

## Knowledge and Attitude of Postpartum and Postaborted Women Regarding Emergency Contraceptive at Fayoum City

Aya Ashraf Qurany<sup>1</sup>, Amal Sarhan El-desokey<sup>2</sup>, Fayza Ahmed Ali  
Abdelbaky<sup>3</sup>, Ehsan Shaban Morad<sup>4</sup>

<sup>1</sup>Demonstrator of Maternal and Neonatal Health Nursing, Faculty of Nursing, Fayoum University, Egypt.

<sup>2</sup> Assistant Professor of Maternal and Neonatal Health Nursing, Faculty of Nursing, Fayoum University, Egypt.

<sup>3,4</sup> Lecturer of Maternal and Neonatal Health Nursing, Faculty of Nursing, Fayoum University, Egypt.

**Corresponding author:** Aya Ashraf Qurany

**Email:** [aak12@fayoum.edu.eg](mailto:aak12@fayoum.edu.eg)

### Abstract

**Background:** Emergency contraception (EC) is one of the modern contraception methods, which is recommended after unprotected sexual intercourse (UPI). EC provides women with the last opportunity to prevent unwanted pregnancy by up to 95%. **Aim:** This study aimed to assess the knowledge and attitude of postpartum and postaborted women regarding emergency contraception at Fayoum city. **Design:** A descriptive research design was used. **Setting:** The study was conducted at the postpartum ward of the obstetrics and gynecological department of Fayoum and Senourse General Hospital. **Sample:** A purposive sample of 385 women. **Tools:** Three tools were used: (1) Structured Interviewing Questionnaire, (2) Knowledge assessment sheet and (3) Attitude Likert Rating Scale. **Result:** The current study showed that, more than two thirds (66.5%) had poor knowledge and more than half of them (59.7%) had negative attitude regarding emergency contraception. **Conclusion:** There was a lack of knowledge about the emergency contraceptive methods among the participants which subsequently influenced their attitude toward using it. **Recommendations:** Enhancing the information, education, and communication activities of family planning programs using mass media, booklets, and simplified brochures in different family planning and MCH centers to increase awareness among the general public about emergency contraceptive methods.

**Key words:** Knowledge, Attitude, Postpartum, Postaborted women, Emergency contraception.

## Introduction

Emergency contraception is one of the modern contraceptive methods which is indicated as early as possible within the first 5 days after unprotected sexual intercourse to prevent pregnancy. The best period to take emergency contraception is 72 hours after unprotected sex. Emergency contraception offers women a last opportunity to prevent pregnancy after unprotected intercourse, so EC can also reduce the prevalence of unwanted pregnancies and unsafe abortions (**Panda, Das, Das, Sharma, & Sharma, 2021**).

Unintended pregnancies occur when access to effective contraception is limited or when contraceptive methods are not used correctly or consistently. As a result, almost 40% of unintended pregnancies globally each year results from ineffective use of contraception, contraceptive failure, or not use contraceptive at all (**Guran et al., 2024**).

Therefore, WHO recommended that emergency contraception is a crucial measure and a highly effective way to prevent unintended pregnancies by up to 95% when used within 5 days of sexual intercourse, which can help clients avoid unsafe abortions and other unfavorable consequences. Emergency contraception is both safe and affordable, it can provide clients with an appropriate option for starting a continuous family planning method. Moreover, emergency contraceptives do not induce abortion, ectopic pregnancies, or birth defects if EC failed and pregnancy occurred and have no impact on woman's long-term

fertility (**McCarthy, & French, 2024**).

WHO recommended two types of emergency contraception which are the emergency contraceptive pills (ECPs) and the copper intrauterine devices (IUDs). Emergency contraceptive pills prevent or delay ovulation, thereby preventing pregnancy. While the copper IUD stops fertilization by altering the sperm and egg chemically before they come into contact (**Alhassan, Adjeso, Yanbom, & Agomuo, 2025**).

As regard, the regimens for the emergency contraceptive pill include three types: Levonorgestrel (LNG), ulipristal acetate (UPA) and combined oral contraceptives (COCs) when taken within 72 to 120 hours after unprotected sexual intercourse, can reduce the risk of pregnancy by 75–85% (**Erko, Demissie, Yabeyu, Haile, & Bilal, 2025**).

Additionally, an efficient method of emergency contraception is copper intrauterine devices (IUDs), as they can prevent pregnancy with an effectiveness of over 99%. So, the extremely highly effective rate, is thought to be the best choice in certain situations where emergency contraceptive pills may not work effectively (**Ibrahim, Maklof, & Mohamed, 2022**).

The postpartum period is critical for women, as the average return to fertility after childbirth occurs within 45 days, while ovulation can happen as early as day 20, especially in the absence of breastfeeding. Since approximately 5.5 percent of

voluntary pregnancy terminations occur in the six months following childbirth each year globally due to non-use of contraceptive methods, it is crucial to initiate using a method of contraception before this period to prevent unplanned and closely spaced pregnancies (**M'bortche et al., 2022**). Thus, women after childbirth are at great risk of unintended pregnancies, particularly in the first year following birth. So, use of postpartum contraceptive methods not only decreases the number of unintended pregnancies, but also enhances the well-being of both mother and child by promoting optimal birth spacing (**Odimegwu, Phiri, Tapera, & Simona, 2023**).

Additionally, it is important to provide an efficient contraceptive method as soon as possible after uterine evacuation or abortion is further highlighted by the reality that most women start having sex again within the first two weeks following early pregnancy loss, this puts women at risk of pregnancy after abortion due to the rapid return of fertility immediately following an abortion (**Hogmark, Envall, Gemzell-Danielsson, & Kopp, 2023**).

Although several Middle Eastern countries, including Egypt, have had emergency contraception available for a long time, many others in the region still lack access to it. This is caused by a variety of worries, such as the belief that these pills might: cause abortion, be too expensive, harm babies, or result in ectopic pregnancies (**Hamdy, Gomaa, & Abd El Fatah, 2023**).

Maternity nurses with extensive knowledge and positive attitude towards emergency contraception can act as an effective counsellor to the public to raise awareness, improve their understanding and change their attitude towards EC. Therefore, it is important to implement an ongoing maternity nurses' in-service training program to enhance their knowledge and attitude toward EC. Also, knowledge coupled with a positive attitude is very important to improve the practice of EC (**Soliman, Ramadan, Abd Elhakam, & Ali, 2024**).

#### **Significance of the Study:**

Unplanned pregnancies are a worldwide public health issue that especially affects people in countries with poor and moderate incomes. There were 121 million unwanted pregnancies per year between 2015 and 2019 (64 UPs per 1,000 women of reproductive age). According to WHO estimation 2021, six out of ten (61%) of all unwanted pregnancies end in an induced abortion. exposing 73 million women annually to the risks of this procedure, which is prohibited in many nations and frequently carried out in inadequate circumstances. Furthermore, 5 to 13% of maternal deaths worldwide are caused by unsafe abortions, which account for 45 % of all abortions (**WHO, 2024**).

Egypt's extensive track record of implementing family planning programs, reported that approximately 25% of pregnancies and births in the country are unplanned. Furthermore, every year, 216,000 women in Egypt are

hospitalized due to complications from abortions and this consider a negative consequence of unintended pregnancy (**Hashem, El-Gamal, Elbohoty, & El-Nagar, 2022**).

The problem of unwanted pregnancies persists despite emergency contraception being available and recorded for an extended period of time in Egypt and various other Middle Eastern countries. According to the Egypt Demographic and Health Survey, the majority of married women know about the implant, injection, pill, and IUD as traditional family planning methods, while only 14.7% of women are aware of EC methods (**Soliman et al., 2024**).

Finally, the unintended pregnancy has more serious consequences on women and their children health, so this study is intended to assess the knowledge and attitude of postpartum and postaborted women regarding emergency contraception to enhance their perception about these methods that can play an important role in decreasing this globally problem and its risks.

#### **Aim of study:**

This study aimed to assess the knowledge and attitude of postpartum and postaborted women regarding emergency contraception at Fayoum city.

#### **Research questions:**

1. What is the knowledge of the postpartum and postaborted women regarding emergency contraception?
2. What is the attitude of the postpartum and postaborted

women regarding emergency contraception?

#### **Subjects and Method:**

##### **Research design:**

A descriptive research design was utilized to achieve the aim of this study.

##### **Setting:**

This study was conducted at the postpartum ward of the Obstetrics and Gynecological Department of Fayoum General Hospital and Senourse General Hospital. These hospitals provide free services for women from urban and rural regions in Fayoum city.

**Sample type:** A purposive sample was utilized in this study.

##### **Sample size:**

Sample size was calculated using Open Epi-program equation of single proportion using the following assumption proportion 60% (**Sabry, Mahmoud, Abd Elzahr, Ahmed, & Ahmed, 2021**), the confidence level 95%, precision level 5 %, total target population 6000 based on statistics obtained from Fayoum General Hospital, and Senourse General Hospital. The calculated size was 348 women this size was increased by 10 % to overcome non response rate, so the total size was 385 women.

##### **Inclusion criteria:**

Postpartum and postaborted women who delivered normally or C.S and willing to participate in the study.

##### **Exclusion criteria:**

Postpartum and postaborted women with any acute or chronic diseases as cardiac disease, restrictive lung disease and diabetes mellitus.

**Tools of Data Collection:**

The data was collected by using three tools.

**Tool I: Structured Interviewing Questionnaire:**

This tool was developed by the researcher after reviewing the national and international related literature. It was written in a simple Arabic language; it was divided into four parts as follows:

**Part I: Socio-demographic characteristics:** It was designed to assess the women's characteristics such as age, residence, level of education, and occupation.

**Part II: Menstrual history:** This was included age of menarche, menstrual regularity, amount of menstruation, duration of menstrual blood flow, and cycle interval.

**Part III: Obstetrical history:** This was included numbers of pregnancy, abortion, delivery, living children, mode of delivery of the last baby, problems occur during previous pregnancy and postpartum and unintended pregnancy occurred before and the cause of its occurrence.

**Part IV: Family planning history:** This was included use family planning method before, the type of previous contraceptive method, duration of using this method, complications occurred during using it and the cause of termination.

**Tool II: Knowledge assessment sheet:**

This tool was adapted from (Sabry et al., 2021 & Ibrahim et al., 2022) and modified by the researcher. It was written in a simple Arabic language; it was consisted of (9) questions to

assess the women's knowledge about emergency contraception such as (the meaning, types, advantages, disadvantages, indications, contraindications, side effect, effectiveness of emergency contraception methods in preventing pregnancy after unprotected sexual intercourse and the suitable recommended time to use.

**Scoring system of knowledge:**

The questionnaire was contained of 9 questions, the total score of the correct answer was scored as two degrees and incorrect answer or don't know was scored as a one degree. These scores were summed and were converted into a percent score. It was classified into 3 categories:

- **Good knowledge** if the total score  $\geq 75\%$  (14-18).
- **Average knowledge** if the total score from 50-<75% (9-13).
- **Poor knowledge** if the total score from <50% (0-8).

**Source of postpartum and postaborted women's information regarding emergency**

**contraception:** such as from the physician, nurse, family planning health centers, relatives, friends, social media, school, university, radio, T.V, magazine and newspaper.

**Tool III: Attitude Likert Rating Scale:**

The Attitude Likert Rating Scale utilized in this study was adapted from (Sabry et al., 2021) and modified by the researcher to assess the women's attitude regarding the emergency contraception. The scale contained 14 statements, and for each statement,

women were presented with three response options:

- A positive response, indicating agreement, was assigned a value of 3 degrees.
- No opinion or uncertainty, denoted as indifference, was assigned a value of 2 degrees.
- A negative response, indicating disagreement, was assigned a value of 1 degree.

**Scoring system of attitude:** The total score for each participant ranged from 14 to 42. It was classified into 2 categories:

- **Positive attitude** if the total score  $\geq 60\%$  (26-42).
- **Negative attitude** if the total score  $<60\%$  (14-25).

#### **Tools Validity:**

The study tools were tested and evaluated for their face and content validity by a panel of expertise composed of 3 professors of Maternal and Newborn Health Nursing to ascertain relevance, clarity, understanding, completeness and applicability of the tools. The required corrections and modifications were done by adding, modifying, and rearranging some questions.

#### **Tools Reliability:**

Reliability was estimated among the same sample of 10 mothers by using the test-retest method on two occasions and then compared the scores through SPSS computer package. The Cronbach's coefficient alpha indicated that the questionnaire is reliable to detect the objectives of the study.

Tool	Alpha Cronbach	Internal consistency
Knowledge	0.870	Good
Attitude	0.871	Good

#### **Ethical considerations:**

Ethical aspects were considered before starting the study, Approval from the Ethical Research Committee of Fayoum University was obtained before conducting the study. An official permission from the selected study settings was obtained for the fulfillment of the study. The researcher explains the purpose of the study and its consequences confirming the confidentiality of the data. Women granted informed consent before data collection. To ensure anonymity, the completed tool was allocated a code number. The researchers informed the women that the information they had gathered would be kept private, and each woman had a right to withdraw at any time without giving a reason. The study didn't harm dignity, tradition and religious aspects of the women.

#### **Operational item:**

Includes the preparatory phase, pilot study and field work.

#### **A. Preparatory phase:**

It includes reviewing of the current and relevant related literature and theoretical knowledge of the various related aspects of the study using books, articles, scientific journal and internet with the aim of acquiring in-depth knowledge about the study. During this phase, the researcher also visits the selected places to get acquainted with the personnel and the study settings. The development of the tools was under supervisors' guidance

and experts' opinions were considered.

### **B. Pilot study:**

A pilot study was carried out on 10% from total sample size (40 of postpartum and postaborted women under the study) in a period of three weeks before conducting the actual study to test the feasibility, clarity, applicability and the efficiency of the tools in addition to estimate the time needed to fill in the tools. The pilot study revealed that some items need to be added which help in achieving the study objectives and some items needed to be modified, such as simplification and rephrasing of some questions to be simpler for understanding and other items need to be omitted. So, pilot study was excluded from the study sample later.

### **C. Field work:**

Data were collected after attaining the approval to conduct the study, sample was collected from the postpartum ward of the obstetrics and gynecological department at Fayoum and Senourse General Hospital 3 days weekly for each hospital from 9a.m to 2 p.m. The studied sample was carried out through six months in the period from February 2024 to July 2024. At the beginning, the researcher introduced herself to the women and explained the purpose of the study to establish trust and encourage their participation. Informed consent was obtained from each participant before proceeding. The researcher asked the women and filled the tools by herself for all women. The interview was conducted individually by the researcher. A structured interviewing

questionnaire sheet was used to gather information about the women's characteristics, as well as their previous and current obstetrical history. Tool I took about 10-15 minutes. Then the researcher assessed the women's knowledge regarding emergency contraceptives using Tool II took from 10-15 minutes. The attitude of the postpartum and postaborted women regarding emergency contraceptives was assessed using the Likert rating scale Tool III took from 5- 10 minutes. The total time needed to fill in the questionnaire was about 20 to 30 minutes.

### **Administrative item:**

An official letter to carry out this study clarifying the purpose and setting of the study was obtained from the Dean of the Faculty of Nursing, Fayoum University to the manager of Fayoum General Hospital and Senourse General Hospital as an approval to obtain permission and cooperation.

### **Statistical item:**

The statistical analysis of data was done by using the computer software of Microsoft Excel Program and Statistical Package for Social Science (SPSS) version 22. Data were presented using descriptive statistics in the form of frequencies and percentage for categorical data, the arithmetic mean ( $\bar{X}$ ) and standard deviation (SD) for quantitative data. Qualitative variables were compared using chi square test, P-value to test association between two variables. Correlation coefficient test ( $r$ ) was used to test the correlation between studied variables. Reliability of the

study tools was done using Cronbach's Alpha.

**Degrees of Significance of results were considered as the following:**

- P-value  $> 0.05$  indicates statistically insignificant difference (NS).
- P-value  $\leq 0.05$  indicates statistically significant difference (S).
- P-value  $\leq 0.01$  indicates statistically highly significant difference (HS).

**Results:**

**Table (1):** Shows distribution of the studied sample according to their socio-demographic data. Regarding to the age was noted that, nearly half of the studied sample (46.8%) their age group 20-<30 years. Regarding the level of education, the study finding showed that, more than half of them (57.9%) had secondary education. Also more than two thirds of them (67.3%) were housewife. Moreover, regarding to residence more than half of them (54.5%) lived at rural areas.

**Table (2):** Shows distribution of the studied sample regarding to their menstrual history. More than two fifth of the studied sample (44.7%) their age of menarche was 9-11years, a Mean SD of age of menarche was  $11.88 \pm 1.52$  years. Also, the majority of them (92.5% and 90.9%) had regular and moderate amount of menstruation, respectively.

**Table (3a):** Shows distribution of the studied sample according to their obstetrical history. More than two thirds of them (70.9%) don't have history of abortion. While, nearly one fifth of them (17.4) have one time of

abortion before and the minority of them (7.8% and 3.9%) have twice and more than three times of abortion, respectively.

**Table (3b):** Shows that, more than third of the studied sample (39.2%) had problems during her previous pregnancy, (41.0%) of them suffered from anemia. Additionally, more than two fifth of them (42.1%) had unintended pregnancy, (46.3%) of them due to missing contraceptive pills.

**Table (4):** Shows distribution of the studied sample according to their family planning history. More than two thirds of them (74.8%) had used a family planning method before, more than two fifth of them (43.4%) had used an IUD, more than two fifth of them (42.0%) had used a family planning method from one to two years.

**Table (5):** Shows distribution of the studied sample according to their knowledge about emergency contraception. More than two thirds (70.1% and 69.9%) of the studied sample didn't know the meaning and advantages of emergency contraception, respectively. Also, more than three quarters (76.6%) and the majority of them (83.4%) didn't know the disadvantages and contraindications of emergency contraception, respectively.

**Figure (1):** Illustrates percentage distribution of the studied sample according to their source of information about emergency contraception. About one third of them (32.8%) had information about emergency contraception from social



media. Also, about one quarter of them (24.4% and 23.1%) had information from family planning health centers and friends / relatives, respectively.

**Figure (2):** Illustrates percentage distribution of the studied sample according to their total knowledge score about emergency contraception. More than two thirds of them (66.5%) had poor level of total knowledge about emergency contraception. While, the minority of them (13.2%) had good level of total knowledge.

**Table (6):** Shows distribution of the studied sample according to their attitude regarding emergency contraception. More than half (50.6% and 50.4%) of them disagreed that, using emergency contraception is necessary in case of failure of the regular used birth control method and if unprotected sexual intercourse occur, respectively. Additionally,

nearly two thirds (63.9% and 62.6%) of them disagreed that, emergency contraception doesn't cause birth defects and ectopic pregnancy or abortion, respectively.

**Figure (3):** Illustrates percentage distribution of the studied sample according to their total attitude score regarding emergency contraception. More than half of them (59.7%) had negative attitude regarding emergency contraception. While, two fifth of them (40.3%) had positive attitude.

**Table (7):** Shows correlation between total knowledge score and total attitude regarding emergency contraception among the studied sample. There was highly significant positive correlation between total knowledge score and total attitude score regarding emergency contraception among the studied women ( $r=0.875$ ,  $p=<0.01$ )

**Table (1): Distribution of the studied sample regarding to their socio-demographic data (n=385).**

Socio-demographic data	No.	%
<b>Age (years)</b>		
<20	24	6.2
20-<30	180	46.8
30-<40	164	42.6
≥ 40	17	4.4
<b>Range</b>	(19-45)	
<b>Mean ± SD</b>	29.88±6.12	
<b>Educational level</b>		
Can't read or write.	36	9.4
Basic education	49	12.7
Secondary education	223	57.9
University education	77	20.0
<b>Occupation</b>		
Employee	126	32.7
Housewife	259	67.3
<b>Residence</b>		
Rural	210	54.5
Urban	175	45.5

**Table (2): Distribution of the studied sample regarding to their menstrual history (n=385).**

Menstrual history	No.	%
<b>Age of menarche (years).</b>		
9-11	172	44.7
12-14	151	39.2
> 14	62	16.1
Range Mean ± SD	(9-15) 11.88±1.52	
<b>Menstrual regularity.</b>		
Regular	356	92.5
Irregular	29	7.5
<b>Amount of menstruation.</b>		
Scanty	24	6.2
Moderate	350	90.9
Heavy	11	2.9
<b>Duration of menstrual blood flow (Days).</b>		
Three days	21	5.5
Four days	77	20.0
Five days	216	56.1
More than five days	71	18.4
Range Mean ± SD	(3-7) 4.96±0.91	
<b>Interval of menstrual cycle (Days).</b>		
<21	4	1.0
21<25	97	25.2
25<30	264	68.6
30<35	15	3.9
>35	5	1.3

**Table (3a): Distribution of the studied sample according to their obstetrical history (n=385).**

Obstetric history	No.	%
<b>Gravidity</b>		
1-2	135	35.1
3-4	145	37.7
≥ 5	105	27.3
<b>Parity</b>		
1-2	143	37.1
3-4	213	55.3
≥ 5	29	7.5
<b>Numbers of abortion.</b>		
None	273	70.9
One	67	17.4
Twice	30	7.8
Three and more	15	3.9
<b>Numbers of living children.</b>		
1-2	147	38.2
3-4	212	55.1
≥ 5	26	6.8
<b>Mode of delivery of the last baby.</b>		
Normal delivery	175	45.5
Cesarean Section	210	54.5

**Table (3b): Distribution of the studied sample according to their obstetrical history (n=385).**

<b>Obstetric history</b>	<b>No.</b>	<b>%</b>
<b>Problems during previous pregnancy.</b>		
Yes	151	39.2
No	234	60.8
<b>If the answer is yes, what are the problems? (n=151)</b>		
Hyperemesis gravidarum	15	9.9
Hypertension	12	8.0
Gestational diabetes	7	4.6
Anemia	62	41.0
Premature rupture of membrane	43	28.5
Hemorrhage	12	8.0
<b>Problems during previous postpartum.</b>		
Yes	23	6.0
No	362	94.0
<b>If the answer is yes, what are the problems? (n=23)</b>		
Puerperal sepsis	4	17.4
Postpartum hemorrhage	19	82.6
<b>History of unintended pregnancy.</b>		
Yes	162	42.1
No	223	57.9
<b>If the answer is yes, what is the cause of its occurrence? (n=162)</b>		
Missing pills	75	46.3
Failure of contraceptive method	62	38.3
Not using contraceptive method	25	15.4

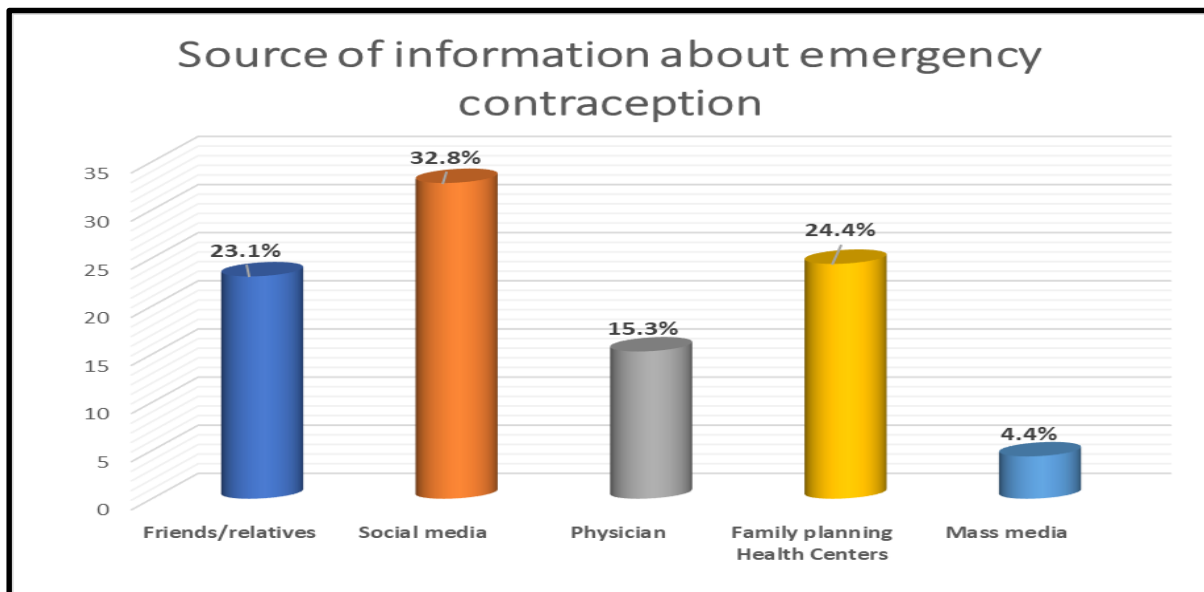
**Table (4): Distribution of the studied sample according to their family planning history (n=385).**

<b>Family planning history</b>	<b>No.</b>	<b>%</b>
<b>Use family planning method before.</b>		
Yes	288	74.8
No	97	25.2
<b>If the answer is yes, what is the type of previous contraceptive method? (n=288)</b>		
Pills	101	35.1
IUD	125	43.4
implant	25	8.7
Injectable	37	12.8
<b>Duration of using this method. (n=288)</b>		
<1 year	29	10.1
1-2 years	121	42.0
3-4 years	75	26.0
5-6 years	63	21.9
<b>Mean ± SD</b>	<b>2.74±1.6</b>	

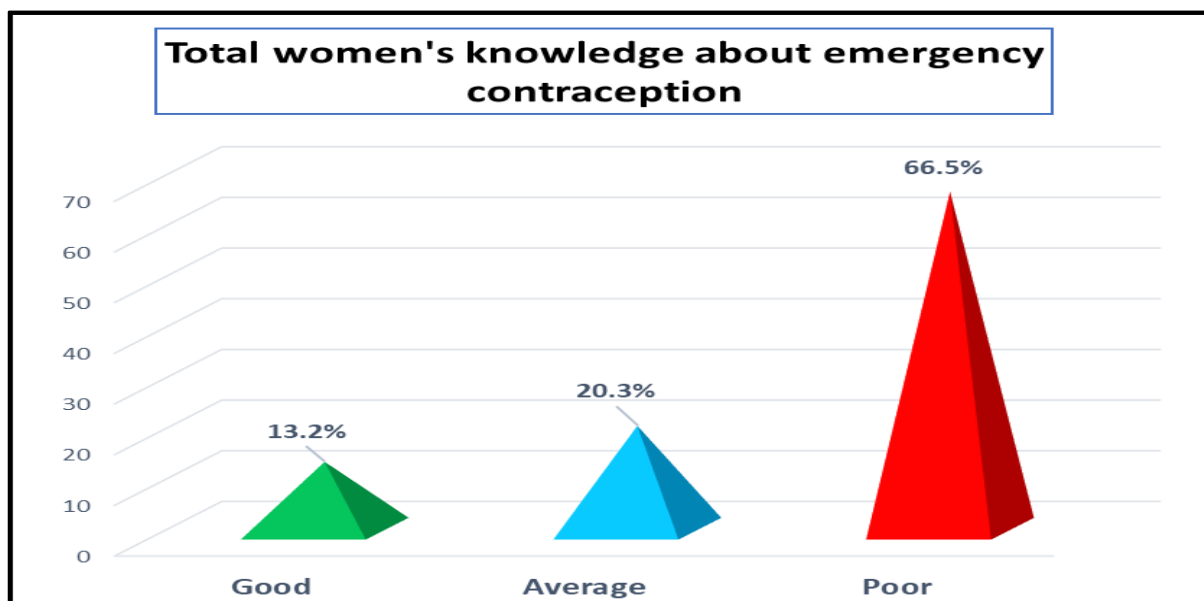
<b>Complications during using it. (n=288)</b>		
Yes	51	17.7
No	237	82.3
<b>*If the answer is yes, what is the complication? (n=51)</b>		
Menstrual irregularity	29	56.9
Bleeding	46	90.2
Infection	4	7.8
<b>Causes of termination of family planning method.(n=288)</b>		
Pregnant while using	76	26.4
Wanted pregnancy	174	60.4
Side effects or complication	38	13.2

**Table (5): Distribution of the studied sample according to their knowledge about emergency contraception (n=385).**

Items	Correct answer		Incorrect answer / Don't know	
	No.	%	No.	%
1. Definition of emergency contraception.	115	29.9	270	70.1
2. Types of emergency contraception.	140	36.4	245	63.6
3. Advantages of emergency contraception.	116	30.1	269	69.9
4. Disadvantages of emergency contraception.	90	23.4	295	76.6
5. Indications of emergency contraception.	101	26.2	284	73.8
6. Contraindications of emergency contraception.	64	16.6	321	83.4
7. Side effect of emergency contraception.	52	13.5	333	86.5
8. Are emergency contraception methods effective in preventing pregnancy after unprotected sexual intercourse?	77	20.0	308	80.0
9. The suitable recommended time to use emergency contraception.	115	29.9	270	70.1



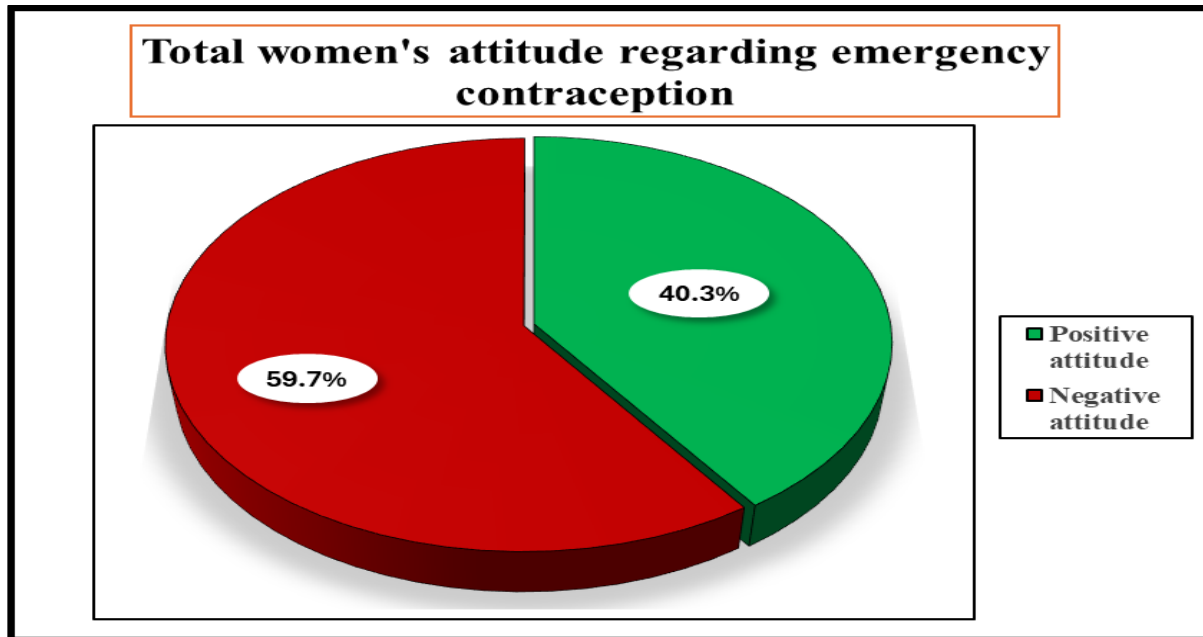
**Figure (1):** Percentage distribution of the studied sample according to their source of information about emergency contraception (n=385).



**Figure (2):** Percentage distribution of the studied women according to their total knowledge about emergency contraception (n=385).

**Table (6): Distribution of the studied sample according to their attitude regarding emergency contraception (n=385).**

Statements	Agree		Uncertain		Disagree	
	No.	%	No.	%	No.	%
1. Emergency contraception is safe to use.	38	9.9	114	29.6	233	60.5
2. Using emergency contraception is necessary in case of failure of the regular used birth control method.	77	20.0	113	29.4	195	50.6
3. Using emergency contraception doesn't affect negatively on the regular used birth control method.	76	19.7	112	29.1	197	51.2
4. It is easy to deal with side effect of emergency contraception.	38	9.9	195	50.6	152	39.5
5. If unprotected sexual intercourse occur; I will use emergency contraception.	78	20.3	113	29.3	194	50.4
6. Emergency contraception available without medical prescription or consult of a pharmacist.	39	10.1	208	54.0	138	35.9
7. It is necessary to increase level of awareness about emergency contraception between the women.	220	57.2	96	24.9	69	17.9
8. Using emergency contraception doesn't affect the fertility in the future.	26	6.7	90	3.4	269	69.9
9. Using emergency contraception after unprotected sexual intercourse is more effective than using regular birth control method.	63	16.4	51	13.2	271	70.4
10. Getting emergency contraception without a prescription minimize the use of other regular contraceptive methods.	88	22.8	63	16.4	234	60.8
11. Emergency contraception doesn't cause birth defects.	13	3.4	126	32.7	246	63.9
12. Emergency contraception doesn't cause ectopic pregnancy or abortion	39	10.1	105	27.3	241	62.6
13. Using emergency contraception is a good idea for all female.	84	21.8	198	51.4	103	26.8
14. Emergency contraception doesn't provide protection against HIV (AIDS) and other sexually transmitted diseases.	64	16.6	128	33.3	193	50.1



**Figure (3):** Percentage distribution of the studied women according to their total attitude regarding emergency contraception (n=385).

**Table (7):** Correlation between total knowledge score and total attitude regarding emergency contraception among the studied sample (n=385).

Variables	Total knowledge score	
	r	P-Value
Total attitude score	0.875	0.000**

(r)= Pearson correlation test. \*\*highly significant correlation at  $p < 0.01$ .

Interpretation of r: Weak (0.1-0.24) Intermediate (0.25-0.74) Strong (0.75-0.99) Perfect (1).

## Discussion

Emergency contraception is one of the best family planning strategies for lowering the chance of an unwanted pregnancy and the associated risks, including maternal disability and death. Unintended pregnancy is a global health problem that affecting women, families and the society and has more serious consequences on women and children health (Yeboah, Appiah, & Kampitib, 2022).

Regarding socio-demographic characteristics of the studied sample, the finding of current study revealed that, nearly half of the studied sample was between 20-30 years with mean age  $29.88 \pm 6.12$  years and regarding residence, it was observed that more than half of the women were living in rural areas. This finding was congruent with a study by Sabry et al., (2021) that entitled "Awareness of Postpartum and Post Aborted Women Regarding Emergency Contraception"

in Egypt, who reported that, about half of the women in the study were between the ages of (20-30yrs) with a mean age  $28.00 \pm 5.84$  years, and was found that over half of them lived in rural areas.

Concerning the women's education, this study showed that, only one fifth of studied sample had university education while more than half of them had secondary education. This result was in disagreement with a study by **Hashem et al., (2022)** that entitled "Effect of Educational Instructional Module on Childbearing Women's Awareness Regarding Emergency Contraception" in Egypt, who revealed that, nearly three quarters of participants had post graduate education degrees or university education and only one quarter had secondary education.

Regarding to the menstrual history of the studied sample, the finding of the present study revealed that, the majority of studied sample had regular menstruation, more than half of them had five days of menstrual blood flow and more than two thirds of them had menstrual cycle every  $25 < 30$ . This result was congruent with a study by **Abdelsamiea, Khamis, & Ibrahim, (2023)** that entitled "Awareness and Attitudes of Child Bearing post-partum Women regarding Billing Ovulation Family Planning Method" in Egypt, who reported that, the most of women in the study had regular menstruation, with intervals of 25–30 days and duration ranging from 3–5 days with a mean of  $4.59 \pm 1.07$  days, respectively.

Concerning the women's obstetrical history, this study revealed that, more

than quarter of studied sample had one or more abortion before and more than two thirds of them did not have abortion before. This result was in agreement with the study by **Ibrahim et al., (2022)** that entitled "Effect of educational program on knowledge and attitude of childbearing women about intrauterine copper device as emergency contraceptive method" in Egypt, who reported that, about one third of studied women had previous abortion and more than two thirds of them did not have abortion before.

Concerning to the number of unintended pregnancy, the present study revealed that, more than two fifth of studied sample had unintended pregnancy. This result came on the line with **Hashem et al., (2022)** who reported that, over one quarter of the studied women had unplanned pregnancy. Also, the finding of this study was congruent with a study by **Ali, Gonied, & Elsebeiy, (2023)** that entitled "Assessment of Reproductive Age Women Health Related Behavior Regarding Emergency Contraception Methods" in Egypt, who revealed that, about one-third of the women in the study had previously experienced an unwanted pregnancy as a result of unprotected sexual activity.

Regarding the cause of unintended pregnancy, this study illustrated that, more than two fifth of studied sample forgot to take hormonal contraceptive pills that in turn led to unintended pregnancy. This finding congruent with the study by **Hassan, El-Kurdy, Yousef, & Lamadah, (2020)** that entitled " The Effect of an Educational Guidelines on Childbearing Women's Knowledge, Attitude and their



Intention regarding Emergency Contraceptive Use" in Egypt, who revealed that, over half of women forget to take the pills, which is the primary cause of unplanned pregnancies, which affect about one-third of women.

The researcher believes that, this result may be due to the lack of national educational programs for the general public about the importance and the correct way for using of family planning methods including emergency contraception, which can help the women to avoid unplanned pregnancy.

Regarding the family planning history, the current study illustrated that, more than two thirds of studied sample had used family planning methods before and only one quarter of them didn't use family planning methods before. This result was in agreement with a study by **Hashem et al., (2022)** who stated that, over three quarters of the women in the study had used previous or current contraceptive method for a duration ranging from five to fifteen years and over one fifth of them had never used family planning methods before.

Regarding to the level of knowledge about emergency contraception, the result of the current study revealed that, more than two thirds of the studied sample don't know the meaning and advantages of emergency contraception, respectively. This result was congruent with a study by **Hassan et al., (2020)** who revealed that, prior to the guidelines' intervention, over two-thirds and over three-quarters of the women in the study didn't know the

proper definition and advantages of emergency contraception, respectively.

According to the source of information about emergency contraception, the finding of the present study revealed that, about one third of the studied sample had information about emergency contraception from social media. Also, about one quarter of them had information from family planning health centers and friends / relatives, respectively. This finding was congruent with a study by **Hamdy et al., (2023)** that entitled " Counselling Program for Married Women Regarding Emergency Contraceptive Methods" in Egypt, who stated that, about one third of women had information about emergency contraception from social media and health care facilities, respectively.

The researcher believes that, this outcome can be the result of growing technology and the widespread use of social media, which has a significant and obvious impact on people nowadays because it is utilized by everyone worldwide.

According to the total knowledge score about emergency contraception, the result of the current study showed that, more than two thirds of the studied sample had poor level of total knowledge about emergency contraception. This finding came in the same line with a study by **Saleh, Asham, & Ismail, (2023)** that entitled "Awareness and use of emergency contraception among women attending Kidwany MCH center, Assiut City" who illustrated that, above three fifths of sample had poor

knowledge about emergency contraception. In addition, **Sabry et al., (2021)** who stated that, more than half of the studied women had poor knowledge about emergency contraception.

The researcher believes that this low level of knowledge about emergency contraception because of about one third of studied sample obtained information about emergency contraception from social media. This information from social media may also be insufficient, incorrect and incomplete. Additionally, there is currently no national plan developed to promote emergency contraception and educate the public, particularly women of reproductive age, about its importance.

Concerning the studied sample's total attitude regarding emergency contraception, the present study found that, more than half of the studied sample had negative attitude regarding emergency contraception, while two fifth of them had positive attitude. This result came on the same line with a study by **Abera, Sema, Guta, & Belay, (2021)** that entitled "Emergency contraceptive utilization and associated factors among college students in Dire Dawa City, Eastern Ethiopia" who reported that, the most of participants had a negative attitude regarding emergency contraception and only one quarter of them had positive attitude.

Also, this finding is supported by the study by **Oshodi et al., (2020)** who founded that, majority of the studied women demonstrated negative attitude regarding emergency contraception.

On the other hand, the result of the present study was incongruent with a study by **Hassan, H., & Ali, L. (2024)** who reported that, slightly more than one half of studied women had positive attitude regarding emergency contraception while more than two fifth of them had negative attitude. Also, **Yeboah et al., (2022)** who reported that, above half of studied sample had positive attitude toward emergency contraception.

The researcher believes that the contradiction between these results and the findings of the current research may be due to differences in the level of education, which affects the level of awareness, which in turn affects women's behaviour.

Lastly, the present study indicated that, there was highly significant positive correlation between total knowledge score and total attitude score regarding emergency contraception among the studied sample. This finding came in agreement with a study by **Davis, Sarasveni, Krishnan, Bhat, & Kodal (2020)** that entitled "Knowledge and attitudes about the use of emergency contraception among college students in Tamil Nadu, India" who reported that, there was significant correlation between the participant's knowledge and attitude toward emergency contraception. Also, this result supported by **Erko et al., (2025)**.

### **Conclusion**

Based on the results of this study, it can be concluded that participants' attitudes regarding utilizing emergency contraceptives were influenced by their lack of knowledge

of these methods. The present study demonstrated that over two-thirds of the studied sample had poor knowledge and more than half of them had negative attitude toward emergency contraception. Overall, the findings of the current study achieved the study's aim and answered the research questions. Thus, it is crucial to initiate health education programs for increasing awareness and utilization of emergency contraception.

### Recommendations:

- Enhancing the information, education, and communication activities of family planning programs for couples regarding emergency contraceptive methods using mass media, a clear language booklet, and simplified brochures especially in different family planning and maternal & child health centers to increase awareness among the general public about emergency contraception.
- Simple reliable online and social media sources should be available to women regarding emergency contraception.
- Train and educate all health care providers, particularly who work in family planning centres about the emergency contraception.
- The importance of incorporating emergency contraception into family planning counselling, particularly in the postpartum period, to prevent unintended pregnancies.

### Further researches:

- Additional research is required to evaluate the factors that are related to and affect women's use of emergency contraception.
- Conduct a prolonged study involving a large sample across various settings such as: family health centers and other maternity care facilities in different areas of Egypt, to assess knowledge and attitudes about emergency contraception and to be able to generalize the results.

### References

- Abdelsameia, O., Khamis, M., & Ibrahim, W. (2023).** Awareness and attitudes of child bearing post-partum women regarding billing ovulation family planning method. *Assiut Scientific Nursing Journal*, 11(40), 294-307.
- Abera, L., Sema, A., Guta, A., & Belay, Y. (2021).** Emergency contraceptive utilization and associated factors among college students in Dire Dawa City, Eastern Ethiopia: A cross-sectional study. *European Journal of Midwifery*, 5, 28.
- Alhassan, M., Adjeso, Y. N., Yanbom, C. T., & Agomuo, S. K. S. (2025).** Factors associated with the utilization of emergency contraceptives by female college students in rural Ghana: a cross-sectional study. *Health Science Reports*, 8(3), e70575.
- Ali, N. R., Gonied, A. S., & Elsebeiy, F. I. (2023).** Assessment of reproductive age women health related behavior regarding emergency contraception

- methods. *Zagazig Nursing Journal*, 19(1), 22-34.
- Davis P., Sarasveni M., Krishnan J., Bhat L., Kodal N. (2020).** Knowledge and attitudes about the use of emergency contraception among college students in Tamil Nadu, India. *Journal of the Egyptian Public Health Association*. 95, 1-11.
- Erko, F. B., Demissie, B. N., Yabeyu, A. B., Haile, K. T., & Bilal, A. I. (2025).** Emergency contraception knowledge, utilization and its determinants among selected young females in Addis Ababa, Ethiopia. *Contraception and Reproductive Medicine*, 10(1), 24.
- Guran SK, Aalam KP, Manjur M, Kapoor G, Alam MI, Mehra S, Kumari S. (2024).** Awareness and attitude of wives of laborer outmigrants originating from Indian subcontinent towards emergency contraceptives- a multi-country study. *Indian Journal of Science and Technology*, 17(25): 2650-2657.
- Hamdy, F., Gomaa Mohamed, F., & Abd El Fatah Omran, A. (2023).** Counseling program for married women regarding emergency contraceptive methods. *Egyptian Journal of Health Care*, 14(3), 1192-1211.
- Hashem, S. M., El-Gamal, S. M. A., Elbohoty, S. B., & El-Nagar, A. E. (2022).** Effect of educational instructional module on childbearing women's awareness regarding emergency contraception. *Tanta Scientific Nursing Journal*, 26(3), 242-263.
- Hassan, H., & Ali, L. (2024).** Knowledge of emergency contraception and acceptability of unplanned pregnancy among married women in reproductive age in Beni-Suef. *Egyptian Journal of Health Care*, 15(1), 1603-1618.
- Hassan, S., El-Kurdy, R., M Yousef, A., & M Lamadah, S. (2020).** The effect of an educational guidelines on childbearing women's knowledge, attitude and their intention regarding emergency contraceptive use. *Egyptian Journal of Health Care*, 11(4), 816-831.
- Hogmark, S., Envall, N., Gemzell-Danielsson, K., & Kopp Kallner, H. (2023).** One-year follow up of contraceptive use and pregnancy rates after early medical abortion: Secondary outcomes from a randomized controlled trial of immediate post-abortion placement of intrauterine devices. *Acta obstetrica et gynecologica Scandinavica*; 102(12): 1694–1702.
- Ibrahim, W., M Maklof, E., & R Mohamed, R. (2022).** Effect of educational program on knowledge and attitude of childbearing women about intrauterine copper device as emergency contraceptive method. *Egyptian Journal of Health Care*, 13(1), 99-113.
- M'bortche, B. K., Baramna-Bagou, F., Douaguibe, B., Logbo-Akey, K. E., Ajavon, D. R., Ketevi, T. A., ... & Akpadza, K. (2022).** Knowledge, attitudes of pregnant

- women and practices of women who have recently given birth on contraception in the immediate postpartum period at principal clinic of the to golese association of family well-being planning center (ATBEF). *Open Journal of Obstetrics and Gynecology*, 12(1), 67-80.
- McCarthy, C. M., & French, A. V. (2024).** Updates in emergency contraception. *Topics in Obstetrics & Gynecology*, 44(7), 1-6.
- Odimegwu, C., Phiri, M., Tapera, T., & Simona, S. (2023).** Patterns and correlates of intention to use contraceptives among fecund sexually active women in developing countries. *Global health action*; 16(1): 2255043.
- Oshodi, Y. A., Akinlusi, F. M., Uduosoro, A. A., Agbara, J. O., Rabi, K. A., & Akinola, O. I. (2020).** Sexuality and emergency contraceptive practice among female undergraduates in Lagos, Nigeria. *Open Journal of Obstetrics and Gynecology*, 10(06), 836.
- Panda, S., Das, R., Das, A., Sharma, N., & Sharma, A. (2021).** A study to assess the knowledge and awareness among young doctors about emergency contraception. *Journal of Family Medicine and Primary Care*, 10(6), 2304-2312.
- Sabry, F. A., Mahmoud, T. M., Abd Elzaher, O. M., Ahmed, S. E., & Ahmed, N. H. (2021).** Awareness of postpartum and post aborted women regarding emergency contraception. *Assiut Scientific Nursing Journal*, 9(26), 55-64.
- Saleh, M. A. K., Asham, M. A., & Ismail, T. A. A. M. (2023).** Awareness and use of emergency contraception among women attending Kidwany MCH center, Assiut City. *The Egyptian Journal of Community Medicine*, 41(3), 175-185.
- Soliman Abdo, R., Ramadan, S., Abd Elhakam, E., & Ali, F. (2024).** Effectiveness of educational intervention on knowledge and attitude of maternity nurses regarding emergency contraception. *Journal of Nursing Science Benha University*; 5(1): 145-163.
- World Health Organization, (2024).** Abortion. Available at <https://www.who.int/newsroom/fact-sheets/detail/abortion>.
- Yeboah, D. S., Appiah, M. A., & Kampitib, G. B. (2022).** Factors influencing the use of emergency contraceptives among reproductive age women in the Kwadaso Municipality, Ghana. *PloS one*, 17(3), e0264619.