



## Knowledge, behaviors of nurses and midwives with emergency contraception\*

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### Abstract

**Aim:** The using of emergency contraception may play important role for preventing unplanned pregnancies and induced abortion. The aim of this study was to determine the knowledge and behaviors of nurses and midwives with emergency contraception.

**Material and Methods:** Sample of this descriptive and cross-sectional study was voluntary 89 nurses and 100 midwives. The data of study were collected using face-to-face interview methods via questionnaire. This study was made 1st-15<sup>th</sup> February, 2005.

**Results:** It was determined that 46.6% of nurses and midwives heard emergency contraception. Of the nurses and midwives who completed the sample 74.1% reported that they did not know about what used for emergency contraception and 77.2% of them did not know about beginning time to emergency contraception. It was found that rate of using the emergency contraception among nurses and midwives was 4.2%. Half of nurses and midwives who used emergency contraception reported that emergency contraception prevented their pregnancy. It was found that occupation ( $p=0.000$ ) and institution ( $p=0.000$ ) of participants effected hearing of emergency contraception by nurses and midwives the differences were significant.

**Conclusion:** Knowledge and behaviors of nurses and midwives with emergency contraception are not adequate. The education should prepare to health care providers for the presenting of knowledge and behavior about this subject. Advance researches into knowledge, attitude and behaviors of health professionals are advised.

**Key words:** Emergency contraception; nurse; midwife; knowledge; behavior.

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## Hemşire ve ebelerin acil kontrasepsiyona ilişkin bilgi ve davranışları

### Özet

**Amaç:** Planlanmamış gebeliklerin ve istemli abortusların önlenmesinde acil kontrasepsiyon kullanımı önemli rol oynayabilir. Bu çalışma, ebe ve hemşirelerin AK'ye ilişkin bilgi ve davranışlarını belirlemek amacıyla yapıldı.

**Gereç ve Yöntemler:** Tanımlayıcı ve kesitsel çalışmanın örnekleme, araştırmaya katılmaya istekli olan 100 ebe, 89 hemşire alındı. Çalışmanın verileri anket formu ile yüzyüze görüşme yöntemi kullanılarak toplandı. Bu çalışma 1-15 Şubat 2005 tarihleri arasında yapıldı.

**Bulgular:** Hemşire ve ebelerin %46,6'sının acil kontrasepsiyonu işittiği belirlendi. Örnekleme alınan ebe ve hemşirelerin %74,1'i acil kontrasepsiyon için ne kullanıldığını bilmediğini, %77.2'si acil kontrasepsiyona başlama zamanı hakkında bilgisi olmadığını belirtti. Hemşire ve ebeler arasında acil kontrasepsiyonu kullanma oranı %4,2 bulundu. Katılımcıların çalıştıkları kurum ( $p=0.000$ ) ve mesleklerinin ( $p=0.000$ ) acil kontrasepsiyonu işitmelerini etkilediği ve farkların önemli olduğu belirlendi.

**Sonuç:** Acil kontrasepsiyona ilişkin ebe ve hemşirelerin bilgi ve davranışları yeterli değildi. Bu konuda, sağlık profesyonellerine bilgi, tutum ve davranış geliştirmek için eğitim programları hazırlanması gerekir. Sağlık profesyonellerinin bilgi, tutum ve davranışlarını içeren ileri araştırmalar önerilir.

**Anahtar Kelimeler:** Acil kontrasepsiyon; hemşire; ebe; bilgi; davranış.

## Introduction

Emergency contraception (EC) via mechanical or pharmacological means inhibits fertilization and/or implantation from unprotected sexual intercourse (Chiou, Shrier, & Emans, 1998). Also, EC has known as “the morning after pill”, “postovulatory contraception” and “vacation pill” (Sevil, Yanikkerem, & Hatipoğlu, 2006). EC pills are combined estrogen-progestin pills or progestin-only pills that reduce the risk of pregnancy when taken after unprotected intercourse (Trussell, & Ellertson, 1995). The need for EC may arise because the women is not using any method of contraception, or when there is failure of the barrier methods, such as breakage or slipping of condoms, or in the case of rape (Ho, 2000). Although emergency contraception has been used primarily in victims of sexual assault, it offers a low-cost, highly effective method to reduce the incidence of unintended pregnancy. EC decreases emotional and physical risks to women who have had unprotected intercourse. EC also increases women have to make reproductive decisions by offering an alternative to abortion and childbearing (Chiou et al., 1998). Potential users of EC should have information and education about EC before they need it (Virjo, Kirkkola, Isokoski, & Mattila, 1999). Because, EC is more effective when taken as soon as possible after unprotected intercourse (Von Hertzen, Piaggio, Peregoudov, Ding, & Chen et al., 2002).

Of the estimated 3.5 million unintended pregnancies that occur each year in the United States, some 1,7 million are thought to be the results of contraceptive failure. The extremely high numbers of unintended pregnancies not only in the United States but also worldwide indicate that EC remains an important used for pregnancy prevention (Chiou et al., 1998).

According to the Turkish Population and Health Research (2008), the usage rate modern contraceptive method is 46%, whereas the use of withdrawal is 26%, willing abortion 10%. Women who terminated unwanted pregnancies had used withdrawal method (21.7%), and 32.3% were using no contraceptive method. Despite these rates, 29% of women were familiar with EC (TNSA, 2008). In Turkey, the ratio of usage of modern contraception is lower than developed countries. Because of that it is seen the ratio of induced abortion is higher. The importance of this is obvious on the point of view of mother-child and the society health. Moreover, the continuity rate of modern contraceptive methods is low in our country. This situation increases the incidence of unprotected or inefficiently protected intercourse. All of this reveals that being aware of EC and using it correctly is essential for women’s health in our country (Bozkurt, Korucuoğlu, Aksakal, Biri, & Çiftçi, et al., 2006). But, counselling and

knowledge about EC information is inadequate in the services of family planning programmes, it is stated that the usage is restricted because of the thought of causing abortion (Aksu, & Karaöz, 2008).

In Turkey, contraceptive counselling is given in many health institutions. Family planning services and primary health-care units give free information on contraceptive methods to individuals and couples, and these units provide contraceptives free of charge. Nurses provide counselling and information contraceptive methods. Family planning counselling is also undertaken by midwives who make regular home visits. Nurses and midwives have also been studied as part of a larger group of health professionals in primary health units in Turkey (Sevil et al., 2006).

Midwives and nurses are in the most effective position from point of communication the EC knowledge to people. Midwives and nurses must have to enough knowledge to educate about EC. Midwives and nurses can use the emergency contraception method when it is necessary.

The aim of this study was to determine the knowledge and behaviors relating to EC among nurses and midwives who have worked in health-care units in Ordu province, Turkey.

## **Material and Methods**

### *Study Design and Sample*

Population of this descriptive and cross-sectional research were constituted from 275 nurses and 117 midwives (184 nurses and 17 midwives that work at the State Hospital, 74 nurses and 74 midwives that work at the Gynecology and Obstetrics Hospital, 17 nurses and 26 midwives that work at the Primary care-units). Samples of research were included 100 midwives and 89 nurses that work at the State Hospital, Gynecology and Obstetrics Hospital, 1., 2. and 3. number Primary care-units in Ordu province of Turkey. The study took place over 2-week period in 1-15 February, 2005. The data were collected by questionnaire form consist of 30 questions.

### *Instrument and data collection*

The data of the research were collected via a questionnaire form. The questionnaire was modified after a pilot test with ten nurses and midwives in health care-units in Ordu province, Turkey. They were receipt in the study after correction in their questions form. The questionnaire included demographic questions and EC knowledge, attitude and behaviors questions. The questionnaire form approximately took approximately from 10 to 15 minutes to complete. The question form was filled in as self-reported by nurses and midwives. The questionnaire form included questions about midwives and nurses' socio-demographic-obstetric characteristics (1<sup>st</sup>-14<sup>th</sup> questions), their knowledge and behaviors with EC and their knowledge on EC (15<sup>th</sup>-22<sup>th</sup> questions).

### *Ethical considerations*

Nurses and midwives were invited to participate in the study and informed before verbal consent was obtained. The researchers guaranteed participants that their identities and answers would be kept confidential. Official permissions were taken from the institution before starting the research. This research was conformed to the principles of the Declaration of Helsinki.

### *Analysis of data*

Analyses of data were evaluated via descriptive statistics, chi-square analysis test and Fisher Exact test.

## **Results**

The average age of participants was  $34.97 \pm 6.25$  (range 23-49). Their number of pregnancies was  $2.18 \pm 0.93$  (range 1-6), their number of children was  $1.80 \pm 0.64$  (range 1-4), their number of spontaneous abortus  $1.40 \pm 0.71$  (range 1-4), their number of willing curettage was  $1.42 \pm 0.70$  (range 1-4), their married age was  $22.42 \pm 2.95$  and their time of marriage was  $12,37 \pm 6.24$  (range 1-30).

**Table 1. Socio demographic and obstetrical characteristics of nurses and midwives**

<b>Socio- demographic characteristics</b>	<b>n</b>	<b>%</b>
<b>Occupation (n=189)</b>		
Midwife	100	52.9
Nurse	89	47.1
<b>Instution (n=189)</b>		
Primary care units	42	22.2
Gynecology and Obstetrics Hospital	62	32.8
State Hospital	85	45.0
<b>Graduation school (n=189)</b>		
Health high school	56	29.6
College	128	67.7
Licence	5	2.6
<b>Willing curettage decision (n=40)*</b>		
I decided	3	9.1
I and my partner decided	24	72.7
Our doctor decided	6	18.2
<b>Reasons of the willing curettage (n=35)*</b>		
To not want more child	5	14.3
Short period between pregnancies	6	17.1
The economical inadequacy	4	11.4
Health problems	14	40.0
Nonavailable as psychological	1	2.9
Problems in marriage	5	14.0
<b>Method in becoming pregnant using a contraceptive (n=40)*</b>		
Pill	3	7.5
Intra uterin device	13	32.5
Condom	11	27.5
Sterilization	1	2.5
Implant	1	2.5
Injection	1	2.5
Withdrawal	4	10.0
Ovulation method	1	2.5
Calendar method	3	7.5
Other (condom- calendar)	2	5.0
<b>Used cotraceptive method at present (n=189)</b>		
Pill	11	5.8
İntra uterin device	65	34.4
Condom	53	28.0
Sterilization	17	9.0
Injection	2	1.1
Coitus interruptus	13	6.9
Ovulation method	2	1.1
Calendar method	3	1.6
It is not used	23	12.2

\* Percent was taken according to "n", participants who have willing curettage and become pregnant using contraceptive method marked these questions.

Socio demographic and obstetrical characteristics of nurses and midwives are shown in table 1. It was found that 52.9% of them are midwives, 47.1% of them are nurse. It was determined

that 45% of them employ in State Hospital and 67.7% of them graduate college. It was found that 72.7 % of them decide together their partners for their willing curettage. The causes willing curettage of them were insufficient health (40.0 %), short period between pregnancies (17.1 %), and don't want more children (17.1 %). It was determined that 16.9 % of them become pregnant while they are using contraceptive method. One-third of them (32.5%) became pregnant with IUD. It was found that 34.4% of them use IUD, 28.0% of them use condom as contraceptive method (Table 1).

**Table 2. Knowledge and behaviors of midwives and nurses about the emergency contraception (n=189)**

<b>Variables connected with EC</b>	<b>n</b>	<b>%</b>
<b>Have you ever heard of EC?</b>		
Yes	88	46.6
No	101	53.4
<b>Is your the EC knowledge enough?</b>		
Yes	45	23.8
No	144	76.8
<b>Would you want to get the knowledge about the EC?</b>		
Yes	142	75.1
No	47	24.9
<b>What is your knowledge source on the EC ?</b>		
Center of CMCHFP	41	47.7
Special doctor	7	8.1
Medicine representatire	13	15.1
Pres- publication	9	10.5
Friend / relative	7	8.1
From school	9	10.5
<b>What used at the EC?</b>		
I don't know	140	74.1
Pill	36	10.0
Intra uterin device	13	6.9
<b>The beginning period to the EC</b>		
Unknown	146	77.2
First 24 hours	4	2.1
First 72 hours	39	20.7
<b>Did you become pregnant with contraception ?</b>		
Yes	32	16.9
No	157	83.1
<b>Did you be successful by using the EC? (n=8)*</b>		
Yes	4	50.0
No	4	50.0

\* Percents were taken according to "n" .

Knowledge and behaviors of midwives and nurses about the emergency contraception are shown table 2. It was determined that 46.6 % of nurses and midwives hear the EC and the

47.7 % of them inform from “The Centre of Mother and Child Health and Family Planning” (CMCHFP). 74.1% of the nurses and midwives who enroll the study reported that they do not know about what used for EC and and 77.2% of them do not know about beginning time to EC. It was determined that 75.1% of them want to knowledge about EC. It was found that rate of using the EC among participants was 4.2%. They reported that the success in preventing unplanned pregnancies among participants who use EC was 50.0% (Table 2).

Their EC heard status according to occupation of health care providers were compared and the difference were found significant ( $p=0.000$ ), (Table 3).

**Table 3. Comparison of their EC heard status according to occupation of health care providers**

Occupation	Have you ever heard of EC?				Total		Significant Test
	Yes		No				
	n	%	n	%	n	%	
Midwife	63	63.0	37	37.0	100	100.0	$\chi^2=23.065$ df=1
Nurse	25	28.1	64	71.9	89	100.0	
<b>Total</b>	88	46.0	101	53.4	100	100.0	<b>p=.000</b>

Their EC heard status according to institution of health care provider were compared and the difference were found significant ( $p=0.000$ ), (Table 4).

**Table 4. Comparison of their EC heard status according to institution of health care providers**

Institution	Have you ever heard of EC?				Total		Significant Test
	Yes		No				
	n	%	n	%	n	%	
Primary care-units	27	65.9	14	34.1	41	100.0	$\chi^2=23.918$ df=2
Gynecology and Obstetrics Hospital	38	60.3	25	39.7	63	100.0	
State Hospital	23	27.1	62	72.9	85	100.0	<b>p=.000</b>
<b>Total</b>	88	46.6	101	53.4	189	100.0	

**Table 5. Comparison of their EC knowledge efficiency according to occupation of health care providers**

Occupation	Is your the EC knowledge enough?				Total		Significant Test
	Yes		No		n	%	
	n	%	n	%			
Midwife	26	26.0	74	74.0	100	100.0	$\chi^2=.562$ df=1 p=.454
Nurse	19	21.3	70	78.7	89	100.0	
<b>Total</b>	45	23.8	144	76.2	100	100.0	

Their EC knowledge efficiency according to institution and occupation of the health care providers were compared and differences were no significant ( $p>0.05$ ), (Table 5,6).

**Table 6. Comparison of their EC knowledge efficiency according to institution of health care providers**

Instituon	Is your the EC knowledge enough?				Total		Significant Test
	Yes		No		n	%	
	n	%	n	%			
Primary care-units	12	29.3	29	70.7	41	100.0	$\chi^2=4.597$ df=2 p=.100
Gynecology and Obstetrics Hospital	19	30.2	44	69.8	63	100.0	
State Hospital	14	16.5	71	83.5	85	100.0	
<b>Total</b>	45	23.8	144	76.2	189	100.0	

## Discussion

It is necessary to serve counselling and appropriate information about EC to the applicant couples by the nurses and midwives who are the health persons. For this reason, the nurses and the midwives are expected to be informed correctly and enough and if necessary to use EC. But, in this study it is determined that less half of the nurses and midwives are aware of EC, only one-fourth finds themselves have enough knowledge about EC and three-fourth wish to be informed about EC. The past studies show parallel results to our study, it is determined that health servers have not to enough information about EC (Mandracıoğlu, Mevsim, & Turgul, 2003; Pınar, Öktem, Algier, Doğan, & Zeyneloğlu, 2005; Sevil, et al., 2006; Uzuner, Ünalın, Akman, Çiftçili, & Tuncer, et al., 2005; Zeteroğlu, Şahin, Şahin, & Bolluk, 2004). Zeteroğlu et al.(2004), stated that the health persons do not know 26% anything about EC. Sevil et al. (2006), in their study with health stated that (29.2%) of the participants know the correct time of using EC. Mandıracıoğlu et al. (2003) in their study, 53.7% of the health persons know about EC. Uzuner et al. (2005) stated that the 39.4% of the

health staff have misconceptions about EC causing abortion. Sevil et al. (2006) stated that 27% of the nurses and midwives get information about EC from their institution or colleagues and 21.3% of them from the books or magazines. In our study the nurses and midwives who enough information about EC (86 persons) half of them get information from the centre of mother and child and family planning. Being to low ratio of getting information about EC from schools make us think that no information about EC in school curriculums. Proper information should be given to the nurses and midwives while education at school.

Different EC methods are used to prevent unwanted pregnancies. After unprotected intercourse in 72 hours using combined estradiol and levonorgestrel, only using of progesteron or only estrogen and after ovulation in 5-6 days using intra uterin device (Köşüş, Köşüş, & Çapar, 2007). In our study, we determined that 74.1% of the nurses and midwives do not know what use for EC. Those results show us that know about EC of nurses and midwives in our province are inadequacy.

The effectiveness of EC is related to the time between unprotected incourse and the cure. Using EC immediately after unprotected intercourse reduces the pregnancy risk to 1-2% (Westhoff, 2003; Yıldırım, 2004). In our study, it is determined that 77.2% of participants have no information about applying time EC method. Pınar et al. (2005) in their study 96.4% of the health staff, Uzuner et al. (2005) 80% of the participants stated that they do not know to apply EC methods in 72 hours. Sevil et al. (2006) found that knowledge of the correct the limit for the use of emergency contraceptive pills was poor: only 29.3% of those familiar with emergency contraceptive pills knew that it should be used within 72 hrs. Sherman, Harvey, Beckman, & Petitti, (2001) determined that health care providers have no enough information about EC while 35% of the health care providers know to apply EC within 72 hours after unprotected sexual intercourse, 40% of them believe that EC should be applied earlier than. In our study, the information level about applying EC time is lower than the literature. This results shows us the participants that we conducted our study have less information about EC so they should be educated in this field.

According to the results of Turkey Population and Health Research (2008) show that usage of modern contraceptive ratio is 46%, the ratio of willing abortion 10% . In the same study, 29% of women know about EC (TNSA, 2008). In our study, the ratio of pregnancy while using a contraceptive method 16.9%, willing curettage ratio 17.4% (n=33). Half of the

nurses and midwives who use EC is successful to prevent pregnancy after unprotected sexual intercourse.

### **Conclusions and suggestions**

Finally, the knowledge and behaviors of nurses and midwives about EC is inadequate and the number of nurses and midwives who use EC after unprotected sexual intercourse is quite less. Beside the training programmes of health care providers about EC, the reason of not using the EC of health care providers should be studied and necessary actions should be taken. The contraceptive counselling is given by nurses and midwives can be affected in a negative way because of less information about EC of the health care providers. Education programmes about EC can be effected knowledge, attitude, behaviors and practices of health care providers'.

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### **Limitations of the research**

This study sample size is small and limited to midwives and nurses from urban areas. Results can be generalized to sample of this study.

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