Place of abortion (N=26)</b>	
Self infliction	4 (15.4)
Health institution /clinics	20 (76.9)
Untrained abortionist	2 (7.7)

\*\* Percentages do not add up to hundred due multiple responses, STI: sexually transmitted infection, N: number

**Table 1:** Sexual and reproductive health characteristics of respondent's in female clients of Ethiopian immigration and nationality affairs office, Addis Ababa, 2013.



### Factors associated with knowledge, attitude and practice towards emergency contraceptive

In multivariable logistic regression analysis age of respondents, marital status, primary source of information and ever use of EC were found to be significantly associated to knowledge of EC. Participants with the age of 20 years and above were about 7 times more likely knowledgeable about EC as compared to those who are under 20

years of age [AOR=7.20, 95%CI=1.26, 41.08]. Married were 12 times more likely knowledgeable about EC than single [AOR=12.49, 95%CI=1.81, 86.47] and those who ever used EC were 5 times more likely knowledgeable than those who did not [AOR=5.26, 95% CI=1.05, 26.54] (Table 2).

Meanwhile, the multivariate analysis indicated that knowledge towards EC was significantly associated to positive attitude toward

Variables	knowledge of EC		Odds ratio (95% CI)	
	Knowledgeable	not Knowledgeable	Crude	Adjusted
	N <sub>g</sub> (%)	N <sub>g</sub> (%)		
<b>Age (years)</b>				
15-19	13(38.2)	21(61.8)	1	1
20-24	43(51.2)	41(48.8)	<b>2.23(1.14, 6.14)</b>	<b>7.20(1.26, 41.08)*</b>
>24	25(51.0)	24(49.0)	1.68(0.69, 4.09)	<b>6.39(1.03, 39.56)*</b>
<b>Educational status</b>				
Not started	7(53.8)	6(46.2)	1	1
Primary	27(39.1)	42(60.9)	0.55(0.17, 1.82)	1.16(0.13, 10.41)
econdary and above	45(52.9)	40(47.1)	0.96(0.29, 3.11)	5.76(0.59, 56.25)
<b>Marital status</b>				
Single	46(43.4)	60(56.6)	1	1
Married	30(53.6)	26(46.4)	1.51(0.79, 2.89)	12.49(1.81, 86.47)**
Divorced	3(60.0)	2(40.0)	1.96(0.31, 12.19)	14.07(0.66, 298.11)
<b>Residence</b>				
Urban	52(51.5)	49(48.5)	1	1
Rural	27(40.9)	39(59.1)	0.65(0.35, 1.22)	0.71(0.23, 2.17)
<b>Religion</b>				
Orthodox	44(53.0)	39(47.0)	1	1
Muslim	26(44.1)	33(55.9)	0.69(0.36, 1.37)	0.26(0.06, 1.02)
Protestant	4(20.0)	10(80.0)	0.22(0.07, 0.72)	0.41(0.07, 2.45)
<b>Ethnicity</b>				
Amhara	36(51.4)	34(48.6)	1	1
Tigray	9(52.9)	8(47.1)	2.83(0.69, 11.53)	1.58(0.17, 14.32)
Oromo	28(50.0)	28(50.0)	3.00(0.59, 15.36)	1.20(0.34, 4.21)
Gurage	3(23.1)	10(76.9)	2.67(0.64, 11.11)	0.08(0.01, 0.08)*
Others	3(27.3)	8(72.7)	0.80(0.13, 5.09)	2.30(0.16, 33.6)
<b>Occupation</b>				
Student	26(36.6)	45(63.4)	1	1
House wife	15(44.1)	19(55.9)	1.37(0.59, 3.14)	1.48(0.31, 6.99)
House maid	14(66.7)	7(33.3)	3.46(1.24, 9.67)	0.19(0.03, 1.29)
Others	24(58.5)	17(41.5)	2.44(1.11, 5.37)	8.06(0.78, 84.15)
<b>Source of information for EC</b>				
Health institutions	43(51.2)	41(48.8)	1	1
Radio	25(75.8)	8(24.2)	4.63(1.94, 11.03)	8.65(1.65, 45.37)*
TV	12(66.7)	6(33.3)	2.448(0.87, 6.87)	0.86(0.13, 5.56)
Friends	25(40.3)	37(59.7)	0.64(.338, 1.21)	0.52(0.09, 2.28)
Family	5(50.0)	5(50.0)	1.12(0.31, 4.03)	1.80(0.06, 55.08)
School	16(47.1)	18(52.9)	0.97(.458, 2.07)	0.39(0.08, 1.94)
<b>Ever use of any contraceptive</b>				
No	39(48.1)	42(51.9)	1	1
Yes	40(46.5)	46(53.5)	0.94(0.51, 1.72)	0.35(0.08, 1.46)
<b>Ever use of EC</b>				
No	41(47.7)	45(52.7)	1	1
Yes	14(58.3)	10(41.7)	1.54(0.62, 3.84)	5.26(1.05, 26.54)*
<b>Sexual pattern or ever had sex</b>				
Not active	15(48.4)	16(51.6)	1	1
Active	64(47.1)	72(52.9)	1.06(0.48, 2.30)	0.87(0.33, 2.27)

\*P<0.05, \*\*p<0.01 for adjusted ratio

Bold reminds statistically significant in crude ratio/ adjusted ration or both  
CI=confidence interval, TV=television, N<sub>g</sub>=number

**Table 2:** Determinant factors to knowledge of EC among female clients of Ethiopia immigration and nationality affairs office, Addis Ababa, 2013.

EC. Those who were knowledgeable have almost 3 times more likely positive attitude towards EC than their counterparts [AOR=2.78, 95% CI=1.05, 7.32] (Table 3). On the other hand ever use of contraceptive, knowledge to EC and ethnicity were significantly associated to use of EC in the study participants. Those who have adequate knowledge about EC were 5 times more likely to use EC than their counterparts [AOR=5.08, 95%CI=1.19, 21.56] and those who ever used contraceptive were around 14 times more likely to use EC than not ever used contraceptives [AOR=13.7, 95%CI=2.66, 70.59] (Table 4).

## Discussion

The results from this study revealed that 40.1% of the respondents had ever heard of EC. This finding is consistent with findings in Arbaminch college students and Turkish women that showed 42.5% and 34.0 %, respectively [18,19]. However, it is lower as compared to studies in Addis Ababa University(AAU), Bahrdar, Cameroon and Nigeria University students which are 84.2%, 83.5%, 63.0% and 50.7%, respectively [20-23]. This may be due to the reason that the above studies were done in higher education students who have a greater opportunity to be aware about EC. Majority of the study participants had lack of detailed knowledge in the recommended timing to use EC methods. The finding of this study is higher as compared to findings in AAU and Jimma hospital [8,9]. The reason for the lack of detailed

knowledge in this study subjects may be linked to ever use of EC [AOR=5.26, 95%CI=1.05, 26.54]. In the previous studies, AAU and Jimma participants ever use of EC is 75% and 27%, respectively. However, in the current study ever use of EC was only 9.3%. This might be explained by the reason that as participants' level of EC utilization increases level of detailed knowledge increases as well. More than half of the study participants were not sure that the method prevents unintended pregnancy after unprotected intercourse. This figure is higher as compared to findings conducted in Pakistan and California in which it was 27.5% and 37%, respectively [23,24]. The difference may be due to low health promotion in developing countries and socio-demographic variation between study subjects.

The overall presences of adequate knowledge about EC of the study participants were 47.3%. This finding is relatively higher as compared to the findings in Cameroon University and Arbaminch College students showing 7.2 % and 21.9 %, respectively (18, 21). This may be due to the difference in marital status [AOR=12.49, 95%CI=1.81, 86.47] and age [AOR=7.20, 95%CI=1.26, 41.08] of the study participants. Besides, it could be also due to the fact that married and age of 20 and above years women have the intention to visit family planning clinics where they may get the opportunity to be counseled about the EC methods.

More than 85% of the respondents agreed to use and advice their

Variables	Attitude of EC		Odds ratio (95% CI)	
	Positive attitude	Negative attitude	Crude	Adjusted
	No (%)	No (%)		
<b>Age (year)</b>				
15-19	42(41.6)	59(58.4)	1	1
20-24	68(35.8)	122(64.2)	0.78(0.48, 1.28)	0.52(0.14, 1.95)
>24	54(43.2)	71(56.8)	1.07(0.63, 1.82)	0.62(0.15, 2.47)
<b>Resident</b>				
Rural	76(34.2)	142(65.8)	1	1
Urban	106(54.6)	88(45.4)	<b>1.59(1.07, 2.37)</b>	1.66(0.63, 4.39)
<b>Educational status</b>				
Not started	29(17.7)	44(17.5)	1	1
Primary	71(43.3)	125(49.6)	0.86(0.49, 1.49)	4.42(0.78, 25.06)
Secondary & above	64(39.0)	83(32.9)	1.17(0.66, 2.07)	3.84(0.65, 22.5)
<b>Religion</b>				
Orthodox	85(40.9)	123(59.1)	1	1
Muslim	58(37.2)	98(62.8)	0.86(0.56, 1.31)	0.94(0.36, 2.45)
Catholic	2(33.3)	4(66.7)	0.41(0.34, 1.53)	0.72(0.13, 4.04)
Protestant	19(42.2)	26(57.8)	1.06(0.55, 2.03)	1.26(0.34, 4.80)
<b>Marital status</b>				
Single	103(37.3)	173(62.7)	1	1
Married	56(43.4)	73(56.6)	1.29(0.84, 1.97)	2.31(0.66, 8.07)
Divorced	5(45.5)	6(54.6)	1.40(0.42, 4.70)	1.74(0.18, 16.93)
<b>Occupation</b>				
Student	63(36.6)	109(63.4)	1	1
House wife	31(36.0)	55(64.0)	0.98(0.57, 1.67)	0.74(0.16, 3.45)
House maid	33(44.0)	42(56)	1.36(0.78, 2.36)	1.70(0.40, 7.21)
Others	37(44.6)	46(55.4)	1.39(0.82, 2.37)	0.50(0.16, 1.59)
<b>Ever use EC</b>				
No	96(39.5)	147(60.5)	1	1
Yes	11(44.0)	14(56.0)	1.21(0.53, 2.75)	0.79(0.27, 2.36)
<b>Level of knowledge to EC</b>				
Not Knowledgeable	32(36.4)	56(63.6)	1	1
Knowledgeable	48(60.8)	31(39.2)	<b>2.71(1.44, 5.07)</b>	<b>2.78(1.05, 7.32)*</b>

\*p<0.05, \*\*p<0.01 for adjusted ratio

Bold reminds statistically significant in crude ratio/ adjusted ration or both

**Table 3:** Determinant factors to attitude towards emergency contraceptives among clients of Ethiopian immigration and nationality affairs office, Addis Ababa, 2013.

Variables	Use of EC		Odds ratio (95% CI)	
	Yes	No	Crude	Adjusted
	N <sub>0</sub> (%)	N <sub>0</sub> (%)		
<b>Age (years)</b>				
15-19	5(11.9)	37(88.1)	1	1
20-24	11(9.1)	110(90.9)	0.74(0.24, 2.27)	0.24(0.04, 1.62)
>24	9(8.6)	96(91.4)	0.69(0.22, 2.21)	0.36(0.06, 2.26)
<b>Educational status</b>				
Not started	4(7.3)	51(92.7)	1	1
Primary	10(8.3)	110(91.7)	1.16(0.35, 3.87)	1.56(0.16, 15.43)
Secondary and above	11(11.8)	82(88.2)	1.97(0.59, 6.56)	0.52(0.06, 4.69)
<b>Marital status</b>				
Single	14(9.1)	140(90.9)	1	1
Married	10(9.5)	95(90.5)	1.05(0.45, 2.47)	0.78(0.11, 5.38)
Divorced	1(11.1)	8(88.9)	1.25(0.15, 10.73)	0.19(0.01, 7.01)
<b>Residence</b>				
Urban	16(12.2)	115(87.8)	1	1
Rural	9(6.6)	128(93.4)	0.51(0.22, 1.19)	1.32(0.38, 4.54)
<b>Religion</b>				
Orthodox	13(10.3)	113(89.7)	1	1
Muslim	10(9.3)	97(90.7)	0.89(0.38, 2.14)	0.62(0.16, 2.46)
Protestant	2(6.7)	28(93.3)	0.62(0.13, 2.91)	0.59(0.07, 5.22)
<b>Ethnicity</b>				
Amhara	11(11.8)	82(88.2)	1	1
Tigray	2(6.1)	31(93.9)	0.48(0.10, 2.29)	0.98(0.11, 8.52)
Oromo	5(5.9)	80(94.1)	0.47(0.16, 1.40)	0.83(0.18, 3.86)
Gurage	4(14.3)	24(85.7)	1.24(0.36, 4.26)	9.17(1.19, 70.62)*
Others	3(10.3)	26(89.7)	0.86(0.22, 3.39)	10.14(0.87, 118.41)
<b>Occupation</b>				
Student	10(10.6)	84(89.4)	1	1
House wife	5(6.8)	68(93.2)	0.62(0.20, 1.89)	0.29(0.04, 2.39)
House maid	2(4.3)	45(95.7)	0.37(0.08, 1.78)	0.20(0.02, 2.06)
Others	8(14.8)	46(85.2)	1.46(0.54, 3.96)	1.91(0.35, 10.27)
<b>Ever use of contraceptive</b>				
No	5(4.2)	114(95.8)	1	1
Yes	20(13.4)	129(86.6)	3.54(1.29, 9.72)	13.7(2.66, 70.59)**
<b>Ever discussed about contraceptive with family/friend</b>				
No	5(6.2)	76(93.8)	1	1
Yes	20(10.7)	167(89.3)	1.82(0.66, 5.03)	0.55(0.09, 3.15)
<b>Knowledge about EC</b>				
Not Knowledgeable	10(18.2)	45(81.8)	1	1
Knowledgeable	14(25.5)	41(74.5)	1.54(0.62, 3.84)	5.08(1.19, 21.56)*
<b>Ever be pregnant</b>				
No	11(7.7)	131(92.3)	1	1
Yes	14(11.1)	112(88.9)	1.49(0.65, 3.41)	1.39(0.39, 4.87)

\*P<0.05, \*\*P<0.01 for adjusted ratio

Bold reminds statistically significant in crude ratio/ adjusted ration or both

N<sub>0</sub> : number

**Table 4:** Determinant factors to use of emergency contraceptives among female clients of Ethiopian immigration and nationality affairs office, Addis Ababa, 2013.

friends or relatives to use EC when they practice unprotected sexual intercourse to prevent unplanned pregnancy. This figure is relatively higher as compared to studies in Jimma University and Arbaminch College students [18,25]. Forty three percent of the study participants believed that ECs might hurt the fetus in case if it does not work. This figure is higher as compared to study in AAU that was only 9.0% [21].

Generally, over all respondents positive attitude towards EC were 39.4% lower as compared to study finding in Arbaminch College students [18]. The possible explanation for this could be due to educational difference as higher education study participants have chance to get reliable information from different sources and academic course as well and develop positive attitude to the methods.

Although the awareness and presence of positive attitude of the respondents towards EC were around 40%, the actual use of EC was only 9.3%. This finding is lower as compared to findings conducted in Turkey, Pakistan, Nigeria, Addis Ababa, Bahrdar and Adama [8, 19, 20, 22, 23, 26]. Study participants who have adequate knowledge about the method are more likely to utilize it as they have detail knowledge on the situations when EC are warranted to use. Similarly a study done in Adama University students showed that those who have poor knowledge about EC were 99% less likely to use EC than their complement (26). In addition to knowledge difference, this might be due to variation in previous use of modern contraceptive [AOR=13.7, 95%CI=2.66, 70.59]. The current study finding also revealed that study participants who had ever used modern contraceptive are more likely to utilize EC. Seventy four percent of the study participants agreed to use EC in the future if they expose to unprotected sex. This may indicate that the intention to use EC may be higher in women who are relatively at risk for sexual abuse like females who plan to immigrate to foreign countries as different medias broadcasted in order to prevent unintended pregnancy.

The limitations in this study could be the fact that it is difficult to guarantee that the study participants provided honest answers to the questions, since the questionnaire includes sensitive matter (i.e. sex). As this was a cross-sectional study, it was difficult to ascertain cause and affect relationship.

## Conclusion

The level of knowledge, attitude and practice towards EC is very low depicting potential of EC to prevent unintended pregnancies and their complications is far from being realized. Hence, awareness creations accompanied by availing necessary supplies are needed to raise knowledge and practice of EC among female adolescents departing to different nations. Besides, strategies and programs should be specifically designed to empower women, raise awareness and favorable attitudes to enhance utilization of EC among adolescents and to minimize unplanned pregnancies and its sequel.

## Acknowledgment

We would like to extend our gratitude to Addis Ababa University for funding the study. We also acknowledge the Ethiopian immigration and nationality affairs office staff members, the data collectors, supervisors and respondents of the study.

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**Citation:** Bugssa G, Kahsay T, Asres A, Dimtsu B, Tsige Y (2014) Factors Associated with Knowledge, Attitude and Practice towards Emergency Contraception among Female Clients of Ethiopian Immigration and Nationality Affairs Office. *J Community Med Health Educ* 4: 305. doi:10.4172/2161-0711.1000305