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Original Research Article

Contraceptive practices and awareness about emergency contraception among women attending a tertiary care hospital of Delhi, India

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ABSTRACT

Background: Emergency contraceptive pills (ECs) are a safe female-controlled method of post-coital contraception; however, the knowledge about them is low among general population.

Methods: This cross-sectional study was done among the adult females, aged 18 years and above, who visited the various out-patient departments (OPD) of a tertiary care hospital in July 2017. A total of 640 adult females, who visited the OPDs of medicine, surgery, orthopedics and gynecology were included in this study. Data were entered and analyzed using SPSS ver 16. Chi-square test was used to test association. A p-value of less than 0.05 was considered as significant association.

Results: Of the 640 participants, mostly were Hindu, aged between 20-29 years, married and had more than one child. Only, 52% females were aware of the term 'contraception' and 17.7% about 'emergency contraception'. The only method of ECs they were aware of was i-pill. Commonest source of their knowledge was friends, relatives and spouse. Only 70 women knew that it can be used after unprotected intercourse and 25 knew that it can be used after failure of barrier method. Just 41.2% women used any kind of contraceptive and 5.3% women have ever used an EC. Around 28% women reported not using contraception due to lack of knowledge.

Conclusions: Despite of their availability since many years, awareness about emergency contraception is low. More efforts are required to generate awareness about regular use of effective contraception and emergency contraception if required.

Keywords: Awareness, Emergency contraception, Knowledge, New Delhi

INTRODUCTION

India is the second most populous country of the world and the lower socio-economic strata is grappling with issues like uncontrolled births and unintended pregnancies. Population explosion not just exhausts resources, but unwanted births are disadvantaged in terms of maternal and child health outcomes.¹ Despite of widespread efforts of the government to improve the contraception use, the contraception prevalence is as low as 64 %.² The knowledge of contraception is widespread

but vast majority of married Indians reported significant problems in accessing a choice of contraceptive methods.³ Emergency contraceptive pills (ECs), made legal in India in 2003 and available over the counter from pharmacists since 2005, are a safe female-controlled method of post-coital contraception.^{4,5} However, the most challenging aspect in reaching the full potential of this approach is that both healthcare personnel and potential users are both quite ignorant it.⁶ The beneficiaries, who know little about it, think that EC use is associated with frequent and severe side effects.⁷⁻⁹ Currently available

commonly acknowledged hormonal method of post-coital contraception was first described by Yuzpe and Lancee and Yuzpe et al. Based on the findings of these authors, each dosage included the combination of 200 µg ethinyl oestradiol and 2 mg dl-norgestrel given in two divided doses where the second dose was given after 12 h of the first dose, within 72 h of unprotected intercourse.^{10,11,12}

Several efficacious and easy to use methods for emergency contraception (EC) are available on the market today with the most widely spread being levonorgestrel (LNG) in a single dose of 1.5 mg (given as one tablet of 1.5 mg or 2 tablets of 0.75 mg each) for administration up to 3 days after unprotected Sexual Intercourse.¹³

The legal availability of ECs in India has not brought the use of ECs in the limelight and empirical data on their acceptability and use are still scarce. Data from the 2015–2016 Indian National Family Health Survey (NFHS-4) indicate that 47.7 % and 50.7 % of women and men, respectively, had ever heard of ECs.²

Out of the 700,000 women interviewed in the survey, the proportion of women who have ever used ECs was 0.4% and those who used EC in the last 12 months was 0.2%.² The use of ECs is limited not just in developing countries, but their use remains suboptimal-even in the countries like United States and Australia.^{14,15}

The NFHS-4 data further indicates that 60-75% of sexually active men and 42-85% sexually active women did not use any contraceptive method during their last sexual encounter.²

The same data suggests a wide gap between total fertility rate (2.2) and wanted fertility rate (1.8), indicating the limited control of females or couples over their family size.

It has also been estimated that the proportion of maternal mortality caused by unsafe abortions in India is 9%, indicating that abortion services are not accessible to women.¹⁶ In the current scenario, ECs look to remain an underutilized tool to avoid unintended pregnancies and unsafe abortions in our country.

However, not much is known about the knowledge, attitude and practices (KAP) about ECs among reproductive age females, and thus this study was carried out to fill this KAP gap.

METHODS

This cross-sectional study was done among the adult females, aged 18 years and above, who visited the various out-patient departments (OPD) of a tertiary care hospital in July 2017. The hospital is a 500 bedded multispecialty hospital which is located on 29.4 acres of land situated at Rohini. It provides comprehensive

medical care services to the residents of North and North West Delhi.

Inclusion criteria

- Women who attended the outpatient departments of medicine, surgery, orthopedics and gynecology, were more than 18 years of age and who were able to understand either Hindi or English were included in the study.

Exclusion criteria

- Women who were seriously ill, mentally unsound or not able to communicate and unwilling to participate in the study were excluded.

The study protocol was approved by the ethics committee of the institution. A convenience sample of 640 was randomly collected, with the help of chit method, from medicine, surgery, Orthopedics and Gynecology OPDs. Sampling was done every day and was completed in 4 weeks. The participants were informed of the objectives and procedures of the survey and assured that the information collected would be kept confidential. Those who gave written consent were included in the study.

The tool used was a pre-tested and semi-structured questionnaire whose content validation was done before hand. The questionnaire included socio-economic data of the respondent such as education, age, type of family, marital status, number of children. After that, knowledge, attitude and practices about ECs were assessed with the help of the study questionnaire. Awareness and usage pattern of other contraceptive methods were also assessed.

The study participants were counseled after the interview regarding the emergency contraception methods. The definition of emergency contraception used was: methods of contraception that can be used to prevent pregnancy in the first few days after intercourse, intended for emergency use following unprotected intercourse, contraceptive failure or misuse (such as forgotten pills or torn condoms), rape or coerced sex.

Statistical analysis

Data were entered and analyzed using SPSS ver 16. Chi-square test was used to test association. A p-value of less than 0.05 was considered as significant association.

RESULTS

Out of the 640 women who participated in the study, 614 (95.9%) were Hindu and rest were Muslim. Most of the women were between the age of 20 to 29 years (317, 49.5%), were married (578, 90.3%) and had one or more children (532, 83.1%) (Table 1). Among the subjects, 333 (52%) were aware of the term 'contraception' and only

113 (17.7%) were aware of the term 'emergency contraception'.

Table 1: Socio-demographic details of study participants (N=640).

Particulars	Responses	Frequency	%
Type of family	Joint	417	65.2
	Nuclear	223	34.8
Religion	Hindu	614	95.9
	Muslim	26	4.1
Sex	Females	640	100
Age (years)	<20	87	13.6
	20 to 29	317	49.5
	30 to 39	144	22.5
	40 or more	92	14.4
Marital status	Married	578	90.3
	Unmarried	62	9.7
Number of children	0	108	16.9
	1	156	24.4
	2	216	33.8
	>2	160	25

Among the women who were aware of emergency contraception (113, 17.7%), the only method of emergency contraception that they were aware of was i-pill and the most common source of their information was friends, relatives or spouse (49, 43.4%).

When asked about the purpose of using ECs, 99 (87.6%) said that it was to avoid unwanted pregnancy, 19 (16.8%) said it was for spacing of births and rest 12 (10.6%) were unaware of the purpose. When asked about the circumstances under which ECs are used, 70 (62%) women answered as unprotected intercourse, 38 (33.6%) said after a missed period, 25 (22.2%) said after failure of barrier method, 14 (12.4%) said after failure of coitus interrupts and rest 28 (24.85%) did not know (Table 2). Three questions were asked to assess the attitude of participants towards the use of ECs. The first question was on willingness to use ECS, second was whether they think that use of ECs is beneficial in any way and third question was whether they will recommend the use of ECs to friends or relatives.

Table 2: Knowledge regarding ECs among participants.

Questions	N	Responses	n	%
Are you aware of the term 'contraception'?	640	No	307	48.0
		Yes	333	52.0
Are you aware of the term 'emergency contraception'?	640	No	527	82.3
		Yes	113	17.7
Which methods can be used as ECs?	113	I- Pill (levonorgestrol)	113	100.0
		Others	0	0.0
What was the source of your knowledge about ECs?	113	Newspaper, magazine, banner, poster	28	24.8
		Friends, relatives, spouse	49	43.4
		Health personnel: doctor, nurse, paramedical worker	36	31.8
What is the place of availability of ECs?*	113	Government Hospital	87	77.0
		Health centers e.g. PHC, sub centers	77	68.1
		private health care institutes	25	22.1
		Over the counter e.g. medical shop pharmacy	75	66.4
		Others	2	1.8
Is it necessary to use ECs under any circumstances?	113	No	7	6.2
		Yes	106	93.8
What is the purpose of using ECs?*	113	To prevent unwanted pregnancy	99	87.6
		Spacing of Birth	19	16.8
		Don't Know	12	10.6
Under what circumstances, the use of ECs is necessary?*	113	After unprotected intercourse	70	62.0
		After missed period	38	33.6
		After failure of barrier method	25	22.2
		After failed coitus interrupts	14	12.4
		Don't know	28	24.8

*The responses are not mutually exclusive due to multiple responses.

Almost half of the women (52%) answered all the three questions positively (Table 3).

Out of 640 women who were interviewed, only 34 (5.3%) had ever used an i-pill as an emergency contraceptive. Out of the 34 women who had used the i-pill, all were satisfied with the outcome though 8 (23.5%) women experienced side effects like nausea, vomiting or some other effects.

When asked about whether they have ever used any other contraceptive method, only 264 (41.2%) women out of 640 replied with a 'yes'. The most common method of contraception that was used was condoms (50.8%), followed by tubectomy (22.3%), Copper-T (21.6%) and oral pills (5.3%).

Table 3. Attitude of participants towards ECs (N=640).

Questions	Responses	n	%
Are you willing to use ECs?	No	307	48.0
	Yes	333	52.0
Is it beneficial to use ECs?	No	305	47.7
	Yes	335	52.3
Would you encourage your friends and relatives to use ECs?	No	305	47.7
	Yes	335	52.3

The most common reasons given for not using a contraceptive method were lack of knowledge (27.9%), desire to have a child (20.7%), no sexual contact (18.6%), fear of side effects (11.2%) and opposition of spouse or partner (95) (Table 4).

Table 4: Practices regarding contraceptives including ECs among participants.

Questions	N	Responses	n	%
Have you ever used ECs?	640	No	606	94.7
		Yes	34	5.3
If yes, then which type of EC did you use?	34	I-Pill	34	100.0
		Others	0	0.0
Were you satisfied with the outcome of use of EC?	34	No	0	0.0
		Yes	34	100.0
Did you have any side effects after you used EC?	34	No	26	76.5
		Yes	8	23.5
If yes, then what side-effects did you experience?	8	Nausea, vomiting	4	50.0
		Others	4	50.0
Have you ever used any other contraceptive method	640	No	376	58.8
		Yes	264	41.2
If yes, then what contraceptive methods have you ever used?	264	Oral Pills	14	5.3
		Condoms	134	50.8
		Copper T	57	21.6
		Tubectomy	59	22.3
		Conventional methods	2	0.8
If no, then what was the reason of never using a contraceptive?	376	Currently pregnant	2	0.5
		Desire to have child	78	20.7
		Fear of side effects	42	11.2
		Husband undergone vasectomy	2	0.5
		Lack of knowledge	105	27.9
		Never had any sexual contact	70	18.6
		No response/ Not willing to disclose the reason	14	3.7
		Opposition of family members	16	4.3
		Opposition of spouse/ partner	34	9.0
		Post-partum period or breast feeding	15	4.0

The awareness of contraception and emergency contraception was significantly associated with increased age (p value=0.026 and 0.0001 respectively). The positive attitude regarding usage of ECs, consisting of

willingness to use ECs, finding it beneficial encouraging others to use ECs, was significantly associated with increased age, being married and having one or more children (p value = 0.0001). The practice of using ECs was significantly more in the age group of 30-39 years.

Table 5: Factors associated with awareness, attitude and practices regarding emergency contraceptives.

Variables		Age			Marital status		No. of Children			Total	
		<30	30-39	≥40	Married	Unmarried	0	1-2	>2		
Awareness	Aware of term contraception	No	210 (52)	61 (42.4)	36 (39.1)	270 (46.7)	37 (59.7)	56 (51.9)	179 (48.1)	72 (45.0)	307 (48)
		Yes	194 (48)	83 (57.6)	56 (60.9)	308 (53.3)	25 (40.3)	52 (48.1)	193 (51.9)	88 (55.0)	333 (52)
		Total	404 (100)	144 (100)	92 (100.0)	578 (100)	62 (100)	108 (100)	372 (100)	160 (100)	640 (100)
		P Value	0.026			0.052		0.543			
	Aware of term emergency contraception	No	338 (83.7)	103 (71.5)	86 (93.5)	473 (81.8)	54 (87.1)	89 (82.4)	302 (81.2)	136 (85.0)	527 (82.3)
		Yes	66 (16.3)	41 (28.5)	6 (6.5)	105 (18.2)	8 (12.9)	19 (17.6)	70 (18.8)	24 (15.0)	113 (17.7)
		Total	404 (100)	144 (100)	92 (100)	578 (100)	62 (100)	108 (100)	372 (100)	160 (100)	640 (100)
		P Value	0.0001			0.302		0.571			
Attitude	Willing to use EC	No	213 (52.7)	42 (29.2)	52 (56.5)	247 (42.7)	60 (96.8)	79 (73.1)	150 (40.3)	78 (48.8)	307 (48.0)
		Yes	191 (47.3)	102 (70.8)	40 (43.5)	331 (57.3)	2 (3.2)	29 (26.9)	222 (59.7)	82 (51.2)	333 (52.0)
		Total	404 (100)	144 (100)	92 (100.0)	578 (100)	62 (100.0)	108 (100)	372 (100)	160 (100)	640 (100)
		P Value	0.0001			0.0001 *		0.0001			
	Is it beneficial to use EC	No	211 (52.2)	42 (29.2)	52 (56.5)	245 (42.4)	60 (96.8)	79 (73.1)	148 (39.8)	78 (48.8)	305 (47.7)
		Yes	193 (47.8)	102 (70.8)	40 (43.5)	333 (57.6)	2 (3.2)	29 (26.9)	224 (60.2)	82 (51.2)	335 (52.3)
		Total	404 (100)	144 (100)	92 (100)	578 (100)	62 (100)	108 (100)	372 (100)	160 (100)	640 (100)
		P Value	0.0001			0.0001 *		0.0001			
	Would you encourage your friends and relatives to use EC	No	211 (52.2)	42 (29.2)	52 (56.5)	245 (42.4)	60 (96.8)	79 (73.1)	148 (39.8)	78 (48.8)	305 (47.7)
		Yes	193 (47.8)	102 (70.8)	40 (43.5)	333 (57.6)	2 (3.2)	29 (26.9)	224 (60.2)	82 (51.2)	335 (52.3)
		Total	404 (100.)	144 (100)	92 (100.0)	578 (100)	62 (100)	108 (100)	372 (100)	160 (100)	640 (100)
		P Value	0.0001			0.0001 *		0.0001			
Practices	Have you ever used EC	No	388 (96.0)	128 (88.9)	90 (97.8)	544 (94.1)	62 (100)	105 (97.2)	348 (93.5)	153 (95.6)	606 (94.7)
		Yes	16 (4.0)	16 (11.1)	2 (2.2)	34 (5.9)	0	3 (2.8)	24 (6.5)	7 (4.4)	34 (5.3)
		Total	404 (100.0)	144 (100)	92 (100)	578 (100)	62 (100)	108 (100)	372 (100)	160 (100)	640 (100)
		P Value	0.002			0.06 *		0.40 **			
	Have you ever used any other contraceptive method	No	273 (67.6)	69 (47.9)	3 (37.0)	314 (54.3)	62 (100)	85 (78.7)	222 (59.7)	69 (43.1)	376 (58.8)
		Yes	131 (32.4)	75 (52.1)	58 (63.0)	264 (45.7)	0	23 (21.3)	150 (40.3)	91 (56.9)	264 (41.2)
Total		404 (100)	144 (100)	92 (100)	578 (100)	62 (100)	108 (100)	372 (100)	160 (100)	640 (100)	
P Value		0.0001			0.0001 *		0.0001				

DISCUSSION

World Health Organization (WHO) has defined family planning as “A way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitude and responsible decisions by individuals and couples, in order to promote the health and welfare of family groups and

thus contribute effectively to the social development of the country”.¹⁷

Any method of contraception will become acceptable to the public when it will fall within their social norms and when proper knowledge about it will be imparted to the public regarding its use and side effects. This study was conducted to find out the knowledge, attitude of

reproductive age women regarding emergency contraception.

Though the use of ECs has long been legalized and it is available in the basket of choices offered to women for contraception, its awareness is not satisfactory, and the attitude of general public is far from positive. Only 52% females were aware of the term 'contraception' and 17.7% were aware about emergency contraception. Other studies among Indian women have also reported low awareness about ECs.^{17,18} The awareness about ECs was reported to be higher (48-85.7%) among other studies.^{19,20} The reasons could be the higher literacy rates among participants in other studies (participants were college students and nurses). Commonest sources of knowledge of almost half of the participants were informal sources like were friends, relatives and spouse, who may be unreliable and incorrect.¹⁹ Other studies have also reported them as most common source of information on ECs.^{20,21}

Even if few people knew about ECs, the knowledge they had about them was limited. Only 70 women out of 640 knew that ECs can be taken after unprotected intercourse and a much lesser number of women (25 out of 640) knew that ECs can be taken after failure of a barrier contraceptive.

Thirty-eight women said that ECs can be taken after a missed period, which is clearly wrong information that is doing the rounds among masses. Other studies have also reported poor knowledge about ECs among participants.^{18,19,22}

The ignorance about ECs has not spared even the health care providers and they have reported poor knowledge and over-estimation of side-effects.²²⁻²⁴ It is estimated that correct information and use of ECs could prevent almost two-thirds of induced abortions.²⁵ The awareness about ECs is significantly associated with age as is reported by another study.²⁶

Less than half of the participants showed a positive attitude towards ECs. They were willing to use them; they thought it to be beneficial and were willing to recommend them to friends and relatives. A study done by Joseph et al among college students also reported that half of the participants were willing to recommend ECs to family and friends.¹⁹

A review of literature reported that majority of women in low-income countries have never heard of emergency contraception, and many providers have negative attitudes toward providing emergency contraception.²⁷ The right attitude will come with right information. People should be made aware that ECs are a safe method to avoid pregnancies after unprotected intercourse and failure of barrier method. They should be told that ECs are not abortifacients, and neither should they be used as a substitute to other contraceptive methods.

When asked about use of contraceptives, not even half of the women (41.2%) reported using any of the contraceptives ever. The most common methods of contraception they used were condoms (50.8%), tubectomy (22.3%) and copper-T (21.6%). Another study done among low-income women in India also reported 52% usage of contraceptives.²⁸

A study done by Takker et al among married women working in a hospital, however, reported a much higher percentage of contraceptive use (81.1%), the reason of which may be higher literacy rate and more accessibility of the women to the contraceptives in the hospital.¹⁷ Almost one-third (27.9%) women in the current study, stated lack of knowledge as the reason for not using a contraceptive. Desire to have a child, fear of side effects and opposition of spouse or partner were also important reasons stated for not using contraceptives. Clearly, the information, education and communication is lacking as far as the contraception especially emergency contraception is concerned. If authors are to achieve the desired fertility rate and reduce maternal mortality, then this topic is unavoidable and empirical.

Healthcare providers have a responsibility to bring about attitudinal changes so that hindrances in learning about ECPs can be removed in minds of the general public. This will also empower users in making informed decisions to regulate their fertility. ECs also give people a second chance at contraception and help in reducing unintended pregnancies and induced abortions.

Thus, they have a big role to play in a country like India where health of the women of reproductive age group is often neglected. Physicians should counsel patients on the use and effectiveness of emergency contraception, the methods available, and the benefits of routine and consistent contraception use.

The information related to reproduction and contraception should be disseminated through media and reach the masses. Health education sessions including sex education should be intensified so that false information and taboo doesn't put adolescents at risk of pregnancies and STIs. Awareness of community workers like ASHA and Anganwadi workers would also go a long way in changing the attitude of community towards contraception especially emergency contraception.

The study had various limitations. The profile of those who refused to participate might be different than those who did, but authors couldn't take into account the non-participation bias. The women who came to the hospital were mostly from the low socio-economic class so the results cannot be extrapolated to the rest of the population. Also, accuracy of responses provided by participants on a sensitive issue like emergency contraception cannot be guaranteed. However, the study gives us insights into the knowledge and attitude of a

population that is the most suitable target for family planning methods especially emergency contraception.

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