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Knowledge of Emergency Contraception among Reproductive Age Group of Married Women in Field Practicing Area of RMCH, Bareilly

Syed E Mahmood[1], Ajay K Agarwal[2]

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Author's Affiliation:
[1]Professor & Head, Dept of Community Medicine, Integral Institute of Medical Sciences & Research, Lucknow; [2]Asso Prof, Dept of Community Medicine, RohilKhand Medical College & Hospital, Bareilly

Correspondence
Ajay K Agarwal
drajayagarwal0@gmail.com

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ABSTRACT

Introduction: Only a few know about ECP as a method to prevent unintended pregnancy after unprotected intercourse and even among those who are aware of ECP very few know how to use it correctly.

Methodology: A cross-sectional community based study amongst married women aged 15-45 years present in their respective households. A structured pretested interviewer-administered schedule was used to collect data. Chi- square test and ANOVA were used to analyze data

Results: Nearly a quarter of females had knowledge about EC. EC awareness was significantly lower among rural females (9.3%) than the urban (17.3%) females. Respondents who were aware of EC first heard about EC from television (68.6%). Majority of those aware knew about the pills (91.2%). In addition, most participants (84.5%, n = 515) did not know about the appropriate interval for efficacy between unprotected sex and taking EC. Only 5.0 % respondents had ever used an emergency contraception method. Nearly a quarter of respondents would like to use EC in future. Education of woman and husband were found to be significant

Conclusion: Education was found to be significant predictor of knowledge of emergency contraception in this study.

Keywords: Emergency contraception, females, urban, rural

INTRODUCTION

Almost, seventy thousand females worldwide die each year because of unsafe abortion.[1] The major brunt of these unsafe abortions contributing to about 13% pregnancy related deaths worldwide, is borne by developing countries only. [2]

More than 75% of pregnancies in India are unplanned and a quarter of them are undesired. [3] Annually almost 11 million abortions take place in the country, and more than half of them are unsafe, accounting for high maternal morbidity and mortality rates [4]. Many of these abortions can be averted by simply creating awareness among females on sexual and reproductive health including various contraceptive measures. [5]

In spite of availability of many contraceptive techniques in India, the couple protection rate estimated at 41% is considered inadequate. [6] Most couples in India do not want to use a contraceptive method on a long-term basis for the fear of related side-effects. Hence, unwanted and unplanned pregnancies are quite common.[7]

Unprotected sex, failure of barrier methods and sexual violence also often lead to an unwanted pregnancy. In such situations emergency contraceptive pills give women a chance at least to prevent an unwanted pregnancy.

Only few know about ECP as a method to prevent unwanted pregnancy after unprotected intercourse

and even among those who are aware of ECP, very few know how to use it correctly. 8

To make ECP effective in preventing unwanted pregnancies, it is critical that potential users are made aware of correct use of ECP and the sources from which it could be obtained.

With this background the present study was carried out to assess the level of knowledge towards emergency contraception among married women of reproductive age group in Field practice areas of Rural Health Training Centre of the Department of Community Medicine, Rohilkhand Medical College and Hospital, District Bareilly.

MATERIALS AND METHOD

A cross sectional three month study was carried out in villages of BithriChanpur and Nawabganj Blocks which are field practice areas of Rural Health Training Centre of the Department of Community Medicine, Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh. All married women of reproductive age group aged between 15-45 years in the selected households were surveyed and comprised the study group. Number of household to be taken for the survey was decided according to Probability Proportionateto Size (PPS) technique.

Villages in the study area were divided into 3 categories according to distance: < 1 km, 1-3 km, and > 3 km from the RHTC to give a better representation. From each category two villages were selected randomly one on road side towards right and one from interior area. Thus six villages out of 60 were selected. A medical social worker first visited the selected villages and identified those households in which currently married females were residing by house to house survey. Serial numbers were allotted by sequence to the identified households. Informed consent verbally was obtained by the married women of reproductive age group (15-45 years) who were the study unit in the study The information was collected by the investigators themselves by interview technique. The investigators were postgraduate students in community medicine, who had been and were pre-trained to do the survey. All married women aged <15 years or >45 years were excluded from the study as our study was directed towards reproductive age group only. Those women who were non-cooperative or refused to provide the necessary information were not included in the study.

Optimal sampling size was calculated on the basis of prior prevalence rate of knowledge of EC of 11.0% reported by **National Family Health Survey (2005).** [9] The sample size was calculated by the formula $4PQ/L^2$ where P is the prevalence (11.0%), Q is 100-P = 89.0% and L is the allowable error i.e.10%. Sample size came out to be 391, which was rounded of to 400..

All married women aged between 15-45 years present in their respective households selected at the time of survey were taken for the purpose of study after informed consent. Ethical clearance was obtained from Rohilkhand Medical College & Hospital, Bareilly institutional review board. Married women in reproductive age group were chosen as study unit as they would benefit from the correct knowledge and use of EC..The need of EC among married females may arise due to failure of contraceptive method being used (condom rupture, diaphragm slippage, forgotten oral pills) or following sexual assault. We have included only married females in this study as it is easier to assess them regarding EC as compared to the unmarried ones as it is considered culturally inappropriate to question them regarding such sensitive issues.

The study involved the use of a structured predesigned and pretested questionnaire to assess study subjects' knowledge and use of emergency contraception. The questionnaire was pretested on 20 subjects in the study area. Necessary modifications were made to overcome the difficulties encountered during pretesting.

Dependent variables: Awareness about emergency contraception.

Independent variables: Place of residence, age, religion, type of family, parity, education, occupation, socioeconomic status.

Data regarding socio-demographic characteristics (Age, religion, type of family, education, occupation, and socioeconomic status using modified Prasad's classification was collected.[10] Specific questions related to reproductive history (parity), knowledge and use of emergency contraception were asked.

Data entry and statistical analysis was performed using the Microsoft Excel and SPSS windows version 14.0 software.

RESULTS

Socio-demographic characteristics

Out of 515 female respondents in this study, 258 (50.1%) were from the urban region and 257 (49.9%) were from the rural region. A higher proportion of females was aged between 24-29 yrs (49.5%) and was married after 18 years of age (57.3%). Majority of respondents belonged to low socioeconomic status (95.7%) using modified Prasad's classification and were Hindus (82.7%).

Table 1: Socio-demographic profile of respondents

Characteristics	Subjects (%) (n=515)
Place	
Urban	258 (50.1)
Rural	257 (49.9)
Age	
18-23 yrs	126 (24.5)
24-29 yrs	255 (49.5)
>= 30yrs	134 (26.0)
Age at marriage	
< 18 yrs	220 (42.7)
>= 18 yrs	295 (57.3)
Socioeconomic status	
Lower middle class	22 (4.3)
Lower class	493 (95.7)
Religion	
Hindu	426 (82.7)
Muslim	89 (17.3)
Education of women	
Illiterate	332 (64.5)
Literate	183 (35.5)
Education of husband	
Illiterate	220 (42.7)
Literate	295 (57.3)
Occupation of women	
Homemaker	490 (95.1)
Laborer	6 (1.2)
Service	13 (2.5)
Other	6 (1.2)
Parity	
Primiparous	102 (19.8)
Multiparous	413 (80.2)
Type of family	
Nuclear	192 (37.3)
Joint	323 (62.7)

Most were illiterates (could not read and write) (64.5%) and were homemakers (95.1%). A higher proportion of females had literate husbands (57.3%) who could read and write. Most participants were multiparous (80.2%) and belonged to joint families (60.2%). (Table 1)

Knowledge and use of emergency contraception

Nearly a quarter of females had heard about EC. The level of EC awareness was lower among rural females (9.3%) than the urban (17.3%) females, the differences being statistically significant (p-value <0.05). Respondents who were aware of EC most commonly reported that they had first heard about EC from television (68.6%). Majority of those aware knew about pills (91.2%). 59.12% of subjects (n = 137) who had heard of EC knew that they could obtain EC from a chemist.

In addition, most participants (84.5%, n = 515) did not know about the appropriate interval for efficacy between unprotected sex and taking EC. Only 5.0 % respondents had ever used an emergency contraception method. Nearly a quarter of respondents said that they would like to use EC in future. (Table 2)

Knowledge about EC was significantly higher among the lower socioeconomic class, Hindus and the literates (Table 3)

Table 2: Awareness, knowledge and use of emergency contraception among currently married women in urban and rural areas of Bareilly

Characteristics	Urban area (%)	Rural area (%)	Total (%)	Chi-Square	df	P-value
Ever heard about emergency contraception	89 (17.3)	48 (9.3)	137 (26.6)	16.501	1	**<0.001**
Source of information						
Television	59 (11.5)	35 (6.8)	94 (18.3)	26.756	8	**0.001**
Radio	7 (1.4)	4 (0.8)	11 (2.1)			
News paper	6 (1.2)	0 (0.0)	6 (1.2)			
Medical literature	2 (0.4)	0 (0.0)	2 (0.4)			
Health worker	13 (2.5)	6 (1.2)	19 (3.7)			
Friends	2 (0.4)	0 (0.0)	2 (0.4)			
Husband	0 (0.0)	1 (0.2)	1 (0.2)			
Family	0 (0.0)	2 (0.4)	2 (0.4)			
Emergency contraceptive methods known						
Pills	80 (15.5)	45 (8.7)	125 (24.3)	17.142	3	**0.001**
IUD	7 (1.4)	2 (0.4)	9 (1.7)			
Other	2 (0.4)	1 (0.2)	3 (0.6)			
Source of getting EC method						
Health worker	14 (2.7)	6 (1.2)	20 (3.9)	21.073	4	**<0.001**
Hospital	13 (2.5)	5 (1.0)	18 (3.5)			
Chemist	47 (9.1)	34 (6.6)	81 (15.7)			
Health centre	15 (2.9)	3 (0.3)	18 (3.5)			
Recommended time to take ECPs						
before unprotected sexual intercourse	5 (1.0)	3 (0.6)	8 (1.6)	27.220	3	<0.001
within 72 hours	55 (10.7)	15 (2.9)	70 (13.6)			
more than 72 hours	1 (0.2)	1 (0.2)	2 (0.4)			
don't know	197 (38.3)	238 (46.2)	435 (84.5)			
Have ever used an emergency contraceptive method	12 (2.3)	14 (2.7)	26 (5.0)	0.170	1	0.680
Would like to use emergency contraception in future	44 (8.5)	83 (16.1)	127 (24.7)	16.098	1	<0.001

Table 3: Unadjusted (crude) associations with awareness of emergency contraception among the respondents

Characteristics	Heard of EC (n=137) (%)	Not heard of EC (n=378) (%)	p value
Age			
18-23 yrs	36 (7.0)	90 (17.5)	0.832
24-29 yrs	67 (13.0)	188 (36.5)	
>= 30yrs	34 (6.8)	100 (19.4)	
Socioeconomic status			
Lower middle class	12 (2.3)	10 (1.9)	**0.002**
Lower class	125 (24.3)	368(71.5)	
Religion			
Hindu	122 (23.7)	304 (59.0)	**0.022**
Muslim	15 (2.9)	74 (14.4)	
Education of women			
Illiterate	62 (12.0)	270 (52.4)	**0.000**
Literate	75 (14.6)	108 (21.0)	
Occupation of women			
Homemaker	129 (25.0)	361 (70.1)	0.186
Laborer	0 (0.0)	6 (1.2)	
Service	5 (1.0)	8 (1.6)	
Other	3 (0.6)	3 (0.6)	
Education of husband			
Illiterate	34 (6.6)	186 (36.1)	**0.000**
Literate	103 (20.0)	192 (37.3)	
Parity			
Primiparous	30 (5.8)	72 (14.0)	0.473
Multiparous	107 (20.8)	306 (59.4)	
Type of family			
Nuclear	54 (10.5)	138 (26.8)	0.546
Joint	83 (16.1)	240 (46.6)	

Education of woman and husband were found to be significant predictors of knowledge of emergency contraception in the total study sample. (Table 4)

DISCUSSION

Nearly a quarter of females had heard about EC in the current study. This is similar to the study by Myer et al (2007) where overall 30% of the women in South Africa had ever heard of EC . [11] Lower level of awareness regarding EC (11%) was reported in **National Family Health Survey**. [9] Good level of awareness was reported by **Kushwah et al** (2007) in Madhya Pradesh where about half of the rural female adolescents had knowledge about EC and by Adhikari et al (2009) where about two-thirds of college students in Nepal had ever heard about EC . [12, 13] Although nine in 10 healthcare providers in Nigeria had heard of emergency contraception, but many lacked specific knowledge about the method. [14] **Poor level of awareness was also observed by Tripathi et al** (2003) among health care providers (gynecologists, general practitioners, paramedical workers, and medical students) in New Delhi where none of the respondents knew about EC. [15] Poor level of awareness was also reported by **Mehra et al** (2006) in Chandigarh where only 1 % of women seeking abortion knew about EC and by **Nigam et al (2010)** where only 2% of the married females from rural Uttar Pradesh had heard it [16, 17].

Table 4: Multivariate logistic regression analysis of predictors of knowledge of emergency contraception in the total study sample

Predictor	β coeff	Odd's ratio	95%CI	P-value
Place (Urban=1, Rural=2)	0.358	1.430	0.901-2.271	0.129
Religion (Hindu=1, Muslim=2)	0.487	1.627	0.881-3.005	0.120
Socioeconomic status (Low=1, Better off=2)	0.872	2.391	0.966-5.920	0.059
Education of women (Illiterate=1, literate=2)	-0.670	0.512	0.322-0.814	0.005
Education of husband (Illiterate=1, literate=2)	-0.548	0.578	0.342-0.976	0.040

Only 5.0 % respondents had ever used an emergency contraception method in this study which is similar to the study from Ethiopia where only 6.8% of graduating female students had used the method.[18] Higher use was observed by Takkar et al (2005) where 10.3% of educated working women had practiced EC [19]. This may be attributed to difference in terms of literacy status and occupation as most of the females in our study were illiterate and homemakers. Higher use of EC (16%) was also reported by Tafuri et al (2012) in Southern Italy and (11.5%) by Irfan et al (2009) among married women of Pakistan. [20,21]. The variation in percentage of knowledge about EC in the above mentioned studies from India as well as abroad can be attributed to the different sociodemographic and cultural patterns of the study populations. The level of knowledge of EC has been increasing in India, both in rural and urban regions. The percentage of knowledge (26.6%) of EC in the current study, confirms this increasing trend.

The level of EC awareness was lower among rural females (9.3%) than the urban (17.3%) females in the current study, the differences being statistically significant (p-value <0.05). This could be attributed to the fact that the females in urban areas are more educated and exposed to sources of information like the media. The other sources of information in this study among the villagers other than media were health workers, family and friends. The health care providers can play an important role by providing adequate knowledge of EC to the villagers as they do not have many sources of information and are illiterate.

The respondents in this study who were aware of EC most commonly reported that they had first heard about EC from television (68.6%). Media (69.3%) was also reported the main source of information of EC in a study conducted in Ethiopia by Ahmed at al [22]. Dissimilar results were reported in another study in Ethiopia where the common sources of information reported were friends (36.5%), radio (22.8%) and television (12.3%) [18]. Consistent messages regarding EC via television in local languages should be conveyed to bring about a change in the behavior regarding use of EC among the villagers.

Nearly 59.12% of subjects who had heard of EC knew that they could obtain it from a chemist in our study.This is similar to the study conducted among the Nigerian school students where 54.4% obtained their emergency contraceptive drugs from patent medicine store. [23]

In addition, most participants (84.5%) in our study did not know about the appropriate interval for efficacy between unprotected sex and taking EC. This is comparable to a cross-sectional, interviewer-administered survey among 831 sexually active women at 26 randomly selected public sector clinics in the Western Cape province. most participants (75%, n = 190) who were aware of EC did not know about the appropriate interval for efficacy between unprotected sex and taking EC. [24] In a study by Wallace et al the majority of healthcare providers reported that they were familiar with indications and protocols for prescribing EC, yet knowledge inaccuracies were identified. [25] If this is the scenario among health care providers then one can imagine the knowledge inaccuracy in the rural females. Potential users as well as providers be made aware of correct use of ECP.

Better knowledge (42.4%) about the correct time for taking EC after unprotected sex was observed in the Pakistani study. [21] In a study by Zeleke et al out of 334 university students, who were aware about EC, only 38.6% responded to the correct time of using EC. [26] Poor knowledge was reported by Attahir et al (2010) in Nigerian adolescent female hawkers and Puri et al (2009) in urban slums of Chandigarh where none ofthe respondents knew about the correct time span during which EC should be used . [27, 28]

Our study revealed that the knowledge about EC was significantly higher among the lower socioeconomic class, Hindus and the literates. These findings are coherent to those reported by **Mittal et al** (2003) where the majority of acceptors was less than 30 years of age and was literate. [29] Nearly a quarter of respondents said that they would like to use EC in future in this study.

Raising public awareness regarding EC can reduce maternal mortality as a significant percentage of it is due to unsafe abortions, taking place in women with unwanted pregnancies. Khan et al (2004) in a study in Bangladesh indicated that introduction of ECP in the National Family Planning Program reduced resorting to abortions to end unwanted pregnancies by one third. [30] A KAP survey on Emergency Contraception was carried out among 190 doctors in Delhi, nearly 82 per cent of them opined that the use of EC would bring down the number of abortions.[31] Emergency contraception is a woman's last chance to prevent unintended pregnancy. Population studies have not shown that increased access to EC decreases abortion rates; this is likely due to inconsistent and infrequent use even when it is available. Its use does not lead to more risky sexual practices or behaviours. [32]

CONCLUSION

Education was found to be significant predictor of knowledge of emergency contraception in this study

RECOMMENDATIONS

Our findings show a need to raise public awareness about EC. Information Education Communication about EC should also be strengthened among the health care providers.

Education on methods available, the correct time limit for use, and accurate message about its effect on health through health professionals and mass media should be given. This will help to reduce the number of induced abortions in future.To change attitude towards EC and further increase the level of awareness and usage, collaborated health education and similar studies among health and media workers are highly recommended.

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