



## A study on emergency contraceptive practice among nursing staff in Sikkim, India-A cross sectional study

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### RESEARCH

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### Abstract

#### Background

Improved knowledge about emergency contraception (EC) may decrease the unplanned pregnancy rate, unsafe abortion and save many lives. This study aims to assess the knowledge, attitude and practice of EC amongst the nursing staff in Sikkim.

#### Method

This study was carried out among 131 nursing staff in Gangtok between 2008 to 2009. A predesigned self-administered questionnaire was used to collect the data.

#### Results

The majority of nursing staff stated that they had heard of EC. About 80% gained knowledge about EC from doctors and health personnel and 61% were willing to use contraceptives, but only 40% were in favor of using EC if required. Only 26 nursing staff had used one or more

methods of EC. High dose oral contraceptive pills (OCP) were the preferred method of EC.

#### Conclusion

Awareness of EC was low among nursing staff. There appears to be an urgent need of education about EC and training programs to promote it.

#### Key Words

Knowledge, Attitude, Practice, Emergency contraception

#### Background

Unintended pregnancy poses a major challenge to the reproductive health of young adults in developing countries.<sup>[1]</sup> 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.<sup>[2], [3]</sup>

Young people are commonly ineffective users of contraceptives. Often they are poorly informed about sexuality and reproductive health and hold myths about the same.<sup>[4]</sup> In India, a baby is born every 1.25 seconds. Couple protection rate is still only 41%. Seventy-eight percent of the pregnancies in India are unplanned and at least 25% are unwanted. Every year 11 million abortions take place and at least half of these are unsafe and associated with a high morbidity and mortality. At least 20,000 women die annually due to abortion related complications.<sup>[5]</sup>

Sikkim, in north east India, has culture similar to the West and most women are sexually active by the age of 15 years. Many of these women who become pregnant seek medical termination' (Exact data is not available as these are conducted in private clinics and hospital). Emergency contraceptives, also known as postcoital contraception or



morning after pills,<sup>[6]</sup> are methods that women can use after intercourse to prevent an unwanted pregnancy when intercourse has occurred without contraception. Other indications for EC include failure of barrier methods like the slipping or breakage of condoms, and after rape. If used properly EC may be an effective way to reduce the number of unwanted pregnancies and induced abortions.<sup>[7]</sup>

Combined hormonal contraceptives taken in a dose higher than is used for regular contraception (Yuzpe method), insertion of a copper intra uterine devices (IUD) and the Levonorgestrel only regimen, have been widely used emergency contraceptives, with excellent results.<sup>[8],[9]</sup> In addition to preventing pregnancy, EC can serve as a bridge into the health care system and a way to obtain an ongoing contraceptive method for women who do not have one.<sup>[10]</sup> The World Health Organization recommends that reproductive health services offer EC as part of their routine services.<sup>[11]</sup>

Emergency contraceptive pills have been available since the 1970s.<sup>[12]</sup> In India, the Levonorgestrel method has been approved and is incorporated in the National Family Welfare Program. Nevertheless, it is an underutilized option for preventing unwanted pregnancy, partly because knowledge of the method is often lacking, even among health care providers who typically serve as the primary gatekeepers to its access. For example, in a study of Indian paramedical workers, just 3% were familiar with the concept of EC.<sup>[13]</sup> In a survey of Turkish physicians, midwives and nurses, only 29% of those familiar with the method correctly identified the period of time after unprotected sexual intercourse in which the method was effective<sup>[14]</sup> and in a recent survey, 39% of Kuwaiti retail pharmacists had heard of the method.<sup>[15]</sup> Furthermore, negative attitudes toward and inaccurate knowledge of the method among health care providers—including pharmacists, physicians and nurses—can pose substantial barriers to women's timely access to the pills in the event of unprotected intercourse. It is with this in mind that the aim of this study was to assess the knowledge, attitude and practice of EC amongst nursing staff in Sikkim.

## Method

A cross-sectional study conducted in two tertiary level hospitals of East Sikkim, Central Referral Hospital - teaching hospital of Sikkim Manipal institute of Medical Sciences (SMIMS) and the Sir Thutob Namgyal Memorial (STNM) Hospital, Gangtok in the year 2008-2009. Permission from the ethical committee of both the hospitals was obtained. A predesigned, pre-tested, self-administered open-ended multiple response questionnaire was provided to the

nursing staff who were willing to participate in the study. Data was collected on demographic information, knowledge and attitude regarding emergency contraceptives and practice of EC. Confidentiality of information provided was assured and maintained.

131 nursing staff, of whom 75 were from Central Referral Hospital and 56 from STNM hospital, were given the questionnaire. Nineteen nurses (14%) had never heard of EC and were thus excluded from the study.

## Results

Of the 200 nurses invited to participate in the study, 131 nurses consented to be included. Sixty six percent of participants were between the age of 21 and 30 years and 30% were between 31 and 40 years. Nearly 80% of participants were from a nuclear family. About 60% were Hindus followed by Buddhist (28%), Christian (10%) and Muslim (1%). 55% participants were married.

Table [1] shows that the most common source (80%) of knowledge regarding EC was from doctors and health personal followed by electronic media (42%) and print media (19%).

As far as methods that could be used as EC, about 26% responded that OCP's could be used, 11% answered in favor of Mifepristone, only 4% felt progesterone only pills could be prescribed as EC, and 6% acknowledged IUD as one of the methods of EC. A very high percentage (61%) of participants responded that condom could be used for EC. Ninety eight of the 122 participants correctly responded that EC is used to prevent unwanted pregnancy. The majority (74%), of participants knew that EC are available over the counter (OTC).

Table [2] shows that of 112 participants, 61% are willing to use contraceptives but only 40% 70% percent felt EC were beneficial and would encourage their friends and relatives regarding EC.

Out of 112 nursing staff, 26 women had used one or more methods of EC. Most commonly used methods were OCP (73%) followed by IUD (23%) and only 12% had used progesterone only pill. Two women used 2 methods each in the form of OCP and IUDs.

## Discussion

Postcoital contraceptive hormones are now approved by the Family Welfare Department of India and are freely available. The Yuzpe regimen of Levonorgestrel 250 µg and Ethinyl estradiol 50 µg given twice was being conventionally used. However due to side effects like nausea and vomiting, recently 0.75 mg in two separate doses 12 hours apart has



been approved for use and is available. With Levonorgestrel method, rate of pregnancy is 0.4% if started within 24 hours and 2.7% if started within 72 hours.<sup>[16] [17]</sup>

Worldwide there is variation of knowledge, attitude and practice of EC amongst health care providers. In the study carried out Gichangi PB et al<sup>18</sup> among qualified nurses and nursing students in Nairobi Kenya only 48% of the respondents had heard of EC and only 2.6% had actual knowledge of EC. Significantly more nursing students than qualified nurses were familiar with EC. Knowledge about the types of EC, applications, and side effects was poor and 49% of the respondents considered EC as an abortifacient. Of those familiar with EC, 77% approved its use for rape victims and 21% for adolescents and schoolgirls. The view that EC was abortifacient negatively influenced the decision to use or provide EC in the future. In the present study 80% responded that they are used after unprotected coitus while 26% after failure of barrier while 17% approved its use after sexual assault.

Zeteroglu S et al<sup>[18]</sup> conducted a survey among health care providers including nursing staff also reported knowledge deficit among health care providers. Of the two hundred respondents in his study, 26.0% did not know about EC, while the remaining 74.0% said that they knew about at least one of the methods of EC. But among these, only 38.5% of the participants had accurate knowledge of EC. None of the respondents knew about Mifepristone and Levonorgestrel. In present study although 85% participant claimed to have heard of EC, only 28% had actual knowledge of EC. However, 15% responded that Levonorgestrel and 10% reported that Mifepristone can also be used as method of EC.

There are very few Indian studies regarding awareness and use of EC among health care providers. Takkar et al<sup>[19]</sup> 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 of EC among health care providers. Only 11.2% of the study population (n -258) was aware of EC. They only knew about Yuzpe's regimen. Of the 29 women who were aware of EC, 19 were nursing staff. In present study although 84% nursing staff claimed that they had heard of EC, only 28 % had actual knowledge of EC. This proportion is higher than that found in the study by Takkar et al. In a study done by Adhikari among college students in Nepal only about 68% of college students had heard about EC.<sup>[20]</sup> Positive attitude towards EC that is manifest by participants being willing to use is was found in 40% participants in present study. This is higher than mentioned by Gichangi et al (23%), however it was lower than that mentioned by Takkar et al (81%). In the present study 71% responded that

they will encourage their friends and relatives to use EC, which is higher than that reported by Gichangi et al (53%). About 69% participant in the present study felt that EC are beneficial which is similar to study by Mustafa et al.<sup>[21]</sup>

Review of literature reveals that there is also variation of practice of EC among health care providers. In present study 23% participants reported that they had used one or more methods of EC, the most common used method was Yuzpe method (73%) , followed by IUD and Levonorgestrel method. Gichangi et al from Kenya and Takkar et al from India reported much lower rate of personal use of EC among nursing staff (3.5% and 10% respectively),.compared to 34% reported by Zeteroglu et al. In all the studies, the Yuzpe regimen was the most commonly used method.

### Conclusion

Knowledge of EC appears to be inadequate among nursing staff. All health-care providers should know not only about contraception but also about EC and include it in routine contraceptive consultations. Since nursing staff are an important part of health care system, it is essential to give adequate knowledge and training to them about contraception and also regularly update their knowledge with recent advances in the field. This will result in dissemination of knowledge to young girls and women, and in turn result in preventing unwanted pregnancy. Further research into the knowledge, practices and attitudes of health-care providers is needed to understand the underlying reasons for the hesitant attitudes among health professionals.

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### References

1. Okonofua F.E. Factors associated with Youth and Adolescent Pregnancy in Rural Nigeria Journal and Adolescent. 1995;24(4): 419-438.
2. Emergency contraception in Nigeria. Report of an Exploratory Research Project Lagos. Society for family health 1998: 1-2
3. Contraceptive Methods for Young Adults: Emergency Contraception. Family Health International 1997;17 (3): 16-17
4. Glasier A. et al.. "Case Studies in Emergency Contraception from Six Countries." International Family Planning Perspectives 1996;22 (2): 57-61.
5. National Family Health Survey. Ministry of Family Welfare and Health, Government of India, 1988.



6. Silvestre L, Bouali Y, Ulmann A. Postcoital Contraception: myth or reality? *Lancet*. 1991; 338:39-41
7. Haspels A.A. Emergency contraception: A Review. *Contraception*. 1994;50:101-108.
8. Berer M et al., Consensus statement on emergency contraception, *Contraception*, 1995 ;52(4):211-213
9. World Health Organization Task Force on Postovulatory Methods of Fertility Regulation, Randomised controlled trial of levonorgestrel versus the Yuzpe regimen of combined oral contraceptives for emergency contraception. *Lancet* 1998; 352:428-433.
10. Grossman RA and Grossman BD, How frequently is emergency contraception prescribed? *Family Planning Perspectives*1994; 26(6):270-271
11. 11 Van Look P and Von Hertzen H, Emergency contraception, *British Medical Bulletin*, 1993, 49(1):158-170
12. 12Von Hertzen H et al., Low dose mifepristone and two regimens of levonorgestrel for emergency contraception: a WHO multicentre randomized trial, *Lancet* 2002; 360:1803–1810
13. Tripathi R, Rathore AM and Sachdeva J, Emergency contraception: knowledge, attitude, and practices among health care providers in North India, *Journal of Obstetrics and Gynaecology Research* 2003, 29(3):142– 146.
14. Sevil U, Yanikkerem E and Hatipoglu S, A survey of knowledge, attitudes and practices relating to emergency contraception among health workers in Manisa, Turkey, *Midwifery*, 2006, 22(1):66–77.
15. Ball DE, Marafie N and Abahussain E, Awareness and perceptions of emergency contraception among retail pharmacists in Kuwait, *Pharmacy World & Science*, 2006, 28(2):101–106
16. Task Force on Postovulatory Methods of Fertility Regulations. Randomised controlled trial of levonorgestrel versus the Yuzpe regimen of combined oral contraceptives for emergency contraception. *Lancet* 1998; 352:428-33.
17. Piaggio G, von Hertze H, Grimes DA et al. Timing of emergency contraception with levonorgestrel or the Yuzpe regimen. Task Force on Postovulatory Methods of Fertility Regulations. *Lancet* 1999;353:72
18. Zeteroglu S, Sahin G, Sahin H, Bolluk G. Knowledge and attitudes towards emergency contraception of health-care providers in a region with a high birth rate. *European journal of contraception and reproductive health care* 2004;9:102-106
19. Takkar N, Goel P, Saha PK, Dua D. Contraceptive practices and awareness of emergency contraception in educated working women . *Indian J Med Sci* 2005;59:143-9.
20. Adhikari R. Factors affecting awareness of emergency contraception among college students in Kathmandu, Nepal. *BMC Women's Health* 2009: 9:27
21. Celik M, Ekerbicer CH, Ergun UG, Tekin N. Emergency contraception: Knowledge and attitudes of Turkish nursing and midwifery students. *The European Journal of Contraception & Reproductive Health Care*, 2007;12(1):63 – 69

**PEER REVIEW**

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**CONFLICTS OF INTEREST**

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**Tables**

**Table 1 Knowledge and Awareness Regarding Emergency Contraception**

	<b>Number (%)</b>
TV/Radio	47(41.9)
News paper/Magazine	21(18.7)
Friends/Relatives/Spouse	14(12.5)
Health personal/Doctor	89(79.4)
Condom	68(60.7)
OCP	29(25.9)
Copper T	7(6.25)
POP(Progesterone only pill(POP)	16(14.3)
Mifepristone	12(10.7)
To prevent unwanted pregnancy	98(87.5)
Spacing of birth	21(18.7)
Prevention of STD	19(16.9)
Acts as an abortifacient	6(5.3)
Unprotected intercourse	67(79.7)
Missed period	9(10.7)
Failure of barrier	22(26.2)
Failed coitus interruptus	12(14.3)
After sexual assault	17(16.7)
Other any (before sex)	1(1.2)
Govt. Hospital	37(33.0)
Health centers (PHC/Sub centers)	46(41.1)
Pvt. Health centers	22(19.6)
OTC(Medical shops/Pharmacy)	83(74.1)

\*Multiple responses **Knowledge of EC:**

**Table 2. Attitude regarding use of Emergency Contraceptives (N=112)**

	<b>Number (%)</b>
Willing to use contraceptive	68(60.71)
Use EC if required	44(39.28)
Beneficial to use EC	77(68.75)
Encourage friends and relatives to use EC	79(70.53)