Research Article

Knowledge of emergency contraception among women seeking abortion services at tertiary care hospital in Western Maharashtra

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ABSTRACT

Background: A safe, effective, and handy method to prevent unplanned pregnancy is available in the form of emergency contraception (EC). By timely and judicious use of EC, 75–85% of the unplanned pregnancies and thereby unsafe abortions can be prevented. It can also play a very important role in reducing maternal and perinatal mortality and morbidity. Knowledge about EC is usually very limited and that too, misleading. **Objective:** The objective of this study is to assess the knowledge and factors affecting the knowledge of EC among the abortion seekers. **Material and Methods:** This was a cross-sectional, hospital-based study conducted among the women requesting an induced abortion at medical termination of pregnancy center in a tertiary care hospital over 2 months (May–June, 2016). Data were collected with the help of a preformed and pre-structured questionnaire which a total of 104 cases were enrolled in the study. The data were tabulated and analyzed using Epi Info and MS Excel. **Results:** Majority of the subjects 66.3% had knowledge of contraception, while 39.4% ever used one or the other method of contraception, most commonly used method was condom; 34 (32.7%) had knowledge of EC, of which 6 (5.8%) had good knowledge. Factors such as women belonging to urban area, education, socioeconomic status, and knowledge of contraception and ever used contraceptive were highly significantly associated with knowledge. **Conclusions:** This study showed that overall knowledge of EC was poor and that media or the health-care professionals are not providing adequate knowledge of this method. Thus, it is important to improve the knowledge of EC with the help of media, medical or paramedical workers, and NGOs working in the field of health.

KEY WORDS: Knowledge; Emergency Contraception; Abortion Seekers

INTRODUCTION

The single highest threat to India's health, political, economic, and social development is the rampant population growth.[1] Pregnancy is an important event in the life of a woman. Unfortunately, all pregnancies are not welcomed. Each year worldwide, 85 million of 208 million pregnancies (41%) are unintended.[2] Reasons for unplanned pregnancies are either woman's failure to use a contraceptive method or failure to use a method correctly.[3] Today, about 53.4% of eligible couples are still unprotected against conception.[4] Ideally, a child should be born because it is wanted not because it cannot be prevented and this can be made possible by the constructive use of contraceptive methods.[5] According to the World Health Organization, it has been estimated that 210 million women get pregnant every year, and only, two-third of them deliver live infants. The rest one-third ends in stillbirth, miscarriage, and abortion.[6] The old idea of prevention of conception is replaced by control of conception. Unintended pregnancy poses a major challenge to mental, social, and reproductive health of young

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adults in developing countries. Relationships between fracture, educational, and career aspirations are put on hold or abandoned altogether, and the financial responsibilities associated with prenatal care and raising a child can be financially devastating to those who had not planned for the pregnancy. Futhermore, population blast (due to the large number of unwanted births) is particularly detrimental to the economy and infrastructure of developing countries like India.[7] Some young women who had unintended pregnancies obtain abortion, and many of which are performed in unsafe conditions.[8] According to the consortium on national consensus for medical abortion in India (2008), around 20,000 women die every year due to abortion-related complications. Most abortion-related maternal deaths are attributable to illegal abortions hence contributing 8% to the cause of maternal mortality ratio in India.[9] The present youngsters enjoy more freedom of movement than it was a decade ago.[10] Given increasing adolescent sexual activity and decreasing age of first sex in developing countries, the use of contraceptives to prevent unwanted pregnancies and unsafe abortion is especially important. Unwanted pregnancy is a social as well as economic burden for the society with a high complication rate.

A safe, effective, and handy method to prevent unplanned pregnancy is available in the form of emergency contraception (EC). EC, otherwise known as postcoital contraception, refers to a group of birth control modalities that, when used after unprotected intercourse within defined time constraints (within 72 h), can markedly reduce the risk of a resultant unintended pregnancy.[11] By timely and judicious use of EC, 75–85% of the unplanned pregnancies and thereby unsafe abortions, can be prevented.[12] It can also play a very important role in reducing maternal and perinatal mortality and morbidity.[3]

In India, it has been computed that about 6 million abortions take place every year, of which 4 million are induced.[13] High rates of induced abortions reflect the low prevalence of contraceptive use and its effectiveness. In India, knowledge about various temporary and permanent methods among men and women ranges between 45 and 97%, and knowledge about EC is only 20% in men and 11% in women.[14] Many young couples confuse EC pills with oral contraceptive or birth control pills. EC is much underpublicized and underused.[15] Knowledge about EC is restricted and that too, misleading. Therefore, prior awareness and knowledge of the correct usage need to be imparted to both the providers and the users.[16] Hence, educating and encouraging couples to use effective contraceptive methods are a way to reduce voluntarily induced abortions. Thus, this study aims at compiling the knowledge about ECs among abortion seekers at a tertiary care hospital.

Objectives

The objectives of this study are as follows:

1. To study the sociodemographic profile of the abortion seekers.
2. To assess the knowledge of EC among the abortion seekers and factors affecting
3. To find the factors affecting the knowledge of EC

MATERIALS AND METHODS

This was a observational, Cross-sectional, hospital based study, conducted among the women of reproductive age group requesting an induced abortion at Medical termination of pregnancy centre in a tertiary care hospital in Western Maharashtra, over a period of two months from May to June of 2016. Sample size was calculated by taking proportion of EC knowledge as 10.64[15] with 6% margin of error and 95% confidence level and design effect 1. Sample size came to be 102.

Inclusion Criteria

All women who were requesting induced abortion and consented to be interviewed during the above-mentioned 2 month's period were included in the study.

Exclusion Criteria

Women who were requesting MTP in cases of fetal abnormality or who were severely ill and not willing to participate were excluded from the study.

Data were collected with the help of a preformed and pre-structured questionnaire which included age, religion, income, marital status, parity, h/o previous MTPs, indications for MTP, and knowledge of EC. Face-to-face interview was taken by the principal investigator explaining the pro forma in the local language. The investigator filled the questionnaire during the interview to ensure a high completion rate. A total of 104 cases were enrolled in the study. Permission of the Institute Ethical Committee was taken. A written informed consent was obtained from all participants. Study participants, whose age was <18 years, assent was taken from the study participants. For this study group, as the issue is very sensitive, consent was not obtained from the caretaker/guardian.

The data were tabulated and analyzed using Epi Info and MS Excel. Descriptive statistics (percentages, mean, anf standard deviation), odd's ratio, and Chi-square tests were done, and the significance of tests was decided at $P = 0.05$. Tables and Graphs have been used to depict results.

Operational Definitions[15]

Knowledge

Awareness about the types, time limit to be taken after unprotected sex, effectiveness after a menstrual delay, and content of emergency contraceptives were taken.

Assessment of knowledge score

Four knowledge-based questions were taken into consideration. A score of 1 was assigned for right answer and 0 for wrong answer.

Interpretation of total score: 3–4 = Good knowledge.

1–2 = Fair knowledge.

0 = No knowledge.

RESULTS

Total subjects enrolled in this study were 104. The sociodemographic profile of study subjects is presented in Table 1. The age range of study subjects was from 16 to 42 years' old, making mean and standard deviation of 26.2 years and 5.4 years, respectively. Majority 58 (55.8%) were between in 21 and 30 years of age group while 16 (15.4%) are below 20 years. Majority of the subjects 69 (66.3%) were from urban area. More than four-fifth 89 (85.6%) of the subjects were Hindus. Most of the study subjects 91 (87.5%) were married. Of all the study subjects, 20 (19.2%) were illiterate and only 16 (15.4%) were educated up to graduation and above. Majority 80 (76.9%) were unemployed while 14 (13.5%) and 10 (9.6%) were engaged in unskilled and semi-professional and professional work, respectively. It was found that 33 (31.8%) were from upper and middle socioeconomic status while 71 (68.3%) were from lower socioeconomic status. Most of the subjects 56 (53.8%) were from nuclear family.

In this study [Table 2], 31 (29.8%) study subjects were married before the legal age of marriage, i.e., <18 years. Of the total subjects coming for abortion, majority 70 (67.3%) had 1–2 children while 18 (17.3%) had no child. Most of the subjects 82 (78.8%) had not undergone any MTP previously, while 6 (5.8%) had undergone MTP for more than 2 times. Of the 22 (21.2%) respondents who had a history of previous MTP, 20 (90.9%) had failure of family planning as a reason for undergoing MTP.

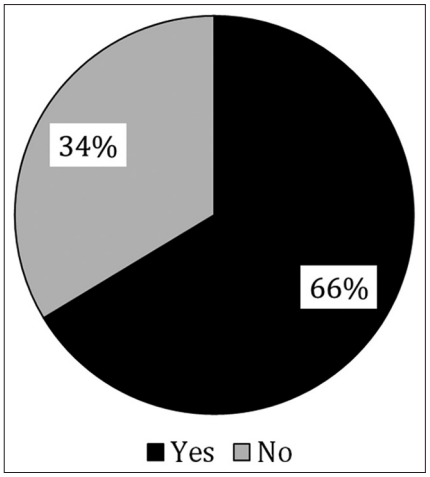

Figure 1: Knowledge of contraception

Table 1: Sociodemographic profile of study subjects

Characteristics	Frequency *n*=104 (%)
Age group (in years)	
<20	16 (15.4)
21–30	58 (55.8)
≥31	30 (28.8)
Address	
Urban	69 (66.3)
Rural	35 (33.7)
Religion	
Hindu	89 (85.6)
Muslim and others	15 (14.4)
Marital status	
Married	91 (87.5)
Single (unmarried, widow, divorcee, and separated)	13 (12.5)
Education	
Illiterate	20 (19.2)
Literate (*n*=84)	
Primary	20 (19.2)
Secondary (middle)	38 (36.5)
Higher secondary and diploma	10 (9.6)
Graduate and postgraduate	16 (15.4)
Occupation	
Unemployed	80 (76.9)
Employed (*n*=24)	
Unskilled	14 (13.5)
Semi-professional and professional	10 (9.6)
Socioeconomic status	
High socioeconomic status (*n*=33)	
Upper	1 (1.0)
Upper middle	14 (13.5)
Middle	18 (17.3)
Low socioeconomic status (*n*=71)	
Lower middle	68 (65.4)
Lower	3 (2.9)
Type of family	
Nuclear	56 (53.8)
Joint/extended	48 (46.2)

Figure 1 shows the distribution of subjects according to the knowledge of contraception, and majority of the subjects 69(66.3%) had knowledge of contraception.

Table 3 shows the knowledge of study subjects, 34 (32.7) had heard of EC, majority 23 (67.7%) were not remembering the time when they heard of this method of contraception. The common source of information was media 17 (50.0%) followed by friends and/or relatives 13 (38.2%). Of 34 subjects who had knowledge of EC, only 9 (26.4%) were informed in detail about this method. Majority of the study subjects 26 (76.5%) mentioned that emergency contraceptives were

Table 2: Reproductive characterstics of study group

Reproductive characteristics	Frequency *n*=104 (%)
Age at marriage* (*n*=97)	
<18 years	31 (29.8)
>18 years	66 (63.5)
Number of living children	
None	18 (17.3)
1–2 children	70 (67.3)
> 2 children	16 (15.4)
H/O previous MTP	
None	82 (78.8)
1 time	16 (15.4)
≥2 times	6 (5.8)
Reasons for previous MTP (*n*=22)	
Failure of family planning	20 (90.9)
Fetal deformity	2 (9.1)

*Age at marriage data was missing for 7 participants.
MTP: Medical termination of pregnancy

available as over the counter drug while 3 (8.8%) were not aware of the place where these contraceptives were available. Overall 34 (32.7%) had knowledge of EC, of which only 6 (5.8%) had good knowledge.

When the factors affecting the knowledge of contraception were studied [Table 4], it was found that subjects from urban area were having 3.3 (1.21–8.82) times more chances of knowledge. Education was also significantly associated with knowledge; literate subjects were 5.53 (1.25–25.4) times more likely to be aware then illiterate. Similarly, subjects from higher socioeconomic status were 4.12 (1.70–9.97) times more likely to have knowledge. In addition, knowledge of contraception 8.72 (2.42–31.14) and ever used contraceptive 7.48 (2.98–18.73) were highly significantly associated with knowledge while other factors were not significant.

DISCUSSION

India was the first country in the world to introduce a National Family Planning program and gave due importance to it by subsequent 5 years' planning (1951–1956) to control population explosion.[17] Yet, the unmet need for family planning among currently married women is still 13% in India. In spite of the availability of safe and effective contraception, the needs for it have not been met mainly due to ignorance among the women. Many women still do not use regular contraception and may need EC for unprotected coitus. In our study, the mean age of study subjects was 26.2 years and 15.4% were below the age of 20 years. Majority of the subjects 69 (66.3%) were from the

Table 3: Knowledge of EC of study group

Knowledge of EC	Frequency *n*=104 (%)	
Ever heard of EC		
Yes	34	32.7
No	70	67.3
Time heard of EC (*n*=34)		
Within 1 year	4	11.8
1–5 years	6	17.6
>5 years	1	2.9
Not remembering	23	67.7
Source of information (*n*=34)*		
Health facilities (public and private)	6	17.6
Friends/relatives	13	38.2
Media (T. V., Newspaper, etc)	17	50.0
Formal education	3	8.8
Place to obtain EC (*n*=34)*		
Hospital/clinic (public or private)	7	20.6
Over the counter drug	26	76.5
Pharmacy with prescription	3	8.8
Don't know	3	8.8
Time interval to use EC (*n*=34)		
Within 3 days (72 h) of unprotected sex	23	67.6
Anytime before first day of next menses	4	11.8
Don't know	7	20.6
Content of emergency contraceptive pills (*n*=34)		
Same as that of oral pills	2	5.9
Different from oral pills	4	11.8
Don't know	28	82.3
Knowledge of EC		
Yes (*n*=34)		
Good	6	5.8
Fair	28	26.9
No	70	67.3

*Multiple responses. EC: Emergency contraception

urban area and 91 (87.5%) were married. Among the married females, 29.8% of study subjects were married before the legal age of marriage, i. e., <18 years. Majority of the subjects 66.3% had knowledge of contraception while 39.4% ever used one or the other method of contraception, most commonly used method was condom. The current study reflects that although 32.7% have heard of EC, detailed and specific knowledge is poor and misleading information is high. Overall 34 (32.7%) had knowledge of EC, of which 6 (5.8%) had good knowledge. The study findings revealed mass media as the most common source of information. Factors such as women belonging to urban area, education, socioeconomic status, and knowledge of contraception and ever used contraceptive were highly significantly associated with knowledge.

While women of all age groups seek abortion care in India, a recent review[10] suggests that majority of those seeking abortion were in 20–29 years of age group and a substantial number were below 20 years. In a study by Reeti *et al*.[18] in Chandigarh, it was found that 70% of respondents were from urban area which was similar to our study findings. Similar sociodemographic distribution was observed by Vinita Singh study.[19] In another study by Tesfaye *et al*.[8] in Ethiopia, 51.7% of women were single while in our study only 13.5% were single. A possible reason for this could be

Table 4: Factors affecting knowledge of EC

Variable	Knowledge		*P* value	OR (95% CI)
	Yes (*n*=34)	No (*n*=70)		
Age (years)				
<20	2 (12.5)	14 (87.5)	0.17	1
21–30	21 (36.2)	37 (63.8)		0.25 (0.05–1.21)
≥31	11 (36.6)	19 (63.4)		0.24 (0.04–1.29)
Address				
Urban	28 (40.6)	41 (59.4)	0.01*	3.3 (1.21–8.82)
Rural	6 (17.1)	29 (82.9)		1
Religion				
Hindu	28 (31.5)	61 (68.5)	0.44	1
Muslim and others	6 (37.5)	9 (62.5)		1.45 (0.47–4.47)
Education				
Illiterate	2 (10.0)	18 (90.0)	0.01*	1
Literate	32 (34.0)	52 (66.0)		5.53 (1.25–25.4)
Occupation				
Unemployed	24 (30.0)	56 (70.0)	0.14	1
Employed	10 (41.7)	14 (58.3)		1.66 (0.64–4.27)
Socioeconomic status				
High socioeconomic status	18 (54.5)	15 (45.5)	<0.0001*	4.12 (1.70–9.97)
Low socioeconomic status	16 (22.5)	55 (77.5)		1
Marital status				
Married	32 (35.2)	59 (64.8)	0.15	2.98 (0.62–14.29)
Single	2 (15.4)	11 (84.6)		1
Type of family				
Nuclear family	20 (35.7)	36 (64.3)	0.47	1.34 (0.58–3.08)
Joint/extended	14 (29.2)	34 (70.8)		1
Age at marriage (years)				
<18	8 (25.8)	23 (74.2)	1.37	0.57 (0.22–1.46)
≥18	25 (37.9)	41 (62.1)		1
Number of living children				
None	6 (33.3)	12 (66.67)	0.36	2.16 (0.44–10.65)
1–2 children	25 (35.72)	45 (64.28)		2.40 (0.62–9.26)
>2 children	3 (18.75)	13 (81.25)		1
H/O previous MTP				
None	23 (28.0)	59 (72.0)	3.79	0.38 (0.07–2.07)
1 time	8 (50.0)	8 (50.0)		0.99 (0.15–6.53)
≥2 times	3 (50.0)	3 (50.0)		1
Knowledge of contraception				
Yes	31 (44.9)	38 (55.1)	<0.0001*	8.72 (2.42–31.14)
No	3 (9.4)	32 (90.6)		1

EC: Emergency contraception, MTP: Medical termination of pregnancy

the Indian culture and tradition which considers marriage as a sacrament. Hence, married females were more in our study. In India, the latest census report on the decadal headcount in 2011[20] reveals that child marriage is rampant, with almost one in every three married women having been wed while she was still under the age of 18 years. In a study[12] in Aurangabad, Maharashtra, the use of contraceptives was observed in 58% of the females, most common being condom. In another study in Raipur,[19] knowledge of contraception was 99.6% which was higher than our study findings and this might be due to more number of literate patients in the study. In a study by Tesfaye *et al*.[6] among women seeking abortion care, only 9 (10.1%) women had awareness about EC, while in another study by Awasthi *et al.*,[3] awareness of EC was 19.95%. Kokane and Khadilkar[15] found that 10.64% of women had knowledge about EC. The increased awareness in the current study could be attributed to more number of literate females as compared to above-mentioned studies. Although 22 (21.2%) had undergone previous one or more MTP, even they had not been educated regarding EC, it was in accordance with the similar study done by Yadav *et al*.[16] The study findings revealed mass media as the most common source of information which was consistent with other study findings.[3,15] Promoting these products through mass media particularly giving more emphasis on frequency of use and time limit would be more advantageous and should be strengthened so that it will reach many clients at a time. Patient's education is of paramount importance. Women belonging to urban area had higher knowledge as these women were more exposed to different medias such as TV and mewpapers as a source of knowledge as compared to women from rural area. Women who had higher education had higher knowledge of EC as better understanding of the resources and the services available.

This was a hospital-based study and the knowledge of the women in the community might be different from this so could not be predicted and this study was conducted only in only one government hospital.

CONCUSIONS

EC has a definite place in the prevention of unwanted pregnancies as an emergency measure in case of rape, incest, and obvious failure of barriers or natural contraception methods. The great potential of EC to prevent unintended pregnancies and induced abortion was not considered as an option by the study participants in this study. This study showed overall knowledge of EC was poor, and the media or the health-care professionals are not providing adequate knowledge of this method. Thus, it is important to improve the knowledge of EC with the help of media, medical or paramedical workers, and NGOs working in the field of health.

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