

## Cross-sectional Analysis of Erzincan Central Pharmacy Enterprises On Emergency Contraception

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### Abstract

Pharmacists have an important role in family planning and emergency contraception. The objective of this study was to evaluate the approaches and levels of knowledge of pharmacy staffs which are working in central pharmacies in Erzincan province. In Erzincan province, 44 pharmacies were evaluated. In the study, the questionnaire was completed in 20 pharmacies and answered by pharmacists and pharmacy staff. The questionnaire consists of three different parts, In the first part, the expressions related to socio-demographic characteristics, in the second part the expressions related to family planning, in the third part the expressions related to emergency contraception and questions about the level of knowledge and thoughts. The survey was carried out in 17 pharmacies voluntarily. In 71.7% of pharmacies, pills and condoms, 98.3% of the family planning methods requested by the patients were hormonal pills and condoms. The rate of emergency contraception answer was 50%. Emergency contraception awareness and family planning counselling services were found to be insufficient. In order to increase the knowledge level of pharmacists and pharmacy workers and to improve their counselling skills, training should be implemented and participation incentives should be increased.

**Keywords:** Family Planning, Emergency Contraception, Pharmaceutical Services

### Erzincan ili merkez eczane işletmelerinin acil kontrasepsiyon konusuna yönelik kesitsel analizi

#### Özet

Eczacılar aile planlaması ve acil kontrasepsiyon da önemli bir yere sahiptir. Bu çalışmanın amacı Erzincan ili merkez eczanelerde çalışan eczane ve eczane çalışanlarının acil kontrasepsiyon konusundaki yaklaşımlarını ve bilgi düzeylerini ölçmektir. Erzincan ilinde toplam 44 eczane bulunmaktadır. Çalışmada örnekleme gidilmiş ve anket 20 eczane ile uygulanmıştır. Eczacılar ve eczane çalışanlarına üç bölümden oluşan anket formu uygulanmıştır. Birinci bölümde sosyo- demografik özelliklerle ilgili ifadeler ikinci bölümde aile planlaması ile ilgili ifadeler üçüncü bölümde acil kontrasepsiyon ile ilgili bilgi düzeyleri ve düşünceleri ile ilgili sorular bulunmaktadır. Gönüllülük esas alınarak 17 eczanede anket uygulanmıştır. Eczanelerin %71.7 sinde hap ve kondom bulunmaktadır. Hastalar tarafından talep edilen aile planlaması yöntemlerinin %98.3 hormonal haplar ve kondomlar oluşturmaktadır. Acil kontrasepsiyon ne zaman alınacağına doğru cevap verenlerin oranı %50'dir. Acil kontrasepsiyon bilinirliği ve aile planlaması danışmanlık hizmeti yetersiz bulunmuştur. Eczacılar ve eczane çalışanlarının bilgi düzeylerini artırıcı ve danışmanlık becerilerini geliştirici eğitimler uygulanmalı ve bu eğitimlere katılım teşviki artırılmalıdır. Acil kontrasepsiyon yöntemleri hakkında mesleki yayınların sayısı artırılmalıdır.

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**Anahtar Kelimeler:** Aile Planlanması, Acil Kontrasepsiyon, Eczacılık Hizmetleri

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## 1. Introduction

### 1.1. Emergency Contraceptions

If the family can support it, it is in the scope of family planning to have a child whenever the family wants. By practicing family planning methods, women's health can be protected even better (Türkiye Nüfus ve Sağlık Araştırması 2013.).

Contraceptions used to prevent unwanted pregnancies are of great importance for women. Since the use and awareness of emergency contraceptives is low, it is of great importance to inform about this issue. Many couples have unprotected intercourse and women have a fear of becoming pregnant. Therefore, a large part of it ends with a miscarriage (Bostancı, M.S.).

Unplanned and unwanted pregnancies negatively affect women's health. This is a social event that brings along medical, social and economic problems. Unwanted pregnancies and voluntary abortions are shown as an important health problem for women (Doğaner, G. and others).

Conditions such as the absence of emergency contraception in counseling services, low level of knowledge of users in family planning outpatient clinics are the main obstacles in the use of emergency contraceptives (Doğaner, G. and others).

The place of emergency contraception in our country is not known exactly. Studies show that there is insufficient information about EC (Emergency Contraception) (Taşpınar, A. and others).

In Turkey, routine family planning consultancy services do not include EC, and practicing EC is limited because of the notion that it leads to miscarriage (Dandan, R.H. and others).

Every year, thousands of women can prevent unwanted pregnancy by using emergency contraception method. Failure to use any method of protection may require emergency contraceptives who are accidental or make mistakes while being protected. Therefore, women are informed about family planning (Bostancı, M.S.).

Women should be told how to access EC methods when necessary, and in some cases, they should be told in detail what emergency contraception methods they can apply, especially when it comes to condom and diaphragm ruptures (Toker, S.O).

#### 1.1.1. Definition of Emergency Contraception

Emergency contraceptions are used to prevent unwanted pregnancy in situations such as unprotected sexual intercourse, contraceptive failure and sexual assault before fertilization. Even if couples are knowledgeable about protection, pregnancy occurs because of unplanned sexual intercourse. In these cases, preventing pregnancy before starting is an indisputable right for every woman (Toker, S.O).

It is important for women to prevent such pregnancies by applying high doses of mini pills or combined oral contraceptives (Bostancı, M.S.).

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Emergency contraception is a cheap and sufficient method (Doğaner, G and others.).

### **1.1.2. Indications for Emergency Contraception**

One of the real indications is unprotected sexual intercourse. Another is the errors and accidents that occur during the use of contraceptives. These include misconduct of the female condom or rupture of the condom, misplacement of the diaphragm or cervical cap, misuse of spermicides, late injection of monthly or quarterly injectable contraceptives, forgotten oral contraceptive intake, partial or complete fall of IUDs, errors and accidents. In addition, emergency contraceptives are used to prevent pregnancy if a pregnant woman is exposed to teratogens (Toker, S. O.).

Emergency contraceptives are also used if a young girl or woman is exposed to sexual assault. It is not a method that provides regular protection. As a last resort, it should be applied to the patient. Emergency contraceptives are not effective when there is a pregnancy. It does not affect existing pregnancy. For this reason, there should be no thoughts in the form of miscarriage enforcement (Toker, S.O).

### **1.1.3. When should emergency contraception pills be taken?**

After unprotected intercourse between the 2nd and 3rd weeks of the menstrual cycle, the probability of a woman getting pregnant varies between 8% and 10%. If emergency contraception method is preferred, these rates decrease to 1-2% (Toker, S.O).

Emergency contraception method is applied in two ways as early and late. The first 72 hours after sexual intercourse are evaluated

as early postcoital contraception and 120 hours after sexual intercourse are considered as late postcoital contraception. These pills which are more effective if taken in the first hours have moderate protection if used within 120 hours. Emergency contraception methods include delaying ovulation, affecting the inner layer of the uterus, preventing the fertilized egg from settling in the endometrium and reducing tubal motility. These pills are taken within the first 72 hours and in case of no vomiting within the first 2 hours, they prevent 99% of pregnancy (Çolakoğlu, H.).

### **1.2. Emergency Contraception Methods**

- High-dose estrogens
- Combined use of estrogen and progesterone with the yuzpe regimen
- Pills containing only progesterone
- Selective progesterone receptor modulators (Mifepristone and UlipristalAcetat)
- Androgens (danazol)
- IUD (Intrauterine Device)

### **1.3. Things to Consider in Emergency Contraception**

Attention should be paid to postcoital methods. The use of these methods as a contraceptive should be avoided. These methods do not prevent the transmission of sexually transmitted diseases such as HIV / AIDS, hepatitis, syphilis, gonorrhea. If a hormonal method is to be used for postcoital emergency contraception, the health history of the person should be clearly taken.

If emergency contraception methods are to be used, it should be started within 72 hours

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after unprotected intercourse, otherwise, if this period expires, the protective effect of these methods decreases. A woman who has used any of the emergency contraceptive methods should immediately apply to a medical institution if there are conditions such as pain in the arms and chest, difficulty breathing, severe headache and dizziness, general weakness, blurred vision.

If vomiting occurs within one hour after the first or second dose of hormonal contraceptive pills, the same dose should be repeated as if it was never taken (Toker, S.O.).

### **1.3.1. Contraindications of Emergency Contraception**

In most healthy women, modern oral contraceptives are generally considered safe, but can lead to the frequency and aggravation of cardiovascular, thromboembolic or malignant diseases in the presence of other risk factors. Thromboembolic disease, cerebrovascular disease, myocardial infarction, coronary artery disease, congenital hyperlipidemia combined oral contraceptives, known or suspected breast cancer, abnormal female reproductive tract carcinoma, undiagnosed vaginal bleeding known or suspected pregnancy or liver tumors or liver disorders can also be counted among these contraindications. Cardiovascular side effects are quite high, especially in women who consume excessive cigarettes and are over 35 years old. Even low-dose oral contraceptives are contraindicated in such patients.

Other contraindications include migraine-type headaches, hypertension, diabetes mellitus, jaundice during gestation or prior oral contraceptive use, and gallbladder disease. If elective surgery is planned, it is

recommended to discontinue oral contraceptives for a few weeks to a month before surgery to minimize the possibility of thromboembolism after surgery. Emergency contraceptives should be used with caution in women with pre-gestational diabetes or uterine fibroids. Low doses should be given to these patients. Undiagnosed vaginal bleeding in contraceptives containing progestin only, contraindicated in the presence of benign or malignant liver disease and known or suspected breast cancer (Dandan, R.H. and others).

### **1.3.2. Side Effects of Emergency Contraception**

No serious complications related to emergency contraception have been reported. However, there are side effects that can reach serious dimensions. These are; Nausea and vomiting, menstrual delay, bleeding irregularity.

Antiemetics may be recommended to a patient who will use a combined preparation.

The menstrual delay can be a week or more. When this delay occurs, the possibility of pregnancy should be eliminated. The patient should be informed about this issue.

Some women may experience spotting and irregular bleeding after using emergency contraception. This situation was detected in the rates ranging from 0-17% in the studies conducted. Irregular bleeding can resolve over time without treatment. Sensitivity, fatigue, dizziness, and abdominal pain are among the other side effects. These effects disappear in a few days at most (Demir, C. and others).

### **1.3.4. Effects of Emergency Contraception on Pregnancy**

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It has been shown that high-dose oral contraceptives do not harm the mother and the fetus during short-term use in early pregnancy. There are evidences showing that emergency contraception generally reduces the risk of ectopic pregnancy by preventing pregnancy, rather than increasing the risk of ectopic pregnancy (Demir, C. and others).

### 2. Resarch Findings

20 pharmacies in Erzincan city center were selected for this study. 3 unwilling pharmacists and 11 seniors were not included in the study and the questionnaire was continued with 17 pharmacists and 43 pharmacy employees.

In our country, pharmacists employ journeymen in their pharmacies to help them. It is observed that the journeymen, whose job is to meet customers under the supervision of a pharmacist, to prepare the prescription drugs and to keep their records by registering and to make drug sales transactions, and that they do the prescribed drugs when pharmacists are busy or busy. For this reason, it is considered appropriate to be included in the questionnaire with the pharmacists to evaluate their knowledge and attitudes about EC since the pharmacist technician will have to provide services and consultancy directly to individuals who apply to the pharmacy for the purpose of EC.

#### 2.1. Sociodemographic Characteristics of Pharmacists and Pharmacy Employees

30% of the participants are pharmacists and 70% are pharmacist technicians. A total of 60 people participated in the study, 35% of the participants were women, 65% were men and 75% of them were married.

When 60 participants were asked about their working time in pharmacies, 51.7% stated that they worked in the pharmacy for 14 years and more, 16.7% for 9-13 years, 20% for 4-8 years and 11.7% for less than 3 years. This situation is given in Table 1 and Table 2.

**Table 1.** Pharmacist and pharmacy staff

demographic features (n:60)

Profession	Number	Percent %
Pharmacist	17	30
Pharmacist Technician	43	70
Gender		
Woman	21	35
Man	39	65
Marital Status		
Married	45	75
Single	15	15

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**Table 2.** The working years of pharmacists and pharmacy employees in pharmacy

Year	Frequency	Percent %	Current percentage %	Cumulative percent %
3 years and under	7	11.7	11.7	11.7
4-8	12	20	20	31.7
9-13	10	16.7	16.7	48.3
14+	31	51.7	51.7	100.0
Total	60	100.0	100.0	-

### 2.2. Information Status and Counseling Practices of Family Planning of Pharmacists and Pharmacy Employees

To the question of what is the most demanded family planning method from their pharmacies, 56.7% answered as hormonal contraceptives, 41.7% as condoms and 1.7% as injectable contraceptives. These rates are given in Table 3.

### 2.3. Knowledge Levels of Pharmacists and Pharmacy Employees on Emergency Contraception

In the third part of the questionnaire, 60 participants who we want to measure their knowledge about EC were asked in the third part of the questionnaire, along with their general information about EC, the definition, duration of use, and methods of open-ended questions.

From the open-ended questions in the survey, "What is emergency contraception?" The answers given to the question "unprotected sexual intercourse, pill used to prevent pregnancy after rape", "birth control pills taken within 72 hours", "the next day pill"

combined hormone pills "were accepted as correct. 60% of the respondents answered the question "What is emergency contraception" and 40% answered the question correctly.

**Table 3.** Family Planning (FP) Methods Most Demanded From Pharmacies

Requesed FP	Frequency	Percent %	Current percentage %
Condom	25	41.7	41.7
H Contraseptive	34	56.7	56.7
Enjcontraceptive	1	1.7	1.7
Total	60	100.0	100.0

From the answers given to the question "What are the methods of emergency contraception", "the following day pill", "combined oral hormones", "oral contraceptives", "injectable contraceptives" and IUD are accepted. These data are given in Table 4 and Figure 1.

**Table 4.** Answers to the question of "What are Emergency Contraceptions?"

Tablet	10
Unanswered	18
Injectable contraceptives	4
Hormonal contraceptives	8
Condom	6
Surgical procedures	2
Spermicide	1
Pill	11
Needle	4
Oral contraceptive	4
IUD	7
Abortion	1

### What are the EC methods?

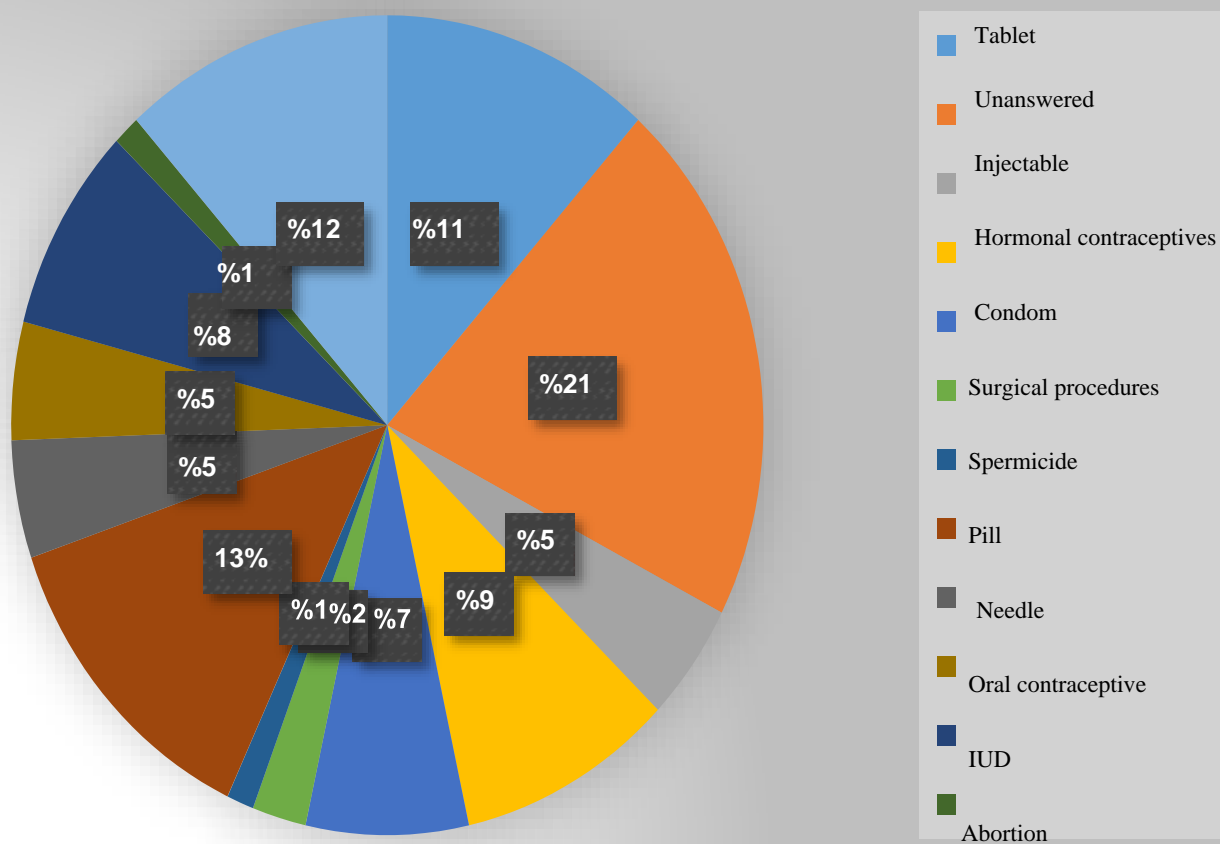


Figure 1. Answers to the question "What are the EC methods?"

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## 3.Results

Hormonal contraceptives and condoms, which are among the family planning methods that are available in pharmacies and are preferred by the next day pill, have a high rate of use.

In studies conducted with 154 pharmacists working in Elazig and Malatya, 85.1% of the family planning methods found in their pharmacies constitute condom and 74.7% of them are the next day pill (Sevindik, F. ve ark.).

A survey was conducted for pharmacists and pharmacist technicians. In this survey, information about emergency contraception methods and their sources of information were asked. It has been determined that the pharmacist technicians' knowledge about emergency contraception was mostly obtained from pharmacists and that most of the information about emergency contraception in pharmacists was from the faculties they received training. It shows the importance of education on emergency contraception methods in pharmacists and pharmacy faculties in the correct and effective use of emergency contraception methods.

It has been determined that pharmacists and pharmacy staff do not have sufficient knowledge about emergency contraception and family planning, and consequently, they cannot provide sufficient counseling on family planning. The emergency contraception service insufficiency of pharmacists and pharmacy workers was found to be related to the scarcity and widespread availability of information sources on emergency contraception methods. Training of pharmacists and pharmacy staff on emergency contraception

as well as family planning will significantly reduce the rate of unwanted pregnancy. In order to reach the desired level of family planning, improving the education given to pharmacists before graduation, organizing the training of pharmacists and pharmacy staff, and increasing advertisements, brochures and professional publications on emergency contraception methods can be provided.

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