Original Research Article

Breaking the silence: Correlates of awareness and usage of emergency contraception amongst youth

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Abstract

Background: Globally 20 million illegal abortions take place every year and out of this 97% occur in developing countries. With decreasing age of menarche and early onset of sexual activity; young people are exposed early to unplanned and unprotected sexual intercourse leading to unwanted pregnancy and subsequently abortions. Many youth have not heard of available modern contraceptive spacing methods though most of them desiring a small family. **Objectives:** To find out the awareness status and knowledge regarding emergency contraception amongst youth. To assess the utilization pattern of emergency contraception and to find out the correlates of knowledge and utilization of emergency contraception. **Methodology:** A descriptive, cross sectional study was carried out amongst 424 youth which is mix of students, teaching and non teaching staff of medical, BPT, Nursing college, interns, hospital staff/ non medical staff and patients of a private medical institute by using a pretested self administered questionnaire. Results were analysed using Epi info 7 software. **Result and Conclusion:** The awareness about emergency contraception amongst youth studied was 58.96 per cent. Out of total aware youth, 52.8% utilized emergency contraception. Awareness about emergency contraception, age more than 19 years, male as decision maker for use of contraception, Sex education during schooling/college, high income, no misconception about EC and no fear of social stigma about EC were found to be the significant correlates for usage of EC.

Key Words: Emergency contraception, Awareness about EC, Usage pattern of EC, Correlates of awareness and utilization of EC.

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INTRODUCTION

Globally 20 million illegal abortions take place every year and out of this 97% occur in developing countries.[1] Un-intended pregnancy poses a major challenge to the reproductive health of young adults in developing countries. Some young women with un-intended pregnancies obtain abortions-many of which are performed in unsafe conditions-and others carry their pregnancies to term, incurring risks of morbidity and mortality higher than those for adult women.[2] About a quarter to third of Indian youngsters engage in premarital sex.[3] In developing countries about 30% of women give birth to the first child before the age of 20.[4] Unintended pregnancy poses a major challenge to the reproductive health of young adults in developing countries.[5] With decreasing age of menarche and early onset of sexual activity; young people are exposed early to unplanned and unprotected sexual intercourse leading to unwanted pregnancy and, subsequently, abortions.[6,7] These abortions are often illegal, unsafe, and performed under unhygienic conditions. All these factors lead to high maternal mortality (212 per 100,000 live births) and morbidity.[8] National Demographic and Health Survey data show that less than 1% of married women (0.5% in

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rural areas and 0.8% in urban areas) have ever used ECPs, and less than one-third of unmarried women know about ECPs.[9] Government of India approved the dedicated regimen of emergency contraceptives in year 2001 and the same was introduced in the National Family Health Welfare Program in 2003.[10] It was approval as over the counter for adults aged 18 and above by the Government of India in 2005. This was done to reduce the rates of unwanted pregnancy and unsafe abortion.[11] Many youth have not heard of available modern contraceptive spacing methods inspite most of the youth desiring a small family and having a positive attitude towards contraception.[12] Even if they are aware, accurate and detailed knowledge is lacking. Therefore availability must be accompanied by education and motivation. The aim of the study was to know the awareness of emergency contraception amongst youths.

MATERIALS AND METHODS

Study Design: A descriptive, cross sectional study

Study Duration: May 2017- Nov 2017

Study Setting: Tertiary care hospital in Srikakulam district of Andhra Pradesh (A.P.)

Sample Size: Sample size was determined taking the following assumptions; since there was no previous study in the area, the proportion of students who are aware of emergency contraception to be 50%, confidence interval of 95%, and 10 % non response rate. The sample size was 424.

Inclusion Criteria

1. Age group- 15 to 24 years
2. Both sexes

Exclusion Criteria

1. Not ready to participate in the study.
2. Those who have undergone permanent method of sterilization.
3. Spouse of enrolled married participant

Methodology: Prior permission was taken from the institutional ethics committee. Data was collected using a structured pre-tested, pre validated, self-administered questionnaire. In order to minimize bias due to language barriers, the questionnaires which originally prepared in English was translated to local language. Simple random sampling method was used to collect the data. Questionnaire were administered to students, teaching and non teaching staff of medical, BPT, Nursing college, interns, hospital staff/ non medical staff and patients. Written informed consent was obtained from the subjects and strict confidentiality was assured. The questionnaires contained information about socio-demographic characteristic of the students (age, sex, marital status, educational level, religion) awareness status, knowledge regarding methods available, timings of use, side effects of emergency contraception and pattern of usage of emergency contraception like which type of EC used, place of obtaining EC, reason for usage of EC, number of times EC used etc. Then the data were entered and analyzed using Epi-info 7 software and p-value of < 0.05 was considered as significant.

RESULTS

Table 1: Socio-Demographic Characteristics of study subjects:

Socio-Demographic Characteristics		Frequency (n=424)	Percentage (%)
Age (years)	≤ 19	196	46.23
	> 19	228	53.77
Sex	Male	164	38.68
	Female	260	61.32
Residence	Urban	306	72.17
	Rural	118	27.83
Religion	Hindu	302	71.22
	Christian	94	22.16
	Muslim	16	3.77
	Others	12	2.83
Education	Illiterate	20	4.72
	Primary and middle school	22	5.19
	Secondary and Higher secondary	224	52.83
	Graduate and above	158	37.26
Marital Status	Unmarried	206	48.59
	Married	211	49.77
	Divorced/ separated	5	1.17
	Widowed	2	0.47
No of children	None	281	66.27
	One	60	14.16
	Two	75	17.69

	More than two	08	1.88
Profession/ studies	Medical	170	40.09
	Nursing / Physiotherapy	130	30.67
	Other staff	64	15.09
	Not related to health care services	60	14.15
Income	I	12	2.83
	II	93	21.93
	III	141	33.26
	IV	110	25.94
	V	68	16.04

The study was conducted amongst youth of age 15-24 years where near about 50% subjects were above and below 19 years of age, outnumbering females (61.32%). Near about ¾ th of subjects were belonged to urban area who were mostly Hindu by religion followed by Christian. Among all 51.41% subjects were married and 33.73% subjects having one or more than one children. Only 14.15% subjects were not related to profession or studies related to health care services. More number of subjects were belonged to class III, IV and V of B. G. Prasad classification of socio-economic status.

Table 2: Status of awareness and usage pattern of emergency contraception

Awareness status and usage pattern of EC		Frequency	Percentage
Sex education during schooling / college **(n=424)**	Received	238	56.13
	Not received	186	43.87
Awareness of at least one method of Emergency Contraception **(n=424)**	Aware	250	58.96
	Not aware	174	41.04
Source of Information **(n=250)**	Friends/ Spouse	37	14.8
	Internet/ TV/ Radio	99	39.6
	Newspaper/ Magazine	30	12
	Health Education by medical personnel	75	30
	Pharmacist and others	9	3.6
* Knowledge of type of Emergency contraception **(n=250)**	Yuzpe method	179	71.60
	LNG pills	153	61.20
	Mifepristone	11	4.40
	IUCD	19	7.60
Knowledge of timing of Emergency contraception	Yuzpe method (n= 179)	143	79.89
	LNG pills (n=153)	132	86.27
	Mifepristone (n= 11)	07	63.64
	IUCD (n= 19)	11	57.89
Knowledge of side-effects of Emergency contraception **(n=250)**	Yes	153	61.20
	No	97	38.80
Utilization of Emergency contraception among aware **(n=250)**	Yes	132	52.80
	No	118	47.20
Type of EC utilized **(n= 132+6=138)**	Yuzpe method	36	26.09
	LNG pills	87	63.04
	Mifepristone	7	5.07
	IUCD	8	5.80
Place from where obtained EC **(n=138)**	Public health facility	49	35.51
	Private hospital	45	32.61
	Pharmacy/ Drug store	38	27.54
	Friend/ Partner	6	4.34
* Reasons for using EC **(n=138)**	To prevent unintended pregnancy and/ or suggested by health care professional	108	78.26
	Forced by partner	29	21.01
	Suggested by peers	18	13.04
Number of times used EC in last year	Once	87	63.04
	Twice	30	21.74
	> Twice	21	15.22

*- multiple choices were allowed.

Among all 56.13% were received sex education during schooling or college and 58.96% subjects were aware about at least one method of emergency contraception. Major sources of information first time received were health care personnel and audio visual media. More number of subjects was aware about Yuzpe method and LNG pills whereas around 11 % subjects were aware about Mifepristone and IUCDs. Among the aware subjects, 86.27% subjects knew about timing of usage of LNG pills but only 57.89% knew about timing of IUCD insertion as EC. About 61.2% subjects were having knowledge about side effects of emergency contraception. Among the aware ones, 52.8% subjects used emergency contraception. There were 1.41% subjects who were not aware of emergency contraception but utilized it due to various reasons. The total percentage of usage of contraception was 55.2%. Mostly they used LNG pills followed by Yuzpe method. Combined usage rate of Mifepristone and IUCD was less than 11%. Public health facilities, private hospitals and pharmacy played near about equal role in providing ECs to these aware subjects. More than ¾th subjects used ECs for prevention of unintended pregnancy. Near about 37% subjects used ECs more than once in last year.

Table 3: Association between various factors and awareness of emergency contraception (n=424)

Factors		Aware	Not aware	Total	OR	'p' value
Age	> 19	158	70	228		
	≤ 19	92	104	196	2.55	0.000003063
Sex	Male	107	57	164	1.535	0.03676
	Female	143	117	260		
Profession/study	Related to health care	232	132	364		
	Not related to health care	18	42	60	4.10	0.000000855
Marital status	Married	118	136	254		
	Unmarried	132	38	170	0.24	0.00000002
Residence	Urban	200	106	306		
	Rural	50	68	118	2.56	0.00001615
Education	> Middle school level	242	140	382		
	< middle school level	08	34	42	7.34	0.000000030

Age more than 19 years, male sex, persons related to profession or studies related to health care, urban residence, education more than middle school level was significantly associated with awareness regarding emergency contraception.

Table 4: Association between various factors and usage of emergency contraception (n=424)

Factors		Utilized	Not Utilized	Total	OR	'p' value
Awareness status	Aware	132	118	250		
	Not Aware	06	168	174	31.32	0.0000001
Age	> 19	116	122	228		
	≤ 19	22	174	196	7.52	0.0000001
Decision maker about EC usage	Male	70	94	164		
	Female	68	192	260	2.10	0.0004037
Sex education during schooling/college	Received	100	138	238		
	Not received	38	148	186	2.82	0.0000025
Residence	Urban	103	203	306		
	Rural	35	83	118	1.20	0.4309
Profession / Study	Related to health care	123	241	364		
	Not related to health care	15	45	60	1.53	0.1781
Income	I and II	48	57	105		
	III, IV and V	90	229	319	2.14	0.00090
Marital status	Married	70	184	254		
	Unmarried	68	102	170	0.57	0.0073
No of children	One or more	60	103	143		
	None	78	183	281	1.367	0.1388
Misconception about EC	Not present	112	197	309		
	Present	26	89	115	1.94	0.00771
Fear of social stigma about EC	Not Present	118	154	272		
	Present	20	132	152	5.05	0.00000002

State of awareness, age more than 19 years, male as decision maker for use of contraception, Sex education during schooling/college, high income, no misconception about EC and no fear of social stigma about EC were the factors which revealed statistically significant association with use of emergency contraception.

DISCUSSION

Though the present study was carried out in a private medical institution in rural area, respondents were from urban as well rural areas were there. We could find many Indian studies regarding knowledge, attitude and practices but those studies were carried out exclusively among medical professionals, medical or nursing students or only females studying in colleges or working women. As present study was carried out among male as well as female subjects which were also a mix of from medical/ paramedical staff and students, interns, other hospital staff/ non-medical staff and patients in the hospital, the results of the present study will not be directly comparable to any of those studies. Worldwide there is variation of awareness status, knowledge and usage pattern of EC amongst youths. In the present study, the level of awareness about emergency contraception was lower (58.96 %) as compared to college students which was (94%)[13] and in the study carried out by Zeteroglu *et al*[14] among health care providers including nursing staff, 74%. Studies in the United States of America (USA) and United Kingdom (UK) conducted in 2008 and 1996 respectively have reported more than 90% awareness.[15-16] In a study conducted among college students in Puducherry[17], 23.1 % were aware of emergency contraception. Takkar *et al*[18] conducted a study among staff nurses, ministerial staff and other educated working staffs in a Government teaching hospital in Chandigarh in north India also reported low awareness (11.2%) of EC among health care providers. This variation seems to be due to the difference in the education level, which can have an influence on the awareness level of EC. In this study, Media like internet, TV, Radio was found to be the main source of information for EC. In a study conducted in Nigeria among undergraduate college students, the main source of information was through friends/peers.[19] In another study conducted in female students of Makerere University of Uganda, only 45.1% had ever heard of EC; their main source of information were also via friends 34% followed by Media 24.8%.[20] Present study revealed that only 7.60% knew Cu-T can be used as EC which is similar to study conducted by Rahaman *et al*[11] where it was 6% only but was less when compared to the study done in Ethiopia (23.2%).[21] In present study, 79.89% answered that after ECP has to be taken within 72 hrs of unprotected sexual intercourse which was higher than 11.3% reported by Delbanco *et al* (9%)[22] Present study revealed that 61% subjects answered about side effects of EC which was lesser than the study done in Chandigarh (88.9%) by Puri S *et al.*[23] In present study 52.8% used emergency contraception who were already aware about EC whereas few others (n=6) used it due to reasons like forced by partener or suggested by peers ; though they were not aware about EC. Total 55.20% have used emergency contraception. There seem to be low usage of EC in the study population also due to the high proportion of sexually inactive participants. The most utilized EC was LNG Pills (63.04%) and least utilized (5.07%) was Mifepristone. Public health facilities, private hospitals and pharmacy played near about equal role in providing ECs to these aware subjects. More than ¾ th subjects used ECs for prevention of unintended pregnancy. Near about 37% subjects used ECs more than once in last year. In present study, age more than 19 years, male sex, persons related to profession or studies related to health care, urban residence, education more than middle school level has shown statically significant association with awareness regarding emergency contraception. In a study conducted by Dorairajan *et al* [17] bivariate analysis showed that males [OR (95% CI): 3.26 (1.9-5.4); P=0.001], exposure to sex education [OR (95% CI): 2.3 (1.4-3.75); P=0.04] and students of medical college [OR (95% CI): 2.2 (1.3-3.5); P=0.002] were significantly more aware about emergency contraception. On applying multivariate model for influence of these factors on awareness about emergency contraception, male sex, awareness of regular contraceptive methods, exposure to sex education and higher age group emerged as significant predictors. Similar observations were also made in a study conducted in Kathmandu, Nepal.[24] In present study, state of awareness, age more than 19 years, male as decision maker for use of contraception, Sex education during schooling/college, high income, no misconception about EC and no fear of social stigma about EC were the factors which revealed statistically significant association with use of emergency contraception. In the study conducted by Dorairanjan *et al*[17] the factors that emerged as significant predictors for potential use of emergency contraception were male sex [adjusted OR (95% CI): 3.245 (1.04-10.08); $p<0.05$] and awareness of emergency contraception [adjusted OR (95% CI): 3.48 (1.19-10.11); $p<0.05$]. In this study, the absence of significant association between urban residence and profession /study related to health care and the use of emergency contraception can be explained by the fact that now a days ECs are available in government setups at peripheral level also, people related with health care profession/studies are more aware about EC and will take care of their health in adequate manner. Number of

children also has no statistically significant association with use of emergency contraception, may be more number of people who were mainly using it to prevent unintended pregnancy which can be at any time and which is not dependent on number of children they have. The ECP use was not associated with the marital status in the present study, indicating that the reach of the t EC in both the groups is similar.

LIMITATIONS

1. The study was conducted in a single private institution only.
2. There were no means to verify the truthfulness of responses.
3. There is a need to do further planned studies preferably community based, involving both sexes, all types of people from rural as well urban areas with large sample and preferably including domains to explore the sexual practices and actual EC use.

CONCLUSION

To conclude, the awareness about emergency contraception amongst youth studied was 58.96 per cent. Out of total aware youth; 52.8% utilized emergency contraception. Awareness about emergency contraception, age more than 19 years, male as decision maker for use of contraception, Sex education during schooling/college, high income, no misconception about EC and no fear of social stigma about EC were found to be the significant correlates for usage of EC.

RECOMMENDATIONS

1. Increase the IEC activities among age group of 15-19 years, low income group people, where social stigmas and misconception about EC is more prevalent.
2. Impart health education to general public through public health care delivery system particularly in rural areas.
3. Include topics related to sex education, contraception and emergency contraception in academics from secondary school onwards.
4. Methods of emergency contraception like Mifepristone and IUCD should be publicised more intensively through audio visual media and internet with due focus on its actual indications.
5. IEC activities to promote gender equality also in decision making for use of contraception and emergency contraception in target population.

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