

## Correspondence

### **Knowledge, attitude & factors affecting potential use of emergency contraception in college students in Puducherry, south India**

Sir,

Although emergency contraception (EC) has been made available under the National Family Welfare Program<sup>1</sup> but unwanted pregnancies continue to occur reflecting its underutilization. In a study, 90 per cent of adolescents girls undergoing abortions were unmarried<sup>2</sup>. This cross-sectional descriptive study was conducted among the college going adolescents in Puducherry in south India, through self administered questionnaire. It was conducted after approval by the Institute Ethics Committee of Indira Gandhi Medical College and Research Institute, Puducherry from June-August 2012, among the consenting students above 18 yr. The domains included demographic data (age, marital status, type of schooling, exposure to sex education), the level of awareness and attitudes and the potential use of emergency contraception.

Assuming awareness about emergency contraception among college students as 10 per cent<sup>3</sup>, absolute error of 3 per cent and alpha 0.05, a sample size of 400 college students was required. The college authorities were informed about the nature and purpose of the study. The study was planned as systematic random sampling in three different streams of colleges: Arts, Engineering and Medical Colleges in the Puducherry district of the Union Territory of Puducherry. Authorities of Arts College and four different medical colleges refused to participate. Finally, a private medical college (total strength-750) and engineering college (total strength-800) agreed to participate. Since we became aware of the resistance offered by most of the colleges and were not sure of the response rate, we decided to include at least 400 participants from each participating college through convenience sampling. Anonymity of the student was assured and ensured. The questionnaire was adopted from (and modified after pretesting) the nationwide

survey conducted by Ethiopian Family guidance survey (FAGE) 2002<sup>4</sup>. The proportion of students for various items analyzed was expressed as percentage. The difference in knowledge, attitude and potential use of emergency contraception was compared by Chi square test. Multivariate analysis was done to identify the factors influencing awareness and potential use of emergency contraception.

Of the 700 students, 529 (76%) (132 from medical college and 397 from engineering college) returned the questionnaire. Overall only 81 students (15.3%) were aware that unprotected sexual intercourse can result both in pregnancy and sexually transmitted diseases; 306 (58%) students were not aware of any method of regular contraception. Of the 529 students, 122 (23.1 %) were aware of emergency contraception, 192 (36.3%) were not aware and 215 (40.6%) did not respond to this question. Regarding attitude towards EC, 114 (21.6%) felt EC a form of abortion, 94 (17.8%) thought that EC could promote sexually transmitted diseases and 82 (15.5%) believed that EC would increase promiscuity. Regarding potential use, 102 students (19.3%) were likely to use emergency contraception after unintended intercourse, 39 (7.4%) said they would not use it, 291 (55%) were not sure and 97 (18.3%) students did not respond. Internet (45% of students) followed by friends (43%) were the common sources of information regarding sex education matters. Parents (4.5%) and teachers (10.2%) were looked upon the least for these matters (in view of multiple responses for this question, the total is more than 100%). Overall, 329 (62.2%) responders were not exposed to any formal sex education. The students of medical college had significantly higher exposure to sex education ( $P<0.05$ ) compared with students of engineering college. Significantly more respondents from the medical college compared with engineering college

**Table.** Logistic regression analysis for factors affecting awareness of emergency contraception among college students of Puducherry, south India

Predictors*	Adjusted Odds ratio	95% confidence intervals	P value
Sex (N=306)			
Female (Ref) (n=112)	1	-	0.001
Male (n=194)	4.1	2.2-7.6	
Age groups (yr) (N=306)			
18-19 (Ref) (n=164)	1	-	0.035
20 and above (n=142)	1.9	1.1-3.6	
Sex education in school (N=306)			
Not exposed (Ref) (n=196)	1	-	0.013
Exposed (n=110)	2.1	1.7-3.8	
Awareness about any contraceptive (N=306)			
No (Ref) (n=145)	1	-	<0.001
At least one method (n=161)	12.5	6.2-25.5	

\*Only statistically significant predictors are shown in the Table. Type of schooling and stream of college were not found to be significant factors

felt that sex education should be made compulsory in school ( $P<0.01$ ). Significantly more male students than female students felt that sex education should be made compulsory in the school ( $P<0.05$ ).

Bivariate (Chi-square test) 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 likely to be aware about emergency contraception. On applying multivariate model (logistic regression analysis) 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 (Table). Similar observations were made in a study conducted in Kathmandu, Nepal<sup>5</sup>. In our study the factors that emerged as significant predictors for potential use 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);  $P<0.05$ ]. Compared to study in north India<sup>2</sup>, we found a higher awareness rate for emergency contraception amongst the adolescents studied.

The strength of our study was that a large sample including both male and female students were included. Our study had certain limitations. The sexual practices

and exposure to sexual intercourse were not probed. The two colleges from where the data were collected were private colleges and 75 per cent students had schooling in private schools. So it may not be representative of adolescents attending college in general. Further planned surveys need to be done including government colleges and preferably including domains to explore the sexual practices and actual EC use.

To conclude, the awareness about emergency contraception in the population studied was 23.1 per cent. Exposure to formal sex education and increasing awareness about regular contraception were found to be the significant predictors for awareness about EC and this in turn predicted its potential use.

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### References

1. Mittal S. Introduction on Consortium on National Consensus for Medical Abortion in India. New Delhi: Consortium on National Consensus for Medical Abortion in India; [about 2 screens]. Available from: [http://www.aiims.ac.in/aiims/events/Gynaewebsite/ma\\_finalsite/introduction.html](http://www.aiims.ac.in/aiims/events/Gynaewebsite/ma_finalsite/introduction.html), accessed on September 1, 2009.
2. Trikha S. Abortion scenario of adolescents in a north India city - Evidence from a recent study. *Indian J Community Med* 2001; 26 : 48-55.
3. Puri S, Bhatia V, Swami HM, Singh A, Sehgal A, Kaur AP. Awareness of emergency contraception among female college students in Chandigarh, India. *Indian J Med Sci* 2007; 61 : 38-46.
4. Family Guidance Association of Ethiopia (FGAE). *Base line survey of the coital dependant methods project of the Family Guidance Association of Ethiopia and Population Council*. Addis Ababa, Ethiopia: FAGE; 2002.
5. Adhikari R. Factors affecting awareness of emergency contraception among college students in Kathmandu, Nepal. *BMC Womens Health* 2009; 9 : 27.