

## Assessment of Reproductive Age Women Health Related Behavior Regarding Emergency Contraception Methods

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### Abstract

**Background:** Emergency contraception has been available and registered for a long time in Egypt and some other Middle Eastern countries, it is still relatively unknown and is discussed controversially in such countries, and the problem of unintended pregnancy still exists. **Aim of the study:** was to assess reproductive age women health related behavior regarding emergency contraceptive methods. **Subjects and Method: Research design:** Descriptive study. **Setting:** The study was conducted at the family planning unit of the outpatient clinic of Zagazig university hospitals. **Subjects:** A convenient sample included 310 women. **Tools of data collection:** A structured interview questionnaire which entailed two parts: General characteristics and women health related behavior regarding emergency contraceptive methods. **Results:** Small percentage of the studied women previously used emergency contraception and agreed that emergency contraceptive methods pills can't be used as ongoing long term contraception. Less than one fifth of the studied women had the intention to seek emergency contraceptive methods if the woman has unprotected sex. Less than one fifth agreed that emergency contraceptive pills (Contraplan II) are available in pharmacies with easy access and affordable cost. Less than one fifth agreed that there is no religious rejection of emergency contraception and agreed that the dose should be repeated if vomiting occurs within 2 hours of emergency contraceptive pills intake. Almost one fifth agreed that breast feeding should be discontinued for few days with some types of emergency contraceptive pills as it are expressed in breast milk. **Conclusion:** almost one third of the studied women had positive behavior regarding emergency contraception. **Recommendations:** Provision of verbal knowledge or in the form of guidelines & brochures to women attending different family planning and maternal & child health centers about emergency contraception and its availability and cost effectiveness; as this will improve health related behavior regarding it.

**Keywords:** Reproductive Age, health related behavior, emergency contraception methods.

### Introduction:

Emergency contraception refers to any contraceptive method that can be used after having unprotected or inadequately protected sexual intercourse but before pregnancy occurs, providing women with the opportunity to prevent unwanted pregnancy which carries higher risk of morbidity and mortality often due to unsafe abortion. EC is a safe and effective method for preventing unwanted pregnancy and can reduce the risk of pregnancy by up to 99%<sup>(1)</sup>.

In a survey carried out in the United Kingdom, only 7% of women had used emergency contraception

during the past twelve months in the form of the 'morning after pill' and 0.5% had used it in the form of an emergency IUD<sup>(2)</sup>.

Emergency contraception is indicated to prevent pregnancy after unprotected or inadequately protected sexual intercourse when no contraceptive has been used whether in married life or in sexual assault, or when there is a contraceptive failure or incorrect use, including: Condom breakage, slippage, or incorrect use. Two or more consecutive missed combined oral contraceptive pills or Progestin-only pill (minipill) taken more than three hours late. More than two

weeks late for a progestin-only contraceptive injection; depot-medroxyprogesterone acetate or norethisterone enanthate should be considered<sup>(3)</sup>.

There are two main types of EC methods, copper bearing intrauterine devices and oral methods. The most commonly used oral methods are levonorgestrel (LNG) 1.5 mg (Plan B®, Teva Pharmaceuticals, Petach Tikva, Israel) and ulipristal acetate (UPA) 30 mg (Ella One®, HRA Pharma, London, UK) given as single doses. Other ECP that are less common as Mifepristone and Yuzpe regimen includes the use of combined oral emergency contraceptive pills<sup>(4)</sup>.

Copper IUD is proven to be an effective method of EC up to 5 days after the first act of unprotected sex. The main mechanism of action of the copper IUD is to prevent fertilization by inhibiting sperm viability and function. If ovulation has already occurred and fertilization has taken place, copper ions influence the female reproductive tract and impair endometrial receptivity if a woman is already pregnant<sup>(5)</sup>.

Levonorgestrel emergency contraceptive pills contains 1.5 mg of LNG, it is also available in the form of two pills of 750 mcg, which can be taken together or twelve hours apart. LNG ECPs can be used until 120 hours (five days) after UPSI, but they should be used as soon as possible. They are used nowadays are marketed in Egypt under brand name contra plan II<sup>(6)</sup>.

Ulipristal acetate pills are used within 120 hours (5 days) after unprotected intercourse. It is in the selective progesterone receptor modulator (SPRM) class of medications. The tablet can be taken at any time during the menstrual cycle. Ulipristal acetate inhibits or postpones ovulation. If ovulation has already occurred, it is no longer effective. The timing of ovulation cannot be predicted and therefore the tablet should be taken as soon as possible after unprotected intercourse. It has been

shown to prevent about 62–85% of expected pregnancies<sup>(7)</sup>.

The Yuzpe regimen is a method of emergency contraception that uses a combination of ethinyl estradiol and levonorgestrel. A meta-analysis of eight studies of the combined (estrogen-progestin) regimen including more than 3,800 women concluded that the regimen prevents about 74% of expected pregnancies; the proportion ranged from 56% to 89% in the different studies<sup>(2)</sup>.

#### **Significance of the study:**

In Iraq,<sup>(8)</sup> found most women had limited information about EC & only 48/400 (12.0%) women had practiced it, the rate of unintended pregnancy was 33.3% and it is significantly related (p-value=0.006) to the knowledge of participants about EC. The present study was conducted in Zagazig to assess reproductive age women's health related behavior regarding emergency contraception methods.

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

The aim of the current study was to assess reproductive age women health related behavior regarding emergency contraception methods.

#### **Research question:**

What is the reproductive age women health related behavior regarding emergency contraception methods?

#### **Subjects and Methods:**

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

A descriptive design was adopted to carry out this study.

##### **Study Setting:**

The current study was conducted at family planning unit at the outpatient clinic of Zagazig university hospitals as it provides care to large number of women all over Sharkia governorate.

##### **Study Subjects:**

A convenient sample of women was included in the study. The total target population was 6984 as previous prevalence of EC use was 24.5%. Sample size estimated to be 289 with 10% non-responder rate so sample was 310 calculated by EPI info

with power 80% and confidence level 95%.

#### **Tool for data collection:**

A structured interview questionnaire was designed, validated and utilized by the researcher to collect the necessary data. It entailed two parts:

**Part I:** General characteristics which included data about:

- Demographic characteristics
- Obstetric history
- Contraceptive history

**Part II:** Women health related behavior regarding emergency contraceptive methods. It was composed of eight questions. It was developed by the researchers after an extensive reviewing of the related articles by (El-Sabaa et al.,<sup>9</sup>) & Walaa et al.,<sup>(10)</sup>

#### **Health related behavior scoring system:**

Women responses were put in a likert scale agree or disagree. Total score of women's health related behavior level <60% denote negative behavior and total score  $\geq$  60% denote positive behavior.

#### **Content Validity and Reliability:**

Tools were reviewed by a panel of five experts in the field of Obstetrics and Gynecology medicine and nursing to test its content validity. Modifications were done accordingly based on their judgment. Reliability was done by Cronbach's Alpha Coefficient Test which revealed that each item of the utilized tools consisted relatively homogeneous items. The values were revealed as follow: women knowledge (0.844 good), women health related behavior (0.902 excellent), and overall reliability (0.837 good).

#### **Field work:**

The researcher attended to the study setting three days per week for data collection over a period of 8 months, starting from December 2020 to July 2021. The researcher started to collect data through the following two phases:

#### **Interviewing phase:**

In this phase the socio demographic characteristics such as age, education, occupation and residence were obtained. Obstetric history such as duration of marriage, number of parity, history of pregnancy occurred due to unprotected sexual intercourse and contraceptive history of contraception method that the woman already used.

#### **Assessment phase:**

In this phase the health related behavior regarding emergency contraceptive methods was assessed. Did the woman previously use emergency contraceptive methods? If the woman has unprotected sex would she seek emergency contraceptive methods? Are Emergency contraceptive pills (contraplan II) available in family planning units and pharmacies with easy access and affordable cost? Is there religious rejection of emergency contraception? Does the use of emergency contraceptive methods require doctor prescription? Can emergency contraceptive pills be used as an ongoing long term method of contraception? Is the dose repeated if vomiting occurs within 2 hours of EC Pills intake? Should breast feeding be discontinued for few days with some types of ECP as it is expressed in breast milk?

All data was collected by the researcher, using face to face interview, for one time. It took about 30 minutes to complete each interview and all women's answers were recorded in the sheet. The researcher answered all the additional questions raised by women, corrected their fault answers.

#### **Pilot study:**

A pilot study was conducted on a sample of 30 women. Those were not included in the total sample size. It was done to test the study tools in terms of clarity and feasibility, and the time required to be applied and to assess the degree of women understanding of the questionnaire and acceptance to be involved in the

study. Following the pilot study the questionnaire was reconstructed and necessary modifications were done to reach the final form.

#### **Administration design and Ethical consideration:**

An official permission was granted by submission of an official letter from the faculty of nursing to the responsible authorities of the study setting to obtain their permission for data collection. Nursing and medical staff responsible for caring of women were approached to gain their cooperation.

Ethical approval was obtained from the scientific and ethics committee of the faculty of nursing, Zagazig university (M.D ZU.NURS/135/12/2/2020). All ethical issues were taken into consideration during all phases of the study; the researcher maintained an anonymity and confidentiality of the subjects. The researcher introduced herself to the women and briefly explained the nature and aim of the study to every woman before participation. Women were also assured that the information obtained during the study was confidential and used for the research purpose only.

#### **Statistical Analysis:**

The collected data were organized, coded, entered using Microsoft Excel software. Data were then imported into Statistical Package for the Social Sciences (SPSS version 20.0) software for analysis. According to the type of data quantitative represent as number and percentage, quantitative continues group represent by mean  $\pm$  SD, the following tests were used to test differences for significance; difference and association of qualitative variable by Chi square test ( $X^2$ ). Differences between quantitative independent groups by paired t. P value was set at  $<0.05$  for significant results &  $<0.01$  for high significant result.

#### **Results:**

**Table 1** shows that this study was conducted on 310 women. Regarding their ages, 47.1% of them

were between 30 to less than 40 years old with mean age  $\bar{x}$  S.D 30.88 $\pm$ 5.47 years. As regards their educational level, 58.1% of them were highly educated and 36.1% were secondary educated. In addition, 59.0% of them were house wives. Moreover, 52.9% of them were from rural area.

**Table 2** illustrates the studied women obstetric history. Regarding their duration of marriage, 43.5% of them were married for more than ten years with mean  $\bar{x}$  S.D 9.32 $\pm$ 5.17 years. The majority of the studied women were multipara with mean  $\bar{x}$  S.D 2.80 $\pm$ 1.07. History of unintended pregnancy was reported by 32.3% of women due to unprotected sexual intercourse.

**Figure 1** shows that 14.2% of the studied women didn't use contraception, while IUD, pills and injectable contraceptives were the most commonly used contraceptives (46.8%, 23.9% & 10.3% respectively) and none of them used natural and barrier methods.

**Table 3** demonstrates that only 4.2% & 9.7% of the studied women previously used emergency contraception and agreed that emergency contraceptive methods pills can't be used as an ongoing long term contraception. 15.8% of the studied women had the intention to seek emergency contraceptive methods if the woman has unprotected sex. 18.4 % agreed that emergency contraceptive pills (Contraplan II) are available in pharmacies with easy access and affordable cost. 17.7% agreed that there is no religious rejection of emergency contraception. 17.7% agreed that the dose should be repeated if vomiting occurs within 2 hours of EC pills intake. 21.3% agreed that breast feeding should be discontinued for few days with some types of EC pills as it is expressed in breast milk. 47.7% of the studied women agreed that emergency contraceptive methods should be ever used with doctor prescription.

**Figure 2** shows that 63.5% of the studied women had negative behavior regarding emergency contraceptive methods, while 36.5% of them had positive behavior.

**Table 4** illustrates that a higher percentage of positive behavior was among age group 30- 40 years, high education, urban residence, duration of marriage >10 years and high parity >4. The differences showed statistically significant difference,  $P = 0.021, 0.001, 0.010, 0.012 \text{ \& } 0.023$  respectively.

#### **Discussion:**

The findings of the current study were discussed under main three sections which included women general characteristics, women health related behavior regarding emergency contraceptive methods, relation between demographic characteristics, obstetric history of the studied women and their total health related behavior

As for demographic characteristics of the studied women, in the present study findings, almost half of the studied women were between age 20-30 years and almost the other half were between 30- 40 years with a small percentage of women aged over 40 years with mean age  $\bar{x}$  S.D  $30.88 \pm 5.47$  years. As regards education level, more than half of them were highly educated and more than one third of them were secondary educated. In addition, more than half of the studied women were housewives and rural residents.

The study of El-Sabaa et al <sup>(9)</sup> about awareness and use of emergency contraception among women of childbearing age at the family health care centers in Alexandria, Egypt was in partial agreement with the present study findings. The mean age of the studied women was  $30.72 \pm 5.11$  years. As for education, 57.0% were graduated, 36.4% had school (any level) and only 6.6% were illiterate. But, a higher percentage of women (53.0% & 59.6% respectively) of the studied women

were working (administration or technical) and urban.

As regards obstetric history of the studied women, the present study findings revealed that less than half of them were married for more than ten years with mean  $\bar{x}$  S.D  $9.32 \pm 5.17$  years. The majority of the studied women were multipara with mean  $\bar{x}$  S.D  $2.80 \pm 1.07$ . Similarly, Ibrahim et al <sup>(10)</sup> conducted a study on the effect of educational program on knowledge and attitude of childbearing women about intrauterine copper device as emergency contraceptive method in Assiut. The study found that 41.7% of the study sample were married for more than 10 years, 79.0% were multipara, 21.0% were nullipara.

In the present study, almost one third of the studied women had a history of unintended pregnancy due to unprotected sexual intercourse. In the same line, Ibrahim et al <sup>(10)</sup> reported that the occurrence of unintended pregnancy was 30.7%. Moreover, Alkhazrajy & Hadi <sup>(8)</sup> studied knowledge, attitudes & practice about emergency contraception among sample of women attending primary health care centers in Baghdad, Iraq and found that the rate of unintended pregnancy in this study was 33.25%.

Reversely, El-Sabaa et al <sup>(9)</sup> reported a higher percentage (65.6%) had unwanted pregnancy in the past and 59.6% of them considered it as a big problem. In addition, the study of Jima et al <sup>(11)</sup> assessed knowledge, attitude and utilization of emergency contraception among unmarried women of reproductive age in Adama, Ethiopia and reported 45 cases out of 59 women (76.3%) who get pregnant their pregnancy was unwanted or unintended. This high percentage of unintended pregnancy can be explained as this study was conducted among 491 unmarried women of reproductive age in Adama town with different religions; Orthodox (58.3%), Protestant (20.4), Catholic (2.6%) & Muslim (18.7%).

According to the present study findings, 14.2% of the studied women didn't use contraception, while IUD, pills and injectable contraceptives were the most commonly used contraceptives (46.8%, 23.9% & 10.3% respectively) and none of them used natural or barrier methods. In partial agreement with the present study findings, El-Shazly et al<sup>(12)</sup> evaluated family planning services in a rural area in Al-Shohdaa district, Menoufiya governorate and found that 19.5% of the studied women didn't use any method of contraception, the most common methods used were oral contraceptive pills (36.6%) followed by IUD and injectable contraceptives 29.8% & 26.7% respectively. Typically these three methods of contraception are the most available contraceptives in MCHs and family planning clinics in Egypt.

Conversely, baseline study: documenting knowledge, attitudes and behaviors of Somali refugees and the status of family planning services in UNHCR's Ali Addeh site, Djibouti was conducted by Farzaneh<sup>(13)</sup>. The key findings were that the most commonly used methods of contraception were injectables (56.5%) and the oral contraceptive pill (43.5%) and lactation amenorrhea (8.5%) and none use IUD. These were, in fact, the only contraceptive methods that were available at the health center in Ali Addeh refugee camp. Moreover, Jima et al<sup>(11)</sup> reported types of contraceptives ever used were condom, oral pill and injectable (69.9%, 56.9% & 18.7%) respectively.

As for women health related behavior regarding emergency contraceptive methods, it was discussed in detail in the present study. The present study illustrated that very few women 13/310 (4.2%) had previously used emergency contraception. In the same line, 34/831 (4.0%) use of emergency contraception was reported by Myer et al<sup>(14)</sup> in their cross sectional study about knowledge and use of

emergency contraception among women in the Western Cape province of South Africa. Also, Dasgupta et al<sup>(15)</sup> studied the cognition of emergency contraception: an assessment among WRA in a rural community of West Bengal in India and stated that among the study participants only 54 (8.9%) had used emergency contraception in the past.

A slightly higher percentage (20%) had ever used EC was reported by Obi & Ozumba<sup>(16)</sup> who studied emergency contraceptive knowledge and practice among unmarried women in Enugu, southeast Nigeria. Conversely, Sharma et al<sup>(17)</sup> who studied knowledge and attitudes towards contraceptives among young adults in USA revealed a higher percentage 47/ 130 (36.2%) of emergency contraception use. This large difference can be explained that the American study was conducted among adolescents and 80% of them were sexually active.

The present study revealed that less than one fourth of the studied women had the intention to seek emergency contraceptive methods if they had unprotected sex. In consistent with the present study findings, Ekhtiari et al<sup>(18)</sup> conducted a survey of knowledge and attitude toward emergency contraceptive method among married women in reproductive age group in Iran and revealed that 19.1% of the participants agreed to use emergency contraception. However, in the study of Shaaban et al<sup>(19)</sup> on emergency contraception in the context of marriage in Upper Egypt, 38 out of 60 participated women (63.3%) willing to use EC if made available.

In the present study, almost one fifth of the studied women agreed that emergency contraceptive pills are available in family planning units and pharmacies with easy access and affordable cost. In partial agreement with the present study, El-Sabaa et al<sup>(9)</sup> found that 21.2% of women ensured availability of EC methods in Egypt

and 17.8% of the total sample supposed high cost of emergency contraceptives while the majority of women agree that emergency contraceptives are cost effective.

On the other hand, Amalba et al<sup>(20)</sup> studied awareness, use and associated factors of emergency contraceptive pills among women of reproductive age (15-49 years) in Tamale, Ghana and showed that higher percentages (60.5% & 63.5% respectively) of the studied women confirmed availability and affordability of emergency contraceptives. These variations may be attributed to higher percentages of awareness and use of emergency contraception in Ghana (69.0% & 27.5% respectively).

The present study revealed that less than one fifth of the studied women agreed that there is no religious rejection of emergency contraception. Similar results were shown by Shaaban et al<sup>(19)</sup>, when the participated women were asked about legality of EC in Egypt, 9/60 (15%) agreed with EC legality. Also,

El-Sabaa et al<sup>(9)</sup> reported that only 10.6% of the studied women agreed that EC is legal. Meanwhile, a higher percentage was found by Amalba et al<sup>(20)</sup> who reported religious acceptance of ECPs in 62 out of 138 (44.9%) women who had awareness.

As for emergency contraceptive pills can't be used as an ongoing long term contraception, low percentage of women in the present study agree with the fact. Hassan et al<sup>(21)</sup> coincided well with the present study; as they studied the effect of an educational guideline on childbearing women's knowledge, attitude and their intention regarding emergency contraceptive use. This study was implemented at the family planning clinic in the new general Mansoura hospital and found that 12.3% of women in the pre intervention agreed that contraceptive pills can't be used for regular contraception.

On the other side, Abuelsoud & Abdelaal<sup>(22)</sup> studied women's access

to emergency contraceptives in Egypt : a pilot study in greater Cairo governorate and 31% of women mentioned that EC pills are not suitable for ongoing contraception. This higher percentage can be explained that 30 out of 78 (the total women enrolled in the study) which equal (38.5%) previously used emergency contraception for unprotected sexual intercourse.

In the present study, almost half of the studied women agreed that emergency contraceptive methods should be used with doctor prescription. Similarly, Abuelsoud & Abdelaal<sup>(22)</sup> revealed that 41% of the respondents (32 out of 78) confirmed intake of EC pills with doctor prescription and they expressed that they receive negative attitudes from the pharmacists when asking about the emergency contraceptive without prescription.

In the present study almost one fifth of the studied women agreed that the dose should be repeated if vomiting occurs within 2 hours of EC pills intake and breast feeding should be discontinued for few days with some types of EC pills as it is expressed in breast milk (17.7% & 21.3% respectively). Slightly lower percentage was shown by the study of AbdElmoniem & Abdelhakam<sup>(23)</sup> on the effect of emergency contraception guidelines intervention on women's knowledge and attitude conducted at Benha university hospital who found that that 25 out of 200 (12.5%) knew the precautions of emergency contraceptive pills intake.

Concerning total women behavior regarding emergency contraception, the present study demonstrated that more than one third of the studied women (36.5%) had positive behavior. On the other hand, Hassan et al<sup>(21)</sup> stated lower percentage (10%) of the participants had positive behavior towards emergency contraception before the educational program which was raised to 82.8% after the educational program. Besides, 11.5%

in the pre intervention test had positive behavior towards emergency contraception in the study of AbdElmoniem & Abdelhakam<sup>(23)</sup>.

Relation between demographic characteristics, obstetric history of the studied women and their total behavior regarding emergency contraceptive methods was analyzed in the present study. There was a higher percentage of positive behavior among age group 30- 40 years, high education, urban residence, duration of marriage >4 years and high parity >4. The differences showed statistically significant difference.

In partial agreement with the present study findings, AbdElmoniem & Abdelhakam<sup>(23)</sup> found that women age <25 years and housewives had significantly higher percentage of positive behavior scores,  $P < 0.001$ . Besides, Ibrahim et al<sup>(10)</sup> found that housewives and rural residents had significantly higher percentage of positive behavior scores,  $P = 0.003$  &  $0.033$  respectively.

**Conclusion:** Based on the present study findings, it can be concluded that almost one third of the studied women

had positive health related behavior regarding emergency contraception.

**Recommendations:**

In the light of the present study findings, it can be recommended that reproductive age women health related behavior regarding emergency contraception methods can be improved through:

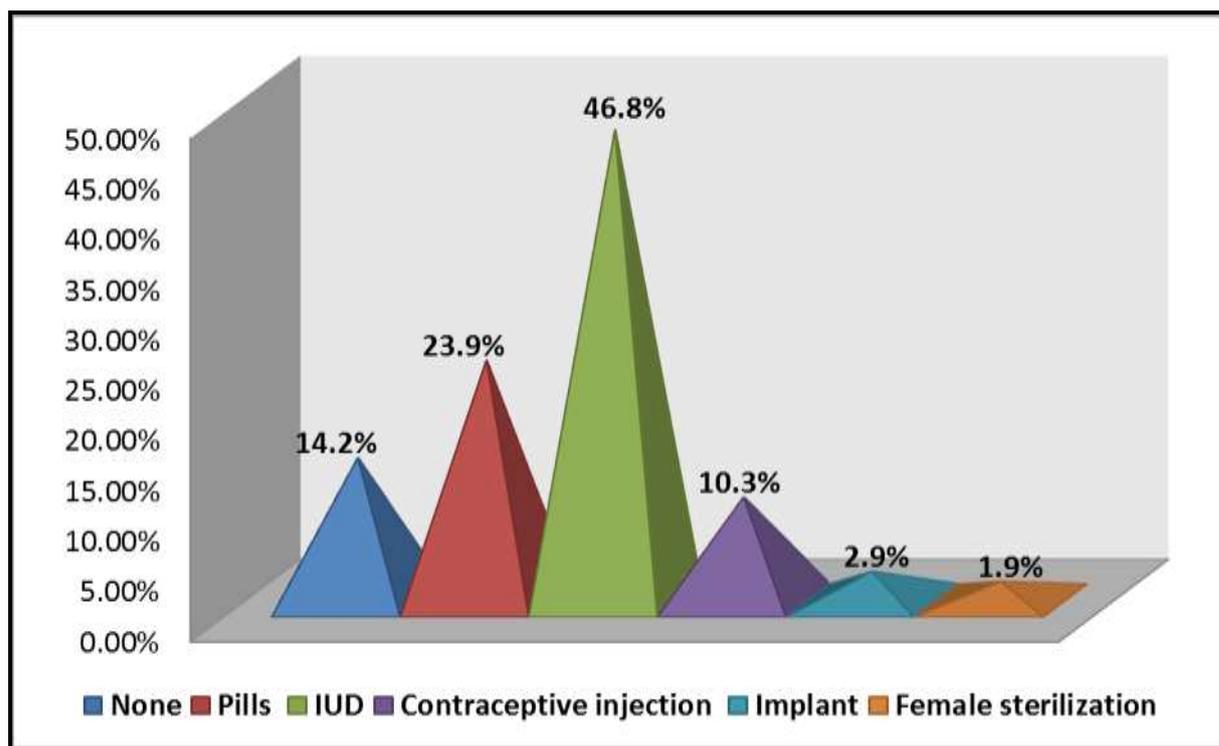
- Family planning methods in education curricula of medical and nursing students should give more knowledge about emergency contraception and its role in prevention of unintended pregnancy.
- Provision of verbal knowledge or in the form of guidelines & brochures to women attending different family planning and maternal & child health centers about emergency contraception and that they it is available and cost effective.
- Simple reliable online and social media sources should be available to women about emergency contraception.

**Table (1):** Number and percentage distribution of the studied women demographic characteristics (n=310).

Demographic characteristics	N	%
<b>Age</b>		
20-	140	45.2
30-	146	<b>47.1</b>
40- 45	24	7.7
$\bar{x}$ S.D 30.88±5.47		
<b>Education level</b>		
Illiterate	6	1.9
Essential education	12	3.9
Secondary education	112	<b>36.1</b>
High education	180	<b>58.1</b>
<b>Occupation</b>		
Working	127	41.0
Housewife	183	<b>59.0</b>
<b>Residence</b>		
Urban	146	47.1
Rural	164	<b>52.9</b>

**Table (2):** Number and percentage distribution of the studied women obstetric history (n=310).

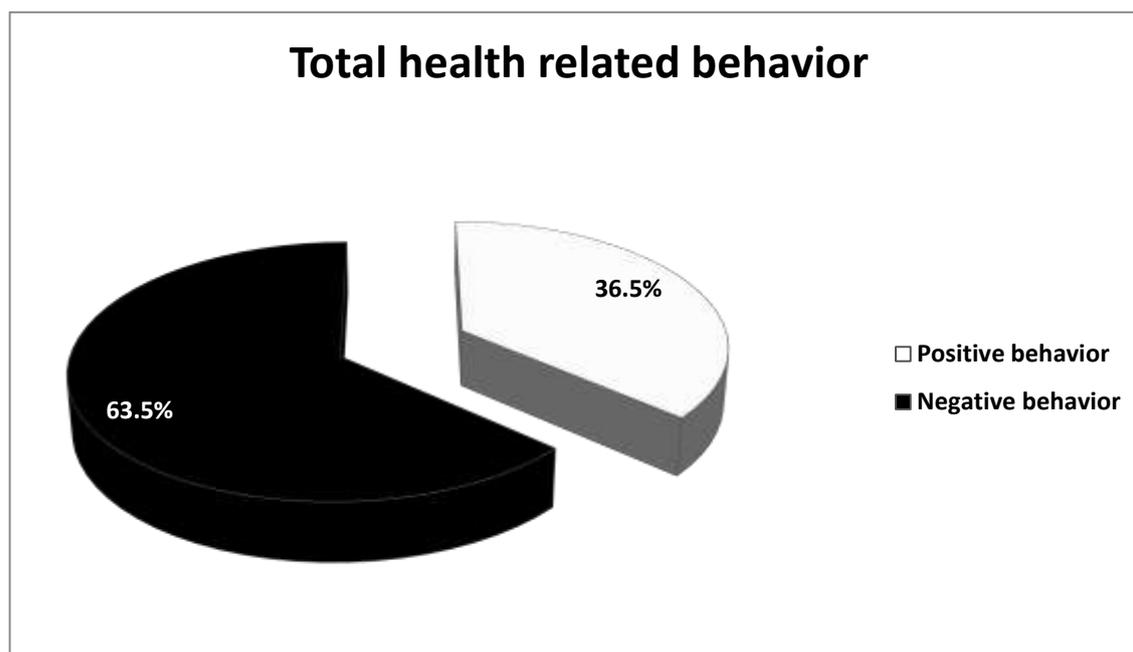
<b>Obstetric history</b>	<b>N</b>	<b>%</b>
<b>Duration of marriage</b>		
1-	50	16.2
5- 10	125	40.3
>10	135	<b>43.5</b>
$\bar{x}$ S.D 9.32±5.17		
<b>Number of parity</b>		
1	42	13.5
2	71	<b>22.9</b>
3	119	<b>38.4</b>
≥4	78	<b>25.2</b>
$\bar{x}$ S.D 2.80±1.07		
<b>History of unintended pregnancy due to unprotected sexual intercourse</b>		
Yes	100	<b>32.3</b>
No	210	67.7



**Figure (1):** Percentage distribution of the studied women contraceptive history (n=310).

**Table (3):** Number and percentage distribution of the studied women health related behavior regarding emergency contraceptive methods (n=310).

Health related behavior	Agree		Disagree	
	No	%	No	%
Previous use of emergency contraceptive methods	13	<b>4.2</b>	297	95.8
Intention to seek emergency contraceptive methods if the woman has unprotected sex.	49	<b>15.8</b>	261	84.2
Emergency contraceptive pills (contraplan II) are available in family planning units and pharmacies with easy access and affordable cost	57	<b>18.4</b>	253	81.6
There is no religious rejection of emergency contraception	55	<b>17.7</b>	255	81.3
Emergency contraceptive methods should be used with doctor prescription	148	<b>47.7</b>	162	52.3
Emergency contraceptive pills can't be used as an ongoing long term contraception	30	<b>9.7</b>	280	90.3
The dose should be repeated if vomiting occurs within 2 hours of EC pills intake.	55	<b>17.7</b>	255	81.3
Breast feeding should be discontinued for few days with some types of EC pills as it is expressed in breast milk	66	<b>21.3</b>	244	78.7



**Figure (2):** Percentage distribution of the studied women total health related behavior regarding emergency contraceptive methods (n=310).

**Table (4):** Relation between demographic characteristics, obstetric history of the studied women and their total health related behavior regarding emergency contraceptive methods (n=310).

Items	Total behavior				X <sup>2</sup>	P-Value	
	Positive N=113		Negative N=197				
	N	%	N	%			
<b>Age</b>	20-<30	3	2.7	137	69.5	4.018	<b>0.021*</b>
	30-<40	91	80.5	55	27.9		
	40-≤45	19	16.8	5	2.6		
<b>Education level</b>	Illiterate	0	0	6	3.0	10.325	<b>0.001**</b>
	Essential education	2	1.8	10	5.1		
	Secondary education	10	8.8	102	51.8		
	High education	101	89.4	79	40.1		
<b>Occupation</b>	Housewife	40	35.4	87	44.2	2.452	0.052
	Working	73	64.6	110	55.8		
<b>Residence</b>	Urban	95	84.1	51	25.9	5.685	<b>0.010*</b>
	Rural	18	15.9	146	74.1		
<b>Duration of marriage</b>	1-	5	4.5	45	22.8	6.721	<b>0.012*</b>
	5-	11	9.7	114	57.9		
	>10	97	85.8	38	19.3		
<b>Number of parity</b>	1	2	1.8	40	20.3	3.170	<b>0.023*</b>
	2	9	8.0	62	31.5		
	3	31	27.4	88	44.6		
	≥4	71	62.8	7	3.6		

\*Significant at  $p < 0.05$ . \*\*Highly significant at  $p < 0.01$ . Not significant at  $p > 0.05$

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