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Assessing the Knowledge, Attitude and Practice of Emergency Contraceptives among Females Attending Feminine and Children Teaching Hospital in Al- Samawah City

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Abstract--- Background: *Emergency contraception is important in inhibiting unintended pregnancy. Knowledge of females regarding emergency contraception is essential in preventing many maternal morbidity and mortality.*

Aim of study: *To assess the level of knowledge towards emergency contraception in a group of women attending Al-Samawah Feminine and children Teaching Hospital.*

Patients & Methods: *A cross sectional study conducted in Consultancy Clinic of Feminine and children teaching hospital in Al-Samawa city-Iraq through the period from 1st of January, to 31st of December, 2019 on sample of 300 females. The data were collected by the researchers directly from selected females and fulfilling a prepared questionnaire.*

Results: *From the total 60 (20%) females with positive knowledge about emergency contraception. Hearing about emergency contraception was significantly related to increased age, higher educational level, employed females and urban residency. The occupation of females was significantly related to type of emergency contraception. History of previously using the emergency contraception was significantly related to age and educational level of females.*

Conclusions: *The knowledge of females attended Consultancy Clinic of Feminine and children Teaching Hospital regarding emergency contraception was low.*

Keywords--- *Emergency Contraception, Knowledge, Unintended Pregnancy.*

I. Introduction

The emergency contraception (EC) is defined as a contraception way by using drug or device urgently to prevent pregnancy following known or suspected failure of contraception or unprotected sexual intercourse, like sexual rape. The mechanism of action for EC is depending on blocking or retarding ovulation cycle, inhibiting fertilization and altering implantation, but failed to damage already established pregnancy[1]. The EC proved its effectiveness and safety[2]. The EC is available nowadays in two types; oral contraceptive pills (OCPs) and intrauterine device (IUD). The OCPs are hormonal which called 'morning-after pill' or 'second chance' provided by pharmacies and the IUD is mainly provided by private clinics. It was shown that EC is effective in declining risk of fertilization after failure of contraception or unprotected sexual relationship by 75-99% if taken within three days following the intercourse[3]. A high success rate for EC was achieved if taken within three to five days after sexual relationship [4].

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According to World Health Organization (WHO) reports, globally about 210 million conceptions occur every year, from which, 38% were unwanted and 22% were ended in abortion [5]. Prevalence of contraceptive methods use increased until 2000, but unfortunately, this increase has stopped since then [6]. It is estimated that about 20% of women at reproductive age are at risk of unintended pregnancy [7] and high proportion of women perceived regression after positive pregnancy test, referring to an unplanned pregnancy [8]. Additionally, the death for women at bearing age is commonly attributed to gestational and labour complications [9].

The choice of contraceptive type is dependable on effectiveness of the method, its safety and availability in markets which all lead to prevention of unplanned pregnancy [10]. The knowledge regarding contraceptives is very important in stimulation of desire for application. The assessing for women's knowledge regarding contraceptives is essential in evaluation of contraceptive health services provided [11]. An appropriate women health requires their good knowledge about sexual habits, well orientation about interesting role of contraception in family and in community in addition to accessible contraceptive methods [12]. Better knowledge and practice regarding contraception for both couples is important for acquiring compatible relationship [13].

In developing countries, about 20% to 60% of couples are using one or more contraceptive technique [14]. In Iraq, although the National program for family planning was started at nineties of previous century [15], the prevalence unwanted pregnancy was very high due to unavailability of family planning services [16]. The objective of the study is to assess the level of knowledge towards emergency contraception in a group of women attending Baghdad maternity Teaching Hospital.

II. Patients and Methods

The design of current study was a cross sectional study conducted in Consultancy Clinic of Al-Samawah Feminine and children Teaching Hospital through the period from 1st of January, to 31st of December, 2019. The study population was females in reproductive age group attending the Consultancy Clinic. Women with age (15-45 years), married and had at least one child were the inclusion criteria. The exclusion criteria were younger age (less than 15 years), older age (more than 45 years, single, widow, divorced, infertile females, and females refused to participate. A sample of 300 females attending the Consultancy Clinic and eligible to inclusion and exclusion criteria was taken. The ethical considerations were obtained according Helsinki Declaration regarding ethical approval of Health authorities, oral informed consent of females and confidentiality of data.

The data were collected by the researchers directly from selected females and fulfilling a prepared questionnaire. The questionnaire was designed by the researchers according to previous literatures [17]. The questionnaire included the followings: sociodemographic characteristics (age, occupation, educational level, residency, number of children and history of abortion) and knowledge criteria of females regarding emergency contraception. These criteria included the following structured questions; hearing about emergency contraception (yes or no), sources of information about EC (doctor, family members, friends, media), time of using EC (don’t know, IUD within 5 days, pills within 72 hrs), knowledge about using it (know how to use it, don’t know), proposed side effects (I don’t know, nausea, vomiting, vaginal bleeding, others) and history of using EC (not used it previously, used it). The researchers

provided the included females who had not heard about EC with full information regarding EC benefits, types, mechanism, methods and adverse effects.

The data collected were analyzed statistically by Statistical Package of Social Sciences software version 22. The chi square test and Fischer's exact test was applied for analyzing the data as suitable. Level of significance (p value) was regarded statistically significant if it was 0.05 or less.

III. Results

The total number of the study sample was 300 females, their distribution by socio-demographic characteristics shown in table (1); according to age group most common age group was >30 years with 119 females (39.7%), followed by 26-30 years with 78 (26.0%), followed by 21-25 years with 69 (23.0%) and least in 15-20 years age group with 34 (11.3%). Most females were housewives 233 (77.7%), and the minority was employed 67 (22.3%). Regarding educational level, the most frequent educational level was secondary school with 118 (39.0%), followed by primary school 87 (29.0%), then higher educational level including bachelor degrees, master, higher diploma and PhD with 59 (19.7%), while illiterates show only 36 (12.0 %). According to residency, most females lived in urban areas 265 (88.3%), compared to 35 (11.7%) who lived in rural areas. Regarding the number of children, whether one, two, three, four, or five and more, it was with 68 (22.7%) had 1 child, 72 (24.0%) had 2, 59 (19.7%) had 3, 63 (21.0%) had 4, and 38 (12.7%) had 5 and more children, respectively. One hundred and seven (35.7%) females had history of abortion while about two thirds (64.3%) had not.

Table 1: Sociodemographic Characteristics of Studied Females

Socio-demographic Variable		***No.***	***%***
Age groups	15 – 20	34	11.3
	21-25	69	23.0
	26-30	78	26.0
	>30	119	39.7
Occupation	Employed	67	22.3
	Housewife	233	77.7
Educational level	Illiterate	36	12.0
	Primary	87	29.0
	Secondary	118	39.3
	Higher	59	19.7
Residency	Rural	35	11.7
	Urban	265	(88.3)
Number of children	1	68	22.7
	2	72	24.0
	3	59	19.7
	4	63	21.0
	5 and more	38	12.7
Had history of abortion	Yes	107	35.7
	No	193	64.3
Total		**300**	**100.0**

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From the total 60 (20%) females with positive knowledge about EC, the majority 27 (45.0%) reported their source was physicians, 16 (26.0%) from media, 13 (21.7%) from friends, and 4 (6.7%) from family members. 40 (66.6%) of females answered that pills should be used within 72 hours, 10 (16.7%) answered that IUD should be used within 5 days of unprotected intercourse, and 10 (16.7%) didn't know what was the best.20 (33.3%) of the females did not have any idea about the possible side effects of EC, while 14 (23.3%) chose nausea, 10 (16.7%) chose vaginal bleeding, 5 (8.3%) chose vomiting, and 11 (18.3%) chose others, 38 (63.3%) women had used it previously, and the other 22 (36.7%) had not use it. (***Table 2***).

Table 2: Knowledge Criteria of Females Regarding EC

Criteria	***No.***	***%***
Heard about EC		
Yes	60	20.0
No	240	80.0
Total	**300**	**100.0**
Sources of information about EC		
Doctor	27	45.0
Family members	4	6.6
Friends	13	21.7
Media	16	26.7
Time of using EC		
Don't know	10	16.7
IUD within 5 days	10	16.7
Pills within 72 hrs	40	66.6
Knowledge about using it		
Know how to use it	10	16.7
Don’t know	50	83.3
Proposed side effects		
I don’t know	20	33.3
Nausea	14	23.3
Vomiting	5	8.4
Vaginal bleeding	10	16.7
Others	11	18.3
History of using EC		
Not Used it previously	22	36.7
Used it	38	63.3
Total	**60**	**100.0**

There was a significant association between increased age of females and hearing about EC (p=0.02). No significant differences were observed between females with different age groups regarding source of information about EC (p=0.6), time of using EC (p=0.8), knowledge about using it (p=0.6) and proposed side effects (p=0.4). A significant association was observed between increased age of females and history of previously using the EC (p=0.001). (Table 3).

Table 3: Distribution of EC Knowledge Criteria According to Age Groups of Females

Criteria		*Age groups*					
		15-20	*21-25*	*26-30*	*>30*	*Total*	*P value*
		No (%)	*No (%)*	*No (%)*	*No (%)*	*No (%)*	
Heard about EC	Yes	0 (0)	13 (21.7)	16 (26.7)	31 (51.6)	60 (20.0)	**0.02**^{S}
	No	34 (14.2)	56 (23.3)	62 (25.8)	88 (36.7)	240 (80.0)	
Sources of information about EC	Doctor	1 (3.7)	4 (14.8)	7 (25.9)	15 (55.6)	27 (45.0)	0.6^{NS}
	Family members	0 (0)	2 (50.0)	1 (25.0)	1 (25.0)	4 (6.6)	
	Friends	1 (7.8)	3 (23.0)	3 (23.0)	6 (46.1)	13 (21.7)	
	Media	0 (0)	1 (6.3)	6 (10.0)	9 (3.9)	16 (26.7)	
Time of using EC	Don't know	0 (0)	3(30.0)	1(10.0)	6 (60.0)	10 (16.7)	0.8^{NS}
	IUD within (5) days	0(0)	2 (20.0)	3 (30.0)	5 (50.0)	10 (16.7)	
	Pills within 72hr	1 (2.5)	8 (20.0)	11 (27.5)	20 (50.0)	40 (66.6)	
Knowledge about using it	Know how to use it	0 (0)	1 (10.0)	3 (30.0)	6 (60.0)	10 (16.7)	0.6^{NS}
	Don't know	1 (2.0)	5 (10.0)	12 (24.0)	32 (64.0)	50 (83.3)	
Proposed side effects	I don't know	0 (0)	3(15.0)	4 (20.0)	13 (65.0)	20 (33.3)	0.4^{NS}
	Nausea	0 (0)	1 (7.1)	3 (21.4)	10 (71.4)	14 (23.3)	
	Vomiting	1 (20.0)	0 (0.0)	4 (80.0)	0 (0.0)	5 (8.4)	
	Vaginal bleeding	0 (0.0)	0 (0.0)	4 (40.0)	6 (60.0)	10 (16.7)	
	Other	0 (0.0)	4 (36.3)	1 (9.0)	6 (54.6)	11 (18.3)	
History of using EC	Not Used it previously	8 (36.3)	3 (13.6)	4 (18.2)	7 (31.8)	22 (36.7)	**0.001**^{S}
	Used it	0 (0.0)	3 (7.9)	11 (28.9)	24 (63.2)	38 (63.3)	

S=Significant, NS=Not significant.

A significant association was observed between higher educational level of females and their hearing about EC (p=0.001). No significant differences were observed between females with different educational levels regarding source of information about EC (p=0.09), time of using EC (p=0.8), knowledge about using it (p=0.6) and proposed side effects (p=0.7). There was a significant association between higher educational level of females and history of previously using EC (p=0.03). (Table 4)

Table 4: Distribution of EC Knowledge Criteria According to Educational Level of Females

Criteria		*Educational level*					
		Illiterate	*Primary*	*Secondary*	*Higher*	*Total*	*P value*
		No (%)	*No (%)*	*No (%)*	*No (%)*	*No (%)*	
Heard about EC	Yes	0 (0)	6 (10.0)	19 (31.7)	35 (58.3)	60 (20.0)	**0.0001**^{S}
	No	36 (15.0)	81 (33.8)	99 (41.2)	24 (10.0)	240 (80.0)	
Sources of information about EC	Doctor	0 (0.0)	6 (22.2)	4 (14.8)	17 (62.9)	27 (45.0)	0.09^{NS}
	Family members	0 (0.0)	0 (0.0)	5 (83.3)	1 (16.7)	6 (10.0)	
	Friends	0 (0.0)	0 (0.0)	6(50.0)	6(50.0)	12 (20.0)	
	Media	0 (0.0)	5 (33.3)	2 (13.3)	8 (53.3)	15 (25.0)	
Time of using EC	Don't know	0 (0.0)	1 (8.3)	4 (33.3)	7 (58.3)	12 (20.0)	0.8^{NS}
	IUD within 5 days	0 (0.0)	2 (25.0)	2 (25.0)	4 (50.0)	8 (13.3)	
	Pills within 72 hrs	0 (0.0)	6 (15.0)	11 (27.5)	23 (57.5)	40 (66.7)	
knowledge about using it	Know how to use it	0 (0.0)	1 (8.3)	3 (25.0)	8 (66.7)	12 (20)	0.6^{NS}
	Don't know	0 (0.0)	6 (12.5)	15 (31.3)	27 (56.2)	48 (80)	
Proposed side effects	I don't know	0 (0.0)	3 (14.3)	4 (19.0)	14 (66.7)	21 (35.0)	0.7^{NS}
	Nausea	0 (0.0)	1 (7.7)	4 (30.7)	8 (61.5)	13 (21.7)	
	Vomiting	0 (0.0)	2 (28.6)	4 (57.1)	1 (14.3)	7 (11.7)	
	Vaginal bleeding	0 (0.0)	1 (12.5)	1 (12.5)	6 (75.0)	8 (13.3)	
	Other	0 (0)	1 (9.0)	3 (27.3)	7 (63.6)	11 (18.3)	
History of using EC	Not Used it previously	0 (0.0)	5 (16.1)	3 (9.7)	23 (74.2)	31 (51.7)	**0.03**^{S}
	Used it	0 (0.0)	0 (0.0)	11 (37.9)	18 (62.1)	29 (48.3)	

S=Significant, NS=Not significant.

There was a significant association between hearing about EC and employed females (p=0.001). A significant association was observed between emergency IUD within 5 days and employed women, while housewives were significantly used emergency pills within 72 hrs (p=0.008). No significant differences were observed between females with different occupations regarding source of information about EC (p=0.053), knowledge about using it (p=0.1), proposed side effects (p=0.4) and history of using EC (p=0.06). (***Table 5***)

Table 5: Distribution of EC knowledge Criteria According to Occupation of Females

Criteria		**Occupation**			
		Employed	**Housewife**	**Total**	**P value**
		No (%)	**No (%)**	**No (%)**	
Heard about EC	Yes	45 (75.0)	15 (25.0)	60 (20.0)	**0.0001** S
	No	22 (9.2)	218 (90.8)	240 (80.0)	
Sources of information about EC	Doctor	15 (57.7)	11 (42.3)	26 (43.3)	0.053 NS
	Family members	5 (71.4)	2 (28.6)	7 (11.7)	
	Friends	9 (81.8)	2 (18.2)	11 (18.3)	
	Media	5 (31.3)	11 (68.7)	16 (26.7)	
Time of using EC	Don't know	9 (90.0)	1 (1.0)	10 (16.7)	**0.008** S
	IUD within 5 days	6 (66.7)	3 (33.3)	9 (15.0)	
	Pills within72hrs	9 (21.9)	32 (78.1)	41 (6.3)	
knowledge about using it	Know how to use it	7 (70.0)	3 (30.0)	10 (16.7)	0.1 NS
	Don’t know	22 (44.0)	28 (56.0)	50 (83.3)	
Proposed side effects	I don’t know	7 (36.8)	12 (63.2)	19 (31.7)	0.4 NS
	Nausea	10 (58.8)	7 (41.2)	17 (28.3)	
	Vomiting	4 (66.7)	2 (33.3)	6 (10.0)	
	Vaginal bleeding	4(50.0)	4(50.0)	8(13.3)	
	Other	7(70.0)	3(30.0)	10(16.7)	
History of using EC	Not Used it previously	11 (45.8)	13 (54.2)	24 (40.0)	0.06 NS
	Used it	25 (69.4)	11 (30.6)	36 (60)	

S=Significant, NS=Not significant.

There was a significant association between rural residency and not hearing about EC by females (p=0.002). No significant differences were observed between females hearing or not hearing about EC regarding their abortion history (p=0.8). (***Table 6***)

Table 6: Distribution of Females' Residency and Abortion History According to Hearing about EC.

Variable	***Hearing about EC***			***P value***
	Yes	***No***	***Total***	
	No (%)	***No (%)***	***No (%)***	
Residency				
Rural	0 (0)	46 (100.0)	46 (15.3)	**0.002** S
Urban	60 (23.6)	194 (76.4)	254 (84.7)	
Abortion history				
Yes	22 (20.5)	85 (79.5)	107 (35.7)	0.8 NS
No	38 (19.7)	155 (80.3)	193 (64.3)	

IV. Discussion

Unplanned conception is regarded as the significant challenge facing young peoples in poor countries as some of couples tend to abort the child leading to many maternal co-morbidities and high risk of death[18]. The emergency

contraceptive is important in preventing pregnancy after unintended sexual relationship, after sexual abuse and failure of contraceptive methods [19].

Present study found that 20% of studied females were heard about EC. This finding is higher than results of Abdulmalek and Ibrahim study in Iraq which reported that only 3% of women within reproductive age group in Duhok city heard about emergency contraception[20]. Our study findings are also better than results Alkhazrajy and Hadi cross sectional study in Iraq which revealed that only 12% of females attended primary health care center in Baghdad used emergency contraception to prevent unintended pregnancy [21]. These differences might be attributed to raising health awareness of Iraqi women regarding family planning in general and regarding emergency contraception and increased rates of poverty in our community in last year's that stimulated women to adopt the contraception. However, our study finding is lower than results of Ahmad et al [22] study in India which found that 34.5% of women attended antenatal outpatients clinic knew about emergency contraception. In general, present study finding is within global range of woman's knowledge regarding emergency contraception of 2%-66% which indicated the urgent need for wide spreading of health information regarding emergency contraception [23].

Current study showed a significant association between increased age of females and hearing about EC. This finding is similar to results of Novikova et al[24] study in Australia which reported that mean age of women who heard about EC was higher than mean age of women who had not heard about EC. Our study found a significant association between increased age of females and history of previously using the EC. Life experiences and discrepancies in awareness regarding EC are different according to different age groups [25].

In present study, a significant association was observed between higher educational level of females and each of their hearing about EC or history of previous use. Consistently, Daniels et al [26] study in USA reported that emergency contraception use by women aged (15-44 years) was varied according to age, marital status, Hispanic origin, race and education of women. Our study revealed also a significant association between hearing about EC and employed females. The females' occupation is related to their educational level and socioeconomic status [27]. The interesting finding of present study was the significant relationship between employed females and IUD emergency contraception, while housewives preferred the use of pills emergency contraception. Selection of an appropriate emergency contraception type is depending on many factors related to women such as their education, occupation and socioeconomic status [28]. The hearing about EC in our study was also related to residency of the females, as rural resident females were significantly commonly not hearing about it. This finding coincides with results of Tesfaye et al [29] study in Ethiopia which stated that prevalence of women with rural residency who had not heard about EC was higher than women with urban residency.

Our study concluded that the knowledge of females attended Consultancy Clinic of Feminine and children Teaching Hospital regarding emergency contraception was low. Factors related to good knowledge of females regarding emergency contraception were age, educational level, occupation and residency. Encouraging media and more educational health programs are needed to increase awareness of Iraqi females.

V. Conflict of Interest

Declared none.

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