European Journal of Biology and Medical Science Research

Vol.2, No. 2, pp.1- 24, June 2014

Published by European Centre for Research Training and Development UK (www.ea-journals.org)

KNOWLEDGE, ATTITUDES& PRACTICE ABOUT EMERGENCY CONTRACEPTION AMONG SAMPLE OF WOMEN ATTENDING PRIMARY HEALTH CARE CENTERS IN BAGHDAD

Dr.Lujain Anwar Alkhazrajy

corresponding author /Associate . Professor/ family medicine specialist /quality assurance & academic performance unit/ Alkindy college of medicine

****Dr. Almas Hamdi Hadi**

general practitioner /Al Mansoor PHCC/ Alkarkh health district -Baghdad/Ministry of health- Iraq

---

ABSTRACT: ***The objective of the*** *study the level of knowledge of and attitude &practice towards emergency contraception in a group of women attending Primary Health Care Centers.* ***Design:*** *Across-sectional study was conducted during 6 months period by questionnaire based survey ,testing the level of knowledge of emergency contraception (EC) and attitudes towards its use, Ethical requirements of informed consent were ensured, Chi-square test was used to test significance, P-value <0.05 considered statistically significant.* ***Results:*** *the participants had limited information about EC , the most common source of their knowledge about EC is Obstetrics & Gyn/obs seniors, and the most common attitude among the participants was neutral* ***Conclusion****: only 12% use EC to prevent unwanted pregnancy. There was an association between knowledge of participants and age, number of children and socio-economic status. There was a significant association between unintended pregnancy and the educational level of women.*

KEYWORDS:(ECS) emergency contraception, unintended pregnancy, (IUD) Intra-Uterine Device, (PHCCs)Primary Health Care Centers , (STIs) Sexually Transmitted Infections

---

INTRODUCTION

Contraception (birth control) prevents pregnancy by interfering with the normal process of ovulation, fertilization, and implantation. A patient's choice of contraceptive method involves factors such as efficacy, safety, non-contraceptive benefits, cost, and personal considerations. [(1)]**.** There are different kinds of birth control that act at different points in the process, from ovulation, through fertilization, to implantation. Each method has its own side effects and risks. Some methods are more reliable than others. There are more different types of birth control available today than ever. [(2)]

Emergency contraception **(EC)**refers to any device or drug that is used as an emergency procedure to prevent pregnancy after unprotected sexual intercourse. [(2, 3)] .Worldwide, estimates suggest that almost two in every five pregnancies are unintended. The majority of

women in their childbearing years (aged 15–44 years) use some form of contraception, but more than one-half of all unintended pregnancies occur when these women experience contraceptive failure. The remaining pregnancies occur in women not using any contraceptive method[4]. An unsafe abortion is "a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards, or both" [5]. About 20 million, or nearly half, of the induced abortions annually are estimated to be unsafe. Ninety-five per cent of these occur in developing countries. [6]. Emergency contraception (EC) has the potential to reduce women's risk of unintended pregnancy, and EC medications are the only contraceptive method that can easily be used postcoitally to prevent pregnancy. [7]. In a survey carried out in the UK, 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 [8]. In developing countries, of the 182 million pregnancies that occur in each year, more than one-third are unintended and 19% end in induced abortion (8% are safe procedures and 11% are unsafe). The consequences of these unintended pregnancies, particularly where abortion is legally restricted, may be life threatening due to unsafe abortion procedures. [4]

The use of EC products in South Africa has traditionally been very low. According to the recently released 2003 South African Demographic Health Survey (SADHS), modern contraception methods are used by 50.6 percent of South African women (65.3 percent of sexually active women and 60.3 percent of married women)[9].Low take up of emergency contraception is occurring in the context of a very high rate of unplanned pregnancies, sexual violence against women, unequal gender relations, maternal mortality and endemic poverty .[10] In our country Iraq, there is no program available in hospitals or primary health care centers about emergency contraception, but there is an idea to increase the awareness of women about the emergency contraception through an educational folder/department of health promotion /Ministry of Health, that contain information about the unprotected intercourse, how to use emergency Contraception, side effects of pills, and the use of IUD as emergency contraception. [11]

According to Iraqi survey done 2011 , unwanted pregnancy seems very high (12.3)which reflect the need for more indepth analysis to know the role of inavailability of family planning services, however the percentage of married women (15-49) with un- met need for contraception reaches 22.8 unintended pregnancies that end in an illegally performed abortion[12].In a study done in Al_Elwyia Maternity Teaching Hospital throughout the year 2007, found that the relative frequency of unsafe abortion treated in the hospital during the year 2007 was 322/3100 = 104/1000 abortions; with a 95% confidence interval of (93-115) abortions. [13]. To increase the awareness of the general population health care providers are important gatekeeper to provide the information about emergency contraception[12]

The aims of this study were to:

1. Evaluate the knowledge, attitudes & practice of Iraqi women about EC.
2. Show the relationship between certain demographic characteristic with general Knowledge and attitude towards emergency contraception.

LITERATURE REVIEW

Despite the availability of highly effective methods of contraception, many pregnancies are unplanned and unwanted. These pregnancies carry a higher risk of morbidity and mortality,

often due to unsafe abortion. Many of these unplanned pregnancies can be avoided using emergency Contraception. [14, 15]. Emergency contraceptive pills (ECPs) are hormonal methods of contraception that can be used to prevent pregnancy after an unprotected or inadequately protected act of intercourse. ECPs sometimes are referred to as "morning-after" or "postcoital" pills. The term "emergency contraceptive pills" is preferred because it conveys the important message that the treatment should not be used as an ongoing contraceptive method, and it avoids giving the mistaken impression that the pills must be taken on the morning after intercourse. [16]

Indications:
ECPs are indicated to prevent pregnancy after unprotected or inadequately protected sexual intercourse, including:
• When no contraceptive has been used;
• 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
—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)
—More than seven days late for a combined estrogen plus- progestin monthly injection
—Dislodgment, delay in placing, or early removal of a contraceptive hormonal skin patch or ring
—Dislodgment, breakage, tearing, or early removal of a diaphragm or cap
—failed coitus interruptus (e.g., ejaculation in vagina or on external genitalia)
—Failure of a spermicidal tablet or film to melt before intercourse
—Miscalculation of the periodic abstinence method or failure to abstain on fertile day of cycle
—IUD expulsion; or
• In cases of sexual assault when the woman was not protected by an effective contraceptive method. [16]

Emergency Contraceptive Pills(ECPs)
ECPs Regimens
Two ECP regimens are discussed:
• **Levonorgestrel-only regimen:** 1.50 mg levonorgestrel in a single dose or in two doses of 0.75 mg taken up to 12 hours apart.
• **Combined estrogen-progestin (Yuzpe) regimen:** two doses of 100 mcg ethinyl estradiol plus 0.50 mg of levonorgestrel taken 12 hours apart. Note that levonorgestrel plus an equal amount of a related but inactive compound is called norgestrel; therefore, these regimens can also be formulated by substituting double the amount of norgestrel as is indicated for levonorgestrel. Treatment with either regimen should be initiated as soon as possible after unprotected or inadequately protected intercourse, because efficacy declines substantially with time. [17, 18]. Early data showed that both regimens are effective when used up to 72 hours after intercourse. [19, 20]. No data are available on efficacy if treatment is started more than 120 hours after intercourse[16]

Mode of Action
Like all hormonal contraceptives, ECPs may work in a variety of ways. The precise mechanism of action of ECPs in a particular case cannot be determined and probably depends on the time in a woman's menstrual cycle when intercourse occurred and when ECPs were taken. [21, 22]

Several studies have provided direct evidence that when taken *before ovulation*; both the combined regimen and the levonorgestrel regimen can act by *preventing or delaying ovulation*. [23-27]. Some studies have shown *changes in histologic and biochemical features of the endometrium* after treatment with combined ECPs, suggesting that they may act by *impairing endometrial receptivity to implantation of a fertilized egg*.[20,27,28]. However, other studies have shown no such effects with the combined and levonorgestrel-only regimens, [23, 26, 28, 29, and 30] and it is not clear that the observed changes would be sufficient to prevent implantation. Additional possible mechanisms include *interference with sperm transport or penetration* [31, 32] and *interference with corpus luteum function.* [27, 33]. To date, no direct clinical data exist regarding these possibilities. Nevertheless, statistical evidence on the effectiveness of ECPs suggests that they could not be as effective as data indicate if they only worked by interfering with ovulation. [34]. At least five days elapse between intercourse and the establishment of a pregnancy, defined as implantation of a fertilized egg in the lining of a woman's uterus. ECPs work in this interval to prevent pregnancy. They are ineffective once implantation has begun. Data from studies of high dose oral contraceptives indicate that neither of the two ECPs regimens discussed here will interrupt an established pregnancy or harm a developing embryo. [34]

Efficacy

The statistic commonly used to express the efficacy of most contraceptive methods indicates the proportion of women who become pregnant while using the method over a fairly long period of time. This statistic is not meaningful for ECPs, which are intended for one-time use. [35]. A more important consideration for most ECP clients may be the fact that ECPs (specifically, the levonorgestrel regimen) are certainly more effective than nothing. [35] .Multiple studies have indicated that both regimens are more effective the sooner after intercourse the pills are taken.[18,20,36,37] ECPs are inappropriate for regular use as an ongoing contraceptive method for several reasons. First, ECPs are less effective than most modern methods over the long term.[16] .The prevented fraction statistic used to express efficacy of ECPs after a single use cannot be directly compared to published failure rates of other contraceptives used for prolonged periods of time. However, if ECPs were used as an ongoing method, the cumulative risk of pregnancy during a full year of use would likely be higher than the risk associated with regular hormonal contraceptives, male condoms, and other barrier methods.[16] In addition, very frequent ECP use would result in more side effects (such as menstrual irregularities) and exposure to a higher total hormone dose than would regular use of either combined oral contraceptive pills or progestin-only pills. Data are not available on the incidence of medical complications (if any) in women who use current regimens of ECPs frequently over a long period of time.[16]

Side Effects, Prevention, and Management

No deaths or serious complications have been causally linked to emergency contraception. [38] Side effects that are medically minor but troublesome to clients do occur, however.

Nausea and vomiting

Nausea occurs in about 18 percent of women and vomiting occurs in about 4 percent of women using levonorgestrel- only ECPs. ([18, 19, 36] Nausea and vomiting occur in about 43 percent and 16 percent, respectively, of clients using the combined regimen. [39].The best way to minimize nausea and vomiting is to use the levonorgestrel-only regimen instead of the combined regimen whenever possible. Nausea and vomiting are uncommon enough with the levonorgestrel-only regimen that prophylactic administration of an antiemetic drug is not routinely warranted.[16]If

vomiting occurs within two hours of taking an ECP dose, many experts believe that the dose should be repeated. In cases of severe vomiting, ECPs can be administered vaginally. [40, 41]

***Delay in menses**

The menstrual period usually occurs within one week before or after the expected time.[16]After using ECPs, if the menstrual period has not come by a week after it was expected, the client should be advised to consider the possibility that she may be pregnant and to seek appropriate evaluation (such as a pregnancy test) and care.[40]

***Irregular vaginal bleeding**

Irregular bleeding due to ECPs is not dangerous and will resolve without treatment. However, it is important not to discount the possibility that irregular bleeding after ECP use may be due to another more serious cause, such as ectopic pregnancy. [40]

***Other side effects of ECPs**

Other side effects may include abdominal pain, breast tenderness, headache, dizziness, and fatigue. These side effects usually do not occur more than a few days after treatment, and they generally resolve within 24 hours. [41] A nonprescription pain reliever can be used to reduce discomfort due to headaches or breast tenderness.

Effects on pregnancy

Results from studies of high-dose oral contraceptives suggest that neither the pregnant woman nor the fetus will be harmed if ECPs are inadvertently used during early pregnancy. [42]

Screening

The only purpose of screening is to identify situations when ECPs are clearly not needed (e.g., the client is already pregnant) or when an emergency contraceptive treatment other than ECPs (i.e., an IUD) should be considered. [43].This screening can be done by a clinician or other trained provider or by the client herself after written or oral instruction. [43]. Clinical assessments (e.g., pregnancy test, blood pressure measurement, laboratory tests, and pelvic exam) are not required but can be offered if medically indicated for other reasons and desired by the client. A pregnancy test may be helpful in detecting pregnancy if the client has missed a menstrual period. ECPs should not be withheld or delayed in order to carry out screening procedures. [16]

Special Issues

***Use in breastfeeding women**

A woman who is less than six months postpartum, is exclusively breastfeeding, and has not had a menstrual period since delivery is unlikely to be ovulatory and therefore is unlikely to need ECPs. However, a woman who is providing supplemental feeding to her infant or who has had menses since delivery may be at risk for pregnancy. [16] **.**A single treatment with ECPs is unlikely to have an important effect on milk quantity or quality. An unknown amount of hormone may pass into the breast milk. Some authorities recommend that nursing women should feed the baby immediately before taking ECPs and then express and discard the breast milk for the next six hours, but the need for this practice is not proven. [16]

***Use of ECPs before intercourse**

No data are available about how long the contraceptive effect of ECPs persists after the pills have been taken. Presumably ECPs taken immediately before intercourse are as effective as ECPs taken immdiately afterwards.However, if a woman has the opportunity to plan to use a contraceptive method before intercourse, a method other than ECPs, such as condoms or another barrier method, is Recommended [16]

Drug interactions

Women taking drugs that may reduce the efficacy of oral contraceptives (including but not limited to rifampicin, certain anticonvulsant drugs, and Saint John's wort) should be advised that the efficacy of ECPs may be reduced. Consideration may be given to increasing the amount of hormone administered in the ECPs, either by increasing the amount of hormone in one or both doses, or by giving an extra dose. (16)

Information for the Client

Relevant information can be provided to ECP clients in person, over the telephone, in writing (e.g., in a pamphlet or product package insert), or by a combination of these methods. This information should include at least the following ***key messages:*** (41)

• The client should take ECPs as soon as possible after intercourse to maximize efficacy. She should not take extra doses unless she vomits within two hours after a dose.

• After taking ECPs, if the next menstrual period has not come by a week after it was expected, the client should consider the possibility that she may be pregnant and seek evaluation and care.

• If the client has irregular bleeding and lower abdominal pain, she should contact a health care provider for possible evaluation of ectopic pregnancy.

• ECPs are not suitable for ongoing contraception. The client should use a standard method of contraception to prevent pregnancy from coital acts in the future.

• ECPs do not protect against HIV or other sexually transmitted infections (STIs). The act of intercourse that prompted the request for ECPs may have put the client at risk for these infections, and she should consider getting tested.

Counseling

counseling can serve to reinforce any messages given in writing and may lead to better overall outcomes.(16).Counselors should be mindful of possible unique sources of anxiety among women requesting ECPs: embarrassment at failing to use contraception effectively; rape-related trauma; concern about STIs, including HIV, due to condom failure or non-use; and hesitation due to a misperception that ECPs cause abortion Counselors should be as supportive as possible of the client's choices and refrain from making judgmental comments or indicating disapproval through body language or facial expressions while discussing ECPs with clients. (16). Supportive attitudes will help set the stage for follow-up counseling about regular contraceptive use and prevention of STIs. When possible, give clients written as well as oral instructions for taking the ECPs. Pictorial instructions may help clients whose literacy may be limited. (16).Actively involving the client in the counseling process is encouraged. For example, a provider might ask her what she has heard about ECPs, discuss her experience with other contraceptive methods (particularly the incident that led to the ECP request), and explore her current approach to protecting herself from STIs. Validating or correcting her ideas as appropriate may be more effective in ensuring compliance than simply providing her with information.(21)

Whenever possible, ensure that counseling is conducted in private. In situations where privacy is inadequate (For instance, in many pharmacies), advise clients to contact a health care or family planning provider for additional information and counseling about regular contraceptive methods. Reassure all clients, regardless of age or marital status that all information that they give to the provider, as well as the fact that they have received treatment, will be kept confidential. (21)

Follow-up

No scheduled follow-up is required after ECP use unless the client identifies a problem or question. However, the client should be advised to seek follow-up care if she :(21)

• needs ongoing contraceptive counseling or a contraceptive method;
• has not had a menstrual period by a week after it was expected;
• has irregular bleeding and lower abdominal pain;
• suspects she may be pregnant;
• needs other services, such as evaluation for STIs; or
• has other reasons for concern.

If the Client Becomes Pregnant

A woman who has used ECPs may later find herself to be pregnant because the ECPs have failed, because she was already pregnant before taking the ECPs, or because coital acts after taking the ECPs led to pregnancy. In any of these cases :(21)

Subjects & Methods

Setting

***Design:** cross sectional study

***Duration of study:** From beginning of Jan.-end of June 2012

***Sample:** All married females who had at least one child, attending PHC centers, with systemic random sampling (every fourth lady was chosen) one day per week/ the **sample size**: 400 ladies.

***Location of the study:**

The study was conducted at four PHCCs of family medicine in Baghdad at both districts (Alkarkh, Alrusafa)

1-Al-mansor PHCC/Alkarkh 3-Bab_Almuadhem PHCC/Alrusafa
2-Al-salam PHCC/Alkarkh 4-Al-Mustanseria PHCC/Alrusafa

3.2.Sample size determination:

The following assumption was used to calculate the sample size required for the study:(E _____error) (P_____ prevalence)

$$n = \frac{(Z_{\alpha/2})^2 (p (1 - p))}{E^2}$$

$Z_{\alpha/2} = 1.96$

$p = 0.5$

$E = 0.05$

$$\frac{(1.96)^2 (.5)(.5)}{(0.05)^2} = 384$$

Ethical Considerations

- Oral & Written consent were obtained from every participant , including approval to participate on the research in addition to the rights of asking about any clarification of the questionnaire after brief explanation of the general purpose of the study and it is objectives.

- Official Permission was obtained from the ministry of health in Iraq by an Administrative order directed to PHCCs involved in the study to facilitate the task of obtaining the information from participants.

Data collection procedure

Data were collected using a self-administered questionnaire, validated and evaluated by three professors of community medicine, from three medical colleges (Baghdad, Al-Kindy, and Al-Nahrain), and by direct interview the questionnaire was filled The questionnaire included:

General demographic information : Age, Occupation, Duration of marriage, No. of children, No. of abortion, Occupation of husband. The Kuppuswamy SES classification was adapted to measure the socio-economic status of an individual.

****The Kuppuswamy SES classification***: This scale[85] takes account of education, occupation and income of the family to classify study groups into high, middle and low socio-economic status.

_ Education

(Education)	**(Scale)**
Profession	7
Graduate or post graduate	6
Post high school diploma	5
High school	4
Middle school	3
Primary school	2
Illiterate	1

_Occupation

(Occupation)	**(Scale)**
Profession	10
Semi-profession	6
Shop-owner, Farmer	5
Skilled worker	4
Semi-skilled worker	3
Unskilled worker	2
Unemployed	1

_Family income per month

(Income $)	**(Scale)**
=2000	12
1000-1999	10
750-999	6
500-749	4
300-499	3
101-299	2
=100	1

Total Score	**Socio_Economic Class**
26-29	Upper
11-25	Middle
< 10	Lower

****Knowledge*** about ECPs was determined by using six multiple-choice questions. Each correct answer corresponded to 2 point score was adopted, and so there was a total of 12 points for the six questions.

So the knowledge score was as below:

K1 (10-12) _____ High knowledge
K2 (6-8) _____ Moderate Knowledge
K3 (0-4) _____ Low knowledge

****Attitudes*** were measured using three items rated on a three-point Likert scale as (1) disagree (2) neutral and (3) agree.

Likert scale: Scale[(86)] primarily used in questionnaires to obtain participant's preferences or degree of agreement with a statement or set of statements. Likert scales are a non-comparative scaling technique and are uni-dimensional (only measure a single trait) in nature. Respondents are asked to indicate their level of agreement with a given statement by way of an ordinal scale. Using this three-point scale for five questions, we arbitrarily set the maximum score for each respondent at 15 and the minimum at five. We decided that a high score was indicative of positive attitude while a low score would be indicative of a negative attitude.

So Score from (5-8) ⟶ Negative attitude
Score from (9-11) ⟶ Neutral attitude
Score from (12-15) ⟶ Positive attitude

****Practice:*** we asked about
_Whether the women used contraception before or not ,
_ Became pregnant by mistake or while using contraception ,
_ If she use EC before ,which type and if the method she used effective or not, and from where she get it .Then if she answer yes we gave her 2 point and if answer no we gave her zero , the total score became 8 points so: the practice scale became

Low practice from 0-2
Intermediate practice from 4-6
and high practice equal to 8

STATISTICAL ANALYSIS

****Descriptive statistics*:** frequency Tables (numbers, & percentages)
****Analytic statistics:***
Minitab (Student Version 12 and Professional Version 13). Chi-square test was used to find any association between variables, P-value <0.05 considered statistically significant.

RESULTS

Four hundred females were included in the study; the age range of participants was (16-55years) with mean age of (34.14±8.6), most common age group in our study (42.50%) were within (26-35 years), there was a significant association between the knowledge of participants

regarding EC and the socio-demographics data like age, no. of children ,No. of abortion and socio-economic status, this is clearly shown in table No.1.As it shown by table No.2, knowledge score was significantly higher in those with no history of unintended pregnancy .There was no association between the no. of abortion and unintended pregnancy this is clearly shown in table no.3.A significant association was obvious between unintended pregnancy and educational level of the participants, as high educational level participants have less percent of unintended pregnancies, this is clearly shown in table No4.) Only 8.25% 0f women who knew the correct timing of effectiveness of postcoital pill (72 Hours after unprotected intercourse) as shown in table No.5, The most common attitude among participants regarding EC according to Likert-scale, was neutral (69.50%) then positive attitude (18.75%) as clear in Fig.2 no association between attitude of participant and use of EC, but there was a significant association between attitudes and their educational level and their age, as obvious in table No.7

There was no association between knowledge of participants and their attitudes towards EC , as obvious in table No.8,on the other hand a significant association between the knowledge of participants & their use of EC (Table No.9).The most common source of knowledge of all the participants regarding EC was Obstetrics & Gynecology senior and then the PHCCs doctors (fig 3)while the source of knowledge among the women who used it was the Obstetrical & Gynecology senior (Fig.4) .Most of the participants had limited information's about EC & only 48(12%) ladies were practiced it(fig 5) , 98% of the participants use oral contraceptives as EC this is clearly shown in Fig 6

DISCUSSION

We didn't find any study on EC in our country so this is the first survey of the Knowledge of EC among clients of PHCCs in Baghdad, many of the participants in this study indicated that use of EC would be acceptable to them.

Relation of knowledge and demographic data:

Most of women in our study had limited information's about EC & only 48(12.00%) women had practiced it , this is higher than the reports from a study among married women in a Kuwait in which only 10(9.7%) women had heard of hormonal EC and only one had used it (42), but the result in our study is lower than a result from a study done among California women in which Nearly 76% of respondents had heard of EC about 4% reported having used the method in the previous year [(43),] and in other study in Southwest Ethiopia ,163(41.9%)of women were ever heard of EC .[(44)].This might be related to insufficient counseling or knowledge provided by health care providers. In light of this finding, education approaches may be useful in increasing EC awareness.The women over 46 years (36.36%) in our study were more aware about EC than the young women (6.6%) and this is similar to a study in south Africa [(45)] where young women 15-19 years(23.10%) have awareness less than old women 40-49 years(27.40%) also in this study women with high socio-economic status (33.40%) have higher awareness about EC than low socio-economic status(11.60%), as well as in our study women with high socio-economic status (70.37%) have more knowledge about EC than others women with lower socio-economic status (3.00%), and another study in Honduras[(46)] where awareness of and willingness to use EC were strongly associated with age and educational status as in our study where the women with higher education significantly related (p-value=0.003)with their knowledge about EC.

The Unintended pregnancy:

Unintended pregnancy can carry serious consequences for women and their families. Of the 208 million pregnancies that occurred in 2008, we estimate that 41 percent were unintended[47]. The unintended pregnancy rate fell by 29 percent in developed regions and by 20 percent in developing regions. The highest unintended pregnancy rates were found for Eastern and Middle Africa and the lowest for Southern and Western Europe and Eastern Asia. North America is the only region in which overall and unintended pregnancy rates have not declined. [48] In our study the rate of unintended pregnancy was (33.25%) and it is significantly related (p-value=0.006) to the knowledge of participants about EC .

Relation between unintended pregnancy and No. of abortion*:*

The reasons for unwanted pregnancy to happen are diverse including insufficient access to modern methods of contraception, failure and imperfect use of contraceptives, and sexual coercion and rape.The reasons for termination of pregnancies may include changing circumstances resulting in a wanted pregnancy to become unwanted, economic reasons, social reasons such as unstable or changing relationships, rejection of fatherhood; among adolescents fear of negative parental reactions to a pregnancy or of expulsion from school; social stigmatization in case of pregnancy out of state of being married, among others.In our study there was no association between the unintended pregnancy and No. of abortion but in other study in United Kingdom (Edinburgh) found that 92% of women getting an abortion, the pregnancies were unintended. [48]. Studies have found that advanced provision of EC (i.e. is being provided to women in advance of needing it) does not lower abortion rates . This may be due to targeting the wrong groups of women during studies, but the same result has been found during multiple projects [49].

Relation between unintended pregnancy and educational level*:*

In our study there was a significant association between level of education and unintended pregnancy (P-value=0.003), and it was the same result in other study in Barcelona, Spain [50], where the major findings were unintended pregnancies accounted for 41% of total pregnancies and of these, 60% ended in abortion. From all pregnancies, the proportion of induced abortion reached 25.6%. Compared to women with university studies, those with primary education uncompleted had more unintended pregnancies (OR = 7.22).When facing an unintended pregnancy, women of lower socioeconomic position are more likely to choose induced abortion, although this is not the case among young or single women[50]. This study reveals deep socioeconomic inequalities in unintended pregnancies and abortion decision in Barcelona, Spain, where the birth rate is very low and the abortion rate is rising. Women in low socioeconomic positions have many more unintended pregnancies than better educated women. [50]

Knowledge of participants about the correct timing of effectiveness of post coital pill*:*

In our study, the correct timing of effectiveness of post coital pill (up to 72 hours after unprotected intercourse) was identified by (8.25%) women, but in a study on Knowledge of emergency contraception among women of childbearing age at a teaching hospital of Karachi [51], the correct timing of effectiveness was identified by (40%) .

Source of participant' knowledge about EC

A large proportion of women in the previous study in Karachi, They reported that their knowledge about EC come from a health care provider, The women who visited a clinic had low levels of knowledge about correct timings and this results in contrast to our result as the

most common source of information among participants who use EC was the Obstetric & Gynecological senior (75.00%) and then the PHCCs doctors and internet (8.330%).

In other study in Southwest Ethiopia [44] in which the common sources of information were friends (36.50%), radio (22.80%).

Attitudes of Participants regarding EC

In our study, Attitudes of participants was evaluated using 3-point –Likert Scale so the most common attitude among them was neutral (69.50%) then the positive attitude (18.75%), while in other study done on women who referred to health centers of Tehran University of Medical Science[52] who were more knowledgeable about EC than nonusers, the majority of subjects (76.57%) had a positive attitude toward EC; however, there was not a significant correlation between positive attitude and use of EC (p = 0.184) , which is the same result in our study (p-value=0.776), but in a study done in Malaysia [53], the users of EC had more positive attitude compare to non users (p-value<0.0001). In a study done in Cameroon [54] , there was statistically significant association between knowledge and attitudes towards EC (p-value<0.0001), but in our study there was no association between knowledge and attitudes towards EC (p-value=0.941).In our study there was a significant association between the attitudes of participants and their educational level (p-value=0.040), which is the same results in a study done in southwest Ethiopia [55], as there was a significant association between the attitudes of participants and their educational level (p-value<0.05).

Practicing of EC among sample participants*:*

In a study in Hong Kong [83], only (11.00%) of women had used emergency contraception before, and this result was similar to other studies in Malaysia (11.20%) and Karachi (11.50%), [53, 51]. Yet in our study, (12.00%) of the participants had practicing EC to prevent pregnancy.Women are aware of high mortality and morbidity risk from seeking an abortion but nevertheless opt for this approach to attain their goal of a small family size rather than for a modern method of contraception. [56]. It is important that unwanted pregnancy be prevented through effective contraceptive practice rather than abortion. Reproductive health services can give a chance to these women to improve their conditions and life. Family planning is about preventing needless deaths. It is not a political but a medical term which addresses the health concerns related to pregnancy and maternity. Countries that fail to provide adequate resources in this area are at risk of having shattered families, pointless deaths and unnecessary sufferings. [56].Without knowledge of reproductive alternatives women cannot demand what has become a recognized right for women living in the industrialized nations, like to have an access to safe , effective , affordable methods of family planning of their own choice. (ICPD programme of action 1994). Knowledge and timely Access to family planning and reproductive services can give a chance to improve the present conditions in the developing world. [56]. Contraception is generally accepted in Islam and it is often considered important for child spacing.

These results raise questions regarding patients' understanding of issues surrounding EC. Physicians and pharmacists should be careful when discussing contraception, as patients' beliefs differ greatly when discussing this issue. There is also the potential for misunderstanding the possible mechanisms of action of EC; therefore, more appropriate consent processes and patient education materials should be developed so that women can feel confident that their use of EC is consistent with their moral beliefs.[56]

Disclosure of interest

This is the first research concerning Emergency contraception in Iraq since its not a familiar concept neither in the health nor public sector. The family planning program in Iraq is dominated by pills (34%) with satisfied mix of durable methods (IUD, injection & female sterilization 30%). The recent data on Family planning program in Iraq shows a low utilization (39.9%) of all methods of contraception, high percentage of unmet need (total 22.8%), high percentage of unwanted pregnancy (12%) & also high percentage of miscarriage/abortions (24%). The main provider/ supplier for the pills is the privet sector (50% pharmacy)[57]which is most of the time coasty. Education about this method of contraception may lead to decrease in percentage of unintended pregnancy& unsafe abortion by offering a less coasty method of contraception in addition to minimizing its side effect with lesser use.

CONCLUSION & RECOMMENDATIONS

Conclusions

Most of women participated in our study had limited information's about EC with only 12% using it to prevent unwanted pregnancy. There was an important association between knowledge of participants and certain demographic data such as age, number of children and socio-economic status. There was a significant association between unintended pregnancy and the educational level of women. The commonest sources of their knowledge about EC were Obstetrics & Gynecology seniors, the PHCCs doctors and internet. The most common attitudes of participants towards EC were neutral attitude then the positive attitude.

Recommendations:

1. Health care providers should have regular in-service training on EC.They should be encouraged to include EC issues during family planning counseling in postnatal care of the PHCCs .
2. Future researches need to be conducted in Iraq among healthcare providers themselves as well.
3. There is still limited availability of the dedicated product of ECPs in public and private health facilities, thus the Ministry of Health and other sponsors should take an action so as to increase its availability through health institutions.
4. Awareness among community members should be enhanced by improving family planning program information about EC, education & communication activities for both husband & wives through radio, T.V., Internet and posters.
5. Family planning is an important health and development issue as well as a human rights issue. Such efforts should help families to achieve their desired family size, by providing financial and political support for culturally sensitive reproductive health programs that meet the needs of Muslim couples.

REFERENCES

1. Contraception: http://emedicine.medscape.com/article/258507-overview. Author: Omnia M Samra-Latif, MD; Chief Editor: Richard Scott Lucidi, MD, Updated: Aug 24, 2011
2. Glasier A. : Emergency postcoital contraception. N Engl J med 1997; 337: 1058-1064
3. Bartfai G. : Emergency contraception in clinical practice: global perspectives. Int J Gynaecol Obstet 2000; 70:49-58
4. Department of Reproductive Health and Research; World health Organization and Advancing sexual and reproductive health worldwide through research, policy analysis and public education; Guttmacher institute. Facts on Induced Abortion Worldwide in Brief, October 2007, www.guttmacher.org.

5. WHO : the prevention and management of unsafe abortion, Report of a Technical Working Group, Geneva, 1992.
6. WHO : unsafe abortion: global and regional estimates of incidence of and mortality due to unsafe abortion with a listing of available country data, Geneva, 1998.
7. Glasier A. : Safety of emergency contraception. J Am Med Women Assoc. 1998; 53 Suppl 2(5): 219–221. [Pub Med: 9859625]
8. Trussell J, Rodriguez G, Ellertson C. : Updated estimates of the effectiveness of the Yuzpe regimen of emergency contraception. Contraception. 1999; 59:147–151. [Pub Med: 10382076]
9. Department of Health (2006) Preliminary Report on the 2003 Demographic and Health Survey. Pretoria, National Department of Health.
10. Meerkotter A (2002) *Violence against young women and HIV/AIDS: Access to post-exposure prophylaxis after rape in South Africa*. Paper presented at the Eastern and Southern African Symposium on Young Women and AIDS, Nairobi, 26-30, Nairobi, 25-30 November.
11. personal communication :Dr. Shaimaa M. J. Ibrahim /Gyn. Obst. Specialist /MoH – Iraq/PHC Department / RH Unit
12. Iraq Women Integrated Social and Health survey : I –WISH 2011
13. Inas T.Alhamdani, Tagreed K.Alhaidari : Is Unsafe abortion still a problem in Iraq?: The N Iraqi J Med August 2010; 6(2):46-54.
14. Trussell J, Koenig J, Stewart F, Darroch JE. Medical care cost savings from adolescent contraceptive use. *Fam Plann Perspect* 1997; 29:248-55, 295.
15. Trussell J, Koenig J, Ellertson C, and Stewart F. : preventing unintended pregnancy: the cost-effectiveness of three methods of emergency contraception. *Am J Public Health* 1997; 87:932-7.
16. Emergency Contraceptive Pills: Medical and Service Delivery Guidelines 2004: The International Consortium for Emergency Contraception Washington, DC USA
17. Piaggio G, von Hertzen H, Grimes DA, Van Look PF, : Timing of emergency contraception with levonorgestrel or the Yuzpe regimen.
Task Force on Postovulatory Methods of Fertility Regulation (letter). *Lancet* 1999; 353:721.
18. von Hertzen H, Piaggio G, Ding J, et al., : Low dose mifepristone and two regimens of levonorgestrel for emergency contraception: a WHO multicentre randomized trial. *Lancet* 2002; 360:1803-10.
19. Task Force on Postovulatory Methods of Fertility Regulation.
Randomized controlled trial of levonorgestrel versus the Yuzpe regimen of combined oral contraceptives for emergency contraception. *Lancet* 1998; 352:428-33.
20. American College of Obstetricians and Gynecologists. ACOG Practice Bulletin No. 69, : Emergency contraception. Washington, DC: American
Gynecol 2003; 101:1168-71.
21. Grimes DA, Raymond EG. , : Emergency contraception. *Ann Intern Med* 2002; 137:180-9.
22. Croxatto HB, Devoto L, Durand M, et al., : Mechanism of action of hormonal preparations used for emergency contraception: a review of the literature. *Contraception* 2001; 63:111-21.
23. Marions L, Hultenby K, Lindell I, Sun X, Stabi B, Gemzel Danielsson K. : Emergency contraception with mifepristone and levonorgestrel: mechanism of action. *Obstet Gynecol* 2002; 100:65-71.
24. Durand M, del Carmen Cravioto M, Raymond EG, et al. : On the mechanisms of action of short-term levonorgestrel administration in emergency contraception. *Contraception* 2001; 64:227-34.
25. Hapangama D, Glasier AF, Baird DT. : The effects of periovulatory administration of levonorgestrel on the menstrual cycle. *Contraception* 2001; 63:123-9.

26. Swahn ML, Westlund P, Johannisson E, Bygdeman M. : Effect of post-coital contraceptive methods on the endometrium and the menstrual cycle. *Acta Obstet Gynecol Scand* 1996; 75:738-44.
27. Gemzell-Danielsson K. : Effects of levonorgestrel on ovarian function when used for emergency contraception [abstract]. *Minerva Ginecol.* 2006; 58:205
28. Prine L. : Emergency contraception, myths and facts: *Obstet Gynecol Clin North Am.* 2007; 34:127–36, ix–x.
29. Raymond EG, Lovely LP, Chen-Mok M, Seppala M, Kurman RJ, Lessey BA. : Effect of the Yuzpe regimen of emergency contraception on markers of endometrial receptivity. *Hum Reprod* 2000; 15:2351-5.
30. Taskin O, Brown RW, Young DC, Poindexter AN, Wiehle RD. : High doses of oral contraceptives do not alter endometrial alpha 1 and alpha v beta 3 integrins in the late implantation window. *Fertil Steril* 1994; 61:850-5.
31. Hansen LB, Saseen JJ, Teal SB. : Levonorgestrel-only dosing strategies for emergency contraception. *Pharmacotherapy*. 2007; 27:278–84.
32. Marions, Lena MD, PhD; Hultenby, Kjell PhD; Lindell, Ingrid; Sun, Xiaoxi MD; Stabi, Berit; Danielsson, Kristina Gemzell MD, PhD, : Obstetrics & Gynecology: July 2002 - Volume 100 - Issue 1 - p 65–71
33. Ling WY, Wrixon W, Acorn T, Wilson E, Collins J.1983 Mode of action of dl-norgestrel and ethinylestradiol combination in postcoital contraception. III. Effect of preovulatory administration following the luteinizing hormone surge on ovarian steroid genesis. *Fertil Steril* 1983; 40:631-6.
34. Trussell J, Raymond EG. : Statistical evidence about the mechanism of action of the Yuzpe regimen of emergency contraception. *Obstet Gynecol* 1999; 93:872-6.
35. Raymond E, Taylor D, Trussell J, Steiner M. : Minimum effectiveness of the levonorgestrel regimen of emergency contraception. *Contraception* 2004; in press.
36. Ho PC, Kwan MS. : A prospective randomized comparison of levonorgestrel with the Yuzpe regimen in post-coital contraception. *Hum Reprod* 1993; 8:389-92.
37. Kane LA, Sparrow MJ. : Postcoital contraception: a family planning study. *N Z Med J* 1989; 102:151-3.
38. Vasilakis C, Jick SS, Jick H. : The risk of venous thrombo-embolism in users of postcoital contraceptive pills. *Contraception*
1999; 59:79-83.
39. Raymond EG, Creinin MD, Barnhart KT, Lovvorn AE, Rountree RW, Trussell J. Meclizine for prevention of nausea associated with use of emergency contraceptive pills: a randomized trial. *Obstet Gynecol* 2000; 95:271-7.
40. Ngai SW, Fan S, Li S, et al. A randomized trial to compare24h versus 12h double dose regimen of levonorgestrel for emergency contraception. *Hum Reprod*. 2005; 20:307–11.
41. Alvarez F, Faundes A, Johansson E, Coutinho E. Blood levels of levonorgestrel in women following vaginal placement of contraceptive pills. *Fertil Steril* 1983; 40:120-3.
42. Najlaa Marafie, Douglas E. Ball, Eman Abahussain, :Awareness of hormonal emergency contraception among married women in a Kuwait, European Journal of Obstetrics & Gynecology and Reproductive Biology Volume 130, Issue 2, February 2007, Pages 216–222.
43. Susie b. Baldwin, MD, MPH, Donna l. Washington, MD, MPH Hongjian Yu, PhD, Yii-Chieh huang, MS. E. Richard brown, PHD. : who is using emergency contraception? : Awareness and use of emergency contraception among California women and teens, Women's Health Issues ,Volume 18, Issue 5, September–October 2008, Pages 360–368.

44. Nasir Tajure, B.pharm. 2010: Knowledge, attitude and practice of emergency contraception among graduating female students of Jimma University, southwest Ethiopia: Ethiop J Health Sci. Vol. 20, No. 2 July 2010, 91-97.
45. Landon Myer, Regina Mlobeli, Di Cooper, Jennifer Smit and
Chelsea Morroni. : Knowledge and use of emergency contraception among women in the Western Cape province of South Africa: a cross-sectional study, BMC Women's Health 2007, **7**:14.
46. Sandra G. García, Diana Lara, Sarah H. Landis, and Eileen A. Yam, Suyapa Pavón . : Emergency Contraception in Honduras: Knowledge, Attitudes, and Practice among Urban Family Planning Clients. Studies in Family Planning Volume 37, Issue 3, pages 187–196, September 2006.
47. Lakha F. & Glasier A. : Unintended pregnancy and use of EC among a large cohort of women attending for antenatal care or abortion in Scotland .the lancet.368, 1782-1787:
http://web.ebscohost.com.ezproxy.webfeat.lib.ed.ac.uk/ehost/pdfviewer/dfviewer?sid=b823bfae-cf1f-49b8-bd61688205c54bf2%40sessionmgr12&vid=1&hid=13
48. Schunmann, C. & Glasier, A., : Measuring pregnancy intention and its relationship with contraceptive use among women undergoing therapeutic abortion. *Contraception*. 76, 520-524

49. Glasier, A., Fairhurst, K., Wyke, S., Ziebland., Seaman, P., Walker, J. & Lakha, F.: Provision of Emergency contraception does not reduce abortion rates.2004, *Contraception.* **69**, 361-366.
50. Laia Font-Ribera, Glòria Pérez, Joaquín Salvador and Carme Borrell, : Socioeconomic Inequalities in Unintended Pregnancy and Abortion Decision **,** Journal of Urban Health Volume 85, Number 1 (2008), 125-135.
51. Irfan F, Karim SI, Hashmi S, Ali S, Ali SA. : Knowledge of emergency contraception among women of childbearing age at a teaching hospital of Karachi. J Pak Med Assoc. 2009 Apr; 59(4):235-40.
52. Gholamreza Babaee , B. Jamali & M. Mirmohammad Ali. : Investigating the Knowledge, Attitude and Its Relationship with the Mean of Using Emergency Contraception :Journal of Sex & Marital Therapy Volume 29, Issue 4, 2003
53. Fatemeh Najafi Sharj Abad, Zaiton Ahmad, Muhammad Hanafiah Juni, Hejar Abdul Rahman : Emergency Contraception Practice and its Related Factors in a Sample of Malaysian Women, *European Journal of Social Sciences – Volume 20, Number 3 (2011).*
54. Eugene J Kongnyuy , Pius Ngassa , Nelson Fomulu ,Charles Shey Wiysonge , Luc Kouam and Anderson S Doh : survey of knowledge, attitudes and practice of emergency contraception among university students in Cameroon, This article is available from: http://www.biomedcentral.com/1471-227X/7/7, Published: 17 July 2007, p 1-7.
55. Anteneh Admasu , Bosena Tebeje : Knowledge, attitudes, practices and barriers to use emergency contraception among women with unsafe abortion in Jimma Marie Stopes Clinic, South West Ethiopia, Ethiopian Journal of Reproductive Health , May 2009, Volume 3, supplement 1, p 16-24.
56. Saleem S., Fikkree FF. : Induced abortion in low Socio-economic settlements of Karachi, Pakistan: Rates and women's perspectives .J pak Med Assoc 2001, 51:275-9.
57. I-WISH Iraq Woman Integrated Social and Health Survey (I-WISH) - Summary Report march 2012

Table No.1:The relation between knowledge about EC of women and Socio-demographic data

1)Age:	*K Score(10-		K Score(6-8)		K Score(0-4)		Total	P-value
	No.	%	No.	%	No.	%		
16-25	5	6.67	6	8.00	64	85.33	75	**0.0001**
26-35	21	12.35	44	25.88	105	61.76	170	
36-45	27	18.75	25	17.36	92	63.89	144	
46-55	4	36.36	5	45.45	2	18.18	11	
Total	57	14.25	80	20.00	263	65.75	400	
2)No. of children:								
1-2	31	13.03	43	18.07	164	68.91	238	**0.0003**
3-4	20	13.89	29	20.14	95	65.97	144	
≥5	6	33.33	8	44.44	4	22.22	18	
Total	57	14.25	80	20.00	263	65.75	400	
3)No. of abortion								
0	31	14.76	53	25.24	126	60.00	210	**0.0001**
1-2	22	12.22	23	12.78	135	75.00	180	
3≥ 3	4	40.00	4	40.00	2	20.00	10	
Total	57	14.25	80	20.00	263	65.75	400	
4)Socio-economic								
Upper(26-29)	38	70.37	13	24.07	3	5.56	54	**0.0001**
Middle(11-25)	16	6.50%	63	25.61	167	67.89	246	
Lower(≤10)	3	3.00	4	4.00	93	93.00	100	
Total	57	14.25	80	20.00	263	65.75	400	

*K=Knowledge

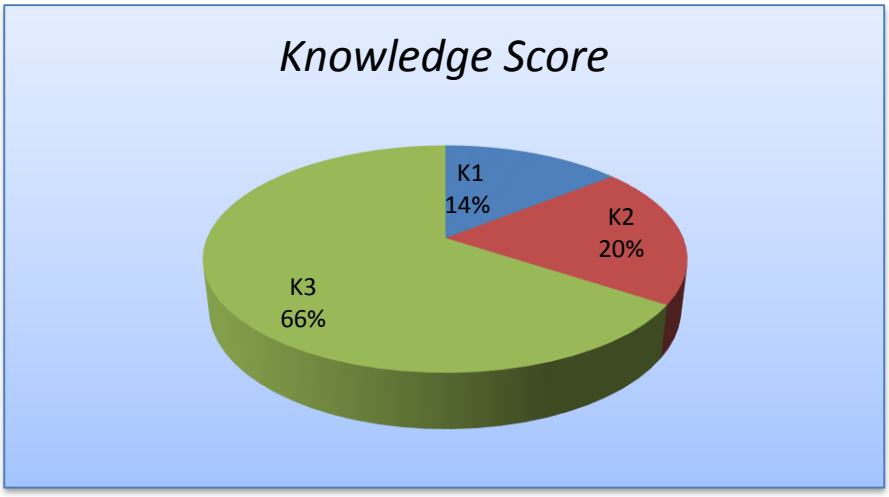

Figure No.1: The Knowledge Score

*K 1= Knowledge (10-12) K2=Knowledge(6-8) K3=Knowledge(0-4)

Table No.2: The relation between knowledge of participants about EC & history of unintended pregnancy

Knowledge Score	Unintended pregnancy				Total	p-value
	No		Yes		No	
K score(10-12)	39	68.42	18	31.58	57	**0.006**
K score(6-8)	65	81.25	15	18.75	80	
K score(0-4)	163	61.98	100	38.02	263	
Total	267	66.75	133	33.25	400	

Table no.3: The relation between unintended pregnancy & No. of abortion among participants

Unintended pregnancy	No. of Abortion							P-value
	0		1-2		3≥3		Total	
	No.	%	No.	%	No.	%	No.	
No	150	56.18	112	41.95	5	1.87	267	0.082
Yes	60	45.11	68	51.13	5	3.76	131	
Total	210	52.50	180	45.00	10	2.50	400	

Table No.4: The relation between unintended pregnancy and educational level of participants

*calculation of p-value was as follows: Primary education (Illiterate+ Primary school),Intermediate(middle +high school) &Higher education (diploma +postgraduate+ professional

Educational level	Unintended pregnancy				Total No.	p-value
	No		Yes			
Illiterate	2	33.33	4	66.67	6	*0.003
Primary school	14	46.67	16	53.33	30	
Middle school	44	65.67	23	34.33	67	
High school	56	61.54	35	38.46	91	
Diploma	23	56.10	18	43.90	41	
Postgraduate	111	72.55	42	27.45	153	
Professional	9	75.00	3	25.00	12	
Total	259	64.75	141	35.25	400	

Table No.5: Knowledge of participants about the correct timing of effectiveness of post coital pill:

	NO.	***%***
Know correct answer	33	8.25
Don't know	367	91.75
Total	400	100.00

Table No.6: Attitudes of Women about EC

Questions of attitudes	Agree		Disagree		Neutral	
1. Do you believe that EC are effective?	219	54.75%	30	7.50%	151	37.75%
2. Do you think that emergency contraception must be available without an authorized doctor?	155	38.75%	135	33.75%	110	27.50%
3. Do you think that emergency contraception is safe?	137	34.25%	123	30.75%	140	35.00%
4 .Do you think that emergency contraception is not against your religion or against the customs and traditions of the society?	74	18.50%	224	56.00%	102	25.50%
5. Providing ECPs wouldn't discourage consistent use of Contraception?	96	24.00%	122	30.50%	182	45.50%

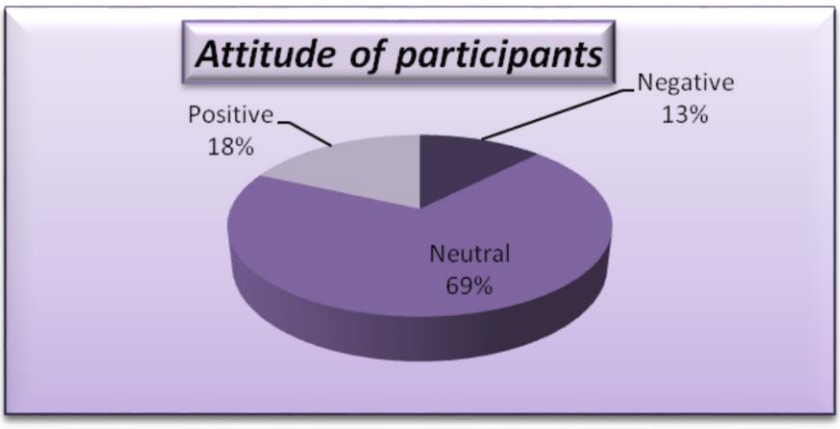

Fig.2: Attitudes of women evaluated using 3point-Likert scales

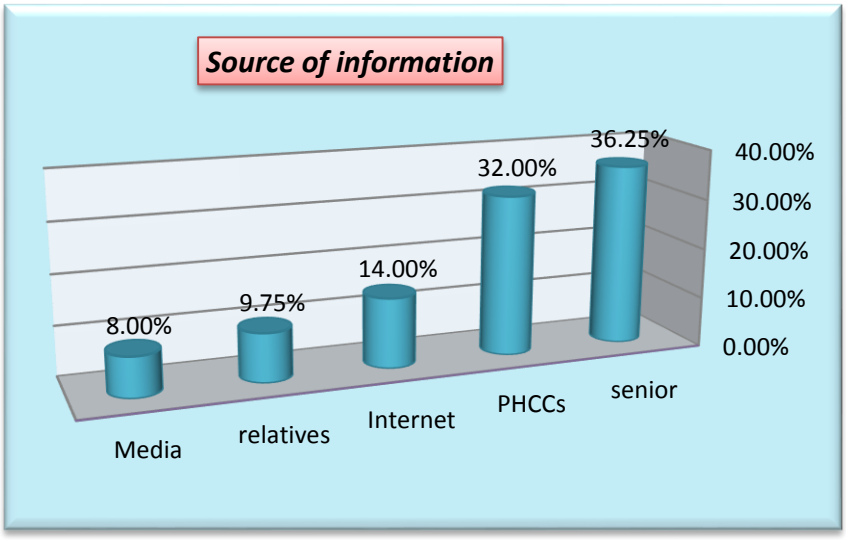

Fig.3: Responses of all the participants regarding Source of information:

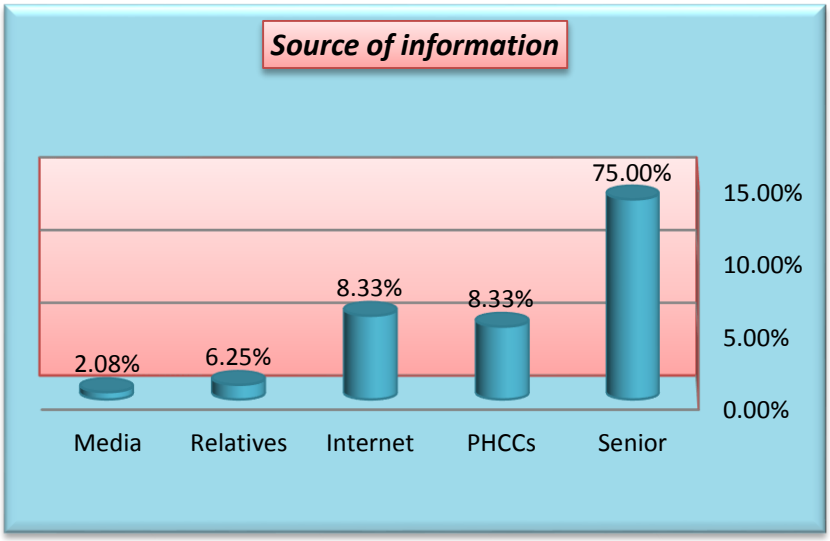

Fig. 4: Responses of participants using EC regarding Source of information about EC *only those who use EC and choose one answer

Table No.7: The association between the attitudes of participants &their age , educational level and practicing of EC

Practicing EC	Attitude(5-8) Negative		Attitude(9-11) Neutral		Attitude(12-15) Positive		Total	p-value
No	44	12.50	242	68.75	66	18.75	352	0.776
Yes	6	12.50	35	72.92	7	14.58	48	
Total	50	12.50	277	69.25	73	18.25	400	
Educational level								
Illiterate	0	------	6	100.00	0	------	6	**0.040**
Primary school	4	13.33	22	73.33	4	13.33	30	
Middle school	12	17.91	46	68.66	9	13.43	67	
High school	5	5.49	62	68.13	24	26.37	91	
Diploma	11	26.19	26	61.90	5	11.90	42	
Postgraduate	18	11.61	110	70.97	27	17.42	155	
Professional	0	-----	5	55.56	4	44.44	9	
Total	50	12.50	277	69.25	73	18.25	400	
Age								
16-25 years	9	12.00	54	72.00	12	16.00	75	**0.014**
26-35 years	24	14.12	118	69.41	28	16.47	170	
36-45 years	14	9.72	103	71.53	27	18.75	144	
46-55 years	3	27.27	2	18.18	6	54.55	11	
Total	50	12.50	277	69.25	73	18.25	400	

Table No.8: The association between knowledge of participants and their attitudes about EC

Attitudes	K score						Total	p-value
	K Score(0-4)		K Score(6-8)		K Score(10-12)			
Attitude(5-8) Negative	7	14.00	9	18.00	34	68.00	50	0.941
Attitude(9-11) Neutral	38	13.72	55	19.86	184	66.43	277	
Attitude(12-15) Positive	12	16.44	16	21.92	45	61.64	73	
Total	57	14.25	80	20.00	263	65.75	400	

Table No.9: The association between Knowledge and practice of EC among participants:

K Score	**Not use**		**Use EC**		**Total**	**p-value**
	No	**%**	**No**	**%**	**No**	
K score(10 -12)	88	31.21	194	68.79	282	**0.032**
K score(6-8)	25	27.47	66	72.53	91	
K score(0-4)	2	7.41	25	92.59	27	
Total	115	28.75	25	92.59	400	

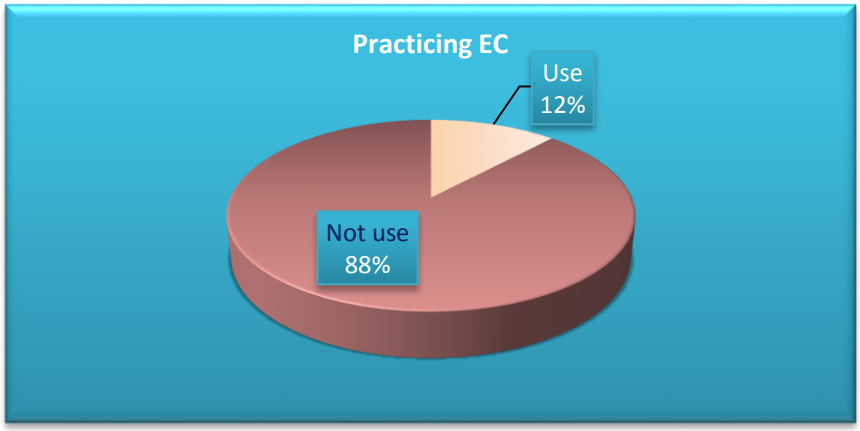

Fig.5 : Practicing of EC among sample participants

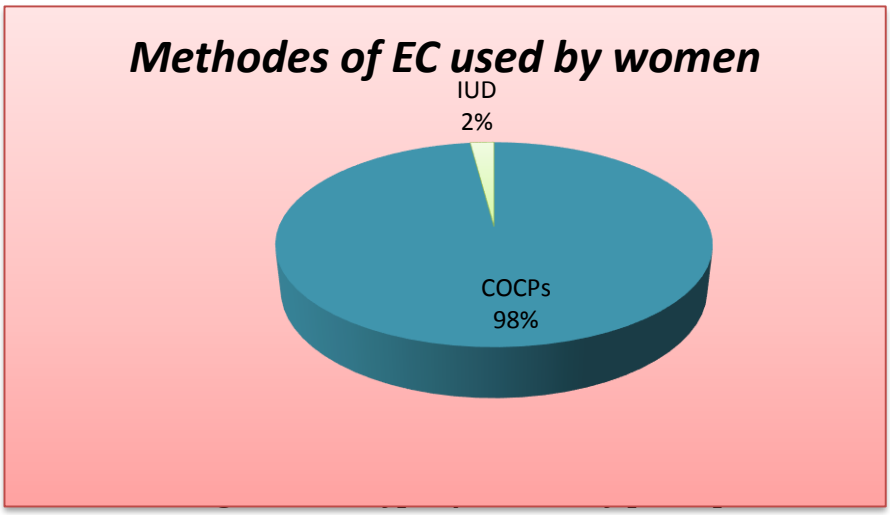

Table No. 10: The knowledge , Attitudes & practice of all women participated in the study

Knowledge	High knowledge		Intermediate Knowledge		Low knowledge		Total	
	57	14.25%	80	20.00%	263	65.75%	400	100%
Attitudes	Positive Attitude		Neutral Attitude		Negative Attitude		Total	
	73	18.25%	277	69.25%	50	12.50%	400	100%
Practice	High practice		Intermediate practice		Low practice		Total	
	14	3.50%	178	44.50%	208	52.00%	400	100%