

EMERGENCY CONTRACEPTION: AN OVERVIEW*

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ABSTRACT

The efficacy of emergency contraceptives is well established. The indications of use of emergency contraceptives are clearly documented. The side-effects following their use are less and manageable. Still, emergency contraceptives are very much underutilised and awareness of emergency contraception among people is limited. This post-coital form of interception is another way and means of regulating fertility in females and should be given due importance in the existing family planning services in India. However, a careful assessment of different methods is crucial in deciding the individual's need and suitability of the method to be offered. The present paper describes various methods of emergency contraception, indication of their use, mechanism of action, their efficacy and side-effects.

For every act of unprotected sexual intercourse the chance of conception is about 8 per cent. Following the use of emergency contraceptives the risk is brought down to 2 per cent, a significant two third reduction in pregnancy rate. In the Indian scenario, where more than 50 per cent of the eligible couples do not practice any form of regular contraception and are unaware of emergency contraception, the percentage of women at the risk of conceiving, at any given time, is always very high. Most of these women would have little choice but either to carry on with the pregnancy against their will or end up at abortion service centres that inflict them with severe mental and physical trauma. Many a times, the situation gets aggravated leading to even death of women when unqualified personnel become providers for these services, It is stated that abortion is one of the most neglected areas in reproductive health care. In

* The summary of the presentations made during the National Seminar on Potential Utility of Emergency Contraceptives in Reproductive Health Care: Essential Pre-requisites for Programme Introduction on December 23, 2000, organised by the National Institute of Health and Family Welfare in collaboration with the Contraceptive Division, Department of Family Welfare, Ministry of Health and Family Welfare, Government of India.

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developing countries, there are reportedly 70,000 maternal deaths out of 580,000 deaths that occur annually as a consequence of complications arising out of unsafe abortions. Improving the users' knowledge on the practice of emergency contraception, many of these unplanned pregnancies could be averted and that would eventually reduce the burden on the abortion services too.

The other important reason for the unplanned conception is the increased adolescent sexual activity in recent years. Growing western influence and lack of adequate sex education are the root causes for the increased promiscuity among adolescent youth. Thus, the age of first coitus or 'sexarche' is happening much earlier nowadays, resulting in younger adolescents engaging in intercourse. This sexual experimentation is often without effective method of contraception leading to a higher demand for counseling for the use of emergency contraception.

Emergency contraception, as the name implies, is meant to be used in an emergency only, to prevent pregnancy following on unprotected sexual intercourse. Therefore, the method is also popularly known as 'contraceptive first aid or morning after pill. The concept of emergency contraception originated in early sixties when it was initially tried on rape victims. Since then, a whole lot of newer and improved methods have become available. At present, depending on the situation and the need of the seeker, the provider has within his/her ambit, a handful of choices for delivering the right short of emergency contraception and then appropriately counseling the user as to how to make an easy and effective switch over to a regular contraceptive later.

Emergency contraceptive has three important characteristics. These are:

- It is a one-off procedure but not a routine approach to contraception.
- It is used post-coitally to prevent pregnancy.
- As the name implies it should be used in an emergency and is not a substitute for other regular methods of contraception such as OCs or IUDs.

Indications for Use of Emergency Contraception

As already discussed, emergency contraception is not to be used in place of other family planning methods.

The indications for use of emergency contraception are as follows:

- A woman has had sex against her will or has been forced to have sex (rape).
- A condom has broken or slipped out of place.
- An IUD has come out of place.

- A woman has run out of oral contraceptives and has had sex without using any other method of family planning.
- Sex took place without contraception and the woman wants to avoid the unwanted pregnancy.

Available Methods

Emergency contraception is meant to control the fertility occurring by chance but not by choice. However, it can also be used as a back-up method in cases following use of contraceptive failure. It is, therefore, rightly referred to as the "Casualty Department of Family Planning" as it offers the only chance of averting an unplanned pregnancy. Therefore given a choice, most women would prefer to opt for a method of emergency contraception than to go in for an abortion. But the efficacy of the method to be offered has to be extremely good and without much complications or side-effects. Most of the available and practiced methods of emergency contraception have reasonably very good efficacy if used within a specified time duration. Knowledge on dose requirements, mechanism of action, contraindications and side-effects of the various methods available would benefit both the service providers and the users in improving the advocacy and acceptability of these methods.

High Dose Estrogens

It was the first such method tried as early as 1960s for emergency contraception in a rape victim. The treatment has to be initiated within 72 hours after the unprotected coitus. The dose consists of diethylstilbestrol (DES) 50 mg for five days that was earlier practiced. Subsequently, 0.5-5 mg of ethynyl estradiol in two doses for five days was used in place. It is still prescribed as an emergency contraceptive (brand name, Lynoral), in the Family Planning Programme in Netherlands. The mode of action is through prevention of ovulation and also by altering the endometrial environment. The efficacy is as good as Yuzpe regimen as the pregnancy rate is less than one per cent. Side-effects include nausea, vomiting, dizziness, breast tenderness and disturbances in the menstrual cycle⁵. Because of the high incidence and prolonged duration of these side-effects, the method is only very restrictively practiced.

Danazol

It is a synthetic progestin with androgenic properties which was successfully tried for post-coital contraception too. The dose consisted of two doses of danazol 400 mg each to be taken 12 hours apart. Three doses of 400 mg at 12 hour intervals were also tried and found to be equally effective. It has a low failure rate of 1.7 per cent with 800 mg dose and 0.8 per cent with a higher

1200 mg dose. The efficacy is claimed to be better than Yuzpe method owing to fewer, milder and shorter lasting side-effects. This can also be given to women with contraindications to oral contraceptives or estrogen. It does not seem to have any clear-cut effect on ovulation but alterations in the endometrial environment leading to failure in implantation is stated to be the possible mechanism of action.

Copper IUD

Post-coital insertion of a copper intra-uterine device (IUD) is another alternate and established method of emergency contraception. This could be used if the woman presents more than 72 hours but less than 7 days after unprotected intercourse but more importantly if she prefers to use the same as a regular method of contraception. This method has an edge over the other methods due to its comparatively large window period (5-7 days) when the emergency contraceptive is being delivered. It can also be used in women with a previous history of estrogen contraindications like thromboembolism, hepatic disease or mammary cancer. However, it cannot be used in nulliparous women or those prone to infections. The efficacy rate of this method is very high with a failure rate not higher than 0.1 per cent. The mechanism of action is primarily due to its ability to prevent implantation through changes in the endometrial environment and also possibly due to the direct embryo-toxic action of copper.

Mifepristone or RU 486

It is a synthetic 19 nor-steroid derivative and a potent anti-progesterone compound. It is established to have high affinity for progesterone receptors and has been tested for its abortifacient properties . Different regimens have been tried for purposes of emergency contraception and with good efficacy. Starting from the initial single dose of 600 mg to be taken within 72 hours of unprotected intercourse other lower doses like 25 mg of the compound in two doses, 12 hours apart (100 % success rate) or 25 mg single dose (83 % success rate) were also tried. In a multicentric trial in countries (Australia, China, Finland, Georgia, UK and USA) 600 mg, 50 mg and 10 mg doses of the compound were tried following 120 hours after coitus. There was no significant difference in the pregnancy rate in all the different doses [600 mg (1.3 %), 50 mg (1.1 %) and 10 mg (1.2 %)] used. Delay in onset of menstruation was observed in some patients with lower doses showing comparably fewer disturbances in menstrual cycle. Being a potent anti-progesterone, the compound acts through mechanisms by altering processes in follicular maturation, ovulation and possibly fertilization. Prevention of implantation through acceleration of embryo transport is stated to be another mode of action of this drug.

Levonorgestrel or Progestin Only ECs

Emergency contraception through progestin only compounds like levonorgestrel has now been accepted as an improvement over other methods such as Yuzpe method because of higher efficacy and less side-effects. This was following the outcome of a multicentric and multi-country study by WHO comparing the efficacy of levonorgestrel with Yuzpe regimen. The EC regimen for levonorgestrel consists of two doses of 0.75 mg of the compound to be taken 12 hours apart starting with 48 hours of unprotected intercourse. It has a good efficacy rate with a failure rate of 2.0 per cent and proportionate reduction in pregnancy of about 60 per cent. Mechanism of action of levonorgestrel indicates affecting both follicular growth and development of corpus luteum. Given in early follicular phase the cycle length was prolonged. Post treatment biopsies in certain cases showed proliferative endometrium due to the increase in the duration of the follicular phase. Given around the time of ovulation a varied response was observed. Although ovulation was blocked in majority of the cases, in some there was follicular activity with deficient luteal function. Administration in the luteal phase however, did not affect the cycle length or cause any significant endometrial changes.

Combined Oral Contraceptives as EC: Yuzpe Method

This method was named after Canadian physician Albert Yuzpe who in 1970s observed that a single dose of 100 mg of estrogen coupled with 1 mg of progestin DL-Norgestrel induces endometrial changes that are incompatible with implantation. The approach has become very popular since it uses the same ingredients as oral contraceptives. Present regimen practiced in North America and Europe consists of 200 ug of ethynyl estradiol and 1 gm of levonorgestrel; half of the dose has to be taken within 72 hours of unprotected coitus and the other half taken 12 hours later. Accordingly, 2 plain oval or 4 low dose oval tablets are required to make up for one dose of emergency contraception. Adopting such an approach the exact dose administered for the estrogen and progestogens usually exceeds a little than what is required. Emergency contraceptives in single tablet formulations are not available anywhere in the world. Therefore, it would be prudent, if necessary permission is obtained from the regulating authorities for manufacturing a single/one dose tablet containing the estrogen and progestogen in the right proportion. Yuzpe method has good efficacy rate with the reduction in the pregnancy rate by 65-75 per cent and with, a failure rate of 0.2 to 2.0 per cent. The mechanism of action is mainly through preventing ovulation but perhaps works in other ways too. However, it does not disturb the existing pregnancy.

There has been a realization in many developing countries for making the emergency contraceptives available in the form of specially packed kits and with requisite information. However, factors like misconceptions among the consumer groups, and apprehensions on the overuse and wrong use of such kits have influenced the health administrators of many countries to adopt a cautious approach. Discussions through meetings, seminars and workshops are thus important for the dissemination of right information at all levels prior to production and introduction of ECs in the form of kits. Such an expert meeting of south to south co-operation was held in Bellagio, Italy (1995), in which 24 different countries participated under the auspices of International Planned Parenthood Federation (IPPF), Family Health International (FHI), Population Council (PC) and World Health Organisation (WHO). It is encouraging to note that the consensus statement issued following the meeting had emphatically favoured that Ecs, Yuzpe, IUD and other methods which are convenient to use and therefore should be made easily available. While agreeing to the need for development of more such methods of emergency contraception, it identified the antiprogestins as the most potential compounds for development in this area. The consensus statement concluded adding that government and inter-government agencies and NGOs should include ECs in all programmes and in all national drug lists. Drug regulatory authorities should ensure explicit description of OCs as ECs. Strongly recommending EC as an OTC product, it further stated that hormonal ECs are appropriate for distribution through many channels, clinics, over the counter in pharmacies and community-based programmes.

In a multi-diversity country like India, there are issues that need to be adequately addressed prior to introduction of ECs in our family welfare programme. The foremost being, the critical self/assessment that whether we have reached the stage for introducing such ECs in the form of kits as other western countries had done it. Secondly, should these be available over the counter and from vending machines and should they be routinely prescribed or dispensed at family welfare centres/hospitals/private clinics, etc.? Considering the fact that adequate information is available on the efficacy and safety of these products, there should be no hesitation in admitting that the stage has now reached for introducing the ECs in the family welfare programme in India. However; strategies for improving communication and awareness amongst people are important prior to such an introduction. Studies on the impact of the easy availability of the EC on society and its implications among various social groups need to be evaluated and carefully assessed in order to take appropriate corrections whenever and wherever required. Hormonal ECs are again meant for consumption amongst women. Support from women advocacy groups is thus necessary and their views, apprehensions, doubts and perceptions have to be adequately addressed to make a successful introduction of EC in our family welfare programme.

CONCLUSION

While there is a need for additional research, available literature sustains a compelling case for expanding availability of ECs; if efficacy and safety considerations are the sole criteria. Hormonal ECs are simple to use, relatively inexpensive. Making these available in an explicit kit form along with appropriate information may well fill an important gap among groups whose needs have gone unmet by traditional family planning programmes. These are interceptive methods needed only in an emergency. Their occasional use to prevent unwanted pregnancy is likely to bring down the load on the therapeutic abortion services. It is very clear, however, that the frequency and the extent of side-effects do not allow for their repeated post-coital use after every act of unprotected intercourse. In order to have an effective switch over to a more regular method by the user, the requisite information needs to be provided either at the time of counseling or needs to be explicitly exhibited in the information literature to be made available along with the specially packed emergency contraceptive.

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आपात गर्भनिरोधक उपायों का सुस्थापित प्रभाव है। आपात गर्भनिरोधक उपायों के प्रयोग संबंधी लक्षणों का स्पष्ट प्रमाण है। आपात गर्भनिरोधक उपायों के प्रयोग के इतर प्रभाव कम होते हैं तथा उनका निदान भी सरल है। अभी भी आपात गर्भनिरोधक उपायों का प्रयोग काफी कम है और लोगों में आपात गर्भाधान के प्रति जागरूकता भी सीमित ही है। महिलाओं की प्रजनन क्षमता पर काबू पाने के लिए सम्भोग के दौरान अन्तरवरोध एक ऐसी ही विधि और साधन है जिसे देश में प्रचलित परिवार कल्याण कार्यक्रम में महत्वपूर्ण स्थान दिया जाना चाहिए। लोगों की स्वास्थ्य संबंधी व्यक्तिगत आवश्यकता और उन्हें उपलब्ध कराये जाने वाले उपायों की उपयुक्तता को सुनिश्चित करने के लिए विभिन्न उपायों का एक सजग मूल्यांकन किया जाना चाहिए। प्रस्तुत लेख में आपात गर्भनिरोध के विभिन्न उपायों, उनके प्रयोग संबंधी लक्षण, कार्यप्रणाली, उनके प्रभाव और उनके इतर प्रभावों के बारे में चर्चा की गई है।

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USE OF EMERGENCY CONTRACEPTION BY WOMEN AS A BACK-UP METHOD

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ABSTRACT

No normal contraceptive method is cent per cent reliable and efficacious. Therefore, the need for emergency contraception as a back-up method to prevent unwanted pregnancy following failure of regular contraceptives like, missed OCPs, expelled IUCDs or slipped condoms has more relevance. The existing awareness of the common people about EC methods is very low. The present study has been designed to evaluate the use and misuse of emergency contraceptives among women who are adopting condom as their primary contraceptive method. The study results demonstrated that subjects, once properly counseled, would not like to misuse the emergency contraceptive even if it is available in advance.

It is estimated that in India nearly 78 per cent of conceptions happen annually are unplanned and 25 per cent are unwanted/mistimed. This results in the nearly 11 million induced abortions, officially recorded annually, which does not include the large number of unrecorded and unaccounted abortions. This reflects the large unmet need for contraception.

Such a situation is mainly due to poor awareness and accessibility to contraceptive services. It is, therefore, necessary to increase and improve the access and awareness of the contraceptives within the family welfare programme, and increase the number and type of methods offered in the "cafeteria-contraceptive basket.

It is much better to advice regular use of contraceptives but no contraceptive is 100 per cent reliable. Considering the typical use patterns and failure rates of the various contraceptives, emergency contraceptives are required and should be provided as a back-up method. Emergency contraceptives are required when unprotected intercourse occurs, i.e., when no

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contraceptive is used, including coercive sex and rape; methods like barrier contraceptives do not function properly; following miscalculations while observing periodic abstinence; missed oral contraceptive pills or expelled IUCDs². Therefore, prior awareness and knowledge of the correct usage needs to be imparted to both the providers and those who are likely to need it, which includes contraceptive users, non-users, both men and women.

EC Schedules

EC method should be started as early as possible but within 48 or 72 hours of the unprotected intercourse, depending upon the type of pills used. With Ru 486 this time interval can be upto five days. Copper IUCD insertion can be done upto 5-7 days.

Yuzpe regimen was the first to be used for the emergency contraceptive, later progestin only pills (levonorgestrel) were used. Now work is being carried out with mifepristone doses of 10 mg and lower given upto 5 days after unprotected coitus. Good service facilities have also to be set-up and adequate counseling for follow-up has to be emphasized to ensure proper use and manage side-effects and failures.

TABLE 1
ECP FORMULATIONS

Formulation	Tablets and capsules per	Doses required
Combined pill regimen LNG 0.25 mg + EE 0.05 mg	2	2
Or NG 0.50 mg + EE 0.05 mg	2	2
LNG 0.15 mg + EE 0.03 mg	4	2
Or NG 0.30 mg+EE 0.03 mg	4	2
Progestin only regimen	1	2
LNG 0.75 mg	20	2
LNG 0.03 mg	20	2
Or NG 0.075 mg	20	2
Danazol 200 mg	2	2b

Timing of administration: First dose within 72-120 h of unprotected intercourse. Second dose 12 h later. LNG - levonorgestrel; EE - ethinyl estradiol; NG - norgestrel,

Source: consortium for emergency contraception 1996, Cu-bearing IUDs, or Cu-bearing frameless intrauterine contraceptive implants were inserted within 120 h of unprotected intercourse.

The effectiveness of progestin only pills is better (89%) compared to (76%) with combined pills when used correctly but with typical use, the rates are lower.

Though ECs can be used at anytime in the menstrual cycle, it should be emphasized that it is not a regular method, we also need to emphasize that it does not prevent STDs.

EC pills are safe and effective. Currently there is only one dedicated preparation marketed, 'Postinor' which is still not available in India. The commonly used oral contraceptive pills can be used, adjusting the dosages according to the hormone concentrations, They are easy to use and no detailed examination is required except a correct and detailed coital and menstrual history. EC pills can also be provided without a prescription. Though this method has too long been kept as the 'best secret', it would be a gross disservice to women not to offer this when required.

Ethical and Religious Considerations

Often providers and elders/parents oppose the widespread dissemination of information on EC among the population, especially adolescents, fearing it could lead to promiscuity, misuse, over use and pressures due to gender imbalances. Another reason for objections is the fear that ready/easy access to ECPs will reduce use of the more regular and effective contraceptives, but studies from all across the world have reported that this does not happen. Also some women's groups fear that this could deprive them of a very strong reason to refuse unprotected sex.

It is important to inform the providers and users about the mode of action of emergency contraceptive pills: Depending upon when it is taken during the cycle, emergency contraceptive pills can inhibit or delay ovulation; or affect the implantation. It does not affect an established pregnancy.

There are very few contraindications to emergency contraceptive pill use i.e., confirmed or likelihood of pregnancy and during attack of focal migraine. The timings of intake are most important; the earlier the better.

Side-effects of nausea are reported in 50 per cent of women and vomiting in half of these. Side-effects usually do not last more than 24 hours after therapy. Progestin only pills have fewer side-effects. Anti emetics help to reduce nausea and vomiting.

There are very few studies on emergency contraceptives done in India. Reports from other countries show that the awareness was very low in the early 1990s (U.K.) when awareness campaigns were initiated. Then in the later 1990s the awareness has increased and women had also used the emergency contraceptive pills. The genuine fear that women would use it too often and compliance with regular methods will be compromised but these studies show that this does not happen. The side-effects of the hormonal pills would deter women from frequent use. The main concern is whether to provide emergency contraceptive pills in advance or only when needed. The awareness has to be given in advance to all potential users.

At the Institute for Research in Reproduction, Mumbai, a study has been carried out in collaboration with the Family Health International, -Rockefeller Foundation grant, looking at the use of emergency contraceptive pills among women relying on condoms as their primary contraceptive method. 200 women were enrolled after detailed information about the study and screening for eligibility and signing a written consent.

During the 3 months of study participation, they recorded details of coital acts and condom use events. Condoms given were those provided through the National Family Planning Programme. If condom broke, slipped during use or was not used, they agreed to take emergency contraceptive pills within 72 hours of such unprotected coital act. The pills given were the Ovral containing 50 by ethinyl estradiol and 0.25 mg levonorgestrol. 1st dose is 2 tablets followed by another 2 tablets after .12 hours. Tablets of Phenergan were given for use if required for nausea and vomiting. The provision of emergency contraceptive pills was randomised in advance (group I) and as needed (group II).

Participants in group I were given the emergency contraceptive pills at enrolment and asked to report to clinic when, they used the tablets to inform the details and collect further advance stock.

Participants in group II were required to report to the clinic as early as possible after the unprotected coitus, to collect the emergency contraceptive pills. A house visit by a social worker was made after one week to record details of pill use.

None of the 270 women contacted for the study was aware of emergency contraceptive methods prior to this study information. All these women were from lower middle socio-economic group. 192/200 participants completed the study, eight discontinued early, (seven due to pregnancy and one was reluctant to continue after one month).

Majority (64%) of the participants were between 25 and 34 years of age, 61 per cent had 10-12 years of formal education (secondary, higher secondary), 76 per cent were housewives and 51 per cent and 46 per cent respectively had 1-2 living children. 95 per cent of the couples had used condoms sometime in the past and 10 per cent of them had the experience of break or slippage.

TABLE 2
THE COMPARISON OF EMERGENCY CONTRACEPTIVE PILLS
USED BY THE TWO GROUPS

	Advance Group	Needed Group
No. of women who required ECPs	32	29
No. of unprotected coital acts	47	41
No. of times ECPs not used	6	18
No. of times ECPs used* correctly	26/41	23
No. of times ECP used incorrectly	15/41	0

"Correct Use" was considered as 1st dose within 72 hours and 2nd dose within 12 hours of interval.

The comparison of emergency contraceptive pills used by the two groups is as follows:

- "Correct use" was considered as 1st dose within 72 hours and 2nd dose within 12 hours interval.

The reasons stated for not taking emergency contraceptive pills as instructed, are shown below:

Reasons for not Taking ECPs as Instructed

- One participant seven times
- One participant two times

Side-effects were the main cause, reported by approximately in 50 per cent of pill users, as shown below;

TABLE 3
REASONS FOR NOT TAKING ECPs AS INSTRUCTED

	Advance	When needed
Child ill	1	3
Forgot instructions and reluctant to take	-	8*
Confused instructions	-	4
Near expected menstruation	1	2**
Indifferent, took risk		1
Went out of city without ECPs	1	-
Office and work tension, so forgot	1	-
Objection from family members	2	-

* One participant seven times

** One participant two times

Side-Effects Experienced by Participants with ECP Intake

At the time of discontinuation the participants were asked to recollect the instructions given regarding ECP intake 72 per cent correctly said the 1st dose should be taken within 72 hours and 83 per cent said the correct interval is 12 hours for the 2nd dose. 1.5 per cent and 4.5 per cent of subjects said they could not recollect/state the timings of the 1st and 2nd dose respectively.

TABLE 4
SIDE-EFFECTS EXPERIENCED BY PARTICIPANTS WITH ECP INTAKE

	Advance (n=41)	When needed (n=23)	Total (n=64)
Nausea	12	6	18
Vomiting	7	5	12
Giddiness	2	-	2
Headache	9	4	13
Breast tenderness	-	1	1
Giddiness, nausea and headache	1	-	1
Bodyache	2	2	4
Fever	1	-	1
Loose motions	1	1	2
Abdominal discomfort	-	2	2
Heavy bleeding	-	1	1

61 per cent said they would prefer advance provision while 87 per cent preferred to get the EC pills when needed. Based on the number of time women did not take ECPs when required, it seems better to offer the ECPs in advance.

It would be practical to-provide ECPs to women according to their preference, but with reinforced instructions in writing, pictures or symbols or even

telephonic contacts. Various health care facilities should also be accessible for ECP distribution and counselling.

More data on patterns of use among women from different strata of society, for about 6-12 months on the use of different primary contraceptives would be useful. Nevertheless EC pills need to be available free of cost, awareness needs to be increased and also counseling to ensure appropriate use.

CONCLUSION

EC is cost effective as a contraceptive first aid. The service facilities need to include sensitive and sympathetic counseling before and after therapy and also follow-up to ensure proper use and manage any failures. The currently recommended and available methods are Yuzpe regimen, Levonorgestrel, Mifepristone Ru-486 and Cu IUD.

The Government of India did not want EC to become substitute for more established and routine contraception. Therefore, EC use is being recognized as an appropriate need among the choices for Indian women.

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कोई भी साधारण गर्भनिरोधक उपाय पूर्णतः विश्वसनीय और जोखिम से मुक्त नहीं है। प्रस्तुत लेख में यह निष्कर्ष निकाला गया है कि भारत में प्रतिवर्ष 11 करोड़ अभिप्रेरित गर्भपात होते हैं, जिनमें प्रतिवर्ष 78% गर्भ अनियोजित होते हैं। और 25% अवांछित अथवा अससामयिक गर्भ होते हैं अतः जोर जबरदस्ती या बलात्कार के मामलों, सामयिक संयम बरतते हुए गलती हो जाने के मामलों, खाने वाली गोलियां खाने में चूक हो जाने के कारण अथवा अन्तःयोनि गर्भनिरोधक उपायों के स्वतः निकल जाने के कारण ठहर जाने वाले अवांछित गर्भ को रोकने के लिए आपात गर्भनिरोधक उपायों के बारे में आम लोगों में व्याप्त जागरूकता काफी कम होने के कारण इन उपायों के प्रदाताओं और इनके सम्भावी प्रयोक्ताओं को प्रचलित उपायों के प्रयोग के बारे में पूर्वगामी जागरूकता और पर्याप्त जानकारी उपलब्ध कराये जाने की आवश्यकता इस लेख के लेखक द्वारा महसूस की गई है।

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INCREASING ACCESS TO EMERGENCY CONTRACEPTION IN INDIA

Anjali Nayyar*

ABSTRACT

The last five years have witnessed a dramatic upsurge of interest in the potential role of emergency contraception as a means to reduce unwanted/unplanned pregnancy; limit the need for unsafe abortion and provide better services for rape victims. Though in use since 1960s; recent years have seen the establishment of an international consortium on emergency contraception; the development of innovative training curricula and IEC materials; the implementation of more aggressive strategies for marketing emergency contraceptive pills; and the publication of informed scientific papers, articles and newsletters. However, the non-availability of registered products; lack of awareness among women and health care providers that contraception following intercourse is feasible; and service-related factors hamper accessibility and wider use of emergency contraceptives. Misconceptions that emergency contraception is an abortifacient, and that its use promotes irresponsibility and a promiscuous life-style particularly among adolescents, also contribute to its under-utilisation to prevent unintended pregnancies. This paper describes in detail about the relevance of various emergency contraceptives, the hurdles in their introduction and availability and the efforts by government and nongovernment organisations for increasing access to emergency contraception in India.

While scientific developments have greatly contributed to our knowledge about emergency contraception, applying this new knowledge to developing countries has been difficult. This is because most research on emergency contraception has been derived from experience gathered in the developed world. Few developing countries have dedicated emergency contraception products, provider knowledge of this method of fairly limited. These nations also present numerous operational constraints that limit their ability to replicate as blueprints, service delivery models developed in Europe and North America.

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What is Emergency Contraception?

Several contraceptive methods can be used to prevent pregnancy after an unprotected act of sexual intercourse. These methods include special doses of ordinary birth control pills as well as the insertion of an intra-uterine device (IUD). Emergency contraceptive pills (ECPs) must be taken within five days of unprotected sex. Depending on the method used, emergency contraception can reduce a women's risk of becoming pregnant from a single act of intercourse by 75 per cent to 99 per cent.

Safety and Side-Effects

Research over the past thirty years has shown that ECPs are safe and effective. There have been no reported deaths or serious complications involving ECPs in over thirty years of use. Side-effects of ECPs include nausea in 30-50 per cent and vomiting in 15-25 per cent of women. Anti-emetic preparations taken before ingesting ECPs reduce these side-effects. Breast tenderness, irregular bleeding and headaches may also occur. These side-effects are far less common for progestin-only ECPs. Side-effects of IUDs may include abdominal discomfort, vaginal bleeding or spotting and infection. These side-effects with the exception of an infection (if it occurs) are temporary. However, neither ECPs nor IUDs prevent the spread of sexually transmitted infections (STIs) including HIV.

An essential component of providing emergency contraception is informing potential users about this important option before they need it. Because the timeframe for seeking treatment is short, women need to be aware that emergency contraception is an option and know where they can seek services. They also need to understand that emergency contraception should be started as soon as possible after an act of unprotected intercourse, but definitely before the required timeframe for both the methods.

NEED FOR EMERGENCY CONTRACEPTION

Potential Users

Every year, women throughout the world have 75 million unwanted pregnancies. Globally, between 120 and 165 million women want to limit or delay future pregnancies, but are not using contraception. In India, the contraceptive prevalence rate is 48 per cent. The recent National Family Health Survey shows that nine per cent of all recent births or pregnancies were not wanted and 12 per cent of women would have preferred to delay the pregnancy. Among women

who did not intend ,to use contraception, one in five women in the prime childbearing ages (15-29 years) cited health concerns, worries about side-effects, dislike of existing methods fear of sterilization. An additional seven per cent did not know of a method or of a source and 12 per cent said that contraceptive use was against their religion. While, 75 per cent of the total demand for family planning was being met, only 30 per cent of the demand for spacing was being met. Notably unmet need was highest among the youngest women and women with only one child, who also have the highest unmet need for spacing.

Despite women's expressed desires to space their children, the condom is used by only three per cent of women, and the pill and the IUD are each, used by only two per cent of women. Five per cent of women currently use the rhythm/safe period method or withdrawal³. Emergency contraception, thus, becomes an important back-up method for the couples who do not use contraception and when contraception fails, as when a condom breaks, pills are missed, or an IUD is dislodged. For these couples, post-coital contraception provides a critical second chance to prevent an unwanted pregnancy.

Consequences of Unintended Pregnancies

By preventing unintended pregnancies, emergency contraception reduces the need for abortion. In Netherlands, which has the lowest abortion rate of any industrialised country, contraceptive use is high among people and emergency contraception has been widely available as a back-up for many decades. In many developing countries, abortions are a leading cause of death among women of reproductive age. In India alone, the total number of abortions conducted every year, are estimated to be about ten times higher than those reported in official service statistics. About 80 per cent of all abortions are conducted by untrained providers at questionable facilities. Consequently a large number of women are exposed to the risk of post-abortion complications and death. In India, only 19 per cent of married women between 15 and 24 years of age use any form of contraception. As a result, 17 per cent of adolescents start childbearing early. These young adolescents seem to contribute substantially to the estimated number of abortions.

Social Conditions

Social and economic conditions such as migration contribute to lower coital frequency. These, conditions give rise to an increased need for emergency contraception. Other social conditions, such as prostitution, are associated with the poverty found in many developing countries, and imply a widespread need for emergency contraceptives.

World-wide, one of the most critical uses for emergency contraception has been in cases of sexual assault. Rape crisis centres in several countries, routinely provide emergency contraception even if the method is not generally in use in those countries.

Age Structure

The youthful age structure of numerous developing countries provides an additional reason to make emergency contraceptives available. Many young couples initiate sexual activity before they begin to practice ongoing contraception. The provision of emergency contraceptives could be an important service to these young people, and may represent their critical first contact with a reproductive health care provider. In India, adolescents represent one-fifth of the population. Marriage and fertility rates within this group are disturbingly high. Available findings in sexual behaviour, awareness and attitudes suggest that between 20 and 30 per cent of all males and 10 per cent of all females are sexually active during adolescence before marriage. Both unmarried and married adolescent women are vulnerable to unwanted pregnancy and are less likely to have decision-making power in their sexual relationship.

Cost

Since post-coital contraceptives are inexpensive to produce, their cost is low to donor agencies and to governments providing subsidised contraception in developing countries, as well as to potential consumers in the private sector. Even where the cost of specifically marketed emergency contraceptives is high, providers may offer low-cost Yuzpe and levonorgestrel supplies by simply dividing cycle strips of oral contraceptives. Moreover, the saving to the health system of averting unwanted pregnancy or unsafe abortion is more than the cost of emergency contraceptive and supplies and services. Indeed, in many settings, the most expensive part of expanding access to emergency contraception is informing women and providers about the option¹.

Status of Emergency Contraception in India

At present no pharmaceutical company in India is marketing emergency contraceptive pills or IUDs specifically packaged or labeled for use as emergency contraception. Another obstacle to wider use is the continued ignorance regarding emergency contraception among most of the medical community and among users. A survey of 342 gynaecologists revealed that only 30 per cent had some awareness about the available emergency contraception options. Similarly, a survey of 1,125 urban and 575 rural women in the

reproductive age group showed that only eight per cent and three per cent of the women in the two groups respectively, knew about emergency contraception. Though oral contraceptive pills are officially available for regular contraceptive use, their use as emergency contraceptives has not been included in the National Family Welfare Programme. The government's documents related to the Reproductive and Child Health Programme also make no mention of emergency contraception.

Efforts of Government of India

In 1997-98, the Government of India developed a training protocol on emergency contraception and conducted several training programmes for health workers. Its new social marketing policy refers to emergency contraception as an option that should be provided to clients. In collaboration with the WHO, the Indian Council of Medical Research and the All India Institute of Medical Sciences are conducting comparative trials to assess the acceptability of levonorgestrel and the Yuzpe regimen. Currently, a large pharmaceutical company has submitted a proposal to the Drug Controller of India for the manufacture and distribution of a levonorgestrel pill for emergency contraception.

Efforts of Non-government Organisations

Very few NGOs have included emergency contraception in their service package. During a recent training programme on media advocacy, there was considerable interest among grassroot NGOs but very few know enough about emergency contraception.

Parivar Seya Sanstha (PSS), an NGO that is an affiliate of Marie Stopes International, undertakes social marketing programmes. PSS has done extensive work on emergency contraception and is currently conducting two projects on the issue that are funded by the Ministry of Health and Family Welfare, Government of India.

The first is a three-year project that includes action research to increase the awareness and feasibility of the use of emergency contraception to develop, brand and package oral pills to be used exclusively for emergencies. The project also aims to assess the potential of upscaling this methodology especially through the public sector. A total of 1,000 clients will participate in the study and will be offered either oral contraceptive pills or the Cu-T IUD as required for emergency contraception. PSS has trained doctors, counselors and outreach staff and has developed IEC materials. The Government of India has provided contraceptive supplies for the study. The appropriate dosage of the oral contraceptive pills for emergency contraception is bottled and given to clients.

So far, 100 clients have been provided emergency contraception and no side-effects, failures or misuse have been reported .

The second is a study to assess the safety and efficacy of norgestrel, levonorgestrel tablets as an emergency contraceptive. It includes training of providers (including a core group of referral doctors) and motivators. On the current use of levonorgestrel as emergency contraception, PSS may get government permission to brand and package this method .

Family Planning Association of India (FPAI) has done some work on emergency contraception through its 'Small Family by Choice project in Bhopal, Madhya Pradesh. The project operates in four districts, and serves a population size of 5.22 million by providing reproductive and sexual health care. FPAI recognised the significance of integrating emergency contraception services within the broader context of sexual and reproductive health care and has taken the initiative to disseminate information at the community level. At a workshop organised by the FPAI in 1997 more than 100 medical personnel from the four districts participated. While some of the participants had been prescribing emergency contraception to their clients, it was clear that they needed more updated information.

FPAI's project counselors disseminate information on emergency contraception through group counseling as well as on an individual basis. Special information; education and communication (IEC) material is being developed in Hindi for the community. At present, the government's brand of oral contraceptive pills - Mala-D and Mala-N are provided to clients in packets with written instructions about the timing, dosage and side-effects. So far, about 180 clients have been given emergency contraception. FPAI is also assessing the feasibility of introducing ECPs under the social marketing scheme' through its community-based distribution (CBD) network.

Population Council Initiatives

When Population Council joined the global dialogue on emergency contraception in 1993, little was being done to make the method available to women in developing countries. The Council is now engaged in this effort so that it can enhance the use of emergency contraception in developing countries.

Building Consensus

In December 1996, the council organised the first national workshop on emergency contraception in India. The workshop brought together leading women's health advocates, service providers, policy-makers reproductive health

researchers and members of the media from India, Bangladesh, Kenya, Indonesia, the United Kingdom and Vietnam. Most participants had never heard of emergency contraception before receiving the background materials for the workshop. While the workshop provided information, more importantly it offered a forum for participants from different countries to share their experiences with emergency contraception and to discuss the appropriate niche for emergency contraception in India.

Through this workshop and subsequent programmes, the Council has built critical support for emergency contraception among important constituencies, including policy-makers, women's health advocates and the media. Discussions have also been held with the Federation for Obstetricians and Gynecologists, the National Commission for Women and the Ministry of Health, and Family Welfare on the need for emergency contraception, its distribution and the non-availability of a dedicated product.

Research

The Population Council conducted two studies on emergency contraception. The first examined the potential of misuse of emergency contraception. It was important to know whether easier access to, a back-up method enhances or undermines condom promotion efforts. The study addressed the question: Does easy accessibility to emergency contraception tempt women to take risks with their more effective regular contraceptive protection?

The Council planned a media campaign to strengthen providers' knowledge and understanding of emergency contraception; increase women's awareness of availability and distribution of methods; and thus increase access to emergency contraception. In order to strengthen communication efforts, a multi-centric collaborative research project was undertaken in three States to obtain Indian data on provider and user knowledge and attitudes on emergency contraception. The respondents were policy-makers at the central and State levels; service providers including doctors, nursing personnel, pharmacists and health workers and clients in need of family planning in the age group of 15-45 years.

Despite the cultural diversity of the three study areas, certain points of consensus emerged. All the respondents felt that unprotected sex was; a common phenomena among youth and responsible for a large proportion of abortions. All had a fair knowledge of contraceptive methods such as oral pills and condoms. Very few had heard about emergency contraception. Some rural girls knew of indigenous concoctions that are used as post-coital contraception. After being told about emergency contraception there was a near unanimity

among the respondents that it would meet a strongly felt need. According to a majority of the youth, emergency contraception should be made available to all, especially to rape victims. The group in one State, however, felt that education on emergency contraception should be provided to them over the age of 18. All stated that detailed information should be provided and emergency contraception should be made available through health care providers and medical personnel. Interestingly, they all felt that emergency contraception should be paid for, albeit at a reasonable cost.

Information Dissemination through the Media

The Council's media campaign sought to raise awareness among the public and to build support for emergency contraception. An important strategy employed by the Council which attributed to a successful campaign was that the television and radio messages were developed in close collaboration with the government. The Ministries of Health and Family Welfare, Women and Child Development and Information and Broadcasting were involved. It was, therefore, possible to air the messages through government controlled electronic media channels that have a wide reach.

In addition to the media campaign, the Council prepared information fact-sheets for policy-makers, service providers and users. These fact-sheets were widely disseminated in the country. These are now being adapted for use in Bangladesh and the Philippines.

Print Media

The Council took the lead in providing information in the print media. An article in the largest circulating popular national daily, the Times of India, was written by a leading gynecologist who is a Council consultant. Well known writers on women's issues and media consultants were encouraged to write articles in women's magazines. Leading newspapers and magazines including popular political weekly carried articles on emergency contraception. Two magazines carried cover articles on the subject.

Several reporters showed an interest on emergency contraception and were willing to write on the topic. Due to the sensitive nature of the subject, low levels of awareness and biases, each reporter had to be individually briefed in detail before being provided with literature. Experts, including obstetricians and gynecologists were encouraged to write articles on emergency contraception. Editors of leading newspaper and magazines were also motivated to write opinion pieces on emergency contraception.

Lessons Learned

Some of the lessons learnt from the media campaign were:

- There are low levels of awareness about oral contraceptives across India. Hence, information on emergency contraception has to be very, clear and precise.
- Due to low levels of awareness and biases, each article placed in the media must be carefully thought through. Information cannot be disseminated through newspapers, unless the reporters are well informed.
- Since there is no dedicated product, a communication campaign can only raise awareness about the concept of emergency contraception. It cannot provide information such as specific dosages in the case of oral contraceptives.
- While providing information is critical, it is as important to build support among key constituencies.
- The media campaign must be based on locally relevant data. It is also necessary to maintain an ongoing dialogue with relevant stakeholders and include data using these stakeholders as respondents.

RECOMMENDATIONS TO PROMOTE EMERGENCY CONTRACEPTION

The Population Council recommends a range of measures in developing countries to promote women's access to emergency contraception. These include:

- Adding instructions for emergency use on labels of appropriate oral contraceptives.
- Packaging contraceptive specifically for emergency use.
- Adding emergency contraceptives to all national essential drugs lists.
- Including information on emergency contraception methods in official documents on reproductive health policies.
- Conducting trials of new and existing emergency contraception methods.
- Conducting research to answer important questions about users and providers attitudes on emergency contraception and service-delivery options.
- Adding question about emergency contraception in routine health surveys.

CONCLUSION

There is significant scope for introducing emergency contraception in India. Since the available information on emergency contraception is limited, further study is warranted.

Organised efforts by professional association, women's health groups, and NGOs can help to legitimise and standardise emergency contraception.

Most importantly, measures to ensure that women know about and understand emergency contraception must be undertaken. It is not sufficient that women have some general idea of their options. For emergency contraception to become a true choice, women must have detailed knowledge of the methods available and be able to find supplies within the short timeframe permitted by the method.

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वर्ष 1960 से आपात गर्भनिरोधक उपायों का प्रयोग जारी होने के बावजूद हाल ही के कुछ वर्षों में खासतौर पर आवांछित गर्भ से बचने के लिए इन उपायों की सम्भावी उपयोगिता की रूचि में एक नाटकीय परिवर्तन अनुभव किया गया है। प्रस्तुत लेख में आपात गर्भनिरोधक उपायों की प्रासंगिकता के विभिन्न पहलुओं और इन उपायों की लोकप्रियता में आने वाली बाधाओं के बारे में भारत के संदर्भ में विस्तारपूर्वक चर्चा की गई है। इस लेख की लेखिका द्वारा यह अनुभव किया गया है कि असुरक्षित सम्भोग के पश्चात एक महिला के गर्भवती होने के जोखिम को आपात गर्भनिरोधक उपायों की सहायता से 75–99% कम किया जा सकता है। प्रस्तुत लेख की लेखिका द्वारा यह भी निष्कर्ष निकाला गया है कि आपातगर्भनिरोधक गोलियां एक थोड़े समय के लिए प्रयोग में लाये जाने के कारण इनके प्रयोग में जोखिम कम है और पिछले 30 वर्षों में किए गए अनुसंधानों से प्राप्त निष्कर्षों से पता चलता है कि आपात गर्भनिरोधक गोलियां सुरक्षित और प्रभावकारी हैं। आपात गर्भनिरोधक गोलियां अथवा अन्तःयोनि गर्भनिरोधक उपाय प्रयोक्ता और एचआईवी सहित यौन संक्रमित रोगों से किसी प्रकार नहीं बचाते हैं। प्रस्तुत लेख में आपात गर्भनिरोध संबंधी सूचना के प्रचार–प्रसार में प्रिंट एवं इलैक्ट्रॉनिक संचार माध्यमों की महत्वपूर्ण भूमिका के बारे में भी विस्तार पूर्वक वर्णन किया गया है।

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SOURCES OF INFORMATION FOR COUPLES REGARDING CONTRACEPTIVES AND THEIR LEVEL OF ADOPTION

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ABSTRACT

Interpersonal communication is a popular mode of communication among the villagers in Pali district of Rajasthan for knowledge on contraceptive methods and their acceptance. In order of media availability in the study area, IPC topped the list followed by radio, television and printed materials. Education, occupation and age are the three important variables that significantly contribute to the level of contraceptive adoption by the couples. Since IPC has emerged more powerful as compared to other modes of communication, sensitising people about their basic health needs through home visits, peer counseling and group meetings in the study area would be appropriate in bringing about desirable changes in their health behaviour.

With only 2.4 per cent of the land areas and 16 per cent of the world's population. India has the dubious distinction of being the second most populated country in the world. From 345 million at the time of independence, the population has increased to 846 million till 1991. It has crossed one billion in 2000 and is expected to reach 1.264 billion by the year 2016. On an average, about 16 million people are added each year or 43,000 each day. This alarming population growth has increased pressure on every sphere of life like infrastructure, economy, environment, the availability of primary health care and nutrition. Thus, in coming years, the challenge would be to introduce innovative programmes that can help slow down this alarming population growth rate so as to meet the basic health needs of population. The States that would invite specific attention in this direction are Bihar, Madhya Pradesh, Uttar Pradesh and Rajasthan where the demographic indicators are poor.

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As indicated the demographic indicators in Rajasthan are not at the desired levels. The literacy rate is 38.6, death rate is 10.4, infant mortality rate is 89 and maternal mortality rate is unexpectedly high¹. This is correlated with the socio-economical status of the State which is poor. Like in other 'States, the family welfare programme in Rajasthan is voluntary leaving the choice of the methods to the individual couple. Although the programme has relied principally on sterilisation, acceptance to other contraceptive methods, such as the IUDs, condoms and pills, needs to be improved significantly. Knowledge on contraceptives obtained through different communication channels like mass media, interpersonal communications, etc. is often utilised by people for self-practice and has a bearing on the contraceptive prevalence rate (CPR) in a given population. As per 2001 census the CPR is 45 per cent for the country as a whole. Potentiality of communication in increasing the awareness and prevalence of various contraceptives among people is well established³. The present study is aimed to assess the impact of communication media on couples in Pali district of Rajasthan for their level of knowledge and adoption of contraceptives.

METHODOLOGY

Selection of District/PHC/Villages/Respondents

The State of Rajasthan is divided into five administrative divisions and 27 districts. Among the districts, the Pali is one of the backward districts. According to 1990-91 census, Pali has a literacy rate of 21.87 per cent compared to the State average of 38.6 per cent. The crude birth rate is 21.17 with growth rate at 16.63. In addition, the general health conditions of the people are not at appreciable levels.

There were 59 PHCs in Pali district. Pipalya (a block PHC) has been chosen for the study, considering its insignificant contribution to the overall performance of health and family welfare programmes of the State as reflected by its demographic indicators such as, CBR, 23.05, IMR, 27.29, MMR, 0.77 and CPR, 52.20. Although there are many other poorly performed PHCs like Bera, Nimaj and others, Pipalya PHC was particularly chosen in view of its accessibility and geographical advantages.

Villages were identified in terms of their health and family welfare performances and were classified as good, medium and poor. In total, nine villages were included in the study and categorised as i) Devatikala, ii) Babra, and iii) Bansia as good performance; i) Barr, ii) Mesia, and iii) Mohara Kala as medium performance; and i) Relada ii) Dhul kot, and iii) Kalab kala as poor performance. Twenty five couples from each village, totalling two hundred twenty

five, within the age group of 15 to 45 (reproductive phase) were enrolled for the study.

Analysis of Variables

The focus of the study is to find out the sources of information from couples regarding the use and choice of contraceptives and their level of adoption. Since the respondents may be influenced by certain personal as well as socio-psychological factors, an attempt was made in this study to find out whether the independent variables like (i) Age, (ii) Religion, (iii) Income, (iv) Education (v) Occupation, (vi) Social participation, and (vii) Housing conditions of the respondents have any impact on their level of adoption of contraceptives.

In order to find out the level of the adoption of contraceptives by the respondents which is considered as a dependent variable, seven prevalent methods of contraceptives were included for analysis in this study. Data from the respondents regarding their method of choice for the use of a particular contraceptive was analysed on a percentage basis. The percentages obtained for all the methods were finally divided by number of methods.

Media Availability and Selection

Unlike urban areas, people in Pali district of Rajasthan tend to listen more to radio and discuss with their friends and relatives, to get information on any subject of their interest. However, the information in relation to contraceptives being very sensitive and important, the use of media such as (i) Interpersonal Communication channel, (ii) Radio, (iii) Television, (iv) Printed materials, and (v) Traditional media as sources of information were analysed in the study.

Sources of Information for Couples Regarding Contraceptives

The respondents in the study area were asked to state their sources of information for practising the different contraceptive methods such as (i) Nirodh, (ii) IUD, (iii) Oral Pills, (iv) Tubectomy, (v) Vasectomy, (vi) Vaginal Pills, and (vii) Rhythm/abstinence. The information received was analysed with respect to the preferred media as the source of information for adopting a particular method.

Data Analysis

Data were analysed using SPSS PC⁺ Package. Pearson's correlation co-efficient was computed. Stepwise multiple regression analysis and ANOVA were carried out.

FINDINGS AND DISCUSSION

Media Availability

Availability of types of communication media to people in the study area is presented in Table 1. Data revealed that-IPC is the most popular mode of communication among all the villagers in the study area irrespective of the classification used as good, medium or poor based on the performances of villages with respect to health and family welfare programmes. This is in agreement with Rogers, 1973 who observed that in communities where access to mass media is limited and educational levels are low, the interpersonal communication may be one of the appropriate channels for conveying information. IPC is more effective because people have more confidence in their friends, neighbours and relatives since this involves no monetary inputs. It is friendly and persuasive in nature. In poor performance villages, 110 respondents out of 150 were found to depend on IPC only. The next available media for information in order of preference are radio, television and newspapers for those who do not have the capacity to buy radio or television sets. Access to these later channels of communication was better perceived in good and medium performance villages as compared to villages classified under poor category. As far as the availability of communication media is concerned, the IPC stood first followed by radio, T.V. and newspapers in all the villages.

TABLE 1
AVAILABILITY OF COMMUNICATION MEDIA

Category	NO Response	IPC	Radio	T.V.	Printed Materials	Total
Good	14	64	27	25	20	150
Medium	18	76	22	19	15	150
Poor	20	110	8	10	2	150
Total	52	250	57	54	37	450
%	11.5	55.5	12.6	12.0	8.2	100

Media preference was almost uniform in all the villages irrespective of their classification on the basis of the performances with respect to the family welfare programmes. IPC (40.2%) was preferred as the number one choice followed by Radio (16.7 %) and Television (11.1 %) respectively (Table 2). The print medium was considered as fourth choice in good performance villages but not in poor performance villages. This trend probably reflects to a busy and vibrant lifestyle of people in good category but a declined education and economic status of the people in poor category villages.

TABLE 2
IMPORTANCE OF DIFFERENT MEDIA /MEDIA PREFERENCE

Category	No Response	IPC	Radio	TV	Printed Materials	Trad. Media	Total
Good	29	63	27	17	14	-	150
Medium	47	57	22.	20	3	1	150
Poor	49	61	26	13	-	1	150
Total	125	181	75	50	17	2	450
%	27.8	40.2	16.7	11.1	3.8	0.4	100

Sources of Information for Couples Regarding Contraceptives

As a source of information for Nirodh, again IPC was the method of choice in poor (54%) followed by medium (42.7 %) and good (34 %) category villages. Ignorance to any of the methods amongst people was more only in' poor performance of villages as compared to other two categories. Nirodh is an inexpensive and effective barrier method but the prevalence of its use is abysmally low; 2.0 per cent for the entire country. Dissemination of the right information through the channels as indicated in the present study was probably not at the desired levels and this was confirmed from the figures stated above with respect to Pali district of Rajasthan. Thus, considerable action oriented programme at appropriate stages are needed to be augmented to bring about a significant change in Nirodh acceptability among people.

Information received from respondents for other methods such as IUD, oral pills, tubectomy, vasectomy, vaginal pills/rhythm or abstinence showed a typically uniform pattern. In the field of contraceptive knowledge and adoption, IPC was found to retain the number one slot as the most favorite medium of communication and education followed by the combination of IPC with radio or television. For the respondents in the poor category of villages the dependence on IPC was 48.7 per cent for gathering information on IUD, 58.7 per cent for vasectomy and 60 per cent for oral pills. This dependence on IPC for contraceptive information gradually shifts to combination of other modes of communication along with IPC such as radio or television or newspapers in the medium or good category of villages. Thus, IPC and television were the preferred channels for source of information for contraceptives (IUD and oral pills) amongst 20 to 22 per cent of the respondents from good category as compared to only 4 to 6 per cent in the poor category villages respectively.

TABLE 3
SOURCES OF INFORMATION FOR COUPLES REGARDING CONTRACEPTIVES

Category	Nirodh			Oral Pills			Tubectomy			Vasectomy			IUD			
	0	1	5	0	1	5	0	1	5	0	1	5	0	1	5	15
Good	14 (9.3)	51 (34)	34 (22.7)	14 (9.3)	45 (30)	34 (22)	18 (12)	52 (34.7)	31 (20.7)	33 (22)	43 (28.7)	26 (17.3)	30 (20)	47 (31.3)	30 (20)	14 (9.3)
Medium	25 (16.7)	64 (42.7)	19 (12.7)	22 (14.7)	65 (43.3)	19 (12.7)	27 (18)	65 (43.3)	18 (12)	40 (26.7)	55 (36.7)	16 (10.7)	38 (25.3)	60 (40)	15 (10)	10 (6.7)
Poor	35 (23.3)	81 (54)	7 (4.7)	23 (15.3)	90 (60)	9 (6)	27 (18)	90 (60)	8 (5.3)	35 (23.3)	88 (58.7)	5 (3.3)	51 (34)	73 (48.7)	6 (4)	4 (2.7)
Total	74	196	60	59	200	62	72	207	57	108	166	47	119	180	51	28
%	16.4	43.6	13.3	13.1	44.4	13.8	16	46	12.7	24,	41.3	10.4	26.4	40	11.3	6.2

Source: (i) No response =0,(ii) IPC = 1, (iii) IPC + T.V.=5, (iv) IPC + TV + Radio + Printed materials =15
(Figures in parentheses indicate percentage)

TABLE 4
CORRELATION CO-EFFICIENT OF SOCIO-ECONOMIC
FACTORS WITH LEVEL OF ADOPTION OF CONTRACEPTIVES

Sl. No.	Socio-economic Factors	
1.	Age	0.251*
2.	Annual Income	0.178*
3.	Education	0.198*
4.	Housing Condition	0.161*
5.	Occupation	0.189*
6.	Social Participation	0.019*

* Significant at -.001 level of probability.

Analysis of Variables

Adoption of contraceptives by the respondents in the study area was positively related to age implying the fact that lesser the age, lesser the adoption of contraceptives (Table 4). The annual income of the respondents in the village was found to be directly proportional to an increased awareness and adoption of the contraceptives. The people in the better income group are usually educated and have easier access to radio, TV and newspapers. Knowledge on contraceptives and their prevalence are perceived significantly higher in this class of people as derived from the present study. Other factors, such as better occupation, housing conditions and meaningful social participation which are again indicators of economic prosperity have also been found to positively, influence the adoption of contraceptives by couples in the study area. In the regression analysis, however, education, occupation and age have emerged stronger as three important variables affecting the trend on adoption of contraceptives as compared to annual income.

TABLE 5
REGRESSION ANALYSIS OF CONTRACEPTIVE ADOPTION
WITH DIFFERENT SOCIO-ECONOMIC FACTORS

Socio-economic Factors	Regression Co-efficients	Standardised Regression Co-efficients
Education	0.142	0.099
Occupation	0.162	0.170
Age	0.189	0.220
Annual Income	6.17×10^{-6}	0.047
Constant	-0.880	-

Levels of adoption of various contraceptive methods are shown in Table 6. Villages under the good (15.3%) and medium (15.0 %) category have shown a

better prevalence rate as compared to poor (6.7%) category villages. The average level of adoption of contraceptives in the study area has been calculated to be 12.1 per cent. Number of people sterilized through tubectomy was more followed by regular use of nirodh or oral pills in all the villages. This finding supports the findings of the study in Rajasthan (N.F.H.S, 1992-93) which confirms the popularity and acceptance rate of tubectomy. Rhythm/abstinence were found to be not very popular in all the villages irrespective of the category. This may be attributed to the incorrect information on the issue of questionable efficacy of the particular method perceived through different channels. It is interesting to observe, that very few women (four only) know about the use of vaginal pills, which was completely unknown to respondents in medium and poor performance villages.

CONCLUSION

Villages in Pali district of Rajasthan relied more on inter-personal communication (IPC) than other different modes of communication available to them like radio, television or newspapers, etc. Categorisation of villages in the form of good, medium or poor on the basis of their performance in the family welfare programmes had no bearing on the preference of the respondents to IPC as the source of information on contraceptive knowledge and adoption. By projecting IPC as a strong source for gathering information, the findings of the present study supports the contention in recommending that health functionaries should organise home visits, peer counseling and group meetings to educate the people to adopt contraceptives.

Lkkjk'k

राजस्थान के पाली जिले के ग्रामवासियों में गर्भनिरोधक उपायों के संबंध में उनकी जानकारी देने और इन उपायों को अपनाने के बारे में अन्तर-वैयक्तिक सम्प्रेषण एक लोकप्रिय संचार माध्यम है। अध्ययन क्षेत्र में संचार माध्यमों की उपलब्धता को ध्यान में रखते हुए रेडियो, टेलीवीजन और मुद्रित सामग्री की सूची में अन्तर-वैयक्तिक सम्प्रेषण सबसे उत्तम संचार माध्यम रहा है। दम्पतियों द्वारा गर्भनिरोधक उपाय अपनाए जाने के बारे में शिक्षा, व्यवसाय और आयु उल्लेखनीय योगदान देने वाले तीन प्रमुख विभेदक हैं। लोगों में उनकी स्वास्थ्य संबंधी मूलभूत आवश्यकताओं के बारे में चेतना जगाने और उनके स्वास्थ्य संबंधी व्यवहार में ऐच्छिक परिवर्तन लाने के लिए अध्ययन क्षेत्र में घर-घर जाना, श्रेष्ठ परामर्श, और सामूहिक सभाओं के आयोजन की सहायता से अन्तर-वैयक्तिक सम्प्रेषण अन्य संचार माध्यमों की अपेक्षा अधिक शक्तिशाली संचार माध्यम सिद्ध हुआ है।

TABLE 6
LEVEL OF ADOPTION OF CONTRACEPTIVE METHODS

Category	N.R.	None of the above	Rhythm / Abstinence	Vaginal Pills	Nirodh	IUD	Oral pills	Tubectomy	Vasectomy	Average	Total
Good	6 (4)	37 (24.6)	4 (2.7)	4 (2.7)	24 (16)	11 (7.3)	21 (14)	31 (20.6)	12 (8)	107 (15.3)	150 (33.3)
Medium	7 (4.6)	38 (25.3)	3 (2.0)	-	22 (14.7)	18 (12)	21 (14)	30 (20)	11 (7.3)	105 (15)	150 (33.3)
Poor	20 (13.3)	83 (55.4)	1 (7)	-	14 (9.3)	4 (2.7)	6 (5.4)	14 (9.3)	6 (4)	47 (6.7)	150 (33.3)
Total	33	158	8	4	60	33	50	75	29	-	450
%	7.3	35.1	1.8	.9	13.3	7.3	11.1	16.7	6.4	12.1	100

(Figures in parentheses indicate percentages)

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SOCIO-ECONOMIC DIMENSIONS OF BREASTFEEDING - A STUDY IN HYDERABAD

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ABSTRACT

This paper examines the patterns and duration of breastfeeding in a sample of 100 urban mothers in Hyderabad City. Significant variables which influence the duration of breast-feeding like, income, education and employment were identified in this study. The study reveals that (i) the incidence as well as the duration of breast-feeding are the highest among the mothers of the lower income group followed by those of the upper income groups, (ii) only 15 per cent of the mothers in the middle income group weaned their children after one year, and (iii) a significantly high proportion of mothers in the middle income group, 37 per cent, weaned their infants in the age group of 1 -3 months itself as against only 7 per cent of mothers in the lower income group and 3 per cent of mothers in the upper income group.

Breast-feeding is considered to be the best kind of feed for the young infants. It has biological and health advantages for both babies and mothers. The mothers immunize their babies through breast-feeding which is documented by a host of medical facts. Breast-feeding helps prevent gastrointestinal and respiratory illness and infections as well as certain immunological disorders and reduces the likelihood of developing certain serious chronic adult illnesses such as multiple sclerosis. Breast-feeding provides maternal protection against breast cancer and osteoporosis. Studies have also shown that human milk enhances intellectual, neurological, psychomotor and social development and is correlated with the development of fewer dental caries among breast-fed toddlers. From a purely health-conscious point of view, breast-feeding is still the best form of early human sustenance, especially in a contaminated world,

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Breast milk provides not only the complete range of nutrients necessary to the young infant but is also easier to digest than the substitutes. Breast milk has special properties that make it superior even to the most carefully homemade or commercial preparation as it has the right proportion of vitamins, proteins and sugar. Hence, even when, supplementary foods are introduced, breast milk remains an important source of proteins and other nutrients for many months.

Breast-feeding further has a vital child-spacing effect which is especially important in developing countries where the awareness, acceptability and availability of modern family methods are very low. Although for an individual woman, it is not a reliable method of family planning. In a country like India where a large majority of the population has a low income and poor education, the need for breast-feeding becomes even more marked and in fact it represents the only way of giving a child a fair chance of survival and good health.

Breast-feeding in India is almost, universal, but many customs and misconceptions surrounding breast-feeding are not conducive to the health of the child. Initiation of breast-feeding is generally quite late and colostrum is discarded. Thus, breast-feeding is socially constructed and controlled practice.

Literature Review

Data from-third world countries show a striking decline in breast-feeding prevalence for infants of all ages in Latin America and to a lesser extent, in the near East and Africa: The breast-feeding duration in urban areas is as low as six months while in almost all rural traditional cultures, breast-feeding usually continues for well over one year 97 per cent in case of rural mothers and only 54 per cent in case of urban mothers.

The duration of breast-feeding is negatively related to socio reconomic development and modernization. Measures of income, education and urban residence are the strongest predictors which decide the length of breast-feeding.

Studies conducted in the past reveal that in developing countries, higher income families breast-feed less in terms of extent and duration and economically poor mothers tend to breast-feed for a longer duration. Another significant determinant of breast-feeding seems to be the education of the mother. Educated mothers tended to stop breast-feeding earlier than the illiterate mothers. Working mothers often find it difficult to breast-feed and take enough care of their infants and so wean their infants quite early. Mothers working in organized sectors tend to breast-feed for shorter duration

than the mothers working in unorganized sectors. Because, mothers in unorganized sectors can take their infants to work place and breast-feed frequently.

Reasons attributed to introduction of top milk vary from urbanization, advertisement and low socio-economic status to maternal malnutrition and lack of family support in foreign countries. The commonest reason for starting top feeds was 'not enough milk followed by other factors such as baby was not satisfied with feeds, cries often, wants frequent feeds, etc. This type of lactation failure is more conceptual (psychological) than real.

MATERIALS AND METHOD

The study was conducted in three different places, namely, Nirmal Nagar, Kukatpalli and Banjara Hills of Hyderabad city, capital of Andhra Pradesh in the year 1994. 100 mothers of different income groups each of whom had a child, aged below two years were interviewed at their respective homes. Structured schedules were used for collecting information on age, employment, education, parity, socio-economic status, structure of family and duration of breast-feeding. Case studies were conducted to get an in-depth understanding of the intricacies involved in the breast-feeding behaviour of mothers as well as to understand the kind of breast-feeding behaviour practiced.

Data on the literacy and educational levels and employment patterns of mothers as well as the aggregate incomes of their households were collected to understand the socio-economic milieu of the mothers and its association with breast-feeding behaviour.

FINDINGS

Socio-Economic Characters

Socio-economic characteristics of mothers presented in Table 1 shows that 41 per cent of the selected mothers belong to the lower income group and 31 per cent and 28 per cent of mothers fall under middle and upper income groups respectively.

TABLE 1
SOCIO-ECONOMIC CHARACTERS OF THE MOTHERS

Income Groups	Education				No. of Mothers	Employment		
	Illiterate	Pre-Metric	Under Graduate	Graduate		Housewife	Unorganised	Organised sector
Lower	18 (44)	13 (32)	7 (17)	3 (7)	41	34 (83)	7 (17)	
Middle	1 (3)		11 (35)	19 (62)	31	23 (74)	-	8 (26)
Upper	-	-	2 (7)	26 (93)	28	23 (82)	-	5 (18)
Total	19	13	20	48	100	80	7	(13)

(Figures in parentheses indicate percentages and others are the no. of mothers)

The lower income, group mothers are characterized by illiteracy (44%) and low educational levels and are mainly housewives (83%) with a few employed in the unorganized sector (17%). In contrast, the middle and upper income group mothers are characterized by higher educational levels and employed in the organized sector and a large percentage of mothers in these groups also remain as housewives (Table 1).

Breast-Feeding Patterns and Determinants

Table 2 shows that 93 per cent of the sample mothers have ever breastfed their infants. The incidence of breast-feeding is the highest among the lower income group mothers, 98 per cent, followed by the upper income group mothers 96 per cent, whereas in the middle income group it is far below 84 per cent and the sample average is 93 per cent.

It appears that the middle income group mothers lag far beyond their counterparts from the lower and the upper income groups in terms of both the incidence (ever breast-fed) and the duration of breast-feeding.

The mothers of the lower and the upper income groups are found to breast-feed their index children for longer duration in terms of age of the child, compared to those of the middle income group. In fact the percentage of mothers breast-feeding their index child in the 6 month is the highest in: the upper income group (92.8%) compared to even the lower income group mothers (85.3%). It was only 52 per cent of mothers in the middle income group who were breast-feeding. However, the duration of breast-feeding falls sharply in the upper income group, as the child grows upto the age of 9th month and beyond and it is lower than the percentage of lower income-group mothers (Table 2). It thus, appears that the upper income group mother's breast-feed their children generally upto 6 months of age and there is an abrupt change in the behaviour of large proportion of these mothers weaning their children thereafter.

TABLE 2
PERCENTAGE OF MOTHERS BREAST-FEEDING BY AGE OF CHILD BY
DIFFERENT INCOME GROUPS

Economic Group	Total No.	Ever Breastfed (%)	(Figures in Percentage) Age of the Child in Months						
			1	3	6	9	12	15	18
Lower	41	97.5	95.1	92.6	85.3	73.0	58.5	34.0	31.7
Middle	31	83.8	80.6	74.0	51.6	29.0	19.3	13.0	9.6
Upper	28	96.4	96.4	96.4	92.8	57.1	46.4	21.0	14.0
Total	100	93	91	88	77	55	43	24	20

Weaning by Mothers

The weaning starts during the age of 1-3 months itself in some cases; but a high proportion of mothers (22%) usually wean their children in 10-12 months of age (Table 3). Distribution by income shows that in the middle income group, a significantly high proportion of mothers (37%) weaned their children in the age group of 1-3 months itself, as against only 7 per cent of mothers in the lower income group and 3 per cent of mothers in the upper income group. Only 15 per cent of the middle income group mothers weaned their children after one year. It is thus clear that the incidence as well as the duration of breast-feeding are again the highest among the mothers of the lower and upper income groups as compared to the middle income group mothers.

Influence of Employment on Breast-Feeding

The basic reason for the differential behaviour of middle income group mothers is their employment. Though the employed mothers are smaller in the sample but clearly shows the influence of employment on the breast-feeding behaviour (Table 4). 100 per cent of mothers working in the unorganized sectors have ever breast-fed. None of them weaned before 9 months. This shows that working in unorganized sectors is not a barrier in breast-feeding. In contrast only 77 per cent of mothers working in organized sectors could ever breast-fed.

TABLE 3
PERCENTAGE OF MOTHERS WHO WEANED THEIR INDEX CHILDREN AT DIFFERENT
AGES BY INCOME GROUPS

Income Groups	Mothers Weaned	Age of the Child (in months)						
		1-3	4-6	7-9	10-12	13-15	16-18	19+
Lower	40	7	10	10	25	10	15	20
Middle	27	37	15	18	15	4	4	7
Upper	28	3	21	21	28	3	18	3
Total	95	14	14	16	22	6	12	11

(Figures in Percentage)

TABLE 4
INFLUENCE OF EMPLOYMENT ON BREAST-FEEDING

Status of Mother		Ever Breast-fed	Weaning Age of the Infants (in per cent)						
			0-3	4-6	7-9	10-12	13-15	16-18	19+
EMPLOYED	Unorganized Sector (7)	100%		—		57	—	29	14
	Organized Sector (13)	77%	46	8	15	15	—	8	8
Housewife (80)		95%	14	19	19	20	7	10	11
Total -100		93%	17	16	16	22	6	12	11

As already mentioned in Table 1, 26 per cent of the mothers in the middle income group are employed in the organized sectors. 46 per cent of mothers have weaned before three months. Through interviews it was found that mothers in the middle income group could not withstand the demands of both the office and home and were forced to find alternative ways of feeding their children. Further, they could not afford to put their children on milk substitutes. They could not sacrifice their jobs like some of the upper income group mothers. They had to leave their homes, travel long distances and were not permitted to take their infants to the work spots. These mothers in the organized sectors get maternity leave for three months only. Many mothers return to work (especially the private organizations) within the first three months of giving birth. The work place, however, does not support breast-feeding and infants are forced to bottle-feed. Duration of leave from work significantly affects the duration of breast-feeding. Mothers who continued breast-feeding after three months in this category were those who breast-feed before and after the office hours and during night hours. They could not afford to take longer leave due to economic constraints and problem of getting alternate employment. Four per cent of mothers from upper income families were originally professional jobholders like doctors, lawyers, etc. They left jobs for one or more years to nurse their infant and expressed to rejoin after their children are grown up. Since they are in a position to take long leave and hope to get back again to their profession easily.

The association of education with the breast-feeding pattern is given in Table 5. Interestingly 95 per cent of illiterate mothers ever breast-fed their index child and this percentage is the lowest in the undergraduate (90%) category. The pattern indicates a steady decline in the duration of breast-feeding when the level of formal education of mothers goes up. The duration of breast-feeding also varied according to level of education. In illiterate group 58 per cent of mothers are breast-feeding for more than one year, 46 per cent under matric and 23 per cent of graduate and above category of mothers have breast-fed for more than a year. Whereas only 5 per cent of undergraduate mothers continued to breastfeed after one year, while it was 31.5 per cent in case of illiterate and 23.00 per cent in case of under-matric.

TABLE 5
INFLUENCE OF MOTHER'S EDUCATION ON BREAST-FEEDING
FIGURES GIVEN IN PERCENTAGE

Education	Total No.	Ever Breast-fed	<3	4-6	7-9	10-12	13-18	19-24	24+
Illiterate	19	95%	10.5	5.2	10.5	15.7	31.5	26.3	-
Under Matric	13	92%	15.3	7.6	15.3	15.3	23.0	15.0	7.6
Under Graduate	20	90%	20.0	20.0	25.0	30.0	5.0	-	-
Graduate and Above	48	92%	14.5	22.9	14.9	22.9	16.6	6.25	-
Total	100	93%	15	17	16	22	18	10	1

Note: *At the time of interview, five mothers were still breast-feeding below six months age of the child, so are not included in this table depicting weaning age.*

Discussion

The present study shows encouraging trends in the upper income groups in contrast to the previous literature. There was a growing awareness about the importance of breast milk through the medium of books and magazines: Almost all the mothers in the upper income groups are educated and have the habit of reading books on mother and child health. They appreciate the importance of breast milk. They are economically well off and could afford to stay at home for few months or years without any financial problem which is not possible in the middle and lower income groups.

In the lower income group, mothers who do labour work could not take leave or take rest as they have to work for survival and in the middle income group, mothers income too is a necessary supplement for the family income.

In the lower income group, breast-feeding was a common practice. Mothers were encouraged to breast-feed for long. Wet nursing too was practiced as one or the other mother was always lactating due to successive children and prolonged breast-feeding.

In earlier times, elders, old people and grand parents or even experienced parents used to guide their daughters in successful breast-feeding. Also they use to take the household responsibility so that a mother could relax and comfortably look after the infant as long as she wished and as long as the baby demanded. But, not in the present social context. Here most of the families are nuclear, mother is all-alone in the family, and it becomes difficult to seek advice now and then whenever she faces any problem. Breast-feeding appears to be a lonely struggle and the end of breast feeding is felt to be stimulated by outside influences. With her limited knowledge she resorts to an easy alternative of readymade commercial foods; Commercial labels like, extra protein, carbohydrates, nutrients with various combinations like milk, Vegetable, egg, and wheat, according to the growing age of the child, attracts the mother. Also when she observes that most of the mothers in her neighbourhood too are practicing the same, she applies the same to her infant irrespective of the age of the child. She takes pride in doing so.

Also mothers in the middle income are under constant stress and strains both psychological and physical. She has to face role conflicts whereas mothers in upper income group have servants to assist, and leisure to look after the infants. In the poor, though mothers are overloaded with the work but they keep the infant in close proximity and breast-feed whenever and wherever she goes. But mothers in middle and upper income groups, feed In privacy. So due to

workload, or presence of outsiders or visitors upset their breast-feeding timings, which slowly leads to insufficiency of milk.

Most of the mothers in the middle income group are less educated and more ignorant of the benefits of breast-feeding. They are unable to get proper information regarding breast-feeding either through books or elders. And it is unlikely that they approach doctors for every small problem. These mothers are guided by various misconceptions, given below which were elicited through case studies.

Misconceptions

Some mothers have an ideal period of breast-feeding in their minds but when it comes to practice rarely they keep up their ideals. They have a lot of misconceptions.

Hereditary: Many mothers believed breast-feeding, or presence or absence of breast milk, is more hereditary in nature. Once a mother feels that she is not able to lactate well, though temporarily, she takes it for granted that she is no more efficient to breast-feed and switches to alternatives. Further, she feels convinced herself that, her own sisters, mothers and relatives also did the same, when they could not breast-feed. As is reported from a case study, where a mother is pursuing her studies, she has attributed her failure in breast-feeding to hereditary. Assuming the cause to be hereditary, she became even more reluctant and took it as natural without making any efforts from her side. Thus, the breast-feeding pattern followed by her sisters and relatives greatly influenced her own behaviour. Few mothers even opined that there is no harm in replacing mother's milk with other milk in the initial three months.

Body Heat According to one of the case studies conducted, a twenty-year-old under-matric mother breast-fed her baby for only three months. According to her the cause of weaning was lack of milk. Which she attributed to body heat. Thus it was believed that even body heat reduces the efficiency to lactate:

Dietary Habits: A mother stated that dietary habits are responsible for breastfeeding behaviour. According to her, mothers use to breast-feed infants for years as they used to drink a lot of milk, whereas now-a-days women are addicted to **tea** and coffee and hence could not lactate. All these lactation failure cases are more conceptual than real.

Traditional Belief: The other belief is that mother is not given food to eat for three days after delivery, and believes lactation is initiated only when the mother starts eating.

Scheduled Breast-Feeding: Few of the mothers reported that their baby has a bad habit of feeding without any schedule. This implies that, mothers believe in scheduled breast-feeding as ideal and best.

Loose Charm and Figure: In many cases, mothers were found to lack determination. Some mothers even expressed their reluctance and uneasiness to breast-feed. They expressed that breast-feeding leads to weakness and feverishness. One mother has gone to the extent of expressing that breastfeeding is disgusting. Few mothers from middle income group felt that mothers loose charm and figure due to breast-feeding but for the sake of the child's health and due to elder's pressure in few cases they continue to breast-feed.

Regarding the size of the breast and the amount of milk production, none except for one expressed that the size of the breast influences the amount of milk production. Surprisingly a mother who is a doctor herself believed in it.

Recommendations

- (i) Since, the study reveals that contemporary women are struggling alone to breast-feed without any counseling around, there is a need for proper information dissemination related to breast-feeding, its benefits and problems.
- (ii) A more practical way to encourage breast-feeding is to form voluntary organizations, associations and groups as has been done in many other countries worldwide. The members of these groups can do counseling through group discussions, telephone and letters. Trained members of the associations can give ante-natal and post-natal talks to mothers at hospitals and maternity and nursing homes.
- (iii) Printed materials, posters and newsletters on advantages of breast-feeding can be produced and circulated. The electronic media like radio and television can be intensively used to propagate messages on importance of breast-feeding as well as to remove misconception surrounding breastfeeding.

CONCLUSION

The present study shows encouraging trends in the upper income groups in contrast to the previous literature. There was a growing awareness about the importance of breast milk through the medium of books and magazines. Almost all the mothers in the upper income groups are educated and have the habit of reading books on mother and child health. They appreciate the importance of

breast milk. They are economically well off and could afford to stay at home for few months or years without any financial problem which is not possible in the middle and lower income groups. In the lower income group, mothers who do labour work could not take leave or take rest as they have to work for survival and in the middle income group, mothers income too is a necessary supplement for the family income. In the lower income group, breast-feeding was a common practice. Mothers were encouraged to breast-feed for long. Wet nursing too was practiced as one or the other mother was always lactating due to successive children and prolonged breast-feeding.

Lkkjk'k

प्रस्तुत लेख में हैदराबाद शहर में रहने वाली 100 माताओं के एक सैम्पल में स्तनपान कराने संबंधी प्रवृत्ति और माताओं द्वारा शिशुओं के स्तनपान कराने की अवधि का विप्लेषण किया गया है। इस अध्ययन के दौरान यह देखने में आया है कि आय, शिक्षा और रोजगार स्तनपान कराये जाने की अवधि को प्रभावित करने वाले कुछ प्रमुख कारक हैं। अध्ययन से पता चलता है कि: 1— उच्च आय वर्ग की माताओं की अपेक्षा निम्न आय वर्ग में स्तनपान कराने वाली माताओं की संख्या अधिक है और इसके अतिरिक्त इस वर्ग की माताओं द्वारा अधिक समय तक स्तनपान कराया जाता है, 2— मध्य आय वर्ग की केवल 15% माताओं ने बच्चों की एक वर्ष की आयु के पश्चात उन्हें अपना दूध पिलाना छोड़ दिया, 3— निम्न आय वर्ग की केवल 7% माताओं और उच्च आय वर्ग की 3% प्रतिशत माताओं की अपेक्षा मध्यम आय वर्ग की 37% माताओं द्वारा 1—3 माह की आयु में शिशुओं को अपना दूध पिलाना छोड़ दिया गया था।

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