

# Knowledge of Emergency Contraception among Married Women of Reproductive Age in a Rural-based Teaching Hospital of Nagpur, Maharashtra, India

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## ABSTRACT

**Objective:** To assess the awareness and level of knowledge toward emergency contraception among married women in the reproductive age group.

**Methods:** A prospective cross-sectional study was conducted employing prestructured questionnaire, which included information about age, occupation, income, education, obstetric profile, knowledge and use of emergency contraception.

**Results:** The average age of women included in the study was 24.6 years. About 33% of women knew about emergency contraception. They mainly belonged to educated category, working class and with income group more than ₹ 5000 per month. There are about 5% of women who know about emergency contraception and have used it in the past.

**Conclusion:** There is a need to popularize emergency contraception in India for its better usages among women to avoid unwanted pregnancies and abortions.

**Keywords:** Contraception, Emergency contraception, Knowledge, Abortion, Unwanted.

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## INTRODUCTION

Unprotected sexual intercourse and contraceptive method failure lead to unintended pregnancies.

Unsafe abortion is a major public health problem in developing countries where women make several attempts to terminate unintended pregnancy before turning to health services and constitute important cause of maternal mortality and morbidity.<sup>1</sup>

Because of the alarming population explosion, effective fertility control drugs are the needs of the hour. Request of emergency contraception (EC) comes from two main groups. The first group is already using contraception but has a problem, such as condom failure or missed contraceptive pills. The second group does not use contraception because they are not expecting to have sex. It is, therefore, evident that there must be a system in place to provide a comprehensive and effective postcoital contraception service for all of those women who require it. Emergency contraception has the potential to significantly reduce the incidence of unwanted pregnancies and

consequent need for abortion.<sup>2</sup> EC is relatively safe with no contraindication except pregnancy. It is ineffective if a woman is pregnant. There is no need for a medical history or a physical examination before providing emergency contraceptive pills. They are taken long before organogenesis starts, so they should not have teratogenic effect.<sup>3</sup>

Different methods of EC are available including the use of combination of estrogen and progestin, progestin alone and postcoital insertion of an intrauterine device. Popular methods of EC include the administration of two doses of a combination of estrogen and progestin pill (Yuzpe method) or two doses of progestin alone taken 12 hours apart of unprotected intercourse, with estimated efficacies of 75 and 85%, respectively. The Yuzpe regimen as a first line method is not recommended now. Here the failure rate is higher, nausea and other side effects are marked, and if pregnancy occurs the offspring bears a high risk.<sup>2</sup>

Currently, two 0.75 mg doses of levonorgestrel are licensed for use within 72 hours of unprotected sex. Recent results from a multicenter WHO trial also found good efficacy with a single dose of 1.5 mg levonorgestrel or a single dose of 10 mg mifepristone at the time of presentation ingested up to 120 hours after intercourse.

An intrauterine contraceptive device can be inserted up to 5 days after the first act of unprotected sex. Progestin pills reduces the chance of pregnancy by 85%, while combined hormone EC pills reduces by 57%, when taken within 72 hours of unprotected sex. Insertion of Copper T IUD reduces the chance of pregnancy by 99%.

WHO considers EC as a safe, convenient and effective method of modern contraception. Despite being an effective and safe method EC is still not widely used. Unfortunately these available methods are poorly utilized due to several factors that include poor knowledge of each method and its effectiveness.<sup>4</sup>

## METHODS

A prospective cross-sectional study was conducted in the Department of Obstetrics and Gynecology, NKP Salve Institute of Medical Sciences and Lata Mangeshkar Hospital Hingna Road Nagpur, Maharashtra, India from April 2011 to November 2011. The study was approved by the institutional research and ethics committee.

A prestructured questionnaire was employed after obtaining a written and informed consent from the women who fulfilled inclusion/exclusion criteria. The questionnaire included information about age, education, occupation,

income, obstetric profile, knowledge and use of emergency contraception.

Five hundred married women within reproductive age group who had not undergone permanent method of contraception or whose husbands had not undergone vasectomy were questioned. Unmarried women, girls below 18 years of age and postmenopausal women and widows were excluded from the study. Women who had the knowledge regarding emergency contraception were further questioned about source of knowledge, about various methods, time of use, if emergency contraception was practiced or not in the past and if it was successful. Chi-square test was mainly used for studying the statistical significance of association between different attributes with 5% significance level.

## RESULTS

The age of women involved in the study ranged between 20 and 40 years with a mean of  $24.6 \pm 3.73$  years. The distribution of age is shown in Table 1. It is evident that about 83% of women were in the age range of 20 to 30 years. The table also shows the educational level of women. Nearly 91% of women were literate with education level of primary and above. The relationship between age of women and knowledge of EC was explored using Chi-square test. The test resulted into a p-value of 0.3504 ( $p > 0.05$ ) indicating that age of women and knowledge of EC are statistically dissociated. As regards significance of association between education of women and knowledge of EC, Chi-square test resulted into a p-value of 0.000006 ( $p < 0.05$ ) indicating statistically significant association between two attributes. It is evident that as the education level increases, the proportion of women having knowledge of emergency contraception also increases, with the highest proportion observed in 'Graduate' women (52%). The proportion of women having knowledge about EC is least in 'Uneducated' category (22%).

As regards significance of association between occupation of women and knowledge of EC (Table 2), Chi-square test for the above data indicated significant association between the two attributes with p-value of 0.039 ( $p < 0.05$ ). In other words, the proportion of working women (54%) having knowledge

**Table 2:** Distribution of women according to occupation and knowledge of EC

Knowledge of emergency contraception			
Occupation	Yes	No	Total
Working	13 (54%)	11	24
Housewife	151 (31%)	325	476
Total	164 (33%)	336	500

**Table 3:** Distribution of women according to income level and knowledge of EC

Knowledge of emergency contraception			
Income level (₹)	Yes	No	Total
Less than 5000	88 (28%)	221	309
5000-10000	59 (39%)	92	151
More than 10000	17 (42%)	23	40
Total	164 (33%)	336	500

about EC is significantly higher than that of housewives (31%) living in the rural setup.

The analysis was also performed considering the income levels of women. The grouping of women based on income levels and knowledge of EC is shown in Table 3. Application of Chi-square test to data resulted into a p-value of 0.029 ( $p < 0.05$ ) indicating that income levels have statistically significant relationship with the knowledge of EC. The proportion of women in lower income group (less than ₹ 5000) and having knowledge about EC was 28%, which was significantly smaller than women in higher income group (greater than ₹ 5000) which is 39 to 42%.

In order to determine if gravidity and knowledge of EC shown statistically significant relation, Chi-square test was applied, which resulted into a p-value of 0.386 ( $p > 0.05$ ) indicating insignificant relationship between the two attributes. In other words, the number of pregnancies for a woman does not necessarily indicate that she has knowledge of EC.

The association of parity and knowledge of EC was studied for statistical significance using Chi-square test. The test resulted into a p-value of 0.1569 ( $p > 0.05$ ), indicating insignificant relation between the two attributes. In other words,

**Table 1:** Distribution of women according to age and education level and having knowledge of EC

Variables	Category	Frequency	Knowledge of EC
Age (years)	Less than 20	63 (13%)	16 (25%)
	20-25	273 (55%)	81 (30%)
	25-30	138 (28%)	59 (43%)
	30-35	17 (3%)	5 (29%)
	35-40	9 (2%)	3 (3%)
	40-menopause	0 (0%)	0
Education level—wife	Uneducated	9 (2%)	2 (22%)
	Primary education	61 (12%)	24 (39%)
	Middle school	76 (15%)	24 (31%)
	High school	249 (50%)	59 (24%)
	Graduate	105 (21%)	55 (52%)

**Table 4:** Distribution of women according to knowledge of EC and its use in the past

Knowledge of emergency contraception			
Use of EC in past	Yes	No	Total
Yes	8	0	8
No	156	336	492
Total	164 (33%)	336	500

higher parity does not necessarily indicate that women have knowledge of emergency contraception.

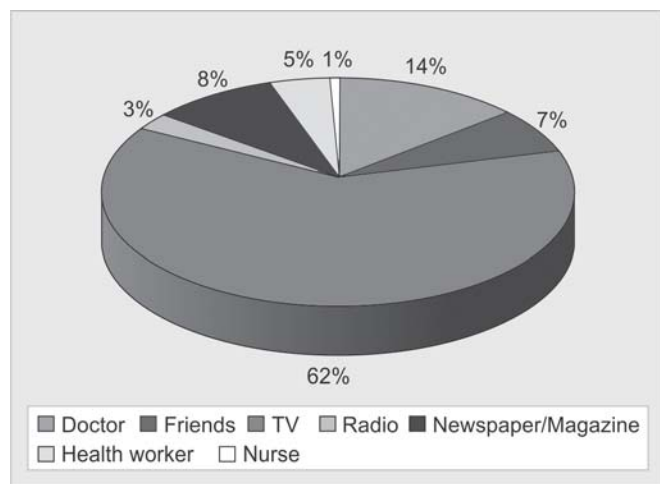
To test whether having knowledge about emergency contraception and using it are statistically related with each other, Chi-square test resulted into p-value of 0.00021 ( $p < 0.05$ ) indicating significant association between the two factors. Out of total 500 women only 164 (33%) women have the knowledge of EC, out of which only 8 (5%) women used it in the past with full satisfaction, whereas 336 (67%) women have no knowledge of EC and never used it in the past (Table 4).

The main source of information about the emergency contraception was television (62%). Other sources were doctor (14%), newspaper/magazine (8%), health workers (5%), radio (3%) and nurse (1%). This has been depicted through pie-chart in Figure 1.

## DISCUSSION

It is a fact that women experience a high level of anxiety and fear of unwanted pregnancy in the immediate period after unprotected sex and they practice different methods to avoid pregnancy.<sup>4</sup> Our study reveals that correct knowledge of emergency contraception is lacking among women. Many women did not know that emergency contraception can be used as a backup when the other methods are known to have failed or after unprotected intercourse.

It was hoped that women using pills or barrier methods of contraception would be better informed than those using other methods, but it was not so. This suggests that health professionals are not telling women about the use of emergency contraception. Same was found in another study from England. Emergency contraception remains an important



**Fig. 1:** The distribution of sources of information of EC

backup contraceptive and should continue to be widely available.<sup>5</sup>

In our study only 33% women knew about EC. Out of which only 5% women used it in the past. Both groups know only pills as an emergency contraception. All of them have no knowledge about various methods of EC and its appropriate timings of use. No women were knowing about CuT as emergency contraception. This differed from study conducted in London East family health services authority area where the knowledge of emergency contraception rate was 53%.<sup>5</sup>

Our study revealed that main source of knowledge of EC is television (62%). The contribution by health professionals is comparatively less. This may be due to the lack of knowledge and awareness among the general practitioners, as found in one study from Lahore, Pakistan. This influences the likelihood of women being made aware of or being given emergency contraception.<sup>6</sup> The community health workers can play an important role by percolating the knowledge of emergency contraception deep down in the community. Workers can act as a depot holder for emergency contraception as they do for oral contraceptives and condoms.<sup>7,8</sup>

There is enormous potential for emergency contraception in reproductive health of the country. Emergency contraception gives a woman the last opportunity to protect herself from an otherwise unprotected intercourse. It has the potential to achieve the goal of 'all pregnancies should be wanted' and can be a handy tool to achieve the objectives of national population policy.<sup>7</sup>

## CONCLUSION

There is a need to popularize emergency contraception in India for its better usage among women to avoid unwanted pregnancies and abortions, with the help of media, government health agencies and health care providers. There is an urgent need to educate the women about emergency contraception with emphasis on available methods and correct timing of use. Advanced provision and promotion of emergency contraceptives would very likely enhance its use as in developed countries. It is important to counsel women regarding the use of various methods of regular contraception and keep emergency contraception in reserve for emergency purpose only.

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