

Knowledge and Attitudes About Emergency Contraception Among Married Women in the Eastern Black Sea Region of Turkey

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ABSTRACT

OBJECTIVE: Emergency contraception (EC) is an effective contraceptive method that can be used after having unprotected intercourse to prevent the implantation of the unintended pregnancy. We aimed to evaluate the knowledge level of reproductive aged women about EC pills and its relation to the contraceptive attitudes and personal characteristics.

STUDY DESIGN: A cross-sectional prospective study conducted in a university hospital in Turkey. A questionnaire was given to married women ages 18 to 49 years old. The frequency distribution of dependent (knowledge, attitudes, and beliefs) and independent (age, gravidity, parity, income and education level, contraceptive methods) variables was calculated.

RESULTS: Of the 187 women, who completed the survey, 40.8% were aware of EC pills, 35.1% correctly answered regarding the timing of use, and 26.6% reported using EC pills. Negative beliefs about the morning after pill were commonly about adverse effects and lack of experience (62.6% and 45.9%, respectively). The other common reasons for not using EC were described as religious reasons (20.8%) and responsibilities (40.8%).

CONCLUSIONS: Awareness and knowledge of EC was low among the women interviewed. The major barriers to use of EC are lack of information and misconceptions about EC. To increase their awareness and dispel negative attitudes, Turkish women need intensive information about EC.

Keywords: Contraception, Emergency contraception, Turkey, Unintended pregnancy
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Introduction

Despite the eligibility and effectiveness of modern contraceptive methods, unintended pregnancy remains a public health problem in developing countries. Unintended pregnancy is estimated to account for 80 million of the 210 million pregnancies that occur worldwide each year.¹ Some women continue to have unintended pregnancies with a greater risk of pregnancy and delivery associated complications and serious social risks.²⁻⁴ Furthermore induced abortion is often performed with increased risks of maternal mortality and morbidity.⁵ According to the Turkish Demographic and Health Survey (2008), 50% of all pregnancies are unintended, and induced abortion occurs in 10% pregnancies.⁶ Moreover, in re-

cent years, the induced abortion rate has increased in the Eastern Black Sea region of the Turkey.⁶

Emergency contraception (EC) or commonly known as “morning after pill” is an effective contraceptive method that can be used after having unprotected intercourse to prevent the implantation of the unintended pregnancy. Situations that may require consumption of EC could include failure of barrier methods (slippage, breakage or incorrect condom use), missed dose of oral contraceptives, unplanned or unprotected intercourse, and sexual abuse. One EC regimen is Yuzpe which consists of two doses 100 mcg of ethinyl estradiol and 0.5 mg of levonorgestrel (LNG) taken 12 hours apart. The other regimen is an LNG-only method that includes two doses of 0.75 mg LNG taken after intercourse and 12 hours later. EC pills should be taken as soon as possible after intercourse. The effectiveness of the EC is higher when consumed within 72 hours of intercourse, but remains effective for up to 120 hours.^{7,8}

In Turkey, EC pills are available as Preven, a combined ethinyl estradiol and LNG regimen, and Norlevo, an LNG-only method.⁹ Although EC pills are available, awareness and

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the use of EC is under expectations. The present study was conducted in the Eastern Black Sea region of the Turkey where the fertility rate was 2.2%, and accessibility to the family planning units was 92.5%.⁶ We sought to evaluate the knowledge level of reproductive aged women about EC pills and its relation with their contraceptive attitudes and personal characteristics.

Material and Method

This prospective cross-sectional study was conducted at the gynecology outpatient clinic of a university hospital, one of the largest hospitals in the Eastern Black Sea region of Turkey serving a population of 750,000.

All women between ages 18 and 49 were included in the study. The exclusion criteria included infertility, current pregnancy or desire for pregnancy, menopause, and surgical sterilization. The local ethics committee approved the study, and participants gave their written informed consent. Data were collected with a questionnaire developed in light of the literature based on the previous research.¹⁰ Before conducting the main study, a pilot study was conducted with 10 women to determine intelligibility and changes to the questionnaire were done based on the recommendations of the participants.

A trained researcher conducted the interviews with all participants who agreed to participate in the study. The participants were informed about the objectives and the procedures of the study. Each participant answered the questionnaire individually without receiving help and without prejudice. Maximum effort was made to provide privacy during the time taken to answer the questions.

Each patient was asked to complete the questionnaire, which comprised items on socio-demographic characteristics, obstetric history and current family planning methods. The questionnaire addressed the knowledge of EC pills and side effects, previous history of use, and attitudes toward EC.

Data were analyzed using the Statistical Package for Social Sciences (SPSS) software version 17.0 (Chicago, IL, USA). The frequency distribution of dependent (knowledge, attitudes, and beliefs) and independent (age, gravidity, parity, income and education level, contraceptive methods) variables was calculated. Descriptive statistics were analyzed using the chi-square test to determine the association among the dependent (awareness of EC) and independent (age, gravidity, parity, income and education level, contraceptive methods, occupation) variables, with $P < 0.05$ considered significant.

Results

Overall, 187 participants were recruited for the study with the mean age, gravidity, and parity of 33.7 ± 7.3 (range 18-45 years), 2.0 ± 1.3 (range 0-6), and 1.8 ± 1.1 (range 0-5), respec-

tively. Sixteen women (8.6%) had induced abortion because of an unintended pregnancy. The mean duration of marriages was 11.5 ± 8.2 years. Employed rate of participants was 43.5%. The education levels were primary school or lower, 31.6%, secondary school, 54.0%, and high school or higher, 10.2%. The participants' income levels were as follows: 22.5% low, 48.7% moderate, and 24.6% high. Contraceptive methods used included coitus interruptus (28.3%), condom (12.8%), intrauterine devices (13.4%) and hormonal contraception (pills or injectable forms) (16.5%), and no method (25.1%) (Table 1).

Table 1: Patient characteristic (n:187)

Characteristic	Value
Age (year)	33.7 ± 7.3 (range 18-49)
Gravidity	2.0 ± 1.3 (range 0-6)
Parity	1.8 ± 1.1 (range 0-5)
Duration of marriage (years)	11.5 ± 8.2
Induced abortion (%)	16 (8)
Occupation (%)	
Employed	81 (43.5)
Unemployed	106 (57.5)
Education (%)	
Primary school or lower	61 (31.6)
Secondary school	104 (54.0)
High school or higher	21 (10.2)
Contraceptive methods (%)	
Coitus interruptus	54 (28.3)
Condom	25 (12.8)
Intrauterine devices	26 (13.4)
Hormonal contraception (pills or injectable forms)	33 (16.5)
None	49 (25.1)
Income level (%)	
Low	43 (22.5)
Moderate	93 (48.7)
High	50 (24.6)

Table 2 shows the distribution of answers to the questions about knowledge, attitudes, and beliefs. Of the participants, 47% knew something could be done after unprotected intercourse, and 40.8% were aware of the "morning after pill". Experience of EC pills usage was noted by 26.6% of women and 35.1% of participants knew the correct time interval between intercourse and EC. Also, 87.3% of participants agreed that they lacked information about EC, and 60.7% of women demanded to have more information about the method. Negative beliefs about the EC were commonly about adverse effects and lack of experience (62.6% and 45.9%, respectively). The other common reasons for not using EC were described as religious reasons (20.8%) and responsibilities (40.8%).

Table 2: Knowledge, attitudes, and beliefs about EC

Questions	Yes (%)	No (%)	Unsure (%)
Knowledge			
Could anything be done after an act of unprotected intercourse or failure of contraceptive methods?	47	15.1	37.8
Do you know about the morning after pill?	40.8	59.2	0
Is this pill available in Turkey?	39.9	4.5	55.6
The morning after pill is used for preventing pregnancy	39.1	8.9	52
Does the morning after pill act as an abortifacient?	3.3	38.1	58.6
Have you used the morning after pill before?	26.6	73.4	0
Do you know when the morning after pill could be used?	35.1	64.3	0.6
Is the morning after pill effective in preventing pregnancy?	26.2	9.3	64.5
Is a pregnancy test required before using the morning after pill?	14.6	29.8	55.6
Could the morning after pill be used regularly for contraception?	3.5	36.3	60.2
Does the morning after pill cause menstrual irregularity?	14	12.8	73.3
Attitudes and beliefs			
Do you believe that the benefits of the morning after pill are superior to the risks?	16.8	18.8	64.4
Could the morning after pill reduce the usage of other contraceptive methods?	9.5	24.5	66
Do you think you have enough information about the morning after pill?	12.7	61.2	26
Would you like to know more information about the morning after pill?	60.7	25.3	14
Do you suggest the morning after pill to your friends in required situations?	25.3	27.3	47.3
Do you think the morning after pill should be advertised commonly?	51	17.4	31.5
Do you hesitate to use the morning after pill because of religious reasons?	20.8	45	34.2
Are you concerned about using the morning after pill because of your responsibilities?	40.8	28.6	30.6
Are you concerned about using the morning after pill because of adverse effects?	62.6	12.2	25.2
Are you unwilling to use the morning after pill due to lack of experience with its usage?	45.9	21.9	32.2

Table 3 presents associations between the participants' socio-demographic characteristics and their awareness of EC. As shown in Table 3, awareness of EC was related with duration of marriage, occupation, education and income level, and use of modern contraception methods. Awareness of EC pills increased with the duration of marriage, OR 1.123 (CI 1.006-1.253, $P < 0.05$), current employment OR 3.510 (CI 1.539-8.004, $P < 0.05$), and using modern methods for contraception, OR 2.297 (CI 1.075-4.906, $P < 0.05$). Age, gravidity and parity were not predictors of awareness.

Discussion

The Eastern Black Sea region of Turkey has the most important source of income from tea and nut farming, but because of the region's lack of developed industry, income level is low. Furthermore, in terms of education and health services, this region is more advanced than the Eastern and Southeast Anatolian regions.⁶ According to the Turkish Demographic and Health Survey 2008, fertility rate decreases from the east to the west side of Turkey. The highest rate was estimated at 3.27 in the eastern region, and the lowest was 1.73 in the western region. Also, an inverse relation was observed between fertility rate and income and education level. Usage rate of different kinds of family planning methods was 68.2%, and modern contraception methods were preferred by 35.4% in the

Table 3: Relation between socio-demographic characteristics and awareness of EC

	Not aware of ECP	Aware of ECP	P value
Age			0.382
18-30	54.4%	45.6%	$\chi^2 = 1.923$
31-40	46.8%	53.2%	
41-49	59.5%	40.5%	
Gravidity	2.1 \pm 1.2	1.6 \pm 1.1	0.103
Parity	1.9 \pm 1.1	1.4 \pm 0.9	0.051
Duration of marriage	12.3 \pm 8.2	8.1 \pm 7.4	0.027
Occupation			0.000
Unemployed	69%	31%	$\chi^2 = 26.685$
Employed	29.9%	70.1%	
Education level			0.000
\leq Primary school	79.7%	20.3%	$\chi^2 = 26.087$
Secondary school	38.6%	61.4%	
\geq High school	42.1%	57.9%	
Income level			0.000
Low	78.6%	21.4%	$\chi^2 = 22.360$
Moderate	36.3%	63.7%	
High	60.9%	39.1%	
Contraceptive method			0.006
Modern	41.3%	58.8%	$\chi^2 = 7.671$
Traditional or none	61.7%	38.3%	

Eastern Black Sea region.⁶ Rate of induced abortion because of unintended pregnancy was 10% in Turkey. During the last decade, Turkey experienced a decrease in the rate of induced abortion, however, the abortion rate in the Eastern Black Sea region increased during this time from 6.3 to 11.5 which was the highest increase in Turkey.

EC is safe and effective and provides a way to avoid unintended pregnancy; therefore, decreasing the need for induced abortion. We aimed to evaluate the extent of knowledge, barriers, and misconceptions regarding of EC pills. This study is the first survey concerning knowledge and attitudes towards EC pills among married women in the Eastern Black Sea region of Turkey. The results revealed that awareness of EC pills was lower than the previous studies conducted in the western side of Turkey,¹¹ but also higher compared to the southeast region of Turkey.¹⁰ Our findings were comparably higher than knowledge levels in less developed countries, such as Haiti (6.0%),¹² India (7.8%),¹³ Lao (22.4%),¹⁴ South Africa (30%)¹⁵, and also the Muslim countries of Iran (6.1%)¹⁶ and Kuwait (8%)¹⁷.

Furthermore, knowledge about the timing of the EC pill was insufficient, but was higher than the other published surveys from different regions of Turkey^{10,18} and also other countries.¹⁹ In our study, the responses about timing of use, possible adverse effects, and efficiency of the EC pill suggested that the biggest obstacle to women using EC was inadequate or lack of information.

EC usage rate was 26.6%, which was higher than previous surveys.^{18,19} Also, current contraceptive choices affected the usage of EC. Among our respondents, most EC users were using modern contraception methods, which mean that the most common reason for using EC was the failure of contraceptive methods. The participants' contraceptive patterns were diverse according to education and income levels, number of children, duration of marriage and frequency of sexual intercourse. Moreover, the efficacy of the contraceptive method, risks, and adverse effects had an impact on choice of method. Unreliable contraceptive methods and concerns about contraceptive usage caused interruptions in using the method and led to the need for EC.²⁰

In contrast, many women who were aware of EC had negative attitudes towards EC, most of them did not believe the benefits of EC, or they objected to the method because of religious reasons or responsibilities. Religion was known to be a factor that adopted the attitudes for EC awareness. The diminished awareness of EC was observed among Muslim women.^{20,21} Our survey showed that 20.8% of women were opposed to using EC because of their religious beliefs. Furthermore, lower education levels and income levels among the Muslim population contributed to decreased EC awareness.²¹ Higher income and education levels were associated with the highest levels of awareness and usage of EC because

women with higher education level can easily access media and other communication devices and may have obtained health-related information.

Our study has several limitations. First, the relatively small number of participants does not reflect the socio-demographic characteristics of the Eastern Black Sea region of Turkey. The higher employment levels have impacted the increased awareness of EC pills. Moreover, this survey was conducted at a tertiary unit, and participants there were more likely aware of health-related information than at lower health care units and also compared to the general population.

Conclusion

The level of knowledge about EC among married women in the Eastern Black Sea region is relatively low, and misconceptions are high. Regarding attitudes towards EC, the client barriers to using EC were lack of information, misconceptions about effect mechanism, and adverse effects. Information about EC should be generalized and provided routinely by family planning units to women to overcome most of the barriers to using the method.

Doğu Karadeniz Bölgesindeki Evli Kadınların Acil Kontrasepsiyon Hakkında Bilgi ve Tutumunun Değerlendirilmesi

ÖZET

AMAÇ: Acil kontrasepsiyon (AK) korunmasız cinsel ilişki sonrası istenmeyen gebeliğin implantasyonunu engelleyen etkili bir doğum kontrol yöntemidir. Bu çalışmada doğurganlık çağındaki kadınların AK hapları ile ilgili bilgi düzeylerini ve doğum kontrolü ile ilgili tutumun ve kişisel özelliklerin AK hakkındaki bilgi düzeyi ile ilişkisini değerlendirmeyi amaçladık

GEREÇ VE YÖNTEM: Bu kesitsel çalışma Türkiye'de bir üniversite hastanesinde düzenlenmiştir. 18-40 yaşları arasındaki evli kadınlara anket uygulanmıştır. Bağımlı (bilgi, tutum ve inanç) ve bağımsız (yaş, gravide, parite, gelir ve eğitim düzeyi, kullanılan doğum kontrol yöntemi) değişkenlerin frekans dağılımı hesaplanmıştır.

BULGULAR: Anketi dolduran 187 kadının %40,8'i AK haplarının farkında idi, %35,1'i hapların kullanım zamanlamasını doğru olarak cevapladı ve %26,6'sı ise AK hapını kullandığını bildirmiştir. AK hapı ile ilgili olumsuz inanışlar genellikle yan etkileri ve deneyim eksikliği ile ilgili idi (sırasıyla %62,6 ve % 45,9). AK yönteminin kullanılmaması ile ilgili diğer yaygın nedenler ise dini inanışlar (%20,8) ve sorumluluklar (%40,8) olarak tariflenmiştir.

SONUÇ: Görüşülen kadınlar arasında AK ile ilgili farkındalık ve bilgi düzeyi düşüktür. AK kullanımıyla ilgili en büyük engel bilgi eksikliği ve yanlış inanışlardır. Farkındalığı artırmak ve olumsuz tutumu gidermek için Türk kadının AK ile ilgili daha yoğun bilgilene ihtiyacı vardır.

Anahtar Kelimeler: Kontrasepsiyon, Acil kontrasepsiyon, Türkiye, İstenmeyen gebelik

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