Original Research Article

Knowledge, attitude and practices regarding emergency contraception among married women in Ludhiana, Punjab, India

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ABSTRACT

Background: An unwanted and unintended pregnancy is a major concern in a women’s life as it has its adverse social and health outcomes. Emergency contraception (EC) is safe and effective method that gives women a second chance to prevent unwanted pregnancy after unprotected intercourse.

Methods: This is a community based cross sectional study done in field practice area under the department of Community Medicine, Christian Medical College, Ludhiana, Punjab. A total of 400 respondents were selected by stratified random sampling from the list of eligible couples residing in the area. The interview was conducted using semi structured questionnaire, after obtaining their informed consent.

Results: The mean age of respondents was 31.44±5.67 years. 68.7% of respondents were using some kind of contraception. Majority (68%) of respondents had heard of emergency contraception and for majority (81.3%) source of information about EC was Media (TV). Out of 272 respondents who had heard of emergency contraception 146 (54.1%) had negative attitude towards emergency contraception and only 30 (8%) had used ECP. Practice of ECP was found to have statistically significant association with employment and history of unwanted pregnancy.

Conclusions: EC has a potential to curb the menace of unintended pregnancy thereby decreasing unsafe abortion and maternal mortality. In spite of reasonable awareness of emergency contraception, as found in present study there is wide gap for its usage. Hence behavioural change strategies should be considered to bring attitudinal change on use of emergency contraception.

Keywords: Emergency contraceptive pills, Knowledge, Attitude

INTRODUCTION

Emergency contraception is defined as the use of drugs or devices to prevent pregnancy within a few days of unprotected coitus. It is sometimes referred to as ‘morning after’ or post coital contraception. It can be used in situations when no contraceptive has been used, when there is a contraceptive failure or it is incorrectly used and in cases of sexual assault when the woman was not protected by an effective contraceptive method. Emergency contraception Pill is one of the 13 essential commodities that are addressed by the UN Commission on Life-Saving Commodities for Women and Children (UNCoLSC). Emergency contraception is essentially female driven, so its use and success rests mainly on how women perceive and practice it. It offers women a last chance to prevent pregnancy after unprotected intercourse. Women deserve that last chance and barriers to the availability of emergency contraception should be eliminated. The ability of women to control their own fertility is absolutely fundamental to women’s empowerment and equality. Emergency contraception is financially, psychologically and physically less burden-
somewhat than abortion. Since the introduction of emergency contraception, the contribution of unsafe abortion towards maternal mortality has declined from 13 to 8 per cent. In India, knowledge about various temporary and permanent methods among men and women ranges between 45-97 per cent, knowledge about EC is only 20 per cent in men and 11 per cent in women. The department of Ministry of Health and Family Welfare has introduced emergency contraceptive pills in 2002, despite its potential, use of EC is low in India. Emergency contraception is largely underutilized worldwide and has been referred to as one of the best kept secrets in Reproductive Health because, despite its unique potential for helping women prevent pregnancies and fulfill their reproductive intentions, rates of use and of counselling about the method are quite low. The potential of emergency contraception can be better utilized only when women are made aware of the method’s existence and its use within the short time frame of its efficacy. Such awareness is practically nonexistent in India at present. Hence a study was designed to evaluate the knowledge, attitude and practices regarding emergency oral contraception among married women of urban area of Ludhiana.

Aims and objectives

- To assess the knowledge, attitudes and practices regarding emergency contraceptive in urban married women.

METHODS

This is a community based cross-sectional study conducted among women of reproductive age group (18-45 years), residing in field practice area of urban health centre located in Field Ganj, Ludhiana, Punjab. The data was collected from 1st March 2016 to 29th February 2017. The total number married women in reproductive age: in the field practice area are 4157. The sample size was calculated as 371 taking prevalence of awareness of emergency contraception among women in urban areas as 18.8% (NFHS 3), taking an absolute precision of 3.8%. For an expected non response rate of 10% sample size was rounded off to 400. This was calculated using Openepi software. A list of 400 women was extracted from the departmental data base of married women in the reproductive age group residing in the field practice area, using systematic random sampling.

The women who were divorced, widowed, post-menopausal and with permanent sterilization were excluded. Ethical clearance was obtained from Ethical committee of Christian Medical College Ludhiana.

Study tool and data collection

The information was collected on a pre-tested semi-structured questionnaire [Annexure 1] through personal interviews by house to house visits, from 400 married women in the reproductive age group. All the study participants were informed about the purpose of the study, and their written and informed consent was obtained. The questionnaire includes variables on demographic profile, knowledge, attitude and practice of emergency contraceptives. Questions of Attitude and Practice of emergency contraceptive pills were asked only from those respondents who knew about emergency contraception. Interviews were conducted in privacy, and confidentiality of the participants was assured. For Measurement of Attitude a performa adopted from Tilahun et al that was modified to measure the respondent’s attitude was used. The variables were measured with five point likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Mean scores for each construct was computed and dichotomized into positive and negative. Respondents who scored above the mean were labelled as having positive attitude and those who scored below the mean were labelled as having negative attitude. This scoring was subsequently reversed for negatively stated statement, so that the higher the score, the stronger the positive construct.

Data was entered using classical EpiData entry software. Data analysis was performed using Epidata Analysis Version 2.2.2 and EpiInfo 3.5.4 software.

RESULTS

Majority of respondents were in the age group of 26-35 years. The mean age of respondents was 31.44±5.67 years. Majority of respondents belonged to Hindu religion and 15.5% belonged to Sikh community. Majority (95.25%) of respondents were literate with only 4.75% as illiterate. Majority of respondents were housewives and only 3.8% of respondents were employed. The majority of respondents belonged to lower
upper class followed by lower middle and upper middle (Table 1).

### Table 1: Socio-demographic characteristics of respondents.

| Age group (years)       | Number | Percentage (%) |
|-------------------------|--------|----------------|
| 18-25                   | 79     | 19.8           |
| 26-35                   | 229    | 57.3           |
| 36-45                   | 92     | 23.0           |

| Religion                |        |                |
|-------------------------|--------|----------------|
| Hindu                   | 338    | 84.5           |
| Sikh                    | 62     | 15.5           |

| Education status        |        |                |
|-------------------------|--------|----------------|
| Illiterate              | 19     | 4.75           |
| Primary                 | 98     | 24.50          |
| Middle                  | 99     | 24.75          |
| High School             | 77     | 19.25          |
| Intermediate            | 42     | 10.50          |
| Graduate                | 57     | 14.25          |
| Postgraduate            | 08     | 2.00           |

| Employment              |        |                |
|-------------------------|--------|----------------|
| Unemployed              | 385    | 96.3           |
| Employed                | 15     | 3.8            |

| Socioeconomic status    |        |                |
|-------------------------|--------|----------------|
| Upper                   | 09     | 2.25           |
| Upper middle            | 69     | 17.25          |
| Lower middle            | 138    | 34.50          |
| Lower upper             | 164    | 41.00          |
| Lower                   | 20     | 5.00           |
| Total                   | 400    | 100.00         |

*As per Kuppuswamy scale.

Most respondents (27.8%) who were interviewed were married for 6-10 years. 23.8% respondents were married for less than 5 years. Majority (81.5%) of respondents had more than 2 children. About one third (31.3%) of respondents were not using any contraception (Table 2).

### Table 2: Obstetric characteristics of respondents.

| Since marriage (yrs) | Number | Percentage (%) |
|----------------------|--------|----------------|
| ≤5                   | 91     | 22.8           |
| 6-10                 | 111    | 27.8           |
| 11-15                | 80     | 20.0           |
| 16-20                | 71     | 17.8           |
| 21-25                | 28     | 7.0            |
| ≥25                  | 19     | 4.8            |

| Parity                |        |                |
|-----------------------|--------|----------------|
| More than 2 children  | 326    | 81.5           |
| Less than 2 children  | 74     | 18.5           |

| Contraception used    |        |                |
|-----------------------|--------|----------------|
| Nil                   | 125    | 31.3           |
| Barrier method        | 157    | 39.3           |
| IUCD                  | 11     | 2.8            |
| OCP                   | 11     | 2.8            |
| Calendar method       | 12     | 3.0            |
| Coitus interrupts     | 73     | 18.3           |
| Abstinence             | 11     | 2.8            |

| Failure of regular contraceptive |        |                |
|----------------------------------|--------|----------------|
| Yes                              | 50     | 18.2           |
| No                               | 225    | 81.8           |

| Unintended pregnancy            |        |                |
|----------------------------------|--------|----------------|
| Yes                              | 109    | 27.3           |
| No                               | 291    | 72.8           |
| Total                            | 400    | 100.0          |

Out of 275 respondents that were using some kind of contraception, 18.2% had experienced failure of their regular contraception. When asked the respondents...
whether they ever experienced unwanted or unintended pregnancy, 109 (27.3%) respondents agreed they had experienced unwanted pregnancy. The study shows that majority (68%) of respondents had heard of emergency contraception. For majority (81.3%) of respondents source of information about EC was Media (TV), while only 9 (3.3%) got information from doctors (Figure 3).

Majority respondents agreed that ECP does not cause infertility, most respondents agreed that it is easily available in their nearby area but majority of respondents disagreed that if need arise they will take ECP. Out of 272 respondents who had heard of emergency contraception 146 (54.1%) had negative attitude towards emergency contraception. Out of 272 respondents who had heard of Emergency contraception, only 30 (8%) had used ECP (Figure 4).

Table 3: Practice of ECP according to socio-demographic profile and obstetrics characteristics.

| Characteristic          | Used ECP (%) | Not Used ECP (%) | Chi square test |
|-------------------------|--------------|------------------|-----------------|
| **Age**                 |              |                  |                 |
| 18-25                   | 04 (8.5)     | 43 (91.5)        | \(\chi^2=1.025\) df(2); p=0.5991 |
| 26-35                   | 20 (12.7)    | 138 (87.3)       |                 |
| 36-45                   | 06 (9.0)     | 61 (91.0)        |                 |
| **Education**           |              |                  |                 |
| Illiterate              | 01 (11.1)    | 08 (88.9)        | \(\chi^2=0.000\) df(1); p=0.9937 |
| Literate                | 29 (11.0)    | 234 (89.0)       |                 |
| **Occupation**          |              |                  |                 |
| Unemployed              | 25 (9.7)     | 233 (90.3)       | \(\chi^2=9.165\) df(1); p=0.0025 |
| Employed                | 05 (35.7)    | 09 (64.3)        |                 |
| **Religion**            |              |                  |                 |
| Hindu                   | 26 (11.5)    | 201 (88.5)       | \(\chi^2=0.252\) df(1); p=0.6158 |
| Sikh                    | 04 (8.9)     | 41 (91.1)        |                 |
| **Socioeconomic status**|              |                  |                 |
| Upper                   | 02 (22.2)    | 07 (77.8)        | \(\chi^2=3.942\) df(4); p=0.4140 |
| Upper middle            | 08 (16.0)    | 42 (84.0)        |                 |
| Lower middle            | 09 (8.9)     | 92 (91.1)        |                 |
| Lower upper             | 11 (10.8)    | 91 (89.2)        |                 |
| Lower                   | 0            | 10 (100.0)       |                 |
| **Years of marriage**   |              |                  | \(\chi^2=5.536\) df(5); p=0.3541 |
| 0-5                     | 02 (3.8)     | 50 (96.2)        |                 |
| 6-10                    | 10 (13.0)    | 67 (87.0)        |                 |
| 11-15                   | 09 (14.1)    | 55 (85.9)        |                 |
| 16-20                   | 07 (13.7)    | 44 (86.3)        |                 |
| 21-25                   | 02 (12.5)    | 14 (87.5)        |                 |
| 26-30                   | 0            | 12 (100.0)       |                 |
| **Contraceptive usage** |              |                  | \(\chi^2=2.129\) df(1); p=0.1446 |
| Yes                     | 25 (12.8)    | 172 (87.2)       |                 |
| No                      | 5 (6.6)      | 71 (93.4)        |                 |
| **Parity**              |              |                  | \(\chi^2=0.009\) df(1); p=0.9250 |
| More than 2             | 25 (11.1)    | 200 (88.9)       |                 |
| Upto 2                  | 05 (10.6)    | 42 (89.4)        |                 |
| **Unwanted pregnancy**  |              |                  | \(\chi^2=21.575\) df(2); p=0.0000 |
| Yes                     | 19 (23.8)    | 61 (76.3)        |                 |
| No                      | 11 (5.7)     | 181 (94.3)       |                 |
On bivariate analysis association of knowledge of ECP with education, occupation, socio-economic status, years since marriage and contraceptive use was found to be statistically significant. On multivariate logistic regression analysis statistically significant association was found between knowledge of ECP and socioeconomic status. There was no statistically significant association of attitude with any socio-demographic or obstetric factor. On Multivariate analysis statistically significant association of attitude was found with socioeconomic status and practice of ECP. There was statistically significant association of Practice of ECP with occupation and history of unwanted pregnancy (Table 3).

The Table 4 shows, Multivariate analysis of practice of ECP with different variables, of these statistically significant association was found with Employment and history of unwanted pregnancy.

### DISCUSSION

In the present study majority of respondents were housewives by occupation (96.3%), only 15 women were employed. This finding was found similar with study done by Kose et al where 95.2% of study subjects were housewives.12

#### Regular contraceptive usage

Out of total, 272 (69.75%) of subjects were using some kind of contraception, while a study from Delhi reported an contraceptive acceptance of 76.8%.13 NFHS 3 and Shendge et al from Cuttack reported contraceptive prevalence rate of 56 percent and 62.4% respectively.14,15 Out of total 400 respondents that were interviewed 50 (18.2%) subjects had experienced failure of their regular contraception. This high failure rate can be attributed to the usage of traditional method of contraception (23.8%).

#### Emergency contraceptive usage

In this study 272 (68%) respondents have heard about EC, which was found much higher than NFHS-III (18.8%).14 The prevalence of awareness of emergency contraception varies from 2% in rural Uttar Pradesh to 12% in Karnataka, 12.2% in Rohtak, 14.3% in central India 33% in Nagpur and 40.6% in Sikkim respectively.4,6,12,16,17 This vast difference in prevalence of awareness of emergency contraception could be related to methodological difference and time gap of the studies. Such differences in the awareness can also be due to cultural differences or government policies. In present study most common source of information was mass media (81%). Most of the studies reported Television and mass media as the major source of information for emergency contraception.18,19,17 The contribution by health professionals is comparatively less in imparting knowledge to recipient population. This can be due to negative attitude among health professionals towards EC as cited by study done in Egypt.19 The reason for the lack of detailed knowledge on this subject may be linked to the sources of information, as majority of the women got to know about emergency contraception from media which do not give adequate information. Information gap regarding correct usage exist in study population. Most respondents 193 (71%) know that ECP can be obtained from chemist. However, study done in Delhi by Verma et al reports that majority of respondents know that ECP is available through Govt Hospital.13 In this study knowledge of EC was found significantly associated with education. This finding is comparable with other studies where awareness of EC was significantly more among females who were better educated than others.12,20,21 In the present study employed respondents were found to have knowledge about EC more than unemployed respondents. This finding is in accordance with study done on by Kose et al that reports the proportion of working women (54%) having knowledge about EC is significantly higher than that of housewives (31%).12 In our study the prevalence of knowledge was found higher among the respondents belonging to upper middle or above socio economic group. Similar finding were reported by Verma et al and Kose et al.13,12 Present study shows that respondents who are using some kind of contraception are more aware of ECP as compared to respondents who don’t use any contraception. This finding is comparable with Verma et al that reports study subjects who were using some method of contraception

**Table 4: Multivariate logistic regression analysis showing factors associated with practice of ECP.**

| Variables               | β Coefficient | Odds Ratio | 95% C.I.          | P value |
|-------------------------|---------------|------------|--------------------|---------|
|                         |               |            | Lower limit        | Upper limit |         |
| Age group               | -0.6243       | 0.5356     | 0.2195            | 1.3068   | 0.1701  |
| Attitude                | -0.8743       | 0.4172     | 0.1737            | 1.0019   | 0.0505  |
| Education               | 0.3848        | 1.4693     | 0.1465            | 14.7321  | 0.7435  |
| Parity                  | 0.7727        | 2.1656     | 0.6181            | 7.5877   | 0.2271  |
| Religion                | -0.4142       | 0.6609     | 0.1878            | 2.3259   | 0.5188  |
| Employment              | -1.5647       | 0.2091     | 0.0521            | 0.8404   | 0.0274  |
| Years of marriage       | 0.3072        | 1.3596     | 0.3679            | 5.0241   | 0.6450  |
| Socioeconomic status    | -0.2700       | 0.7634     | 0.4717            | 1.2354   | 0.2716  |
| Contraceptive users     | -0.5079       | 0.6017     | 0.2065            | 1.7536   | 0.3520  |
| Unwanted pregnancy      | -1.9026       | 0.1492     | 0.0599            | 0.3716   | 0.0000  |

**Variables**

- Age group
- Attitude
- Education
- Parity
- Religion
- Employment
- Years of marriage
- Socioeconomic status
- Contraceptive users
- Unwanted pregnancy

**β Coefficient**

- A measure of the strength of the relationship between the predictor and the outcome variable.

**Odds Ratio**

- A measure of how much the odds of the outcome variable increase or decrease with a one-unit increase in the predictor variable.

**95% C.I.**

- The confidence interval for the odds ratio, indicating the range within which the true value is likely to fall with 95% confidence.

**P value**

- The probability of observing the data, or data more extreme, if the null hypothesis is true.
were four times more likely to have used EC as compared to the study subjects who were not using any contraceptive method. In the present study out of 272 respondents who had heard of emergency contraception 146 (54.1%) had negative attitude towards emergency contraception. Majority of respondents 114 (41.9%) disagreed to the statement that if need arise they will take ECP. Most of the respondents 138 (50.7%) agreed to the statement that emergency contraception does not cause infertility in women. Majority of respondents 140 (51.4%) agreed to the statement that EC is easily available in their nearby area. 231 (84.9%) answered that it is not right to take emergency contraception and only 41 (15.1%) think it is right to take EC. Studies done in various parts of the country shows a positive attitude towards emergency contraception among women. Differences in methodology and beliefs of the community are the possible reasons for this variation.

Factor found to be associated with the positive attitude towards EC among the study subjects from multivariate logistic regression model was socio economic status. This finding was found similar to the study done by Verma et al. In the present study out of 272 respondents who knew about emergency contraception, 8% had ever used. Study done by Kose et al in rural Nagpur reports 5% women used it in the past. According to DLHS 4 ever use of Emergency Contraceptive Pills (ECP) in urban areas of Punjab is 1.3. As regards Practice of ECP, present study reveals that employed respondents and respondents with history of unwanted pregnancy had higher probability of using ECP as compared to unemployed respondents and respondents who never had unwanted pregnancy. Many studies show that knowledge regarding ECP was significantly associated with practice of ECP. However in the present study we could not prove it as we asked questions of practice of ECP to only those respondents who were aware of emergency contraception. There is need to educate women about the available methods of emergency contraception and correct timing of it use. Fear of side effects, myths and mis-understandings among the beneficiaries must be removed by proper counselling and awareness. For emergency contraception to become a true choice, women must have positive attitude towards ECP and access to the available option within the short timeframe permitted by the method. Reducing unintended pregnancies would improve educational and employment opportunities for young women, and, in turn, contribute to improvements in the status of women overall, greater family savings, reductions in poverty and increases in economic growth.

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