PN-ACM-055
109952

Spacing as an Alternative Strategy

India's Family Welfare Programme

M.E. Khan
George Cernada

B.R. Publishing Corporation
Delhi-110 052

Sales Office
D.K. Publishers Distributors (P) Ltd.
1, Ansari Road, Darya Ganj
New Delhi - 110 002
Phone: 3261465, 3278368
Fax: 0091-11-3264368

© 1996 The Population Council, India
ISBN 81-7018-837-7

ACKNOWLEDGEMENT:

This work has been carried out with support from the Population Council's Asia and the Near East Operations Research and Technical Assistance Project. The ANE OR/TA Project is funded by the U.S. Agency for International Development, Office of Population, under Contract No. DPE-3030-Q-00-0023-00, Strategies for Improving Family Planning Service Delivery.

Published by:
B.R. Publishing Corporation
A-6 Nimri Commercial Centre
Near Bharat Nagar, Ashok Vihar
Delhi - 110 052
Phone: 7430113, 7143353
Fax: 0091-11-7138265

Printed at:
D.K. Fine Art Press (P) Ltd.
Delhi - 110 052

PRINTED IN INDIA

FOREWORD

All available data show that despite various constraints, fertility in India has substantially declined since independence. The Total Fertility Rate has declined roughly by 40 per cent from about 6 children in 1951-61 to 3.6 in 1992. In other words 58 per cent of the required fertility decline to reach the replacement level of fertility has already been achieved. Infant mortality during the same period has declined at a faster rate and according to 1994 SRS estimate, it has dropped from 146 in 1951-61 to 73 in 1994 (SRS). The expectation of life at birth has risen from 32 years in 1941 to 1950 to 58 years during 1986-91 and is likely to have achieved a level of 62 years by 1994. The annual exponential growth rate of population has shown a decline during the eighties as compared to the previous decade.

All these changes are important and encouraging. It also indicates that the Indian family welfare programme together with broader social and economic development, has contributed, in slowing down population growth rate of the country. It is the time now to consolidate the gain and provide the family planning programme with a new impetus to accelerate the decline in fertility and improve reproductive health.

Various studies have brought out the deficiencies in the Programme -- these deficiencies range from the emphasis on contraceptive approach, overdependence on sterilization, the need for improvement in quality of services, lack of community participation, inadequate outreach and accessibility, the need for client specific communication, lack of proper follow-up and so on. The recently conducted National Family Health Survey has also provided valuable information on the achievements and shortcomings. It has confirmed that the general awareness of family planning is universal, even in the less developed states, but the acceptance level is only about 40 per cent. The findings of the survey will be extremely useful in planning policy initiatives.

There is a general agreement that in a country like India with a high degree of diversity in the level of social and economic development, traditions, language and culture, family planning strategies cannot be uniform. The programme has to be planned

and implemented at State and even district levels. The programme was launched as a National Programme because it was one of the high priority areas for national development. But the time has come when while retaining its national objectives, the programme planning and implementation need to be decentralized.

The Government of India has recently taken several initiatives to change the focus of the programme from quantitative achievements to quality. The most important of these initiatives is to experiment with removal of method specific contraceptive targets in selected districts. It is expected that the removal of method-specific targets and their replacement by quality indicators will enable the providers to concentrate on quality. Other initiatives relate to revival of "health" rationale for family planning, introduction of special schemes for involvement of farmers groups at the village level, decentralization of management functions to District Block and village level panchayats, improvement of outreach through "Swasthya Melas", etc.

The articles in this Book highlight the findings of various studies done by researchers on family planning acceptance, quality of services, demographic impact, social marketing etc. Although the data used in the studies are old, the findings are quite relevant and will, I hope, prove useful in formulating new strategies.

J.C. Pant
Secretary
Department of Health and Family Welfare
Government of India

5 January 1996

PREFACE

This book is an outcome of a national seminar to discuss alternative strategies for promoting family planning spacing methods. The workshop was planned and organized in close collaboration with the Ministry of Health and Family Welfare. Mr.A.K. Mathur, the then Secretary, Department of Family Welfare took keen interest in structuring the workshop programme and actively participated throughout the meeting. Apart from him, other senior officials of the Ministry including Mr. S.B. Mishra, Joint Secretary, Family Welfare, Mr. R. L. Narasimhan, Director, Social Marketing and several others participated in the meeting and presented their views on how the Family Welfare Programme could be strengthened and what strategies could be adopted for increasing access and use of family planning spacing methods. A total of about 55 senior professionals from 12 States and Union Territories having expertise in different disciplines actively participated and shared their experiences. Their papers have been included in this volume. Though the papers were written about four years back, their observations and the issues raised are still valid. This volume may serve as reminder and stimulate discussion on these issues which are of central importance to the programme. The Foreword written by Mr. J.C. Pant, Secretary, Department of Family Welfare, Government of India for the present volume also underlines these issues as crucial and timely.

After ICPD, the intentions expressed by the Ministry of Health and Family Welfare to bring about a paradigm shift in the programme, from largely demographic goals to meeting the reproductive health needs of women is encouraging. The recent decision of the government to withdraw method specific targets from all over the country and shift the responsibility to set the goals of the programme at the district and PHC levels are important, but also needs careful monitoring. The user perspective particularly with respect to access, quality and promotion of services remain the central focus and almost a pre-condition for success. The present volume raises issues that need to be addressed for the smooth implementation of the paradigm shift in the programme.

The workshop was organized under the ANE OR/TA Project funded by USAID. Participation and guidance provided by Mr. John Dum, the then Director, Health, Population and Nutrition, USAID, Delhi helped in making this workshop a success. I hope the programme managers and professionals who are interested in this subject will find this book useful and stimulating.

John W. Townsend, Ph.D
Project Director
The Population Council

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ABOUT THE CONTRIBUTORS

Sandhya Barge is Manager in the Centre for Operations Research and Training (CORT) and specializes in Rapid Appraisal of Social and Developmental Programme including family planning and reproductive health.

Mari Bhat is Additional Director, Population Research Centre, Dharwad, Karnataka. He is a well known demographer.

George Cernada is Professor of Public Health at the University of Massachusetts in Amherst. Earlier, he was Senior Associate of the Population Council and served as Director, Operations Research and Technical Assistance Project during 1990-93.

N.P. Das is Joint Director, Population Research Centre, Baroda. He is a well known demographer.

M.M. Gandotra is Additional Director, Population Research Centre, Baroda. He has specialized in demographic studies including family planning and mortality.

Shireen Jejeebhoy is a freelance consultant with wide experience in Population Science and Reproductive Health.

M.E. Khan is Programme Associate and Country Advisor in the Population Council. Before joining the Population Council, he was General Manager and in-charge of Social System Division of Operations Research Group (ORG) for more than 15 years.

Harish Khanna was a Senior IAS officer and retired as Director General, Doordarshan. He also served as Executive Director, Population Foundation of India. Professionally, he has contributed significantly in the area of communication.

Sumati Kulkarni is a well known demographer at the International Institute for Population Sciences, Bombay. She is also Vice-President of IASP.

S.B. Mishra IAS, is Additional Chief Secretary in Government of Orissa. Previously, he was Joint Secretary, Department of Family Welfare, Ministry of Health and Family Welfare, Government of India.

R. Narasimhan is President of Black Stone, a large market research firm. Earlier, he was President of Operations Research Group (ORG). Professionally, he is an expert in Market Research.

R.L. Narasimhan is Director, Marketing in the Ministry of Health and Family Welfare, New Delhi. During the last 20 years, in different capacities in Ministry of Health and Family Welfare, he has contributed significantly in shaping the Indian Family Welfare Programme.

S. Rajagopal is Director of Centre for Operations Research and Training (CORT), Baroda. Earlier, he was Chief Executive of ORG and was responsible for its Market Research Division for more than two decades.

J.K. Satia is Executive Director, International Council on Management of Population Programme, Malaysia. He is a management expert and has contributed extensively in the area of family planning. Previously, he was Professor and Dean, Indian Institute of Management, Ahmedabad.

V.K. Sharma works in the Ministry of Health and Family Welfare, New Delhi. Earlier he worked as an Executive in Nirodh Marketing Division of the Government of India.

Prem P. Talwar is an independent consultant. Earlier, he was Head of Demography in the National Institute of Health and Family Welfare, Delhi.

I.C. Tiwari is Senior Family Planning Programme Manager, JHPIEGO in India. Before joining Johns Hopkins University, he was Advisor (Health), Planning Commission, Government of India; Consultant to UNICEF and Professor and Head of Social and Preventive Medicine, Banaras Hindu University.

List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANM	Auxiliary Nurse Midwife
ASFR	Age Specific Fertility Rate
ASMFR	Age Specific Marital Fertility Rate
CBD	Community Based Distribution
CBR	Crude Birth Rate
CEB	Children Ever Born
CEP	Couple Effectively Protected
CHG	Community Health Guide
CORT	Centre for Operations Research and Training
CPR	Couple Protection Rate
CPR	Contraceptive Prevalence Rate
CSM	Contraceptive Social Marketing
DFW	Department of Family Welfare
FPAI	Family Planning Association of India
GFR	Gross Fertility Rate
ICDS	Integrated Child Development Service
ICMR	Indian Council of Medical Research
IEC	Information, Education and Communication
IIPS	International Institute for Population Sciences
IMA	Indian Medical Association
ISM	Indian Systems of Medicine
IUD	Intra Uterine Device
KAP	Knowledge, Attitude and Practice
LHV	Lady Health Visitor
MCH	Maternal and Child Health
MCRAs	Married Couples in the Reproductive Age Group
MIS	Management Information System
MOH&FW	Ministry of Health and Family Welfare
MPW	Multipurpose Worker
MTP	Medical Termination of Pregnancy
NGOs	Non-government Organizations
NIHFW	National Institute of Health and Family Welfare
NRR	Net Reproduction Rate
OCP	Oral Contraceptive Pill
ORG	Operations Research Group

OTC	Orientation Training Camp
OTC	Over The Counter
PDS	Public Distribution System
PHC	Primary Health Centre
PHU	Primary Health Unit
PPA	Post Partum Amenorrhoea
PRC	Population Research Centre
PSI	Population Services International
PSS	Parivar Seva Sanstha
SRS	Sample Registration Scheme
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
TMFR	Total Marital Fertility Rate
UNFPA	United Nations Population Fund
VHG	Village Health Guide
WFS	World Fertility Survey
WHO	World Health Organization

PROMOTING SPACING: A STEP TOWARDS PARADIGM SHIFT

M. E. Khan and George Cernada

Indian family welfare programme has gone a long way in achieving its objective of bringing down country's fertility to replacement level from about 6.0 in 1952 to around 3.6 in 1993 (SRS). To achieve replacement fertility, it needs to drop further to a level of 2.1 children per woman. In otherwords during 1952-1993, about 60 per cent of the goal of replacement fertility has been accomplished. During the same period infant mortality has dropped from 146 to 74 and life expectancy has increased from 41.3 during 1951-61 to 58.6 (1986-91).

These achievements though commendable, have taken a considerable longer time to reach to these levels and are not uniformly spread over the country. The demographic diversity across the regions is wide--total fertility ranges between 2.00 in Kerala to 4.82 in Uttar Pradesh. Similar wide variations could be observed in case of infant mortality and level of contraceptive use.

National Family Health Survey estimates an unmet need of contraceptive of 31 per cent in 1992. This indicates that despite the fact that Government of India has succeeded in establishing an impressive network of health and family welfare facilities all over the country, the service delivery system has failed to meet the contraceptive demand of a large number of people. Overemphasis on sterilization, failure in expanding contraceptive choice, lack of access and promotional effort of spacing family planning methods and slackness in ensuring a good quality of services are some of the reasons frequently mentioned as main bottlenecks of the programme. It is now increasingly realized that sterilization alone neither could help the Government in achieving its goal of attaining replacement fertility level, nor could satisfy the need of couples who wish to space their births or stop child bearing without getting sterilized.

All this demands change in programme strategy, improvement in logistic and managerial support, expansion of contraceptive choice, modification in promotional and communication efforts to make it culturally sensitive, relevant and

balanced with respect to gender to ensure greater acceptance of male contraceptives. The present Volume addresses to some of these aspects. The papers included in the volume were presented in a National Seminar on "Strategies for Promoting Spacing Family Planning Methods" held in Delhi. The articles tell us a great deal about Indian National Family Welfare Programme and suggests ways for improving the services. The thirteen articles are grouped under four headings.

1. India's Family Welfare Programme: Current Situation;
2. User and Women's Perspectives;
3. Improving the Quality of Services; and
4. Improving Programme Strategies.

The two articles under the heading, *India's Family Welfare Programme: Current Situation*, provide an introduction to the Indian family planning programme's over-reliance on sterilization as well as lack of emphasis on spacing births as a family planning strategy. The first article (Rajagopal) reviews the demographic impact of the programme and shows that its impact on reducing the birth rate is less than desired by the Government. It recommends that the contraceptive mix be changed from "almost exclusive dependence on sterilization--to a more balanced use of both terminal and non-terminal methods". The second article (Mishra) suggests strategies for change including providing a criteria of birth spacing methods; increasing access in rural and urban slum areas using existing private, public and community resources; improving the quality of services; and a more effective monitoring system.

The next two articles under the heading, *User and Women's Perspectives on Family Planning*, explore the need for contraceptive choice and spacing as a health and family planning strategy. The focus is the woman's viewpoint. The first article (Jejeebhoy and Kulkarni) calls attention to the inconsistencies of national programme directed primarily to women yet lacking a women's perspective. The paper underlines the fact that the quality, thrust and content of the Information, Education and Communication (IEC) programme has largely neglected the women's perspective and argues to modify the IEC strategy and to make messages culturally more relevant.It also notes that birth spacing has traditionally been practised through postpartum

abstinence and this needs to be integrated into any spacing programme. The authors conclude that women need to be seen not as targets but the rightful recipients of quality services. The second article (Barge) reviews the quality of services available: choice of methods, access to information and services, competence of providers and ability to discontinue use, if desired. Her conclusions, based on the existing field studies, suggest much more room for programme improvement.

The four articles grouped under the heading, *Improving the Quality of Services*, focus on specific issues and research related to factors affecting the choice of family planning methods, the extent of acceptance and the continuation (Talwar) or discontinuation (Gandotra) of use. The need for proper follow-up care and provision of quality services at the time of acceptance of the IUD are documented in a study of IUD Retention in Northern Karnataka (Bhatt and Hasalkar). Additional focus on the relation of the quality of family welfare services to increased acceptance and continuation of contraceptive usage also is provided (Das).

The last heading, *Improving Programme Strategies*, includes five articles. In the first article for increasing use of spacing methods, Satia emphasizes the need of strategic planning addressing to quality of services, introduction of new contraceptive technology and area specific strategies depending on its demographic and socio-economic situation. He also underlines the importance of recognizing need for differential managerial requirements for terminal and spacing methods and requirement of higher financial resources to implement alternative strategies.

Narasimhan and Sharma's article on social-marketing of condoms in India, brings out various strategic questions which need to be answered to strengthen the programme. Though this paper was written about four years back, most of these questions are still valid. Similarly, the trend analysis of social marketing in India by Narasimhan and Khan shows limitation of the programme in penetrating to rural areas and wide variation in off-take of condoms by region. The article also points out to the failure of the programme in increasing use of condom. According to the paper, during 1980-89 period, use of condom increased only by 1 per cent, that too because of its increased acceptance in rural areas. In urban areas the percentage of couples using condoms remained

stagnant at 10 per cent. Today's situation is no different.

The role of community-based contraceptive distribution and need to expand it to provide spacing methods is described in Tiwari's paper. The article highlights the experience of Varanasi CBD project which perhaps is the only large CBD experiment in India. The author concludes that the project was cost-effective and replicable in India. However, it underlines need of giving more attention to a sustained motivational support and management of side-effects (in case of pills) to reduce drop out rate.

In the last paper Khanna emphasizes on taking IEC more seriously as one of the necessary and essential component of the programme and considering it in all strategic planning of national family welfare programme. He argues that because of the unplanned communication activities and misplaced emphasis on sterilization, family planning is still considered as a method for stopping child bearing and not to raise a family by choosing the time to marry and space birth. Khanna rightly argues for the inclusion of adolescents as an important target group for family health education and improvement of communication skill of FP workers in any strategic planning of IEC activities for the country.

The conclusions and recommendations in the articles are summarized below:-

1. A major weakness of the Indian family welfare programme is its thrust on demographic goals rather than empowering the couples particularly the women, to use contraceptive for planning and achieving their reproductive goals and to enjoy sex free from anxiety of pregnancy or disease.

2. The method specific target approach, particularly the emphasis on female sterilization has not yielded the expected results. Since sterilization is used by higher parity couples, the effect on the birth rate is limited. Further, with a prevalence of sterilization of 30 per cent among all married couples it is unlikely to go much higher--if experience in other countries is a guide.

3. Due to over emphasis of the programme for sterilization, family planning is being seen both by providers and users only as a way of permanently stopping rather than spacing childbirth also. Special

attention needs to be paid to the sizable young married couples to promote spacing as a way of bringing healthy family.

4. The quality of services being provided is too often weak, some say poor. Providers at the field level have much more incentive to provide sterilization than other contraceptive methods. The clients are generally not given choice; counselling is non-existing and easy accessibility to condoms and pills is difficult, particularly in remote villages. More attention in training, planning, supportive supervision, logistic support and service provision must be paid to match the services with the potential client's needs.

5. Women's perspective has largely been neglected in planning and implementation of the programme. Instead of addressing to their reproductive needs and providing information and contraceptive services as a measure to achieve their reproductive goals, the programme has targeted them to achieve country's demographic goals.

6. A concerted effort to promote spacing between births needs to be made. Social marketing and community based distribution should be emphasized more. Private doctors and other health care providers both in rural and urban areas could be potential partners in promoting contraception and providing reproductive health services.

7. Adolescent and youth have been totally left out under all IEC activities. There is an urgent need to restructure IEC strategies which are region specific, culturally sensitive and need-based for different segment of population including adolescent and youth.

COMMENTARY

All in all, this is a useful collection of articles. The consensus is that the need to expand family planning services and improve their quality is great. Adopting a stronger national strategy of promoting spacing seems critical--to satisfy the rights of couples to have access to a choice of family planning methods and to plan when and if to have a child; to increase the prospect of healthier mothers and children by increasing the interval between births; as well as to increase the demographic impact of the family welfare programme on lowering the birth rate.

It is important, however, to recognize that although there is a consensus that spacing is a critical strategy to initiate and expand, sterilization services must be easily available to those who want to terminate childbirth. Even if well informed about the advantage of spacing, some will not practise. Others may want a terminal method after spacing births. Furthermore, the Indian programme has a long way to go to provide these other contraceptive methods on a large scale. Committing to a cafeteria approach is one thing and ensuring that all required services are available, are of good quality and delivered in a culturally acceptable manner, is another. It demands not only a shift in the orientation of the programme but also more resources and better trained staff to implement the strategy efficiently. Budgets and cost-effectiveness, unfortunately are not treated in this collection of articles. There is an urgent need to critically examine the cost implications for bringing out the suggested changes.

This volume suggests a major shift in emphasis involving all aspects of creating demand and developing service: improved counselling; a revised worker performance evaluation system giving more weight to satisfying clients' needs than achieving method specific targets; extensive in-service training on the health benefits of spacing; increased supportive supervision; involvement of community and private sector resources; social marketing approaches; and incorporating more culturally relevant themes in IEC activities. This means national and state level decisions have to be taken about financial and human resources to carry out this national strategy. The outcome is critical to the success of the national family welfare programme since the present emphasis on sterilization is neither likely to accelerate the decline in the CBR, nor satisfy the reproductive health needs of the couples.

From the viewpoint of the potential service consumer, this new strategy of emphasizing a shift in the paradigm from quantity to quality and from demographic goals to reproductive right of people with a proper mix of contraceptive methods is likely, if implemented properly, to provide couples with a way to improve maternal and child health status as well as the control of their fertility. If one outcome is a decline in national fertility, it will not be an unwelcome one for India's economy.

BIRTH SPACING METHODS IN THE INDIAN FAMILY WELFARE PROGRAMME

S. B. Mishra

Population explosion has become India's foremost national problem and population control, an over riding national priority. Our demographic goal of NRR (Net Reproduction Rate) equal to one by the turn of the century, now seems unachievable. To reach this goal even by 2005-11 would call for herculean efforts. If would mean reducing the TFR (Total Fertility Rate) from 4 to 2.3 and the CBR (Crude Birth Rate) from 2.03 percent to 1.0 percent, in a period of 15-20 years. To achieve this, the effective CPR (Couple Protection Rate) has to increase from the present level of 44.1 percent (1990) to well above the targeted level of 60 percent since experience has shown that a decline in CBR has not been commensurate with the increase in CPR. Meticulous and sustained efforts are required to consolidate, invigorate and expand the programme of contraception.

Since the beginning of the family planning programme in India, the fertility control programme has had a bias towards terminal methods i.e. sterilization. The following table illustrates this:

Table 1: Couple protection rate by methods, India 1991

	CPR (%) as of 31-3-91	*% Contribution*
Sterilization	30.3	68.6
IUD	6.6	15.1
C.C. Users	5.1	11.5
O.P. Users	2.1	4.8
Total	44.1	100.0

The contribution of the terminal method to the CPR is as high as 68.6 percent while the non terminal or the birth

spacing methods contribute only 31.4 per cent to the total CPR.

An analysis of the characteristics of family planning acceptors reveals that during 1989-90, the average age of acceptors of sterilization is 29.9 years (vasectomy 32.3 years, tubectomy 29.7 years) and the average number of living children of acceptors is 3.3 (3.5 for vasectomy, 3.3 for tubectomy). In other words, sterilization has insufficient impact on TFR and CBR. The situation in respect of IUD, the most important spacing method in India today, is somewhat happier - the average age of acceptors is 27.4 years and the average number of living children is 2.2. According to the latest estimate (ORG Survey 1988-89) 41.6 percent and 24.7 percent of the couples in the age group 15-24 years and 25-29 years respectively, have not been practicing any form of contraception. This analysis underscores the urgent need for promoting contraception with greater vigour among younger age couples. Obviously non terminal contraception or spacing methods would be relevant to this target group as sterilization would not be acceptable to most of the members of this group.

Before discussing the strategy for revamping the birth spacing programme, it would not be out of place to put sterilization in the proper perspective. Sterilization has, over the years, become a much maligned word in the Indian family planning lexicon. Sterilization bashing has become the favourite pastime of academicians and demographers. For them, sterilization is synonymous with the 'failure' or the loss of the 'humane' element in the programme. They seem to feel that if the emphasis on sterilization is watered down and the sterilization targets are done away with, the family planning programme would emerge stronger, would acquire a human face and spacing methods would rapidly gain ground. The argument is reasonable, but not entirely correct.

Firstly, over the past few years, the contribution of sterilization to CPR has been declining perceptibly. In 1990-91 there were 27.4 million acceptors of different modern family planning methods. Only 4.2 million of these accepted

sterilization. Secondly, with the TFR at 4, sterilization even at the high parity of 3.3, has a role. Thirdly, being a one time intervention with high method effectiveness, it is certainly useful in the far flung rural countryside characterized by poor outreach and serious problems of logistics. Fourthly, in the prevailing scenario, each of the non-terminal choices available to the acceptor has its own problems. The continuation rate of IUD is poor - a survey in U.P indicated it to be only 30 percent after the first year. Condom is still not an 'open' contraceptive in India; the acceptors of condom operate under a tremendous burden of inhibition. In the rural areas and the urban slums, its storage and disposal are strong inhibiting factors. Given the poor delivery system and the apathy of the illiterate or semi-literate acceptors, condoms or pills are either not readily available or are not obtained or used on a regular basis. Lastly, the logic that reduction in the emphasis on sterilization would automatically prop up spacing methods is not a sound one. Terminal and non terminal methods are not so interchangeable.

The correct stand would be to accept the importance of both methods for different categories of acceptors. Those with two or more children should be motivated for sterilization. Couples with one child must be motivated for spacing methods. Whenever the motivation for sterilization fails for the higher parity category, couples must be persuaded to adopt spacing methods. Much of the bad reputation of sterilization is due to the poor quality of service. This is mainly attributable to the 'year end approach': performing the bulk of sterilizations in camps in the last few months of the year with the attendant risk pertaining to fake and ineligible cases, loss of quality, post-operative complications and poor follow up. The identification of target couples and their motivation as a continuous activity, and performance of sterilizations on a regular basis, would go a long way in improving the image of sterilization. Improvement in skills, and better care in follow up, are other key elements.

The need to impart the required thrust to birth spacing is both imperative and urgent, specially with sterilization gradually losing ground. The Action Plan recently formulated

by the Department of Family Welfare of the Government of India for revamping the National Family Welfare Programme lays specific emphasis on the spacing methods.

The strategy to improve non-terminal contraceptors should have the following key elements:

a enlarging the basket of birth spacing devices;

b improving their availability specially in rural areas and urban slums;

c launching a multi-faceted campaign for creating demand;

d improving the quality of services; and

e effective monitoring and evaluation.

As is well known, we have a cafeteria approach to family planning in India wherein the acceptor is free to exercise his or her choice with regard to the device. Our birth spacing 'menu' is rather limited. The IUD is the only long acting device available to the acceptors. For the 'not so conscious' acceptor, a long acting contraceptive is much more relevant than the 'daily use' devices like the condom or pill. The urgent need for introducing Norplant and Injectable into the programme arises in this context. However, unlike many other countries, the Indian programme does not yet have these methods.

There is a strong case for the introduction of these devices into our programme. Obviously, being new methods, a cautious and gradual approach has to be adopted. Proper training in clinical and motivational aspects as well as in counselling and follow up has to precede the introduction. Before universalizing Norplant and Injectable, they should be tried first through medical colleges and then experiment on sub district levels before, in a few years time, the new programme

percolates to the level of Community Health Centres and Primary Health Centres.

However, in the prevailing circumstances, the IUD is the major birth spacing device that the national programme has to depend on. Fortunately, the IUD has found wide acceptance, and a sufficient indigenous manufacturing capacity has recently come up to ensure self sufficiency. The continuation rates, however, are low. Thus the major thrust of the birth spacing strategy should be on increasing the coverage of IUD - ideally every woman with one child should be motivated to get an IUD - and on intensifying the training of field workers, specially ANMs, in IUD insertions, counselling and follow up. IUD will have to be the cornerstone of our family planning programme during the present decade.

The condom has a very useful role too. The importance of condom has increased with the emergence of AIDS. The IEC (Information, Education and Communication) campaign for AIDS is bound to push up condom use and benefit birth spacing efforts. Independently, however, some concrete measures need to be taken to popularize condoms. Firstly, non-lubricated condoms should be phased out from the programme. This has already been done and in a few months time only lubricated condoms would be distributed under the free distribution programme of the Government. The Social Marketing programme has already stopped using the non-lubricated condoms. Secondly, the Social Marketing programme of condom needs to be considerably stepped up in rural areas and urban slums to ensure availability of condom at acceptor's door steps. Recently, the Government has introduced social marketing of condoms through the Public Distribution System (PDS) which handles essential commodities like rice, sugar, kerosine etc. This innovation has been a considerable success in Punjab and other States, like Andhra Pradesh, are following suit. In addition to the marketing companies, two NGOs are, at present, undertaking social marketing of condom. It is necessary to induct more NGOs to take up the responsibility.

The Community Based Distribution (CBD) of condoms would be the ideal way to popularize use of condom and has to be introduced on a large scale. It could involve any member of the community selling condoms supplied by the Government or a Marketing Company on a small commission. An innovative method of developing a cheap brand which would be available to any willing member of the community on prepayment, at a reduced price, so that any sale at the printed price would fetch a small remuneration to the community worker, may be the right approach in this direction. The packet of 3 condoms with a printed consumer price of Rs. 0.30 could be made available to any community worker at Rs. 0.25. The subsidy element can be met by bringing about a reduction in free distribution. Phasing out the free distribution programme with the expansion of social marketing and CBD is desirable as people identify efficacy with cost. Besides, heavy wastage associated with free distribution can be obviated and the use of a priced product can be ensured better than a free product.

In many countries, the Oral Contraceptive Pill (OCP) is the backbone of the family planning programme. It has a great potential in India also. All out efforts have to be made to popularize it among rural acceptors among whom it has limited appeal today. A recent decision of the Government should help its wide dissemination. Earlier the OCPs were sold only in the chemists' shops through a medical prescription. Of course under the free distribution scheme of Government, OCPs were distributed by the trained paramedical staff. Now the OCP has become an OTC (Over The Counter) product. It can be sold by anyone without a doctor's prescription. In another recent policy decision, the Government has allowed private medical practitioners to distribute Mala 'N', the free OCP, to their clients and charge a small fee. This would bring about greater involvement of private doctors in the OCP programme. As with the condom, social marketing and the CBD of the Oral Pill have to be stepped up through innovative measures.

A real breakthrough has been the weekly OCP-the non steroidal 'Centchroman', a product of about twenty years of

indigenous research endeavor by the Central Drugs Research Institute, Lucknow. It is now marketed in a limited way in Delhi under the brand name of 'Saheli'. In a few months time, when the bulk manufacture of the basic ingredient gets underway, the pill would be available on a large scale. It has few side effects and great potential. The OCP programme stands to benefit a great deal if manufacturing and supply logistics are properly linked together and the product is brought under the social marketing programme.

In order for spacing methods to find wide acceptance, NGOs have to play an extremely important role. Strong NGOs with a national or multi-state presence would be able to develop their own brands of condom or pill and undertake social marketing like the PSI (Population Services International) and the PSS (Parivar Seva Sanstha) have been doing. Often strong NGOs can follow the example of FPAI (Family Planning Association of India) and take up free distribution through the CBD approach. Smaller NGOs may either operate under the umbrella of social marketing companies for social marketing or link up with the State Governments to undertake free CBD distribution. These smaller NGOs would, of course, require some financial support from the Government to meet their expenses during promotional activities. Recently the IMA (Indian Medical Association) has undertaken a programme to distribute oral pills through its members. This programme has a great potential as it could involve thousands of medical practitioners throughout the country.

Practitioners of ISM (Indian Systems of Medicine) offer a vast potential for the popularization of birth spacing devices. In interior rural areas, ISM practitioners enjoy great confidence and credibility as they are often the daily point of contact for the rural clients. No time should be lost in formulating an imaginative programme to involve them in this effort.

'Birth spacing camps' like sterilization camps should form a part of the new strategy. Regular camps for IUD insertion can be held on fixed days of the week or month involving the ANMs (Axillary Nurse Midwife) and the

Anganwadi workers. Similarly, mobile vans can organize camps for the dissemination of information, motivation and distribution of condoms and oral pills. A basic weakness of birth spacing efforts is that field workers spend a considerable amount of time and energy on motivation and the changing of attitudes. The contact time with the acceptor is longer than sterilization or immunization. The ANM is becoming increasingly over-burdened with work relating to MCH and immunization and perhaps does not have enough time to discharge family planning responsibilities, specially those relating to motivation and counselling for birth spacing efforts. It is high time that we think of evolving alternative models for effective family planning interventions involving, in addition to the ANM, other agencies like Anganwadi workers, rural practitioners, Village Health Guides, Mahila Mandals, and grass root workers of the government departments.

Target setting and monitoring of birth spacing efforts need to be systematized and strengthened. Modified mechanisms aimed at identifying the target group comprising couples with one or more children, continuous contact for motivation, acceptance of birth spacing devices, close follow up of the acceptor at regular intervals etc, has to be evolved.

15

DEMOGRAPHIC IMPACT OF FAMILY PLANNING PROGRAMME IN INDIA

A Statistical Analysis

S Rajagopal

Introduction

The Family Planning Programme has not been having the desired impact in reducing the birth rate - at least not in terms of the desired rate of decline. In the present paper, based on published statistics, an attempt has been made to analyze the impact of family planning on birth rate. Both time series and cross section data have been used to get an understanding of the relationship over the last decade and a half. Multivariate technique has been used to get a precise measure of the impact of Contraceptive Prevalence Rate (CPR) on Crude Birth Rate (CBR), when all the contraceptive methods are taken together, as well as when CPR due to terminal and non-terminal methods are considered separately.

Linkage Between CPR and CBR

According to the available statistics, the period 1976-77--1983-84 shows a steady birth rate. The couple protection rate (CPR), which is a measure of acceptance of the Government of India's efforts in Family Planning, also shows a steady percentage over the period 1976-1982. The break up of total couple protection rate into that due to sterilization and that due to other temporary methods also show that the percent of eligible couples protected by either methods remained more or less invariant over this period. (Table 1).

Towards the end of the period 1976-77 to 1985-86, there was some semblance of an impact of family planning on the crude birth rate (CBR). But, a regression analysis using the data for this decade shows that neither of the two methods-

sterilization nor other spacing methods, could significantly explain the variation in crude birth rate which had remained almost invariant over this period. In other words, CPR and CBR did not exhibit any strong empirical relationship since neither one was changing much.

Table 1: Couple Protection Rate (CPR) Vs Crude Birth Rate (CBR) - All India

Years	*CBR*	*CPR due to*		
		All method	*Sterilization*	*Other methods*
1976-77	33.0	23.5	20.7	2.8
77-78	33.3	22.5	20.1	2.4
78-79	33.7	22.4	19.8	2.6
79-80	33.7	22.3	19.8	2.5
80-81	33.9	22.8	20.0	2.8
81-82	33.8	23.7	20.6	3.1
82-83	33.7	25.9	22.0	3.9
83-84	33.9	29.5	23.7	5.8
84-85	32.9	32.1	24.9	7.2
85-86	32.6	34.9	26.5	8.4
86-87	32.2	37.5	27.9	9.6
87-88	31.5	39.9	29.0	10.9
88-89	30.5	41.9	29.8	12.1
89-90	29.9	43.3	30.1	13.2

Source: Analytical review of couple protection rate (1990) Dept. of Family Welfare, MOH&FW, Govt. of India

Since 1984-85, a relatively faster decline in the birth rate can be noticed. For the subsequent analysis, the data for the decade 1980-81 to 1989-90 were utilized. During this decade, the CBR declined from 33.9 to 29.9, whereas the effective CPR due to all methods increased from 22.8 to 43.3 from 20.0 to 30.1 due to sterilization and from 2.8 to 13.2 due to other non-terminal methods.

A linear regression was fitted to the data of 1980-81 - 1989-90 between CPR for all methods, and CBR of the corresponding years, to examine whether there exists any empirical relationship between CPR and CBR. The regression coefficient of -0.18 was found to be statistically significant (at

1% level), with a correlation coefficient -0.94. The regression equation obtained was

$$CBR = 38.5 - 0.18\ CPR. \quad .....(1.1)$$

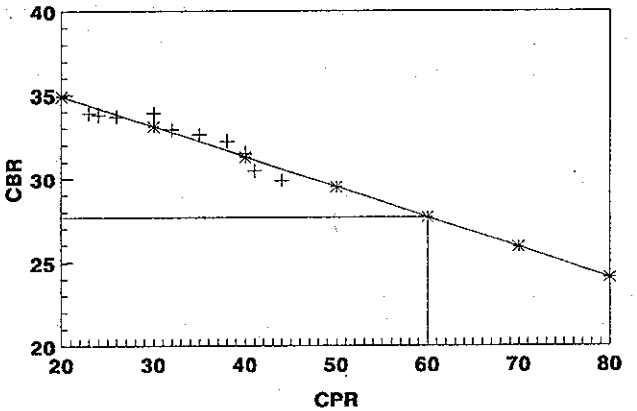
Other researchers (Srikantan et. al. 1989, Brown and Jain 1983, Kapoor 1984) have also obtained similar relationship for different periods. For instance, Srikantan et. al., (1989) obtained a correlation coefficient of -0.86 for the period 1971-86, but this relationship weakened when the regression was fitted for the period 1977-86. Brown and Jain (1983) quotes a similar relationship for the period 1977-85 with a regression coefficient of -0.16. All these studies thus indicate an association between CPR and CBR. However, it should be noted that this relationship should not be interpreted as a complete causal relationship between CPR and CBR, as in none of these studies other proximate variables were considered.

According to expert committee report to attain a crude birth rate of 21, the effective couple protection rate should reach a level of 60 per cent (National Health Policy of Government of India, 1983). However, the regression analysis based on 1980-89 data, given above, shows that for **every unit increase in CPR, the decrease in CBR is only of the order of 0.18 units. With such slow rate of decline in CBR, a CPR of 60 will only bring down the CBR to 27 per 1000 .** In other words, if we have to reach a birth rate of 21 per 1000 during the next decade or so the decline in CBR has to be at a faster rate. Of course, **there appears to be a faster decline in the birth rate from 1985-86, but as only 5 years data are available after 1985-86 no regression analysis has been attempted on the data for this five year period. To put it crudely, if one assumes that the present declining trend will continue, for achieving CBR of 21, a CPR of 71 per cent will be required, and this could be achieved only by around 2007 A.D.. The task is obviously difficult and other alternative approaches should be adopted to make the program more effective.**

Rates of Change in CPR

The increase in couples protected through sterilization and through other non-terminal methods, both in absolute numbers and in terms of percent change, are presented in Table 2. As can be seen from the table, the increase in couples protected through sterilization has been declining year by year during the last five years of the decade.

Chart 1: Couple Protection Rate (CPR) Vs Crude Birth Rate (CBR)



Period: 1980-81 to 1989-90

Table 2: Rate of Change in Couples Effectively Protected

Year	*Sterilization*			*Other methods*			*All methods*		
	No of CEP mil.*	*Annual Increase mil.*	*% Change*	*No. of CEP mil.*	*Annual Increase mil.*	*% Change*	*No. of CEP mil.*	*Annual Increase mil.*	*% Change*
1980-81	23.32	--	--	3.12	--	--	26.44	--	--
1981-82	24.53	1.21	5.3	3.65	0.53	16.8	28.18	1.74	6.6
1982-83	26.73	2.20	9.0	4.73	1.08	29.5	31.46	3.28	11.6
1983-84	29.37	2.64	9.9	7.24	2.51	53.2	36.61	5.15	16.4
1984-85	31.49	2.12	7.2	9.19	1.95	26.9	40.68	4.07	11.1
1985-86	34.31	2.82	8.9	10.85	1.66	18.1	45.16	4.48	11.0
1986-87	37.00	2.69	7.8	12.73	1.88	17.3	49.73	4.57	10.1
1987-88	39.34	2.34	6.3	14.84	2.11	16.6	54.18	4.45	8.9
1988-89	41.32	1.98	5.0	16.82	1.98	13.3	58.14	3.96	7.3
1989-90	42.72	1.40	4.1	18.75	1.93	11.5	61.67	3.33	5.7
1990-91	43.95	1.23	2.9	20.12	1.37	7.4	64.07	2.60	4.2

CEP Couples Effectively Protected.*

Source: Analytical Review of Couple Protection Rate (1990), Ministry of Health and Family Welfare, GOI.

It is possible that this decline is due to recent shift in the programme emphasis, from exclusively sterilization oriented to a more balanced mix of sterilization and other non-terminal methods. However, it is disturbing to note that **while the increase due to sterilization has reduced, the yearly increase in the number of couples protected through non-terminal methods has not shown a corresponding increase**. This is despite the fact that during the same period the number of eligible couples has increased and has been increasing at a faster rate.

Result of Regression Between CPR and CBR: Statewise Analysis

Unadjusted Data : The regression analysis between CPR due to all methods versus CBR over different states was carried out for 1985 and compared with that of 1990. The regression coefficient between CPR due to all methods (1985) and CBR was estimated to be -0.21 which is statistically significant at 5 per cent level with a correlation coefficient of -0.52. It means, that the CPR explains only 27 per cent of the variation in CBR.

$$CBR = 38.75 - 0.21\ CPR \quad .... (3.1)$$

$$R^2 = .27$$

On the other hand, if CPR due only to sterilization [CPR (st)] is regressed with CBR, the correlation coefficient improves to -0.76, while the contribution to the variation in CBR due to other methods is not statistically significant

$$CBR = 43.29 - 0.45\ CPR\ (st) \quad .... (3.2).$$

In other words, **the analysis shows that while sterilization has some impact in reducing birth rate,** the regression was able to explain up to 59 percent of the variation in CBR - **the contribution of non-terminal methods remained negligible** (statistically non-significant).

A similar analysis when carried out on data for 1990 shows that there is no significant relationship between CPR due to all methods and CBR. But the picture dramatically changes

Chart 2: Annual Increase in Couples Effectively Protected Due to All Methods

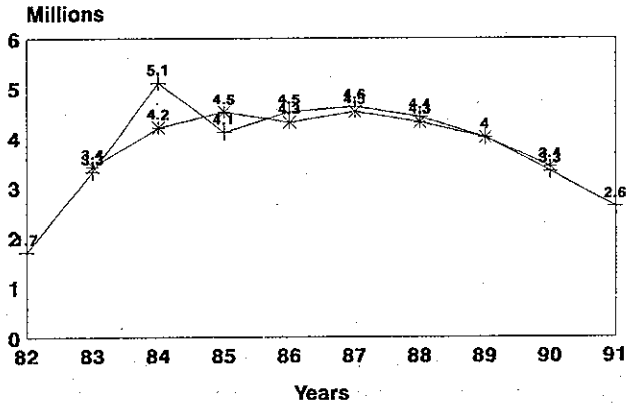


Chart 3: Annual Increase in Couples Effectively Protected - Sterilization

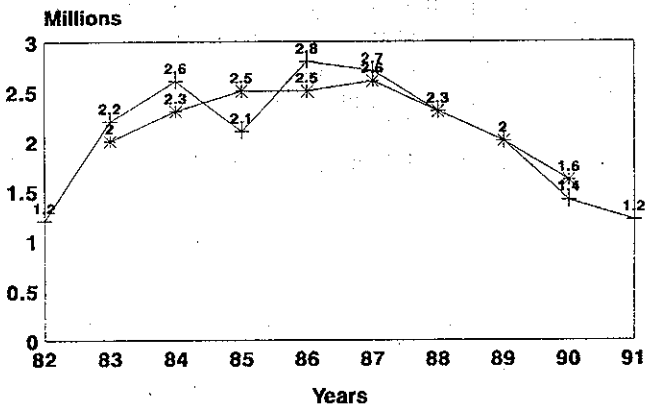
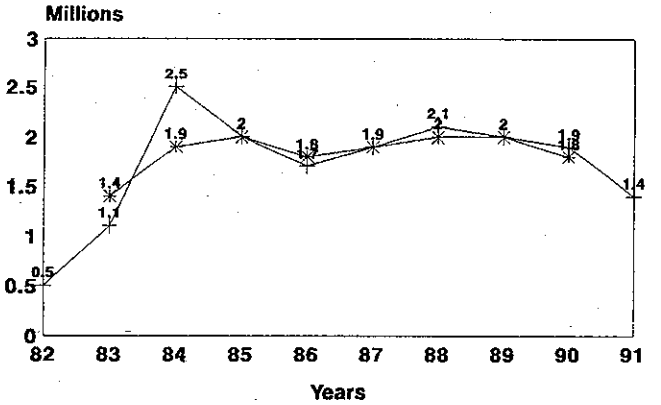


Chart 4: Annual Increase in Couples Effectively Protected - Other Methods



when the CBR is regressed separately with the CPR due to sterilization and that due to other methods. CPR due to - sterilization explains 59 per cent of the variation in CBR (R = 0.77) and the regression coefficient was significant at a one per cent level (Table 3). The addition of the variable, CPR due to other temporary methods, improves R2 from 0.59 to 0.72, the regression between CPR due to other methods CPR (OM) and CBR being statistically significant at 5 per cent level (R = - 0.37). But an unhappy feature of this is that the sign of the regression coefficient due to other non-terminal methods is positive (+0.21), which is not easily explainable.

$$CPR = 41.98 - 0.48\ CPR\ (st) + 0.21\ CPR\ (OM) \ldots. (3.3)$$

Table 3: Result of Regression Between CBR and CPR.

CPR due to		*1985*	*1990*
All methods	Reg.Cofft.	-0.21*	-0.14
	R2	0.27	0.20
Sterilization	Reg.Cofft.	-0.45**	-0.40**
	R2	0.59	0.59
Other methods	Reg.Cofft.	0.13	0.21*
	R2	0.03	0.13
Sterilization & Other methods (jointly)	Reg.Cofft.	(0-.47, 0.13)**	(-0.48, 0.21)**
	R2	0.62	0.72

* *Statistically significant at 5 per cent level.*

** *Statistically Significant at 1 per cent level.*

Since 1985-86 attention has been paid to the promotion of non-terminal methods as well. However, the effect of this relatively balanced approach is not reflected in the above regression analysis. In 1985, the CPR due to non-terminal methods did not contribute significantly to the reduction in CBR, but in the 1990 analysis there is a slight effect (significant at 5 per cent) noticed in this empirical relationship. However, contrary to the expectation, the regression coefficient is positive (0.21). This could be due to inconsistencies in the data itself as other authors have pointed out (Srikantan et. al. 1989; Kapoor 1989). For instance Srikantan et. al (1989) pointed out several inconsistencies in the reported CPR for some of the states and felt that such inconsistencies do not allow full appreciation of the existing situation.

Adjusted Data : The CPR due to different methods as estimated from the Third All India Family Planning Survey carried out by the Operations Research Group (ORG) and the corresponding GOI estimate are given in Table 4.

Table 4: CPR by Method as Reported in ORG Survey and Service Statistics 1988

	CPR due to				
	Sterilization	*IUD*	*Pill*	*Condom*	*Any method*
ORG estimate	29.6	1.9	1.3	5.2	38.0
GOI estimate	28.9	5.2	1.5	4.2	42.1

The difference in sterilization was explained in terms of the non-inclusion of sterilization done by the private doctors in their clinic in service statistics. Similarly, the service statistics do not include imported condoms sold in the market. However, the difference in IUD could not be explained. This may be largely due to the inflated figures given by the workers to show their target achievement.

If the service statistic on couple protection rates due to different methods in the different states for 1990 are adjusted based on the 1989 ORG survey estimates, the regression analysis turns out to be more meaningful. The adjustment factors are ratios of method specific contraceptive prevalence rates as given by the service statistics to estimates from the Third All India Family Planning Survey (1990). The adjustment in the CPR due to sterilization is marked only in a few states. But, the effect of adjustment on CPR due to other non-terminal methods was significant in many states leading to a major change in the CPR due to all methods (Table 5).

Table 5: Couple Protection Rates-Adjusted and Unadjusted 1990

State	*Sterilization*		*Other methods*		*All methods*		*CBR*
	U	*A*	*U*	*A*	*U*	*A*	
Andhra Pradesh	35.0	45.6	7.9	2.9	42.9	51.2	25.6
Assam	26.0	22.1	2.2	8.5	28.2	30.6	27.5
Bihar	22.3	21.0	4.0	2.6	26.3	23.6	32.9
Gujarat	39.4	38.2	19.2	7.5	56.5	45.7	29.5
Haryana	32.4	38.9	26.5	8.6	58.9	47.5	31.8
Himachal Pradesh	36.8	42.0	13.3	7.9	50.1	49.9	27.0
Jammu & Kashmir	18.4	27.8	3.3	5.5	21.7	33.3	31.4
Karnataka	38.0	40.3	8.0	9.8	46.0	50.1	27.8
Kerala	44.9	61.1	9.5	5.8	54.4	66.9	19.0
Madhya Pradesh	27.1	30.1	12.3	5.5	39.4	35.6	36.9
Maharashtra	42.0	42.4	12.4	7.7	54.4	50.1	27.5
Orissa	31.4	33.9	9.3	5.8	40.7	39.7	29.9
Punjab	38.7	37.2	34.5	32.1	73.2	69.3	27.6
Rajasthan	21.9	23.2	7.1	4.1	30.0	27.3	33.1
Tamil Nadu	44.5	38.7	12.6	7.1	57.7	45.8	22.4
Uttar Pradesh	19.6	16.9	13.7	5.7	33.3	24.8	35.7
West Bengal	28.7	30.1	4.4	9.0	33.1	39.1	27.3

U = Unadjusted A = Adjusted

When the adjusted CPR was regressed with the CBR, the result shows that the CPR (all methods) has a significant (at 1 per cent level) relationship with CBR and this explains 56 per cent of the variation in birth rate. A similar exercise with adjusted CPR due to sterilization and that due to non-terminal methods shows that there is statistically significant relationship (at 1 per cent level) between CPR (sterilization) and CBR, but the CPR (non-terminal methods) does not have a significant relationship with CBR. **This means that CPR (non-terminal methods) does not contribute to the reduction in CBR.** In other words, sterilization alone explains the 58 per cent of the variation in birth rate (Table 6).

The wide variation between states in the CPR due to other temporary methods (before adjustment) has been reduced on account of the adjustment. The regression equation of 1990 for CPR (adjusted) due to all methods vs crude birth rate is :

$$CBR = 40.60 - 0.28\ CPR\ (Adj.) \ldots\ldots\ldots (4.1)$$

The regression coefficient is statistically significant at 1 per cent level. As in the earlier cases, the regression coefficient between CPR (sterilization) vs CBR is significant (at 1 per cent level), (R2 = 0.58) and that due to other methods is not significant (R2 = 0.01).

Table 6: Results of Regression Analysis Using Adjusted Data (1990)

		Unadjusted	*Adjusted*
All methods	Reg Coefft	-0.14	-0.28**
	R2	0.20	0.56
Sterilization	Reg. Coefft	-0.40**	-0.31**
	R2	0.59	0.58
Other method	Reg. Coefft	0.21*	-0.11
	R2	0.13	0.01
Sterilization and other methods (Jointly)	Reg. Coefft	(-0.48, 0.21)**	(-0.30, -0.11)**
	R2	0.72	0.59

** *Significant at 1 per cent level of significance*
* *Significant at 5 per cent level of significance*

With unadjusted data, the two variables together explain 72 percent of variation in CBR, but the regression coefficient for the second variable becomes positive (3.3). With adjusted data, the two variables together explain 59 percent of the variation in CBR, the couple protection rate due to other methods contributing just one per cent towards explaining the variation in CBR and hence the regression coefficient not significantly different from zero.

Based on the foregoing two exercises, doubts are raised as to the reliability of the data from the service records, particularly those pertaining to non-terminal methods. These inaccuracies could either be in the basic record keeping or due to the various conversion factors used to convert figures of acceptors of different methods into effective couple protection rate, which becomes necessary to render comparison feasible between methods. Conversion factors such as attrition rate for different methods, conversion to effective sterilization rate etc.,

could be worked out separately for the different states, and the adjustment done separately for each state. This might improve the consistency of the statewise figures.

Summary and Conclusions

1 Couple protection rate as an explanatory variable for the decline in crude birth rate has explained 88 percent of the variation in CBR during the period 1980-81 to 1989-90. But, the regression coefficient was -0.18, which means, a decline of 0.18 per cent in CBR was being achieved for one percent increase in couple protection rate due to all methods. This rate is possibly not adequate. According to the National Health Policy (1983), the couple protection rate of 60 per cent should be reached to achieve a crude birth rate of 21 per 1000 of population by 2006. But, based on the regression exercise for the period 1980-81 to 1989-90, **the birth rate at best can go down to around 27 per 1000 even if the CPR goes up to 60 per cent. If the pattern of decline during the last five years in CBR continues, a CPR of 71 will be required to bring down CBR to 21 by around 2007.**

2 If one takes a look at changes in absolute terms (numbers) there is a downward trend in the rate of increase in CPR due to sterilization, despite the increase in the number of eligible couples. Again, the rate of change oscillates around 1.9 million couples protected by other spacing methods. This means that **the annual per cent increase in CPR due to all methods, which was 11 per cent in 1985-86, has gone down to 4.2 per cent in 1990-91.** This could partly be because of the Government's policy of shifting emphasis to promotion of non-terminal methods as compared to sterilization.

3 If we consider the state-wise scenario, there are large variations from state to state in CPR due to different methods.

The regression analysis of CPR versus CBR was done for 1985 and for 1990. The regression analysis shows that in 1985 the regression coefficient (-0.21) between CPR and CBR was significant at 5 per cent level, CPR explaining 27 per cent of variation in CBR; but in 1990, this empirical relationship (regression coefficient -0.14) was not significant. The data for 1990 was when adjusted using the data from Third All India Family Planning Survey, then the regression coefficient between CPR and CBR (-0.28) becomes significant at 1 per cent level, CPR explaining 56 per cent of the variation in CBR. In all of the cases, CPR regressed with CBR exhibits a strong relationship, the regression coefficient being significant at 1 per cent level. But the CPR due to other non-terminal methods does not exert any significant impact on CBR except in 1990 using unadjusted data where the regression coefficient (0.21) becomes significant at 5 per cent level; but the regression coefficient becomes positive which makes interpretation difficult.

4 Possibly, equal emphasis is not being given to the promotion of non-terminal methods in the different states, or the level of accuracy of the basic service records on couples protected through different methods varies from state to state. In this connection, it might be worthwhile to adopt state-wise correction for attrition, consumption rates for calculating equivalent sterilizations etc., for different methods, instead of applying uniform conversion factors to all states.

The study clearly brings out that impact of family planning program in reducing CBR is modest and much below the desired level (CBR declines only by 0.18 unit for every unit increase in CPR). According to the present study, even if we achieve CPR of 60, the CBR may remain around 27. During the last five years the impact of the program was relatively better and CBR has shown somewhat faster decline. The study, however, shows that even if the program continues to

follow the pattern prevailing during the last five years, a CPR of 71 will be required to achieve the national target of CBR of 21 and this could be achieved only by around the year 2007.

International experience indicates that achieving such a high CPR is not an easy task, particularly if program does not offer multiple choice of contraceptives to prospective users. Thus, to make the impact of program more visible, the use of contraceptive mix must change from the present almost exclusive dependence on sterilization, generally adopted after having several children, to a more balanced use of both terminal and non-terminal methods. The motive for family planning also must change from largely stopping child bearing to both spacing and termination of reproduction. This demands strengthening of IEC activities and making it more imaginative as well as innovative in approach, keeping in mind the vast population living in rural areas and their literacy levels, and where mass media cannot reach them. All these make case for higher level of resource allocation for the program. The recent statistics of increased use of non-terminal methods suffer from inaccuracy and generally these statistics are inflated by the workers to achieve targets. As a result, regression analysis carried out in this paper shows that non-terminal methods do not have any bearing on CBR. This underlines the need for improving accuracy of service statistics by improving existing MIS, supervision and more importantly, by conducting regular concurrent evaluation of the program.

PROMOTING CONTRACEPTIVE CHOICES IN THE INDIAN PROGRAMME: WOMEN'S PERSPECTIVES

S. J. Jejeebhoy and Sumati Kulkarni

The situation of women is recognized as a key factor conditioning the pace at which the shift from natural fertility to deliberate family size limitation occurs in general and in explaining regional variations in contraceptive prevalence in India (Mitra, 1978; Bose, 1986; Dyson and Moore, 1984). The Indian family planning programme is fundamentally woman based: more than four out of five persons protected by it are women. And yet there is an essential contradiction in that the women's perspective, their interests and welfare have been largely neglected (Karkal and Pandey, 1989; Balasubramanyan, 1986). There has been an undue focus on tubectomy, while at the same time other critical aspects of women's poor reproductive health have not been diligently pursued. As a result, anaemia continues to be widespread, births continue to be conducted by untrained attendants, antenatal care continues to be far from universal and women have little respite from frequent and closely spaced pregnancies.

Several aspects of the situation of women in India impinge on their fertility and contraceptive behaviour. Women in the reproductive years have little decision making autonomy and control over resources within the household, they tend to be physically and socially secluded, have little social contact with their husbands and remain generally ignorant of new ideas and alternative behaviours. Under these conditions, reproduction is the only avenue available to a young woman to legitimize her position in her marital home and hence there is pressure to establish her fertility in general and the bearing of sons in particular as soon as possible after marriage. And the poor reproductive health commonly associated with Indian

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women is a reflection of the adverse social, cultural and economic circumstances facing women. There is convincing evidence that in the southern states, in which women play a more decisive role, fertility levels are considerably lower than in such northern states as Bihar, Rajasthan or Uttar Pradesh, in which women have little autonomy (Basu, 1989; Jejeebhoy, 1991). Programmes designed to promote health and family planning, including the practice of non terminal methods will have to be sensitive to these underlying conditions and constraints.

We are grateful to Deanna Jejeebhoy, Jyoti Moodbidri, Shantha Rajgopal and Saumya Rama Rao for suggestions and assistance.

The shift to contraception takes place when two conditions are met (See Easterlin, 1978). The first is the motivation to control fertility; a couple is held to be *motivated* to use contraception when the number of living children the couple can have under natural fertility conditions exceeds the number desired. The second consists of overcoming a range of obstacles, including both programme related and attitudinal which would deter use; these range from costs in time and money to social attitudes, fear of side effects, availability, accessibility and acceptability of methods, quality of services and outreach and so on. The shift to birth *spacing* in India would impose another barrier, intricately linked to the socio cultural situation of women. Where contraception occurs, limiting is preferred to spacing because it is vital for a young woman's prestige and security in her marital home that she prove her fecundity in general and her ability to produce sons in particular, before contraception is undertaken. At the same time, however, birth spacing *has* traditionally been practiced through the imposition of long periods of post partum abstinence.

We start the paper with a review of the contraceptive scene in India, and the extent to which it is driven by female method use and non terminal methods in particular (Section B). We then discuss factors underlying use and non use, including motivation to contracept (Section C), and programmatic and attitudinal barriers to contraception (Section D).

The Contraceptive Scene

Table 1 (in Appendix) presents state and method wise effective protection rates as measured from service statistics (Ministry of Health and Family Welfare, 1990). On the whole, 42 percent of all eligible couples were effectively protected in 1989, but only 12 percent were protected by non terminal methods, ranging from under 5 percent in such states as Bihar, Jammu and Kashmir, Assam and West Bengal to over 25 percent in Haryana and Punjab. Non terminal method users comprise about 29 percent of all protected couples - and independent evidence from a national family planning survey (Operations Research Group, 1990) suggest that there has been little increase in the proportion of couples protected by non terminal methods over the 1970 to 1988 period. And the use of non terminal methods increases systematically with women's education: from 7 per cent among illiterate women to 15 per cent among primary school educated women and 22 per cent and 38 per cent respectively among women with secondary and higher education.

What is especially notable from both service statistics and the national level ORG reports is the lack of a female perspective. For example, we cannot discern in a precise way the proportion of all contraceptors who are women. We know, of course that women comprise the overwhelming majority of terminal method users. As far as non terminal method users are concerned, the term conventional contraceptive user includes both condom users and foam tablet, diaphragm and jelly users; hence an accurate picture of the proportion of non terminal method users who are female is simply unavailable. Assuming, however, that almost all the conventional contraceptive users

are condom users, we could estimate that more than three out of five non terminal method users were female.

Motivation to Control Fertility

Motivation to adopt contraception occurs when the number of children a couple can have exceeds the number desired. Lack of motivation is probably the most important deterrent to contraception in India (see for example, Srinivasan *et al.*, 1984) and its roots are both social and cultural. A number of factors will affect whether the number of children a couple can have exceeds the number desired, including marital duration, extent and duration of breastfeeding and post partum abstinence, and the level of child survival on the one hand and desired family size and factors relating to parental expectations of children on the other. Despite early marriage, a number of forces continue to operate which might prevent women from achieving their preferred family size.

One of these is poor child survival. In a number of states, particularly the north, child survival is poor and a small but significant proportion of couples may be unable to fulfill their desired family size as a result. Or, given their lack of confidence in child survival levels, a more realistic strategy might be to over shoot preferred family size in order to insure the survival of the desired number. There is considerable evidence that women who have experienced high child mortality or who consider that child survival conditions are generally poor in their communities are less likely to practice contraception than other women and this is true in every state in the country (Jejeebhoy, 1984).

There is considerable evidence in India that women who are more educated or more knowledgeable about child health practices, who are in a position to make the decision to seek medical assistance for sick children and who have the freedom to do so independently of other household members (Basu, 1990; Khan *et al.*, 1986) do in fact experience lower child mortality. Given the generally adverse conditions facing

women, it is imperative that doorstep services are provided to provide MCH care and educate mothers regarding child health and nutrition and recognition of danger signals; equally important is the link between MCH and family planning, that is, the health rationale of birth spacing on the other.

That the programme shifted its emphasis from a singular focus on family planning to an integrated approach stressing the larger maternal and child health care points to its recognition of the links between maternal and child health and family size regulation. But there is convincing evidence that MCH activities have not been adequately integrated into the programme and services are grossly under utilized: the large majority of pregnant women are not registered for ante natal services and only a minority receive iron tablets (Satia and Giridhar, 1991). In such states as Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh, over 95 per cent of all rural deliveries continue to take place at home and fewer than ten percent of pregnant women are registered for ante natal services (see Talwar, 1988; Bhatia, 1988, for example), and this is so even in villages in which ante natal care facilities exist. This can be attributed, to some extent, to traditional beliefs relating to child bearing and rearing practices (Jefferys *et al.*, 1989) and a lack of conviction regarding the efficacy of MCH services (IIPS *et al.*, 1984; Kanitkar and Mukerji, 1988), but a lot has to do with poor infrastructural conditions (Satia and Giridhar, 1991) including poor facilities, lack of coordination between workers and poor dissemination of information on the programme.

Prolonged breastfeeding and post partum abstinence are traditional checks through which births have been naturally spaced in India. Breastfeeding continues to be universal and practiced for well over 12 months and post partum abstinence though declining is a well established behaviour. While the trend away from these practices with the advent of modernization has been noted (Nag, 1983; Jefferies *et al.*, 1989), the point of interest is that these are two traditionally accepted means of birth spacing which have not been adequately recognized in the programme. Breastfeeding

messages are unenthusiastic at best and little use has been made of the fact that deliberate birth spacing through post partum abstinence is not unfamiliar in the Indian context.

Finally, and perhaps most importantly in today's context where most women can have as many children as they want, is large family size preferences and a strong preference for sons. In contrast to the two child norm promoted by the programme, family size preferences hover around three children (two sons and a daughter) for most of India; as recently as 1988 (Operations Research Group, 1990), two thirds of all respondents want three or more children (and over a quarter want four or more). Desired family size is somewhat lower (in the range of 2.7 to 3.3) in the southern states in which women's status is relatively high and higher in much of the north where women's status is particularly poor (in the range of 3.5 to 3.9). What is more important than numbers of children desired is their composition: almost one in three respondents in India wants two sons (Operations Research Group, 1990) and as many as 57 per cent rural in Uttar Pradesh (Khan and Gupta, 1988) were prepared to have three or more daughters just to get a *second* son. Son preference is especially strong in the northern states where women are most reliant on sons for old age support: 64-72 per cent (compared to 15-40 per cent in southern states) of all women in these states who have one son express a desire for additional sons. Sterilization is rarely undertaken by women who have no sons. And the recent trend towards selective abortions of female foetuses following amniocentesis is a dangerous manifestation of this preference.

From a woman's perspective, under conditions in which they are denied control over resources, where they are socially and physically secluded, where the only acceptable route through which to achieve legitimacy and status in her marital home is through reproduction, and where their access to knowledge and economic opportunities are severely curtailed, post marital power, security, and economic survival in old age and adversity become inextricably linked with reproduction

(Satia and Jejeebhoy, 1991). As a result, women are observed to have a stronger preference for a second son than their husbands (Khan and Singh, 1987). Simply advocating a two child family under these conditions glosses over the major needs of women, that go beyond FP greater access to education, employment and extra domestic relief by way of institutional forms of risk insurance or old age security on the one hand and better child survival prospects on the other.

Barriers to Contraception

Notwithstanding the above, a large proportion of women have more children than they want and as many as 24.6 million couples who are motivated (want no more children) do not practice contraception in India (Operations Research Group, 1990). Between 1980 and 1988, the level of unmet need has declined impressively from 30 per cent (Khan and Prasad, 1983) to 18 per cent (Operations Research Group, 1990). This could translate into a larger proportion if we include the proportion who want to delay the next birth. Reasons for non use as reported in the all India survey reflect a range of barriers to contraception, rooted both in the programme and in general socio cultural conditions. We list below a number of common barriers to contraception in India.

Method Awareness

Awareness of non terminal methods tends to be poor among both women and men; in fact family planning is frequently seen as synonymous with sterilization. As recently as 1988, while 85 per cent and 95 per cent respectively were aware of vasectomy and tubectomy, fewer than 60 per cent of all women in the reproductive ages are aware of such non terminal methods as the IUD, condom and oral pills and about one in three knows *how* to use them correctly (Operations Research Group, 1990). Even fewer women would be aware of *when* to use them. Moreover, one in ten couples with unmet need reported lack of awareness as the main reason.

Such high levels of ignorance are, to a considerable extent, a function of development factors and women's poor access to knowledge. Better educated women, for example, are systematically more aware of non terminal contraceptive methods than are uneducated women: for example awareness of the IUD increases from 39 per cent among uneducated women to 95 per cent among women who have completed higher secondary schooling; of the oral pill from 45 per cent to 93 per cent and of the condom from 53 per cent to 97 per cent. But under conditions in which over half of all women continue to be illiterate, and nearly half of all urban women and three quarters of all rural women remain unexposed to the mass media (Operations Research Group, 1990) an important function of the family planning programme is precisely to counteract these disadvantages. Unfortunately, the current IEC component of the programme rarely refers to how a small family can be achieved by methods less drastic than sterilization and this orientation needs to be corrected.

Is There Really a Cafeteria?

Though a cafeteria of methods are theoretically available, the undue stress on sterilization is a well documented fact - we have seen that over three in five contraceptors are sterilized. Essentially three non terminal methods are currently available in the programme: IUDs, oral contraceptives and condoms. Three other conventional contraceptives, foam tablets, spermicide and diaphragms which were found to have been quite well received in the earlier stages of the programme (Bhatia, 1990) are rarely available through programme sources. This is despite evidence from rural parts of India which confirm the acceptability of foam tablets among young rural women as a means to space births (Rajgopal *et al.*, 1989).

But, most women in India do not have the wide choice that this list of theoretically available methods implies. For the most part, the prospective acceptor tends to be apprised of the method considered appropriate by the service provider and does not participate in the selection of the method she will use. Also, one in six couples risk an unwanted pregnancy because they did not like the method (usually sterilization) offered and over a quarter, because they fear a drastic measure such as sterilization. A village level study of tubectomy in Punjab (Pettigrew, 1984) observes that while tubectomy was the method favoured by district authorities, this was the method most likely to be feared and rejected by women; women were being offered sterilization when what they wanted was something less permanent. By and large, neither are supplies regularly available nor are women offered the option of selecting a spacing method. It is revealing to note that of motivated women who reported non availability of a method as the reason for non practice of contraception, the majority referred to a preference for a non terminal method (Operations Research Group, 1990).

Male Involvement in the Decision to Contracept

In the socio cultural conditions prevailing in India, women have little decision making authority, including control over their own reproduction, or the numbers and spacing of children. The All-India Family Planning Survey of 1980 indicated that in rural areas, the decision on fertility and family planning was made by the husband in over half of all cases, by husband and wife jointly in about a third and by other family members in about one tenth (Khan and Prasad, 1983).

At the same time, the husband-wife bond tends to be unequal and distant, the couple rarely discusses the number of children to have or contraception and husbands are often reported to be generally indifferent and apathetic, if not against contraception. That men do not have the same stakes as women in avoiding the dangers of closely spaced childbearing is obvious; hence where there is an interest in contraception, the concept of spacing is of less interest to husbands than

terminating childbearing. Also, male methods are of considerably less interest than female. Many cases have been reported in which women would accept contraception, but fear the reaction of their husbands (Khan and Singh, 1987). In short, the predominant role of the husband and other family members (notably the mother in law) in deciding on contraception may well act to impede its adoption in general and non terminal methods in particular.

The lack of intimacy between spouses especially during the early reproductive years precludes any inter spousal discussion of family size and contraception and is recognized as a major impediment to contraception, particularly non terminal contraception, in India. As recently as 1988, only half of all married couples have discussed the issue of family size and this ranges from 25 per cent among illiterate women to no more than 68 per cent among secondary school educated women. Worse, only as few as 8 per cent had discussed family size immediately after marriage (Operations Research Group, 1990).

In such circumstances, it is important that male involvement is more actively sought: in terms of both male method utilization and greater participation in the decision to contracept and greater sensitivity to the effect of early onset of reproduction and repeated pregnancies on mother and child.

Availability and Accessibility of Contraceptive Services

In the prevailing socio cultural conditions, Indian women are not likely to accept contraceptive services from men, nor are they likely to be able to travel long (even to the next village) distances to obtain contraceptive or health services or even education for their daughters. And yet, in practice, women face both these possibilities; in fact, one in six rural couples who report an unmet need for contraception attribute their non use to lack of services (Operations Research Group, 1990).

Often female personnel are unavailable. In some districts, for example, over half of all posts for ANMs are vacant; where they are filled, the ANM often does not reside at the centre, with the result that she is rarely available. Such innovations as the village health guide (VHG), traditional birth attendant (TBA) and multipurpose worker (MPW) schemes are plagued by poor training and even here, some VHGs are male for example (Satia and Giridhar, 1991). In one district in Uttar Pradesh, for example, only 56 of the 1356 CHGs were female (Bang, 1986). Correspondingly, there is a paucity of female doctors posted at PHCs; in some districts of Rajasthan 50 per cent of posts remain vacant (Satia and Giridhar, 1991) and in Uttar Pradesh, the non availability of female doctors is reported to have adversely affected IUD insertions and the utilization of other non terminal methods (Khan and Gupta, 1988).

Where workers are available, they are generally poorly trained and have little knowledge themselves of the methods they are to impart. A baseline study in rural Maharashtra (Roy *et al.*, 1991) observes that only one third of the 80 health workers interviewed had correct knowledge of oral contraceptives and only 43 per cent could advise a family planning method convincingly and adequately. To add to this, with the undue stress on sterilization, the credibility of all workers has suffered. Women tend to view the primary health system as a sterilization facility rather than as an integrated system providing for other aspects of primary health including ante natal and child health care and birth spacing.

As far as accessibility is concerned, the 1988 ORG survey (Operations Research group, 1990) indicates that well over one third of all women have to travel over 5 kilometers to reach a distribution point for IUDs or other modern non terminal methods. Recalling the cultural constraints on women's movement outside the home and particularly the village, it is unlikely that a motivated woman would venture the five kilometers to avail of non terminal contraceptive services. A study of the female perspective in India's family planning programme (Khan and Ghosh Dastidar, 1985) suggests that seclusion practices are a major social and cultural barrier, not

only curbing women's exposure to new ideas and innovative behaviours but also to family planning personnel and services. To this we could add women's general socialization which makes them reluctant to seek health care services for themselves.

The importance of domiciliary services and village level outlets cannot be adequately underscored from this point of view. Even among women who want to practice contraception, the fact that the means are not available at their doorsteps inhibits contraception. For example, almost three quarters (74 per cent) of those reporting an unmet need for contraception reported either that workers rarely made home visits or that service outlets were too far away (Operations Research Group, 1990). A study of the utilization of health services in tribal areas of Madhya Pradesh (Hanumantha Rao *et al.*, 1988) reports that ANMs made domiciliary visits to no more than 17 per cent of eligible women. And a village level study in Uttar Pradesh (Khan *et al.*, 1985) indicates that of 25 women from whom qualitative data were obtained, only two had been visited by the ANM and many responses reflect a cynical attitude towards the ANM. This is corroborated by a study of the service delivery system which observed that ANMs were more likely to be in the clinic than making home visits (Public Systems Group, 1985).

Availability and Accessibility of Abortion Services

Abortion has been a traditionally familiar means of limiting family size and there continues to be a significant demand for abortion services. Unfortunately, though it has been legal in India for twenty years, services remain unavailable to the large majority of those in need and illegal abortion persists. For example, in 1987-88, only about half a million of an estimated total of five million abortions were performed through the health services network, the rest being performed illegally. Women resort to illegal abortions for a number of reasons. Registered practitioners tend to be concentrated in urban areas; in 1984 for example only about 1,000 of a total

of roughly 15000 were in rural areas. In addition, while Medical Termination of Pregnancy (MTP) is to involve no cost to the client, in practice, costs of drugs often prove prohibitive to the average rural woman, information on legal services tends to be inadequate and services at approved centres tend to be impersonal. Finally, these high estimates of abortion suggest once again a latent demand for non terminal methods and the inadequacy of the current programme in conveying alternative measures to abortion and substituting method use for the current reliance on abortion.

Perceived Disadvantages of Methods

Major barriers restricting use among couples who are aware of contraception are the disadvantages associated with it. The recent all India survey (Operations Research Group, 1990) observes that roughly one in five respondents associates any form of contraception with one or more disadvantage, and this proportion has remained virtually constant over the decade of the 1980s. For example, at the national level, as many as 22 per cent and 37 per cent of all respondents (who are aware of the method) associate side effects with vasectomy and tubectomy respectively: largely concerns regarding ability to work, pain and in the case of tubectomy, menstrual disturbances. Non terminal methods do not fare much better: at the national level, as many as 24 per cent of all respondents perceives side effects of the IUD; 15 per cent to the oral pill and 8 per cent to the condom. The principal side effects of the IUD include menstrual disturbances, pain and the inability to work. Side effects of oral contraceptives include nausea and headache as well menstrual disturbances, pain and the inability to work. So, common concerns regarding the side effects of non terminal contraception include menstrual disturbances, health related problems and disturbance in work ability. These concerns need to be taken far more seriously, even where labeled as misconceptions; but they are rarely addressed by service providers.

Take the case of menstruation disturbance for example. In a society in which menstruation has important implications for the woman (in terms of purity, sexual availability, even family chores and seclusion), a method which causes spotting, excessive bleeding or dysmenorrhea at inconvenient times is simply not acceptable and studies have found that in many cultures such methods as the IUD and oral contraceptives are discontinued for this reason (Khan and Ghosh Dastidar, 1985). In fact, a study on factors affecting the discontinuation of the IUD in Gujarat (Gandotra and Das, 1990) finds that the single most powerful determinant of discontinuation was whether social taboos associated with menstruation were strongyl upheld.

While the condom is perceived to have the fewest side effects, its use involves the cooperation of the husband and for large numbers of women, this is frequently absent. Evidence from qualitative studies suggests that male involvement today is marginal. A woman in Uttar Pradesh reports "... I don't want a child in the next 2-3 years. But my husband does not bother to prevent conception. You know, menfolk hardly bother about women's problems. I can use any method in which the husband's cooperation is not needed...can you get me pills?" (Khan *et al.*, 1985).

A major factor deterring contraception among couples who report an unmet need for family planning is the fear of side effects. Almost half of all reasons for not practicing contraception advanced by respondents who wanted no more children concerned method disadvantages (Operations Research Group, 1990). More specifically, most fears were associated with sterilization, pointing once more to the programme's singular focus on sterilization.

Finally, a major disadvantage to non terminal method use are women's perceptions regarding method effectiveness. While three quarters of all women consider tubectomy as an effective method, as few as one third consider non terminal methods so (Operations Research Group, 1990). And this fear

of method failure is strongest among the least educated (24 per cent, 35 per cent and 28 per cent consider the IUD, condom and oral pill effective as compared to 69 per cent, 75 per cent and 64 per cent of the most educated respectively).

Quality of Care

The quality of both MCH and family planning care is generally poor and indifferent to the needs of women (Karkal and Pandey, 1988) and contribute to women's general reluctance to avail of medical care. Non-attendance at PHCs in both Bihar and Kerala is largely attributed to poor quality of supplies and treatment from staff (Khan and Prasad, 1988). Studies in Uttar Pradesh (Khan *et al.*,1985) suggest that there is little contact between women and service providers, except in order to fulfil sterilization targets. Health personnel tend to be quite uncaring of women's dignity (See Khan and Ghosh Dastidar, 1985 for example). Anecdotes of newly sterilized and unconscious women in a semi exposed state being carried by male ward boys and of health personnel refusing to remove an IUD are frequently heard (Kakar, 1984 for example) and do not foster much confidence in any method provided by the health services.

Nor is attention paid to pre-acceptance counselling or post acceptance follow up. At the pre acceptance stage, the potential acceptor is rarely informed of all the methods available so that she can make an informed decision; rather the service provider judges (often influenced by the focus on sterilization and target achievement motives) which method is most suitable to the prospective user and rarely touches on other available methods. Correspondingly, there is a tendency to over emphasize the benefits and skim over the side effects (Prabhavathi and Seshadri, 1988). Lax screening and inappropriate selection of clients exacerbates side effects. This is cited as the main reason for the failure of the thrust of the programme on IUDs in the late 1960s (Dandekar and Nikam, 1971) for example.

In a retrospective study of IUD acceptors (Prabhavathi and Seshadri, 1988), it was observed for example that only 21 per cent were informed of the range of advantages and disadvantages of the method, while 79 per cent were informed only of its advantages. A study in Orissa observes that only 14 per cent of respondents were informed about more than one method and none were told of possible side effects (Khan *et al.*, 1990). Results confirm that when information on alternative methods of contraception are not provided and when an accurate representation of potential side effects is not given, methods are significantly more likely to be discontinued than when pre acceptance counselling is comprehensive (Prabhavati and Seshadri, 1988).

Post acceptance follow up is notoriously poor. And unfortunately, user specific records for conventional contraceptives and oral pills are not routinely maintained (Karkal and Pandey, 1989) making it difficult to follow up users. It is essential that acceptors of both terminal and non terminal methods are regularly followed up in order to respond to side effects and misconceptions that tend to arise. The IUD follow up study cited above also confirms that method continuation is significantly longer among women who have experienced regular follow up.

Regular follow up of oral pill and condom acceptors in order to renew supplies is another follow up feature which tends to be ignored. Qualitative evidence from Uttar Pradesh (Khan *et al.*, 198) repeatedly indicates that a method was discontinued when supplies ran out. The importance of domiciliary services in this connection cannot be underscored. In a culture in which women have limited freedom of movement and in which sexuality is a subject of embarrassment, it is unrealistic to expect women to visit the service delivery outlet in order to renew supplies.

Introduction of New Methods (Injectables and Norplant)

The introduction of long acting injectables and Norplant sub dermal implants will expand the cafeteria of methods available to Indian women. These have been effectively used in other Asian settings and in local trials. In Bangladesh for example, injectables have become increasingly popular, partly because women can control the use of this method without the knowledge of the husband or other family members (WHO, 1991). And in fact, during qualitative discussions in India, women often request "an injection", expressing the view that one can get inoculated against just about everything, why not pregnancy (see, for example, Pettigrew, 1984).

While these methods have been effectively used in other settings, the above sections highlighting poor outreach and quality of services raises an important concern. Any new type of technology has to be accompanied by good service delivery and counselling; whether it is ethical and responsible to introduce contraceptive methods that are heavily dependent on skilled health personnel where such personnel are frequently inaccessible to the user needs to be addressed.

Women's activists have raised an alarm regarding the potential side effects of these methods (Karkal and Pandey, 1989) in a society in which women's overall reproductive health is poor. And indeed, the trials conducted thus far rarely include a social science or women's perspective; nor are results widely disseminated. Women's organizations can play an important role in expressing the women's perspective (World Health Organization, 1991) and it would be worth including these organizations in the design and analysis of trials of such new technologies as injectables and Norplant.

Conclusion

This paper highlights the fact that women are seen as the target rather than as the beneficiaries of the family planning programme. There is no real strategy to promote spacing and women's reproductive health; reproductive and child health benefits are not prominently included. In short, though the large majority of methods are female based, the programme is not sensitive to women's situation and special needs. We need only to recall that current statistics cannot give us a breakdown of the distribution of male and female users to confirm this.

Aspects of the socio cultural situation of women which have to be considered in a spacing strategy for women include: (1) their economic dependency on men and consequently on sons for purposes of risk and old age security; (2) their need to depend on reproduction to derive prestige in the marital home; (3) their relative lack of authority in domestic decisions including those pertaining to contraception; (4) their lack of access to modern knowledge and modes of behaviour; (5) their lack of freedom of movement and ability to obtain child health or contraceptive services for themselves; and (6) the tendency towards social distance between spouses which prohibits any discussion of sexuality and family size limitation. While the programme cannot be expected to change the culture, it can certainly be expected to act in a way which will be both culturally acceptable and help women overcome the cycle of repeated and often unwanted pregnancies.

Fundamental changes beyond family planning measures have not had a great impact on women, especially in the northern region. The importance of multi-sectoral activities to accelerate the expansion of education and employment opportunities, income generation and status enhancement factors for women has yet to be recognized in practice. At the same time, the programme has to pay more than lip service to its integration with maternal and child survival and health. The current focus on efforts directed to the promotion of contraception in the absence of corresponding efforts in

maternal and child health point to a basic imbalance in the programme and a relative lack of concern for women's welfare. In the long run, these factors keep women's family size preferences high.

The general insensitivity to the socio cultural situation of women has resulted in the programme ignoring the fact that birth spacing is not unknown in the Indian context. Post partum abstinence has traditionally been practiced precisely to protect the health of children (if not mothers) and now that the practice appears to be on the decline, the logical substitute is spacing methods. Unfortunately the IEC thrust has been notoriously poor in making this link and emphasizing the health advantages of non terminal methods for child and maternal survival and well being. It is important then that the IEC component of the programme becomes more woman directed and more culturally sensitive.

The current focus on quantitative aspects of the programme (targets, equivalent sterilizations) detracts from a concern for quality (visits, proper information, follow up). This lack of a qualitative approach has serious implications for women. For example, the absence of good domiciliary and village level services for both maternal and child health and contraception in a society in which women's movement is restricted affects health and results in non use of contraception even among motivated women. Pre acceptance counselling, post acceptance follow up and renewal of supplies can only be comprehensively provided through regular extension facilities. And given that non terminal methods are almost exclusively female, it is all the more important that extension services are extensive and of high quality.

The programme is unfortunately characterized by a paucity of female personnel on the one hand and poorly trained personnel on the other. Health personnel have to be better informed about non terminal methods, their proper use and their advantages and disadvantages; and have to be evaluated in terms of the quality of services they provide rather than the number of sterilization cases they motivate.

The programme's IEC strategy and messages have to be more culturally relevant. Given that women are often excluded from the decision making process and have little communication with their husbands regarding contraception, it is important that motivational efforts are directed to husbands and to mothers-in-law as well. And given that women are largely uneducated, the description of methods, their advantages and disadvantages need to be provided in a simple and unthreatening way. Neither the concept of spacing, nor the health rationale for it have been adequately promoted in the programme's educational programmes and little use has been made of the culture's traditional concern for birth spacing. Nor has the educational programme been more widely directed so as to include adolescent and newly married women and men. In short, the quality, thrust and content of the IEC programme has largely neglected the women's perspective.

In addition, in the area of programme monitoring, it is imperative that gender specific information on contraceptive prevalence is made routinely available in service statistics and surveys. And monitoring efforts need to be as mindful or more mindful of the qualitative aspects of the programme as of the quantitative.

From a research needs angle, there are currently few studies on the user perspective. Questions which need to be rigorously pursued include: what are the kinds of methods women want; what are the main obstacles to continued use of various methods; what are clients' needs and perspectives; which attributes of various methods do they most like or dislike; whether women have made informed choices and whether user satisfaction exists; what are women's and men's attitudes to sexuality and fertility regulation in particular settings.

In short, the programme has to be more sensitive to the social and economic realities of women's lives; their health; and the quality of family planning and health services in their settings. Women in India are caught in between a patriarchal

family structure which inhibits their use of contraception and a programme which has thus far been insensitive to their particular constraints and preferences. It is time that the family planning programme plays a role in bridging this major gap.

Table 1: Percentage of Couples Effectively Protected by Family Planning Methods, 1989

	Total Users	*Terminal methods*	*Non terminal methods*				*% using non terminal methods*	*% using female non terminal methods*	*% females of all non-terminal method users*
			IUD	*Conventional contraceptives*	*Oral Pills*	*Total*			
India	41.7	29.7	5.9	4.5	1.6	12.0	28.8	18.0	62.5
North									
Bihar	25.8	21.9	3.1	0.7	0.1	3.9	15.1	12.4	82.1
Haryana	59.3	31.3	13.6	12.8	1.6	28.0	47.2	25.6	54.3
H P	47.7	35.8	7.3	3.5	1.1	11.9	24.9	17.6	70.6
J & K	21.9	18.9	2.3	0.5	0.2	3.0	13.7	11.4	83.3
Madhya Pradesh	38.8	28.1	4.4	4.5	1.8	10.7	27.6	16.0	57.9
Punjab	69.6	37.2	21.3	9.2	1.9	32.4	46.6	33.3	71.6
Rajasthan	28.9	21.8	3.6	2.9	0.6	7.1	24.6	14.5	59.2
Uttar Pradesh	32.3	19.2	9.7	2.6	0.8	13.1	40.6	32.5	80.2
South									
Andhra Pradesh	42.0	35.2	2.8	2.8	1.2	6.8	16.2	9.5	58.8
Karnataka	44.1	36.4	5.1	1.5	1.1	7.7	17.5	14.1	80.5
Kerala	49.7	41.9	4.1	2.8	0.9	7.8	15.7	10.1	64.1
Tamil Nadu	55.0	43.1	8.3	1.8	1.8	11.9	21.6	18.4	84.9
East									
Assam	26.1	23.7	1.3	0.9	0.2	2.4	9.2	5.7	62.5
Orissa	39.5	31.2	4.6	2.6	1.1	8.3	21.0	14.4	68.7
West Bengal	32.3	28.8	1.8	1.0	0.7	3.5	10.8	7.7	71.4
West									
Gujarat	55.1	39.2	9.2	5.0	1.7	15.9	28.9	19.8	68.6
Maharashtra	54.8	43.0	6.6	3.2	2.0	11.8	21.5	15.7	72.9

H P = Himachal Pradesh J & K = Jammu & Kashmir

WOMEN'S PERSPECTIVE IN THE USE OF FAMILY PLANNING SPACING METHODS

Sandhya Barge

The result of the 1991 population census has given more shocks than comfort. It shows that the heavy investment in the Family Planning programme has not succeeded in arresting the population growth at the desired level. It clearly indicates the need to have a fresh look into the programme and the steps required to ensure its proper and efficient implementation. A shift from the existing emphasis on sterilization to a more balanced contraceptive mix is also urgently required. The Third All India Family Planning survey shows that of the 40 per cent of couples who were practicing family planning 31 per cent had accepted sterilization and those who were depending on modern spacing methods were less than 9 per cent (IUD 1.9, oral pill 1.4, condom 5.3 per cent respectively), (ORG 1990). A comparison of this data with the Second All India Family Planning survey (Khan and Prasad 1981), conducted in 1980 shows a negligible increase in the use of non-terminal methods during 1980-89. For example the use of IUD increased only by 1.4 percentage point, pills by 0.7 percentage point and condom by 0.9 percentage point. Realizing that the programme's emphasis on sterilization alone will not help in bringing down the birth rate to the desired level (21 by 2005), both programme managers and researchers have stressed the urgent need of popularizing the acceptance of non-terminal family planning methods among young and low parity couples. If one goes by the plan documents and recent statement of both policy makers and programme managers, it appears that in the near future the programme emphasis is going to be more balanced and non-terminal methods will also get due emphasis along with sterilization.

Among the spacing methods which are either currently available under the programme (IUD, oral pills, condom) or that may be available in the near future (Norplant and injectable)

five are for women. This demands that women's perspectives, that is their needs and priorities, must be taken into account, while planning and strengthening the family planning delivery system, The opportunity to control her reproductive behaviour must be provided to the woman. Accessibility to contraceptive is not only ensured by having a good technology, but more importantly by creating a social and cultural environment which permits and encourages the acceptance of the technology. Experiences from developing countries clearly demonstrate that acceptance of contraceptive is as much conditioned by social and cultural norms as by the availability of safe and efficient contraceptive technology.

Often the former is more important than the latter. Unless both of these aspects are considered and planned accordingly, the desired level of success in the promotion of family planning perhaps cannot be achieved. This article attempts to address each of these aspects by analyzing the existing situation and possible future action.

The present article tries to review the Indian situation mainly from the programme point of view covering the following aspects:

1 Easy availability of different methods to give her a change to choose a contraceptive of her choice **(Choice)**

2 Access to correct and detailed information about each method. **(Information)**

3 Easy access to service providers. **(Accessibility)**

4 Correct administration of the method and capability to handle the sensitive problems. **(Competence)**

5 Accessibility of the service to discontinue the method on demand. **(service to discontinue the methods on demand)**

Is the Contraceptive Easily Accessible to Women?

The acceptance of a family planning method is directly influenced by the knowledge of contraceptives among the potential users. In India a large number of KAP surveys indicate a fairly high level of **awareness** about family planning methods, particularly sterilization, both among male and female respondents. However, there are very few studies which carefully assess the extent that couples have correct knowledge about specific contraceptives. The Third All India Family Planning survey shows that while most of the couples were aware of sterilization, a fairly large number of them, both male and female, had not heard about various spacing methods. For example, only about 54 per cent of the females were aware of IUD and condom and 59 per cent about oral pills. A still smaller proportion had correct knowledge as to how these methods are used (Table 1). Even among those who were aware of the methods, a substantial proportion of them believed that the methods have serious adverse side effects.

Table 1: Extent of Awareness And Knowledge of Family Planning Methods

Method	*Awareness*	*Correct Knowledge*	*Believe that has serious adverse after effect* *
Vasectomy	84.7	28.9	22.3
Tubectomy	95.0	52.8	36.5
IUD	56.3	30.2	24.2
Condom	55.9	37.1	8.0
Pills	59.3	38.8	15.1

* *Based on both male and female respondent's answer. No separate date is available for male and female respondent's answer*

Source: Family Planning in India - Third All India Survey, ORG,Baroda 1990.

Even knowledge of natural family planning methods, like safe period is quite low. A micro level study carried out in the villages of western Uttar Pradesh reveals that only 50 per cent of the women were aware of safe period and had correct knowledge about this method (Khan, Ghosh and Bairathi, 1983).

Misconceptions about the Method

Due to the lack of correct and complete information, women often have serious misconceptions about the methods. For example, according to a study about 50 per cent of women did not adopt IUD as they were afraid of weakness, bleeding, cancer, the possibility of the loop rising into the womb, etc. Similarly a national study in India showed that about 32 per cent of the women were convinced that IUD had serious repercussions on the health of women and the perceived severity of the after effects ranged from cancer to excessive bleeding and weakness (Khan and Prasad 1983). The study further observed that rural women believed IUDs caused "heat" inside the body, which deterred many of them from opting for this method. In India where still a large proportion of people believe that a menstruating women is unclean, frequent bleeding or spotting due to contraceptive disrupts her family schedule, and forces her to discontinue the method (ICMR 1986).

As for the use of oral pills, it is also believed that a child would be deformed if conception took place after discontinuation of pills. Pills are also believed to cause blood clots, slight increase in blood pressure, jaundice, increase in body weight and slight depression. Further, it is also observed that specially in rural settings the news of any problem or difficulty faced by a woman with the use of spacing method spreads very easily and is often quoted.

Access to Services

Available literature provide very little information on women's accessibility to service providers. However, whatever literature on the subject is available indicates that despite the vast expansion of the family planning infrastructure, the physical accessibility of contraceptives to women is quite limited. Factors like distance to the nearest clinic or source of supplies, long waiting time, non-suitability of clinic hours and the absence of trained female staff specially doctors, and at

times the non-functioning of the extension staff, etc.have been identified as serious constraints to women's access to services (Khan and Dastidar 1985).

Data on the distance from the village to the nearest source of contraceptive information and services are also generally not available. Even the Third All India Family Planning Survey which provides this information, did not give the break up by sex of the respondents. The data show that for about 60 per cent of the cases, the nearest source for sterilization was more than five Kms. (Table 2). The corresponding figure for IUD, pills and condom was reported to be 48, 27 and 26 per cent respectively. In rural India, particularly in the less developed states like UP, Bihar, MP and Rajasthan where the communication network is fairly poor, and women have restrictions on free movement, 5 Kms is a long enough distance to discourage them from seeking contraceptive services (or even health services) from these sources. The problem is further compounded by the waiting time at these centres for receiving the services.

Table 2: Nearest Source of Information and Services for Different Contraceptives in Rural India

	Nearest Source of information (Kms) Average		*Nearest source of services (Kms) Average*		*Waiting time for receiving service (minutes) Average*
	3 - 5	5 or more	3 -5	5 or more	
Vasectomy	8.9	38.3	11.7	59.5	77
Tubectomy	9.2	38.4	12.0	59.4	85
IUD	7.8	29.4	10.7	47.7	51
Pill	8.2	21.1	9.6	26.7	23
Condom	7.4	21.6	8.7	26.3	22

Source: Compiled from ORG report (ORG-90)

According to the Third All India Family Planning Survey, the mean waiting period for getting IUD services was around 51 minutes at a PHC and about 40 minutes at a private clinic. For pills and condom it was estimated to be around 23 minutes.

Lack of trained personnel, particularly of female staff, continues to be a major hurdle in the delivery of family planning

services. In India, the cultural values do not permit the examination of females by male staff. Yet the development of trained female personnel at the peripheral level has remained a neglected area and it is reflected from the fact that the allocation of funds for the training of staff in the Seventh Five Year Plan was only 1.9 per cent of the total outlay for the family welfare programme (Ministry of Health and Family Welfare 1991). In the Sixth Five Year Plan, the funds allocated for the training of peripheral staff was still low at 0.3 per cent of the total outlay for health and family welfare. (Khan and Prasad, 1984). Again as of 1990, 15 per cent of the required positions of health assistants were vacant. (Rural Health Division, 1991).

The availability of services from female staff is further reduced because of their involvement in various other activities which consume a major portion of their time. According to one study, field workers spend as much as 60 per cent of their time on activities not directly related to the delivery of active service (United Nations 1984). In India, the maintenance of records consumes a substantial portion of their time. According to one recent study, an ANM alone maintains 22 records and prepares 12 reports a month. The time required for maintaining these records varies between 19 per cent to 26 per cent of their total working time. Thus, the available studies clearly demonstrate that both because of physical distance, lack of logistic support and several social constrains, women's access to family planning services is quite limited. Unless the existing delivery system is strengthened and other approaches are used to improve the out-reach of the services, chances of any major increase in the acceptance of non-terminal method are quite limited.

Technical Competence of the Workers and Follow-up Services

To ensure proper counseling, safe administration of the contraception and efficient management of problems in subsequent follow-up of acceptors, providers must be fully trained, not only in the technical aspects but also in effective

communication and counselling. From the limited number of studies on these aspects it is indicated that majority of the providers are incompetent and lack proper skills. For example, most of them are not equipped to insert IUD. Some of the ANMs who have received limited training are not confident enough to insert IUD independently. They prefer to do it in the presence of a LHV . Their lack of confidence thus further limits accessibility of IUD in rural areas.

Even if the ANMs are trained and equipped to do the insertion, they do not properly examine the women for any contraindication before insertion of IUD. Often because they have to complete their target, they insert IUD even if the women is suffering from some urinary tract infection. Sometimes such insertions also are done because they fail to recognize that the women is suffering from a gynecological problem. In most of these cases, after accepting IUD women suffer from problems causing pain, excess bleeding, septic and other serious complications forcing them to discontinue the method.

Such incompetence on the part of the workers not only causes high discontinuation rate but also discredits the method. For example, a recent study carried out by NIHFW in Uttar Pradesh showed that more than 60 per cent of the IUD acceptors discontinued the method within six months because of one or more complications. Some of the more common complaints causing discontinuation were reported to be menstrual disorder (29 per cent), and adverse effect on health (17 per cent). However, because of a lack of similar field studies it is difficult to assess how far the observations made by the NIHFW study on the discontinuation of IUD is generalizable. It is an important area of further investigation, particularly because urban, clinic -based perspective studies do not show such high discontinuation rates. For example, a ICMR study shows that only about 11 per cent of the women in Tamil Nadu, Punjab, Haryana and Maharashtra had discontinued the method after six months. In Bihar, the discontinuation rate was 14.5 per cent and Rajasthan 24 per cent (ICMR, 1986). The low discontinuation rate was to an

extent because of higher education of acceptors and better clinical facilities provided in the urban areas.

To increase the continuation rate of non-terminal methods particularly for IUD and pills in rural areas, proper counseling and regular follow up of the acceptors are important. A number of studies both in the rural and urban areas show that counseling at the clinic is either non-existant or at best poor (ICMR, 1986; Khan, Patel and Chandrashekar, 1990; Khan and Patel, 1990, CORT, 1991). For example in the ICMR study only 40 per cent of the acceptors were told about both the advantages and disadvantages of IUD/Pill, 17 per cent about advantages only and as high as 43 per cent were told nothing about the methods (ICMR, 1986).

Similar observations were made by Khan et al., (Khan et al. 1990) in Orissa where only 14 per cent of the women were informed about the availability of other family planning methods and practically none of them were informed about the initial possible side effects of the method chosen by the women. Similarly, only 29 per cent of the women were told about the effectiveness or chances of failure of the selected method. Thus, immediate steps should be taken to improve the quality of counselling by the clinic staff and the perspective clients should be informed not only about the methods available but also about the advantages and possible side-effects of each method and their management.

After acceptance the follow up of the acceptors and the management of problems to the satisfaction of clients are yet other areas which need strengthening. The available studies show that the follow up services are not up to the desired level. For example, in a ICMR multi-centric study at least 25 per cent of the women in Gujarat, 29 per cent in Uttar Pradesh and about 8 per cent in Rajasthan who suffered from complications after the insertion of IUD were not satisfied with the assistance they were provided in managing problems (ICMR, 1986). Similarly yet another ICMR study on quality of care given by ANM in rural India showed that only one third of

the ANMs managed the complicated cases of IUD properly (ICMR, 1991).

Facilities for Removing/Discontinuing the Method on Demand

Besides counselling, the provision of availability of services to discontinue the method on demand should be there. Available literature again does not provide any information whether women are denied removal of IUD in case of complications or if demanded by the acceptor. In the case of IUD it is not a serious issue also as the services for removing IUD are quite common and hence even if denied by one clinic, the women could easily obtain the help from other clinic. Reporting of pulling the device by themselves is also not uncommon. However, with the arrival of ICMR (1986) Nor Plant, it is crucial the women have the right of removal of the device at her will and she should not be forced by the providers to continue for some more time just because the device is expensive.

Need for Future Research

The above review clearly indicates that the existing delivery services are not geared towards the women's reproductive needs and unless some of the problems/limitations raised above are removed, an increase in the acceptance of family planning to the desired level may not be possible. The review also points to various knowledge gaps on which information should be collected to make the programme more sensitive to women's reproductive needs. Some of them are listed below:

1 Informative needs of women
- what kind
- modes of communication

2 Interaction of contraceptive with endemic health problems.

3 Unmet need - why are fertility regulation needs unmet? It may be that it is not only a lack of services,but also the poor health of women and the lack of appropriate methods for their use.

4 Women's perspectives on the benefits of methods - are they relieved about the released from concern about pregnancy, how they work etc.

5 Ascertain the risks of methods in reality and what women perceive as the risks/effects.

6 To look into the existing health infrastructure to see how the quality of service of the existing methods can be improved and whether the infrastructure can support the introduction of new methods like Norplant or injectable

7 Research on women's reproductive health conditions and services available to meet their needs.

8 Women's feeling about children, how they view pregnancy, and how they wish to control it.

9 Operations research on disseminating information on methods available so that providers are able to offer choices.

10 Women's perceptions on how they view service delivery and what services they want, where.

FACTORS INFLUENCING IUD RETENTION IN NORTHERN KARNATAKA

P.N. Mari Bhat and J.B. Hasalkar

India's family planning programme has been dubbed as the world's most massive sterilization campaign. However, with the average number of living children among sterilization acceptors remaining fairly steady at around 3.5 during the last decade and the total fertility rate having failed to fall below four births per woman, there is a growing recognition that fertility cannot be brought down beyond a certain level by promoting this method alone. From the point of view of programme managers, the main advantage of sterilization is that it requires only one-time motivation, and workers at the grassroots do not have to approach couples repeatedly about using a method. But in populations with relatively high infant and child mortality this advantage is more than offset by the reluctance of young couples to accept the method unless the survival of their children is adequately guaranteed. With the majority of Indian couples expressing preference to have *two* sons before going in for an operation, the popularization of non-terminal methods seems to be the only way to convince young couples to accept family planning.

The service statistics published by the Government indicate that the proportion of acceptors of non-terminal methods among the annual acceptors of family planning methods has been increasing rapidly since 1982. The increase is particularly impressive for IUD and oral pill. By 1988-89 the number of annual IUD insertions done had surpassed the number of sterilization acceptors. But, recent contraceptive prevalence surveys have revealed only a very marginal impact of this increase on the method mix among the couples currently using contraception. For example, the all-India surveys of the Operations Research Group, Baroda, showed that couples using

modern non-terminal methods (IUD, oral pill and condom) among all users increased from 16 per cent in 1980 to 19 per cent in 1988, when the government statistics showed an increase from 17 per cent to 36 per cent during the same period (see Bhat, 1991). There could be several explanations for the above noted discrepancy. First, a substantial proportion of users of non-terminal methods in the official records might be fictitious. Our own studies in rural areas of northern Karnataka have indicated that anywhere from 3 to 20 per cent of the IUD cases may not be genuine (see Population Research Centre, 1991). Second, discontinuation rates of IUD and wastage of oral pills and condoms distributed through government networks are probably higher than those assumed by the Department of Family Welfare (DFW) in its computation of couple protection rate (CPR). Third, survey statistics on contraceptive practice are also not without error. It is known that a sizeable number of acceptors of non-terminal methods use the method without the knowledge of family members, and they might not disclose this to field interviewers unless they are approached confidentially. A careful study of factors contributing to the choice and continuation of reversible methods is therefore a necessity.

In this paper, we have restricted our discussion only to IUD partly because it is the most popular of all the non-terminal methods in Karnataka, and partly because of the availability of data to the authors. Further, we propose to discuss only the factors responsible for the low retention of the method, as the literature on it is surprisingly scanty. Although many follow-up studies of IUD adopters have been conducted in the past, most of them have confined themselves to the estimation of retention rates and the discussion of reported side effects (see, Gandotra and Das 1990). In particular, the contribution of programme factors in extending the duration of use has received far less attention than it deserves (see Phillips *et al.*, 1989).

The Data

We reanalyzed the data from several evaluation studies conducted in northern Karnataka by the Population Research Centre, Karnataka. In particular, we choose the studies conducted in the rural areas of Shimoga, Belgium, Bijapur, Bellary districts, and urban areas of Shimoga district at various intervals since 1986 (Nair, Talwai and Rajaretnam, 1988; Raharetban and Patil 1989; Patil 1992, Hasalkar and Ganiger 1990; Hasalkar and Rajeswari 1990). In these studies, a pre-determined number of acceptors were selected from the PHC-registers, and those who could be contacted at the addresses given were interviewed. The cases lost to follow-up were quite substantial in these studies, varying from 45 to 55 per cent in different districts. In all, 713 IUD acceptors (mainly Cu-T), 461 in rural areas and 252 in urban areas, all accepting during the period 1983-1989 could be interviewed. Two-thirds of the respondents had the IUD inserted between 1985 and 1987. About 20 per cent of the cases were interviewed between 6 to 12 months after insertion, 40 per cent between one to two years, 25 per cent between two to three years, and 15 per cent between three to four years.

IUD Continuation Rates

At the time of the interview, the original IUD was placed in only 35 per cent of the cases. An additional three per cent had the IUD reinserted after removing the old device for renewal purpose. In another three per cent of the cases the IUD was expelled, and in one per cent of the cases pregnancy was reported while the IUD was in place. In all the remaining cases the IUD was removed on request. We estimated the monthly discontinuation rates from all causes combined using the life-table technique. The estimated monthly continuation rates, and the basic data employed in computing them, are shown in the Appendix 1. Figure 1 shows the estimated continuation curves for urban and rural areas separately.

It is observed that IUD is retained for a longer period in urban areas than in rural areas. About 50 per cent of rural adopters and 30 per cent of urban adopters discontinue use within one year of adoption (see Table 1). The life-table analysis indicated a mean duration of use of about 18 months in rural areas and 24 months in urban areas. The estimated average period of retention is lower than what is assumed in the computation of CPR by the Department of Family Welfare (27 months), but are consistent with the findings of other studies in the region. A follow-up study of IUD acceptors conducted by the Population Centre, Bangalore, reported the average period of retention for the Cu-T intrauterine device as 20 months in rural areas and 30 months in Bangalore City (Bhattacharjee, Rao and Gowda, 1987). A similar study done in Pune City showed the retention of Cu-T for roughly 24 months (Mulay and Srikantan, 1987).

The examination of estimated hazard rates shows that drop outs are relatively high in the first six months of use and reach their low values during 1-2 years (see Table 1). The drop-out rate rises sharply after three years of use because those who used the device for spacing of the children go for the next child and those who used it for stopping have to go for reinsertion due to the short life span of the Cu-Ts used in India. In contrast to this J-shaped pattern of the hazard rate, a constant drop out rate of 3.7 per cent per month is assumed by the Ministry of Health and Family Welfare for the computation of CPR (Department of Family Welfare, 1979). An IUD is assumed to give protection (for one per cent of acceptance) even up to 10 years when in fact hardly anybody uses the same device for more than four years. Since in the programme statistics reinsertions are treated as new cases of IUD adoption, a serious upward bias is caused due to the assumption of constant drop-out rate in the calculation of CPR. Although the negative binomial distribution employed by the D.F.W. does give a reasonable approximation for the observed IUD continuation curve up to three years of use, it diverges significantly after three years (Mulay and Srikantan; 1987).

Table 1: Comparison of Estimated IUD Continuation Rates with those Used in the Computation of Couple Protection Rate

Completed month	*Proportion still using IUD*			*Average monthly attrition rate*		
	Used in computation of CPR @	*Present study **		*Used in computation of CPR @*	*Present study **	
		Rural	*Urban*		*Rural*	*Urban*
0	1.000	1.000	1.000	0.037	0.054	0.039
3	0.894	0.849	0.890	0.037	0.067	0.027
6	0.799	0.693	0.821	0.037	0.049	0.025
12	0.638	0.516	0.707	0.037	0.034	0.027
24	0.408	0.343	0.507	0.037	0.045	0.048
36	0.260	0.197	0.281	0.037	0.134	0.079
48	0.166	0.021	0.101	0.037	-	-
60	0.106	-	-	0.037	-	-
120	0.011	-	-			
Mean duration of use	27	18	24			

Note: These estimates are derived by excluding data for Belgaum district where duration of use was recorded only in broad intervals of 0, 1-3, 4-6, 7-12 and 13+ months.

* *Survival function was slightly smoothed to reduce the effect of preference for months 3, 6, 12, 24, etc. in reporting duration of use. Raw figure are shown in the appendix.*

@ *Department of Family Welfare (1979).*

There are thus strong grounds for considering the revision of IUD continuation rates currently used in the computation of CPR. However, continuation rates alone cannot explain the large discrepancies found between the official and the survey-based CPR. At the maximum, the official CPR in the case of IUD could be biased upward by 10 to 15 per cent from the use of constant drop-out rate, where as the official figure is typically 3 to 4 times larger than the survey-based estimates.

It should also be noted that part of the protection conferred by the IUD could be spurious as the use might overlap with duration of post-partum amenorrhoea (PPA). However, only 30 per cent of our acceptors reported that their monthly period had not resumed when the IUD was inserted.

As the mean length of PPA works out be about five months on average, not more than 5 x 0.3 = 1.5 months of use could be during PPA.

Determinants of IUD Retention

In Table 2 we have analyzed the reported reasons for removal by duration of use. Although the majority of our respondents said that they accepted the IUD for spacing births, only 17 per cent of the women who got the IUD removed did so because of the desire for another child. As much as 60 per cent of the women reported side-effects as the main reason for discontinuation. Among these women, two-thirds had problems related to menstrual flow (white or heavy discharge), and one-third complained of pelvic pain, body ache or weakness. Eight per cent of the women dropped out because of family or social pressure. About 10 per cent of the removals was for switching over to another method (mainly sterilization), or for reinserting the IUD. The remaining five per cent had the IUD removed for miscellaneous reasons.

Table 2: Reasons for IUD Discontinuation by Duration of Use

Reason for removal	*Duration of use in months*				*All durations*
	0-3	*4-6*	*7-12*	*12+*	
Side effects					
Problems related to menses or sepsis	52.3	50.5	52.3	14.5	40.1
Bodyache or weakness	6.4	18.3	29.5	26.0	20.0
Wanted a child	19.3	17.2	13.6	17.6	17.1
Renewal of IUD	0.0	0.0	1.1	16.8	5.5
To switch over to another method	3.7	4.3	2.3	7.6	4.8
Family/social pressure	13.8	5.4	1.1	8.4	7.6
Other reasons	4.6	4.3	0.0	9.2	5.0
All causes	100.0	100.0	100.0	100.0	100.0
No. of removals	109	93	88	131	421

The analysis of reasons for removal by duration of use shows that problems related to the menstrual flow is the dominant reason for early drop out, and physical discomfort is a more important reason among the late drop outs. Family and social pressures also cause early drop out, whereas reinsertions

or switching to another method occur only after the prolonged use. Thus, the analysis of reported reasons for removal suggests that experience of side effects, especially problems related with the menstrual flow, is the main deterrent to the prolonged use of IUD. However, it is important to recognize that contraceptive discontinuation is a complex and multidimensional phenomenon (Philips *et al.*1989). In this case the percentages in the 12+ column are disturbed by the sudden appearance of 16.8 per cent removals for IUD, renewal in one sense there are really continuing cases.

Therefore, an attempt has been made below to ascertain the influence of some of these factors on both the duration of IUD use and the reported experience of side effects. The effect on duration of use is studied by considering the percentage of women who retained the device after 4, 7 and 13 months of use among those who were interviewed after one year of acceptance. (Gandotra and Das, 1990) Although the restriction of the sample to those who were interviewed after one year of acceptance resulted in some loss of cases, it effectively avoided-though in a simplified manner-the problem of censoring the data. However, in studying the impact on side effects, all cases were included in the analysis since all were contacted after six months of use and few reported the onset of side effects after this period. To simplify the analysis, only two broad categories of reported side effects; those related to menstrual flow and complaints of body ache/weakness, were considered. A few cases of sepsis were included in the former category. In our sample, 56 per cent of acceptors never experienced any side effects, 21 per cent reported problems related to the menstrual flow, and 14 per cent reported body ache/weakness and 9 per cent complained of both the problems.

Personal Characteristics of Acceptors

The data presented in Table 3 show that older and high parity women retain IUD for a longer duration than younger and low parity women. Women with more children also reported lower frequency of side effects, especially body ache/weakness

(see Table 4). The relationship between age and experience of side effects of IUD was, however, not so clear cut. Women under 20 and over 35 have reported a lower incidence of side effects than women aged 20-34 years. Overall, it appears that younger and low parity women are more bothered by minor discomfort as they are not so strongly motivated to use the method. More of the older women use IUD for stopping rather than spacing children, and this helps delay the discontinuation of IUD use.

The sex composition of children does not appear to have an impact on IUD continuation; at least the pattern i.e., somewhat irregular since in panel 3 of Table 3 those with one daughter only do somewhat better than those with one son only. This is significant because our surveys have revealed that in contrast to sterilization acceptors, IUD acceptors are not selected for preponderance of boys among their children or in their last child (see Population Research Centre, 1991). Thus popularization of IUD (or any reversible method) may help to overcome the son-preference barrier, as it is likely to reduce the desire for the second son, who is wanted mainly as an insurance against the risk of losing the first.

Our data also indicate that those who accept the method shortly after birth at 0-3 months, continue much better than those at 4-6 or 7-12 months. Oddly, however, women the best rates are at 12+ months. The pattern for side effects is it may be noted that younger and low parity women tend to have more postpartum insertions. Consequently, from the bivariate analysis, it is not clear whether the observed effect is due to postpartum insertions or due to age or parity of acceptors.

Table 3: IUD Continuation Rates by Personal Characteristics of Acceptors

Acceptor characteristics	*Per cent retaining IUD*			*Total case in each category*
	After 4 months	*After 7 months*	*After 13 months*	
	1	2	3	4
All adopters	83.6	69.2	52.6	568
Age of wife at adoption				
< 20	78.4	55.4	37.8	74
20 - 24	82.9	66.3	43.4	205
25 - 29	82.1	70.2	57.1	168
30 - 34	88.4	73.9	62.3	69
35 +	92.3	90.4	82.7	52
Living children at adoption				
One or less	80.4	67.6	45.8	179
Two	84.3	66.8	51.6	223
Three	84.1	71.9	57.3	82
Four or more	88.1	76.2	65.5	84
Sex composition of children				
No son	81.8	67.6	51.4	148
No daughter	82.1	65.3	45.7	173
1 son only	82.0	68.1	49.4	267
1 daughter only	83.6	70.8	54.9	226
2 + sons	88.3	72.7	61.0	154
2 + daughters	85.3	71.2	58.2	170
Sex of last child				
Male	85.4	70.5	53.6	295
Female	82.9	68.5	53.3	257
Interval since last birth (at adoption)				
0 - 3 months	85.0	77.5	57.0	107
4 - 6 months	82.6	69.6	52.2	92
7 - 12 months	79.6	55.1	39.8	98
More than a year	88.6	81.2	72.5	149
Wife's schooling				
Illiterate	80.1	58.0	39.2	181
Primary level	80.4	66.1	50.0	56
Middle level	84.5	66.3	54.5	110
High school	90.2	85.3	65.9	164
Collage	77.2	66.7	56.1	57

(Contd.)

	1	2	3	4
Husband's schooling				
Illiterate	76.7	56.7	34.2	120
Primary level	85.1	61.7	44.7	47
Middle level	85.1	66.7	50.6	87
High school	87.6	75.8	59.5	153
Collage	83.6	75.4	62.3	146
Occupation of wife				
Non-worker	85.3	70.9	55.0	333
Family farm	79.0	64.2	38.3	81
Wage labour	82.1	61.9	47.6	84
Others	82.9	75.7	64.3	70
Occupation of husband				
Family farm	79.7	65.9	47.8	138
Wage labour	76.5	57.6	45.9	85
Artisan	87.5	75.0	42.5	40
Salaried job	83.7	71.5	59.9	147
Trade & commerce	91.4	74.2	54.3	116
Others	83.9	74.2	58.1	31

Note: Only those acceptors who were interviewed after one year of acceptance are analyzed here. Since a revised set of questionnaires were used each time, total number of cases is not the same for all the variables.

Table 4: Percentage of Adopters Reporting Side Effect of Using IUD by Personal Characteristics of Acceptors

Acceptor characteristics	*Never experienced any side effect*	*Reporting side-effects from IUD use*			*Total adopters in each category* *
		Related to menses/ sepsis	*Bodyache/weakness*	*Combination of both*	
	1	2	3	4	5
All adopters	55.8	21.5	13.5	9.2	710
Age of wife at adoption					
< 20	61.3	17.9	6.6	14.2	106
20 - 24	49.2	22.7	17.7	10.4	260
25 - 29	57.3	21.8	12.1	8.7	206
30 - 34	59.0	25.6	10.3	5.1	78
35 +	65.0	16.7	16.7	1.7	60

(Contd.)

	1	2	3	4	5
Living children at adoption					
One or less	50.9	21.5	15.8	11.8	228
Two	54.0	23.4	14.6	8.0	274
Three	61.2	20.4	10.7	7.8	103
Four or more	65.7	18.1	8.6	7.6	105
Sex composition of children					
No son	50.0	20.0	16.8	13.2	190
No daughter	50.9	27.8	12.7	8.5	212
1 son only	59.2	19.2	12.8	8.7	343
1 daughter only	55.6	18.7	16.5	9.2	284
2 + sons	55.4	27.7	11.3	5.6	177
2 + daughters	60.7	19.2	10.3	9.8	214
Sex of last child					
Male	54.5	23.3	13.3	8.9	369
Female	57.1	19.6	3.2	10.1	317
Interval since last birth					
(at adoption)					
0 - 3 months	55.5	22.7	13.4	8.4	119
4 - 6 months	47.5	23.3	16.7	12.5	120
7 - 12 months	56.6	26.2	9.0	8.2	122
More than a year	65.7	16	13.3	5	181
Wife's schooling					
Illiterate	58.6	19.7	11.2	10.4	249
Primary level	47.9	26.8	8.5	16.7	71
Middle level	56.7	24.6	11.9	6.7	134
High school	54.5	20.4	18.3	6.8	191
Collage	55.6	20.6	15.9	7.9	63
Husband's schooling					
Illiterate	60.5	23.5	10.5	5.6	162
Primary level	50.8	24.6	13.8	10.8	65
Middle level	58.3	17.5	10.0	14.2	120
High school	50.3	27.2	13.9	8.7	173
Collage	54.4	17.5	18.7	9.4	171
Occupation of wife					
Non-worker	54.8	21.7	13.1	10.4	405
Family farm	60.0	17.3	12.7	10.0	110
Wage labour	59.2	24.3	9.7	6.8	103
Others	51.6	23.1	19.8	5.5	91

(Contd.)

	1	2	3	4	5
Occupation of husband					
Family farm	64.3	19.5	8.6	7.6	185
Wage labour	56.0	20.2	13.8	10.1	109
Artisan	56.0	22.0	14.0	8.0	50
Salaried job	57.2	19.1	15.0	8.7	173
Trade & commerce	39.4	30.7	18.2	11.7	137
Others	54.8	21.4	11.9	11.9	42

* *Since a revised set of questionnaires was used each time, total number of cases is not the same for all the variables.*

The data presented in Table 3 clearly show that IUD is retained longer by the educated couples (until college level, for wife) and those with non-agricultural occupations. This is, however not because they are less prone to side effects (see Table 4). In fact, women who have husbands with some schooling or engaged in trade and commerce activities have complained more about side effects. Obviously, educated couples and those in urban occupations have a stronger desire to stop or space children and hence to endure some side effects of the method.

Household and Community Characteristics

The impact of household-and community-level variables on retention of IUD and the experience of side effects is analyzed in Tables 5 and 6. We find no significant difference in the drop-out rates of caste Hindus and Muslims. But, members of other religions (mainly Christians) and, surprisingly, women of Scheduled Caste or Scheduled Tribe, show longer duration of IUD use. They have also reported lower incidence of side effects. However, due to their small number in our sample not much ought be made out of this finding.

The joint family, particularly the presence of a mother-in-law in the house, appears to have an adverse impact on continuation of IUD use. One might assume that this is owing to greater pressure on the acceptor in such households to discontinue the method. But, women belonging to these households also complained more of side effects. Women living in joint households tend to be younger than women in

nuclear households which may explain why they have complained more about side effects and discontinued the method early.

Table 5: IUD Continuation Rates by Household and Community Characteristics of Acceptors

Acceptors characteristics	*Per cent retaining IUD*			*Total cases in each category* *
	After 4 months	*After 7 months*	*After 13 months*	
	1	2	3	4
All adopters	83.6	69.2	52.6	568
Religion/Caste				
Caste Hindus	83.6	68.9	50.5	414
SC/ST	82.5	75.5	66.7	57
Muslims	84.0	64.0	49.3	75
Others	86.4	77.3	68.2	22
Family type				
Nuclear	86.0	71.7	56.1	399
Joint	78.0	63.1	44.0	168
Mother-in-law				
Not present	85.3	73.3	60.0	75
Present	73.9	60.9	41.3	46
Type of house				
Kutcha	81.6	65.4	47.8	228
Pucca	84.8	73.4	56.9	290
Cultivated land @				
None	84.8	60.2	41.3	138
< 5 acres	81.6	67.9	51.7	87
5 + acres	76.4	60.7	39.3	89
Annual household income (Rs.)				
< 5000	85.7	68.8	52.6	154
5000 + 10000	89.1	72.3	46.2	119
10000 + 20000	80.2	65.6	49.6	131
20000 +	80.5	71.5	62.4	133
Village type				
PHC/PHU	77.7	63.3	45.3	139
Sub-centre	84.6	63.5	42.4	123
Other villages	84.7	59.3	40.7	59
Urban area	86.2	77.7	64.8	247

(Contd.)

	1	2	3	4
District				
Shimoga, urban	86.2	77.7	64.8	120
Shimoga, rural	79.7	59.4	35.6	87
Belgaum, rural	89.4	63.9	51.1	47
Bijapur, rural	80.0	51.4	25.7	153
Bellary, rural	81.0	68.6	52.9	146

* *See the note to Table 3.*

@ *For rural respondents only.*

Table 6: Percentage of Adopters Reporting Side Effects of Using IUD by Household and Community Characteristics of Acceptors

Acceptor characteristics	*Never experienced any side effect*	*Reporting side-effects from IUD use*			*Total adopters in each category **
		Related to menses/ Sepsis	*Bodyache / Weakness*	*Combination of both*	
	1	2	3	4	5
All adopters	55.8	21.5	13.5	9.2	710
Religion/Caste					
Caste Hindus	55.4	21.3	14.1	9.1	516
SC/ST	63.6	15.6	14.3	6.5	77
Muslims	48.4	27.5	11.0	13.2	91
Others	65.4	23.1	7.7	3.8	26
Family type					
Nuclear	58.7	20.1	13.6	7.5	492
Joint	49 1	25.0	13.0	13.0	216
Mother-in-law					
Not present	69.2	14.4	5.8	10.6	104
Present	62.5	12.5	14.1	10.9	64
Type of house					
Kutcha	56.2	21.7	13.1	9.0	267
Pucca	54.5	21.6	14.0	9.9	343
Cultivated land @					
None	53.7	21.6	15.3	9.5	190
< 5 acres	54.9	21.8	12.8	10.5	133
5 + acres	64.8	10.4	11.2	13.6	125

(Contd.)

	1	2	3	4	5
Annual household income (Rs.)					
< 5000	57.5	21.7	9.4	11.3	212
5000 + 10000	55.7	24.2	13.4	6.7	149
10000 + 20000	48.1	23.1	18.1	10.6	160
20000 +	60.0	18.7	16.0	5.3	150
Village type					
PHC/PHU	58.4	20.0	11.6	10.0	190
Sub-centre	58.1	18.8	13.4	9.7	186
Other villages	48.8	17.1	17.1	17.1	82
Urban area	54.4	26.2	13.9	5.6	252
District					
Shimoga, urban	54.4	26.2	13.9	5.6	252
Shimoga, rural	45.4	23.1	21.5	10.0	130
Belgaum, rural	58.3	20.8	13.5	7.3	96
Bijapur, rural	47.1	21.4	8.6	22.9	70
Bellary, rural	68.5	13.6	8.6	9.3	162

* *See the note to Table 4.*

@ *For rural respondents only.*

The analysis of continuation rates by type of house, size of land holding and household income shows that rich women do not retain IUD significantly longer than poor women. We also find only a weak evidence for the often repeated claim that poor, malnourished women are more prone to have side effects from the use of IUD. Women belonging to households with an annual income over Rs. 20,000, or with more than five acres of land, reported a lower incidence of menses-related problems with IUD use, but the difference is not significant.

Among the community-level variables, we could only analyze the impact of proximity to health services and the district of residence. It was found that women living in PHC/PHU-headquarters villages, or in sub-centre villages, do not retain IUD longer than women living in villages with no such amenities. However, women living far away from health service centres have complained more about side effects. Our data appear to support the hypothesis that women living in distant villages are more motivated acceptors (see Philips 1978).

Also, urban women retained the IUD significantly longer than rural women although they complained as much about side effects as rural women. As a matter of fact, they complained more about menses-related problems and less about body pain and related problems (which are only weakly related to duration of use) than rural women. While 82 per cent of rural acceptors received follow-up visits from health workers, only 49 per cent of urban acceptors reported follow-up visits from health functionaries.

There are reasons to believe that urban acceptors are more motivated to use the method, and thus continue to use it in spite of some physical discomfort. While only 42 per cent of rural acceptors said that they were self-motivated to accept the method, 66 per cent of the urban acceptors reportedly adopted the method on their own will. Moreover, about one in three adopters in urban acceptors to use the method is also indicated by the fact that 60 per cent of the urban areas had used IUD for stopping child bearing complained to only one in eight in rural areas. The stronger resolve of the urban acceptors reporting side effects availed treatment in Government or private health centres compared to 48 per cent in the rural areas. However, this may also be due to easy availability of health facilities in urban areas.

The adopters from rural areas of Bellary and Belgaum districts complained less about side effects and have retained IUD longer than their counterparts in Bijapur and Shimoga districts. As our follow-up studies were not conducted in the same period in all the districts and did not use the same principal investigators in every district (though, the field team was the same), it is difficult to assess the quality of programme management in different districts. None-the-less, adopters in Belgaum reported more follow-up visits from the female health workers (around 5 per acceptor) than in other districts (about 4 per acceptor), and adopters in Bellary, though received fewer follow-up visits, availed follow-up services from health centres in far greater number (73 per cent) than in other districts (35 per cent). Further, 67 per cent of the acceptors in Bellary and

51 per cent of the acceptors in Belgaum reported having undergone medical checkup before acceptance compared to only 38 per cent in Shimoga and 12 per cent in Bijapur. Thus, the quality of programme management may be a factor in the low retention of IUD observed in some districts.

Programme, Acceptance and Method-Related Factors

Among the programme-related variables, we have analyzed the impact of the place and person inserting the device, medical check up and advice given at the time of insertion, and follow-up services extended to the users on the continuation of IUD and occurrence of side effects. However, it should be noted that these variables may also include a component of motivational aspects of method-continuation. For example, those who have got the IUD inserted at home by female health workers may be self-selected for their low level of motivation, and thus may discontinue the use early.

From the data presented in Table 7, it is evident that those who had the IUD inserted at home or sub centre by Lady Health Visitors or auxiliary Nurse-Midwives have retained the device for shorter duration than those who had it done at the PHC or Government hospital by a medical doctor. Interestingly, reported incidence of side-effects was not higher in home or sub-centre insertions (see Table 8), suggesting that the place of insertion mainly reflects the acceptor's motivational level. However, in a sample of cases where we had data on the person inserting the device, we did find that the incidence of side effects is lower if the IUD is inserted by a Government medical officer instead of a LHV or ANM (see Table 8).

Table 7: IUD Continuation Rates by Programme, Acceptance and Method - Related Factors

Acceptors characteristics	*Per cent retaining IUD*			*Total cases in each category* *
	After 4 months	*After 7 months*	*After 13 months*	
	1	2	3	4
All adopters	83.6	69.2	52.6	568
Place of insertion				
Home	80.8	64.2	47.7	151
Sub-centre	81.5	61.0	25.9	54
PHC/PHU	82.78	69.7	54.3	208
Govt. hospital	8.9	77.0	66.7	126
Other places	89.3	75.0	57.1	28
Functionary inserting IUD				
ANM	72.7	49.1	27.3	55
LHV	82.2	65.8	47.4	152
MO/Govt. doctor	88.9	81.9	67.8	171
Private doctor	85.7	57.1	42.9	7
Pre-medical check up				
Not provided	84.6	69.8	52.8	371
Provided	82.0	68.6	52.6	194
Post-insertion advice				
Not given	83.0	68.9	52.2	441
Given	85.7	70.6	54.8	126
Month of adoption				
January - March	84.0	71.0	57.0	100
April - June	83.8	74.3	58.8	148
July - September	86.5	69.2	49.2	185
October - December	79.3	62.3	47.4	135
Motivator				
Self/Spouse	87.2	72.8	55.4	305
ANM	79.0	60.9	44.9	138
Other functionaries	75.3	64.9	55.8	77
Friends & relatives	93.2	81.8	54.5	44
Consent of spouse				
Not taken	86.0	67.9	49.7	193
Taken	84.1	71.1	55.3	246

(Contd.)

	1	2	3	4
Reasons for acceptance				
Spacing	83.9	66.5	47.7	373
Had enough children	90.4	80.8	73.6	125
Other reasons	69.1	63.2	41.2	68
Previous contraceptive use				
None	80.5	63.7	46.2	370
IUD	90.8	81.5	69.2	130
Other methods	86.6	76.1	56.7	67
Follow up visit by female worker				
No visit (urban)	87.0	80.9	64.1	131
No visit (rural)	75.4	55.4	43.1	65
1 - 3 visits	69.6	56.5	43.5	115
4 - 7 visits	82.8	66.7	48.3	87
8 + visits	95.6	75.6	56.3	160
Interval for follow up visit				
0 - 3 days	81.7	62.5	46.2	104
4 - 7 days	80.0	65.0	46.3	80
8 - 14 days	83.3	71.2	48.5	66
15 - 30 days	87.5	70.3	59.4	64
After a month	96.0	82.0	66.0	50
Nature of follow up				
General enquiry	86.3	69.5	53.5	226
Gave medicine	83.6	64.4	37.0	73
Other services	78.6	53.6	53.6	28
Side effects				
None	90.2	80.7	69.0	316
Related to mensus	69.4	48.4	25.8	124
Body pain/Weakness	80.5	67.1	48.8	82
Combination of both	84.4	51.1	20.0	45
Satisfaction with method				
Satisfied	92.8	83.6	71.9	249
Not satisfied	64.8	41.0	15.6	122
Indifferent	93.1	82.8	58.6	29

* *See the note to Table 3.*

Table 8: Percentage of Adopters Reporting Side Effect of Using IUD by Programme, Acceptance and Method-Specific Factors

Acceptor characteristics	*Never experienced any side effect*	*Reporting side-effects from IUD use*			*Total adopters in each category* *
		Related to menses/ sepsis	*Bodyache/weakness*	*Combination of both*	
	1	2	3	4	5
All adopters	55.8	21.5	13.5	9.2	710
Place of insertion					
Home	54.4	20.5	15.3	9.8	215
Sub-centre	63.8	15.9	8.7	11.6	69
PHC/PHU	53.4	23.1	14.6	8.9	247
Govt. hospital	58.2	24.7	9.6	7.5	146
Other places	56.7	10.0	23.3	10.0	30
Functionary inserting IUD					
ANM	47.7	27.7	16.9	7.7	65
LHV	48.7	27.8	17.1	6.3	158
MO/Govt. doctor	54.9	20.7	14.7	9.8	184
Private doctor	44.4	22.2	22.2	11.1	9
Pre-medical check up					
Not provided	51.5	24.8	15.4	8.3	447
Provided	62.7	16.2	10.4	10.8	260
Post-insertion advice					
Not given	54.2	22.7	13.9	9.2	533
Given	60.2	18.2	12.5	9.1	176
Month of adoption					
January - March	57.1	23.0	12.0	7.9	191
April - June	53.0	20.1	17.4	9.4	149
July - September	57.8	21.6	11.1	9.5	199
October - December	55.2	22.1	13.5	9.2	163
Motivator					
Self/Spouse	55.6	23.5	13.4	7.5	358
ANM	55.8	20.5	14.2	9.5	190
Other functionaries	58.0	25.0	11.0	6.0	100
Friends & relatives	56.1	7.0	14.0	22.8	57
Consent of spouse					
Not taken	53.0	22.3	14.9	9.8	215
Taken	51.9	24.7	14.7	8.8	320

(Contd.)

	1	2	3	4	5
Reasons for acceptance					
Spacing	52.4	22.0	13.9	11.6	481
Had enough children	67.1	18.9	10.5	3.5	143
Other reasons	57.1	22.6	15.5	4.8	84
Previous contraceptive use					
None	54.5	21.7	13.6	10.2	479
IUD	62.2	19.6	14.2	4.1	148
Other methods	51.2	24.4	12.2	12.2	82
Follow up visit by female worker					
No visit (urban)	50.0	28.4	13.4	8.2	134
No visit (rural)	55.7	19.3	14.8	10.2	88
1 - 3 visits	55.5	22.6	12.3	9.7	155
4 - 7 visits	65.2	14.3	12.5	8.0	112
8 + visits	55.3	21.6	13.9	9.1	208
Interval for follow up visit					
0 - 3 days	56.8	18.7	12.2	12.2	139
4 - 7 days	55.6	20.4	13.9	10.2	108
8 - 14 days	59.3	26.4	11.0	3.3	91
15 - 30 days	59.0	17.9	16.7	6.4	78
After a month	61.7	15.0	11.7	11.7	60
Nature of follow up					
General enquiry	61.1	18.4	14.5	6.0	283
Gave medicine	45.9	23.5	11.2	19.4	98
Other services	51.3	33.3	12.8	2.6	39
Satisfaction with method					
Satisfied	78.3	9.4	9.7	2.5	277
Not satisfied	5.0	53.9	22.7	18.4	141
Indifferent	9.4	28.1	31.3	31.3	32

* *See the note to Table 4.*

About two-thirds of the respondents stated that they did not receive a pre-insertion medical checkup nor were they cautioned about the probable side effects of using IUD. Those who had the benefit of these services complained less of the side effects but, surprisingly, they did not retain the IUD significantly longer than others (see Table 7). One reason for this anomaly seems to be that medical check-up and advice at the time of insertion had little impact on the experience of side effects (see Table 8). Perhaps, owing to the pressures to fulfil performance targets, the medical screening was done only as a formality in a few cases.

On the other hand, the importance of post-insertion advice may depend on the educational level of adopters. Educated women may already be armed with the required information, whereas for illiterate women it may have to be provided by the health functionaries. We, therefore, analyzed the impact of post-insertion advice separately by educational level of the woman :

Adopter's education level	*Per cent retaining IUD*			*Number of women*
	After 4 months	*After 7 months*	*After 13 months*	
Primary or less				
Received post-insertion advice	83.9	69.6	53.5	56
Not received post-insertion advice	79.3	58.2	43.5	184
More than Primary				
Received post-insertion advice	88.3	74.0	61.0	77
Not received post-insertion advice	85.9	77.2	61.6	263

The above analysis shows clearly that post-insertion advice does help in lengthening the duration of use among illiterates and women with just primary level of education.

About a half of the urban acceptors and one-fifth of the rural acceptors reported that no health functionary visited them for follow up. However, those who received follow-up visits also complained equally about side effects and did not retain IUD longer than those who were not followed-up. Those who received more than three follow-up visits did retain IUD longer than others, but this could be because an acceptor remains eligible for follow-up only as long as she retains the device.

Our results appear to confirm the findings of a recent literature review that there is no systematic evidence to support the hypothesis that reassurance or resupply visits by field workers have any effect on the duration of contraceptive use (Phillips et al. 1989). However, it is possible that such counter-intuitive findings are reported in the literature because of the failure to examine some of the relevant interaction effects. We, therefore, subjected our data to further analysis.

In particular, we examined whether follow-up visits help in extending the IUD use among women who reported side effects. The result is shown below:

	Number of women reporting side effects	*Per cent retaining IUD*		
		After 4 months	*After 7 months*	*After 13 months*
Rural areas				
No follow-up visits	29	65.5	31.0	13.8
Had follow-up visits	113	78.8	51.3	27.4
Urban areas				
No follow-up visits	64	76.6	70.3	40.6
Had follow-up visits	48	79.2	64.6	52.1

The analysis shows that women reporting side effects of using IUD retain the device longer if health functionaries visit them for the follow-up. The impact of follow-up visits may be stronger on rural women as they seldom come on their own to clinics for post-insertion care, but only 29 women were not visited. Moreover, both rural rates at 13+ months are exceedingly low. The timing of the follow-up visit may also be critical in extending the duration of use. The ideal time for first follow-up visit appears to be 15 days or one month after acceptance than immediately following the insertion (Table 7).

The type of follow-up care provided is often guided by the nature of complaint the woman had (see Table 8). Consequently, we find lower retention among women who reported casual follow-up visits from the ANM than among women who were given medicine or advised to come to the clinic for further treatment (see Table 7). Nevertheless, our data do confirm the poor quality of follow-up services extended to IUD acceptors. Only about 40 per cent of the rural acceptors who complained of menses-related side effects stated that they had received follow-up care from the health workers. The remaining were either not visited (20 per cent), or received only casual calls from the ANM (40 per cent). In urban area, the frequency of casual visits by the health workers

were much less (27 per cent). In fact, most of them (60 per cent) were not visited at all after the insertion.

Among the acceptance-related factors, our data permitted the analysis of the impact of reason for acceptance, person who acted as the motivator, consent of spouse before adoption, previous use of contraception and month of adoption. About one-fifth of our respondents had explicitly mentioned that they accepted the method to stop having children, and these women had retained the IUD significantly longer than those who reported that they used it mainly for spacing (see Table 7). A somewhat unexpected result was that stoppers complained less about side effects than the spacers (see Table 8). Whether this is because stoppers are older than spacers, or that spacers tended to exaggerate the problems with the method, is not clear.

About 40 per cent of our respondents stated that they were motivated by the ANM or other health functionaries to adopt the method. These women retained the IUD for a significantly shorter duration than those who accepted the method on their own or were persuaded to do so by their relatives and friends (see Table 7). The experience of side effects was, however, not related to who the motivator was (see Table 8). Thus, by implication, those who were motivated by health workers were self-selected for their low level of motivation.

As much as one-half of urban acceptors and one-third of rural acceptors stated that they did not consult the husband prior to adoption, either by choice or otherwise. But, surprisingly, the data presented in Table 7 indicate that duration of use is unrelated to whether or not the consent of the family was taken before acceptance. However, when the data were analyzed separately for rural and urban areas, the expected relationship between prior consultations between the husband and wife and duration of use did emerge:

	Per cent retaining IUD			Number of women
	After 4 months	After 7 months	After 13 months	
Rural areas				
Consent not taken	80.8	53.4	38.4	73
Consent taken	84.8	64.1	44.5	128
Urban areas				
Consent not taken	89.4	77.2	61.0	123
Consent taken	84.8	80.0	70.4	125

Although the above analysis makes it clear that women who did not take the consent of the husband did indeed use IUD for a shorter span, the impact observed is not significant. Perhaps, those who did not take the consent of the spouse were more strongly determined to use the method, which largely compensated for the resistance she might have had to face within the family later.

Acceptors who reported a previous history of contraception, especially those who had used an IUD earlier, retained the device for a significantly longer time (Table 7). About one-fifth of the acceptors in our sample had used an IUD earlier and one-tenth had used other methods. Women who had used an IUD previously complained less about side effects than those who did not use any method, or used only methods other than IUD (Table 8). Obviously, those who decided to readopt IUD were the ones who had less problems with the method earlier.

For two reasons, the month of adoption may influence the IUD retention. First, because pressures to achieve targets on programme personnel become particularly acute in certain months, a disproportionately large number of low-motivated women might become "acceptors" in those months. Second, as follow-up of acceptors might prove difficult during the rainy season, those who adopt the method during or just before the monsoon period may not get adequate follow-up care. The data presented in Table 7 show that those who adopted IUD between July and December retained the device for a shorter

period than those who adopted it during the first half of the calendar year. The experience of side-effects was, however, not related to the month or season of adoption. But among those who adopted the IUD during July to December, there were relatively more women who did not take the consent of the husband, did not have medical checkup before adoption, were not advised about the probable side effects and were not visited by health workers for follow up. Thus, the season of adoption does appear to influence the duration of IUD retention.

The most important method-related factor influencing retention is the experience of side effects. As already mentioned, 44 per cent experienced one side effect or the other. About two-thirds of these complaints related to menstrual flow such as excessive bleeding, white discharge, irregular monthly period, etc, and the remaining one-third to minor complaints, such as vaginal discomfort, back ache, weakness etc. A very small fraction of women reported infection at the place of insertion. Not surprisingly, the experience of side effects was strongly related to duration of use. If Two-thirds of the women who reported not having experienced any side effect retained the IUD for at least one year, while only one-fourth of those who reported menses-related complications and half of those who reported physical discomfort retained the IUD for more than a year (see Table 7). Women who reported multiple side effects retained the IUD for a much shorter duration.

The experience of side effects also has a strong detrimental effect on satisfaction with the method (see Table 8). About one-fourth of our respondents expressed their dissatisfaction and an additional 10 per cent were indifferent. Among those who expressed clear dissatisfaction, five out of six had discontinued the method within one year (see Table 7). About two-thirds of the adopters who were mostly satisfied users had stated that they have recommended the method to someone or would do so if consulted.

Another important method-related factor influencing duration of use is the almost universal view in India that IUD is mainly a spacing device. Such a misconception is present perhaps because, unlike sterilization, the method is easily reversible. It could also be due to the short life span of Cu-Ts used in India. Whatever the reason, in our sample, two out of three urban acceptors and seven out of eight rural acceptors have adopted IUD only to space children. Those who used IUD for spacing retained it for a significantly shorter time than those who used it to stop childbearing. If the misconception among the public (also perhaps among the programme managers and grassroots workers that IUD is good only for spacing children could be removed, the duration of use would see a dramatic improvement.

Policy Recommendations

1 Ensure proper follow-up care: Like many previous studies on the subject, our study indicates that the experience of side effects, especially those related to the menstrual flow, is the major deterrent to the prolonged use of IUD. But, the results of our study also tentatively indicate that duration of IUD use might be extended in such cases by providing proper and timely follow-up services. A follow-up visit after 15 days to one month of insertion seems to be ideal. However, follow-up services currently given are far from adequate. About 20 per cent of rural acceptors who reported serious side effects were not visited for follow-up, and in an additional 40 per cent of these cases only casual visits were made.

2 Improve quality of service at the time of acceptance: About two-thirds of our respondents stated that they did not receive either a pre-insertion medical checkup or counselling about probable side effects. Even those women who reported receiving these services did not retain IUD longer. Probably even the check ups if any were done as a mere formality. Our analytical results support the assumption that post-insertion advice helps

in extending the contraceptive use duration at least among the uneducated women. Screening of women for IUD ought to be made more strict, and acceptors should be advised on side effects and post-insertion care.

3 Encourage older women to adopt IUD : There is a misconception among public and programme managers in India that IUD is mainly a spacing device, and that it is not ideal for those who wish to stop childbearing. But our results indicate that it is the stoppers rather than the spacers who retain the IUD longer, and also complain less of side effects. The spacers tend to be less motivated and are quick to discontinue the use under the pretext of discomfort. If the IUD is promoted also as a terminal device and as an alternative to sterilization, it has a better chance of being accepted as a legitimate contraceptive device by the public. Once the IUD is accepted as such, its use is likely to be much higher among younger women than sterilization in a country such as India where infant mortality is still quite high, and preference for sons is strong. To facilitate those who would like to use it as a terminal device, the programme could consider promoting the use of IUDs with a longer life span.

4 Emphasize the reversibility of the method: Even though women reporting side-effects from using IUD is quite large, our studies in rural Karnataka indicate that it is equally true of sterilization (Population Research Centre, 1991). But the advantage of IUD over sterilization is that it can be dispensed with in the event of adverse effects, and women are free to choose a more suitable method. The programme should try to promote this as an advantage of the method.

5 Use revised continuation rates in the computation of CPR: the use of constant geometric attrition rate for IUD users has the effect of exaggerating the protection

conferred by the IUD after three years. Our analysis suggests that about 40 per cent of the adopters discontinue the method during the first year and 20 per cent each during the second, third and fourth years. Virtually no protection is conferred by the Cu-t after four years.

NOTES

1 *Monthly continuation rates were estimated by excluding 96 acceptors of Belgaum district where the data on duration of use were recorded only in broad intervals of 0, 1-3, 4-6 7-12 and 13+ months.*

2 *In the computation of CPR, the Department of Family Welfare, Ministry of Health & Family Welfare Govt. of India methodology assumes a monthly geometric attrition rate of 3.86 per cent (or an annual attrition rate of 37.6 per cent), which is inclusive of both non-retention of IUD and death or widowhood of the woman. On the basis of a few IUD follow-up studies done in the early 1970s (for lippes loop), it assumed that 10.6 per cent of the acceptors retain the device at the end of five years, which implies a monthly, geometric attrition rate of 3.67 per cent, the remaining being the mortality component.*

3 *The estimate of mean length of PPA was derived using the life-table approach from the data on fecundity status of the acceptors at the time of insertion by interval since last delivery. It may be noted here that the ORG survey of 1988 had estimated the mean duration of PPA as six months in rural areas and five months in urban areas (Operations Research Group, 1990).*

4 *The data are presented in these somewhat unconventional intervals because of the limitation of duration of use data gathered in the Belgaum evaluation study (see footnote 1).*

APPENDIX

Table A1: Duration of Use by Status of IUD at Survey Date and Estimated Survival Function in Rural and Urban Areas

Duration of use in months	Rural areas			Urban areas		
	IUD status		Estimated survival function	IUD status		Estimated survival function
	Still in situ	Not in situ		Still in situ	Not in situ	
0		25	1.000		13	1.000
1		10	0.931		8	0.948
2		18	0.903		7	0.916
3		23	0.853		6	0.888
4		17	0.789		4	0.865
5	3	11	0.742		4	0.849
6	3	31	0.712		13	0.833
7	5	7	0.624		5	0.781
8	1	11	0.604		3	0.761
9	3	6	0.572		4	0.749
10	9	2	0.555			0.733
11	5	2	0.549			0.733
12	14	25	0.542		20	0.733
13	6	1	0.459			0.653
14	9	2	0.455		3	0.653
15	3	1	0.447	5	3	0.641
16	4	2	0.443	7	3	0.629
17	5	1	0.435	9	1	0.617
18	5	6	0.430	4	7	0.612
19	2	2	0.403	2	2	0.579
20	3	1	0.393	4	2	0.570
21		1	0.388	5	1	0.560
22	3	1	0.383	3	1	0.555
23	2	2	0.378	2	1	0.550
24	6	15	0.367	4	21	0.544
25	2	3	0.283		1	0.426
26			0.264	6	1	0.421
27	3	1	0.264	1	2	0.415
28	2		0.264	3	1	0.402
29		5	0.257	3	1	0.395
30			0.257		3	0.389
31	1		0.222	1	1	0.367
32			0.222	3	2	0.360
33	1		0.222	2	3	0.345
34	4		0.222	1		0.322

(Contd.)

35		1	0.222	1		0.322
36	2	6	0.213	7	13	0.322
37	1		0.157	3	1	0.201
38	2		0.157	1		0.188
39	2	1	0.157	3	1	0.188
40	2	1	0.144	1	1	0.172
41			0.128			0.152
42	3	1	0.128		1	0.152
43	1	1	0.105	1		0.130
44		1	0.063			0.130
45				2		0.130
46				1		0.130
47						0.130
48				1	1	0.130
						0.043

Note: The data presented above exclude Belgaum district where duration of use was recorded only in broad intervals of 0, 1-3, 4-6, 7-12 and 13+ months.

FACTORS INFLUENCING CHOICE OF A CONTRACEPTIVE AND THE REASONS FOR ITS DISCONTINUATION

M. M. Gandotra and N. P. Das

The pattern of age-specific marital fertility rates in India during the years 1972 and 1985 reveals that over time there was a relatively sharp decline in the level of fertility in the country, especially among women aged 30 years and over as compared to women below 30 years. This means that the sterilization biased family planning programme in the country probably could reduce the fertility of women aged 30 years and over, who contribute only 20-30 per cent of the total fertility in the country. Although the Government of India is at present rightly advocating a method-mix strategy, the family welfare programme is still skewed towards terminal methods. The effective implementation of a method-mix strategy is required as a further decline in fertility appears to be unlikely unless couples start accepting spacing methods, especially in the age group 20-29 among the women, where fertility is at its peak. This calls for a greater understanding of the phenomenon as to why couples choose one or the other methods of family planning, how long they continue to use the method, and the factors that make them continue with the method, switch to another method, or discontinue it.

The present study is an attempt to investigate how couples choose contraceptive methods and the factors associated with the determination of this choice.

This investigation received financial support from the Special Programme of Research Development and Research Training in Human Reproduction, World Health Organization. We wish to put on record our deep sense of gratitude to the WHO for their support.

Review of Literature

Research on why couples choose a particular method of contraception is of recent origin as in most of the countries a couple's choice of a contraceptive is largely influenced by the type of family planning methods promoted by then respective governments. For example, the promotion of sterilization by the Government of India resulted in the choice of sterilization by about three fourths of the couples in the country (ORG, 1990; Gandotra & Das, 1989). Further, the popularity of IUD in China, oral contraceptives in Indonesia and Malaysia, condoms in Singapore and rhythm and withdrawal in the Philippines (U.N., 1984) are, to a large extent, a consequence of governmental policies of the countries. Even the shift in the method used by couples from IUD in the 1960s to oral contraceptives in late 60s or early 70s and then to female sterilization in late 70s and 80s in the Republic of Korea was due to an emphasis by the Government on these methods (Moon et al. 1973; Cho et al. 1984).

Palmore & Bulatao (1989) provided a framework for investigating method choice and emphasized that the choice of a method is a function of cultural, economic, technical, psychological and other factors. A cross-national analysis of Asian countries revealed that there was a significant increase in the share of users relying on sterilization over time and a substantial decline in the use of IUD even after controlling for the effect of socio-economic and regional variables in these countries.

Particular socio-economic factors were found to be related to the method mix in certain countries. For example, higher educational attainment in a country seems to reduce the share of sterilization and increase the share of other methods. It was also observed that greater newspaper circulation reduced the share of IUD use and increased the use of pill. A regression analysis with such factors suggests that different channels of communication are important in determining the choice of a method.

Using the data of Philippines and Egyptian studies, Jones (1989) studied the role of accessibility as a determinant of contraceptive method choice. The Philippines study revealed that "the chances of using the pill rather than another efficient method are almost two and a half times greater if other efficient methods are relatively inaccessible as opposed to relatively accessible". It was also observed in this study that if the travel time to seek the supply of condom was half an hour or more, the likelihood of using condom dropped to around half compared to when the time of fetching condoms was less than 15 minutes. Also the Egyptian study indicated that "the use of pills diminished markedly with the increase in the travel time to the source and that this inverse relationship was almost as sharp in the urban as in the rural areas. No such decrease or increase was evident in the use of IUD as travel time lengthened".

Using the data from the 1979 Korea Contraceptive Prevalence Survey, Minja Choe et al. (1989) observed that desire for additional children was an important variable for the decision on whether to use a method or not; but, it was not a significant factor for choosing any particular method. Further, number of living sons was reported to be a significant factor for the choice of terminal vis-avis a spacing method. Experience of a child death was a significant factor for choosing withdrawal over the IUD and female or male sterilization. It was also noticed that women who were aware of more government sources tended to choose the pill and the IUD over other methods.

Studies on method mix conducted in Sri Lanka (Malhotra & Thapa, 1991) revealed that sterilization received more prominence over time, as among those who were using some contraceptives about half were relying on this method in 1987 as compared to less than 40 per cent in 1982 and 30 per cent in 1975. While studying the determinants of contraceptive choice, it was apparent from this study that both demographic and socio-economic factors were important in distinguishing those practicing contraception from those who were not. The

method choice is largely dependent on family life-cycle goals rather than on socio-cultural characteristics. As a result sterilization is associated with the goal of terminating child bearing while temporary methods (both modern or traditional) are being used for child spacing.

In order to understand the contraceptive method choice Bulatao (1989) provided a frame work. He was of the opinion that the contraceptive method choice is determined by four factors viz. contraceptive goals, contraceptive competence, contraceptive evaluation and contraceptive access. Evidence relating to choice was reviewed by him method by method rather than country by country with reference to this frame work.

The above review has, thus, highlighted the need for greater understanding into contraceptive choice and its continuation as affected by (i) clients' social, psychological and cultural milieu as well as (ii) the programme factors like accessibility and quality of services available from country to country. The present paper, which has been taken from the WHO sponsored study undertaken by the Population Research Centre, Baroda, is an attempt to study the factors associated with the choice of contraceptive in the Indian cultural set-up.

Data and Methods

We cover only acceptors of IUD and oral pills in this paper in order to understand the underlying socio- cultural and behavioral factors that determine the use of those methods. The study was prospective in nature where a sample of 1123 cases of IUD and 494 cases of oral pill were covered from Gujarat during the period 1988-90. The couples who accepted these spacing methods during the six months prior to the date of survey were selected and followed at an interval of every six months for a period of one year. Thus all the women were exposed to a minimum of 12 months at the end of final follow-up. Simple cross-classification as well as logic regression analyses were carried out to understand the factors

that determine the choice and shift of a method and to know the proportion of switchers, their characteristics and the reasons for change over.

Patterns of Method Switchover

The life table analysis for IUD and oral pill acceptors revealed that 43 and 62 per cent of them discontinued their respective method by the end of the 12th month, while 62 and 73 per cent discontinued the use of IUD and oral pill respectively by the end of the 18th month. The reasons for the acceptor's discontinuation of their respective methods have been discussed elsewhere in the paper; the concern of this section is to understand the patterns of their shift to other methods after discontinuing the IUD and oral pill. The switching pattern among the IUD and oral pill cohorts were examined and are presented separately.

IUD Cohort: Out of 1,123 users of IUD who were followed for a period ranging between 12 to 18 months, 517 (46 per cent) continued to use the same method, and 343 (30.6 per cent) discontinued the use of this method and did not switch over to any other method (Table 1). Only 239 couples (21.3 per cent of the selected clients) discontinued use of IUD and shifted to another method. About 10 per cent switched over to a terminal method (Tubectomy), five per cent to natural methods, three per cent to oral pills and another three per cent to condoms. Only one couple resorted to vasectomy after the discontinuation of IUD.

About two per cent of the discontinuers of IUD switched over to two other methods of contraception. Two couples resorted to three other methods after discontinuation of IUD. Thus, there were 17 switching patterns among the IUD cohorts, considering one or more than one method shift. It appears that there is a general tendency among the majority of those who discontinue the IUD to shift to a relatively safe method like tubectomy. A significant proportion of couples also

switched to natural methods in the absence of a safe and side-effects-free modern spacing method (as per their response).

Oral Pill Cohort

In the case of oral pill cohort, 32 per cent of the couples continued this method while 27 per cent (133 couples) discontinued its use but, did not switch over to any other method. The remaining 41 per cent tried at least one more method of their choice. 36 per cent of the users of oral pill discontinued this method and adopted one other method; which 12 per cent each shifted to IUD and natural methods, 8 per cent switched to tubectomy, while only 4 per cent preferred to shift to condom.

The proportion of couples who tried two or more methods of family planning after abandoning the use of oral pill was very small. Only four per cent of the discontinuer of oral pill tried two methods while one per cent tried three methods by the end of the final follow-up visit. In all, there were 16 switching patterns among oral pill cohorts, considering one or more than one method shift. The general pattern of shift among the discontinuers of oral pill was not spread than in the case of IUD cohort. The preference of the discontinuers of oral pill users, who belonged to the urban areas, appeared to be for some spacing methods like IUD and natural methods, followed by a terminal method like tubectomy.

Reasons for Non-use or Changeover

IUD Chart : Among the IUD acceptors, 606 women discontinued its use for one reason or the other. Out of these, 343 women did not adopt any other method, while 263 switched over to other methods of family planning. As can be seen from Table 1, among those who had discontinued IUD, but had not shifted to any other method, the main reasons for such behavior were the desire for additional children (48 per cent), followed by excessive bleeding and other side-effects (37 per cent), expulsion of IUD (5 per cent) and failure of the

method (3 per cent). On the other hand, the major reasons reported for the discontinuation of IUD and subsequent switch over to another method was the experience of side effects related to menstruation and other physical complaints (54 per cent), followed by concern for effectiveness of the method and desire to adopt a permanent method (29 per cent). This is quite apparent as the major shift from IUD was to tubectomy. Fertility intention, as determined by couples' desire for a child was found to rank third.

As shown in the Table 1, the number of IUD cases switching over to two or more methods was small (24). These cases were further probed to understand their reasons for dropping the second method and switching over to the third or even fourth. About 63 per cent of these cases were quite concerned about the effectiveness and convenience of the methods and therefore they shifted from one method to the other to get choice.

Oral Pill Chart: Out of a total of 494 cases of oral pill acceptors, 337 discontinued this method. Out of 337 cases, 133 did not shift to any other method after pill discontinuation, the remaining 204 cases shifted to one or more methods of family planning. Among oral pill users who discontinued the method and did not switch to any other method, the main reasons reported were, once again, desire for additional children (34 per cent), side effects relating to menstruation and other physical complaints (33 per cent) and concern for the effectiveness and convenience of the method (12 per cent) (Table 7). The other reasons reported were pill lapse, fear of side effects, no need for contraception, social taboos and failure of the method. On the other hand, the prime reason for the shift to other methods among oral pill users was side effects relating to menstruation and other physical complaints. This reason made more than half (52 per cent) of the couples to discontinue oral pill (Table 2). The next major reason was the concern about the effectiveness and convenience of oral pill as a method (33 per cent), followed by the desire for additional children (7 per cent).

Table 1: Reasons for Discontinuation of IUD and Subsequent Method Shift, Gujarat, 1988-90

Reasons for Discontinuation of IUD	*Discontinued but not shifted to any method*	*Discontinued IUD and shifted to*					
		Vasec	*Tubec*	*Pills*	*Condom*	*Natural meths.*	*Total*
1 Wanted a child	165 (48.1)	-	7 (6.5)	-	1 (2.3)	8 (11.2)	16
2 No need for contraceptive /No sex relations/ Amernorrhoeic	7 (2.0)	-	-	-	-	-	-
3 Failure of the method	10 (2.9)	-	2 (1.9)	-	-	-	2 (0.8)
4 IUD expelled	18 (5.2)	1 (100.0)	4 (3.7)	4 (9.8)	2 (4.6)	3 (4.3)	14 (5.3)
5 Fear of side effects/health injury/sex injury	4 (1.2)	-	- (0.9)	1 (2.4)	1 (2.3)	2 (2.9)	5 (1.9)
6 Side effects related to menstruations (excessive bleeding, sportting)	51 (14.9)	-	12 (11.1)	22 (53.7)	31 (70.4)	28 (40.6)	93 (35.4)
7 Other physical Complaints (pain in abdomen, headache, general bodyache, irrittation, descomfort)	77 (22.4)	-	9 (8.3)	13 (31.7)	5 (11.3)	23 (33.3)	50 (19.0)
8 Objection by husband or in-laws	4 (1.2)	-	2 (1.9)	1 (2.4)	2 (4.6)	1 (1.5)	6 (2.3)
9 Concerned about the effectiveness & convenience of the method/wanted to go for permanent method	7 (2.0)	-	71 (65.7)	-	2 (4.6)	4 (5.8)	77 (29.3)
Total	343	1	108	41	44	69	263

Notes: *Figures within parentheses indicate percentage.*

* *Figure below include 239 cases who shifted to only one method after the IUD, plus 24 cases who used 2 or 3 methods after the IUD, for 263 total*

Table 2 : Reasons for Discontinuation of Oral Pill and Subsequent Method Shift, Gujarat, 1988-90

Reasons for Discontinuation of IUD	*Discontinued but not shifted to any method*	*Discontinued IUD and shifted to*				
		Tubec	*IUD*	*Condom*	*Natural meths.*	*Total*
1 Wanted a child	45 (33.8)	6 (15.4)	1 (1.5)	-	8 (11.4)	15 (7.3)
2 No need for contraceptive/No sex relations/Amernorrhoeic	10 (7.5)	-	-	-	-	-
3 Failure of the method	-	-	2 (3.1)	-	-	2 (1.0)
4 IUD expelled	8 (6.0)	-	4 (6.2)	2 (6.7)	1 (1.4)	7 (3.4)
5 Fear of side effects/health injury/sex injury	6 (4.5)	-	1 (1.5)	-	1 (1.4)	4 (1.9)
6 Side effects related to menstruations (excessive bleeding, sportting)	19 (14.3)	2 (5.1)	11 (16.9)	6 (20.0)	14 (20.0)	31 (15.2)
7 Other physical Complaints (pain in abdomen, headache, general bodyache, irrittation, descomfort)	25 (18.8)	9 (23.1)	26 (40.0)	14 (46.7)	26 (67.1)	75 (36.8)
8 Objection by husband or in-laws	4 (3.0)	-	-	-	3 (4.3)	3 (1.5)
9 Concerned about the effectiveness & convenience of the method/wanted to go for permanent method	16 (12.0)	22 (56.4)	20 (30.8)	8 (26.6)	17 (24.3)	67 (32.8)
Total	133	39	65	30	70	204

Notes: *Figures within parentheses indicate percentage.*
* *Inset rate as in table 1*

Among this cohort a small number of cases (24) discontinued oral pill and used more than one method of family planning. The major reason for their discontinuation of two or more methods and switching over to the third/fourth method was their concern for the effectiveness and convenience of the method (reported by 72 per cent of these switchers).

The above discussion regarding the reasons for discontinuation of both IUD as well as oral pill in favour of other methods of family planning leads one to conclude that

besides fertility intentions the major reasons for switchover from one method to the other were discomfort/side effects/physical complaints and the concern for the effectiveness and convenience of the method.

Covariates of Contraceptive Method Shift

This section examines the influence of cultural, socio-economic, demographic and service factors on contraceptive shift by binary logic regression. For the purpose of this analysis, the current contraceptive status among the IUD and oral pill cohorts who had discontinued their respective methods at the time of the final follow-up visit of the study was examined. Since the number of switchers to each of the different contraceptive methods was small, the method shifts among the oral pill and IUD cohorts was based on four broad but mutually exclusive contraceptive choice categories, viz., (i)shift to no method (non-use), (ii) shift to terminal methods (sterilization), (iii) shift to modern spacing methods, and (iv) shift to traditional methods (natural methods), to ascertain the current contraceptive status among them. Accordingly, four logic models viz., (1) choosing any method vs. no method, (2) choosing a terminal method vs. other method, (3) choosing any modern spacing method vs. other methods and (4) choosing any traditional method vs. other method were developed for each cohort (IUD and Oral pill) to study the impact of various background characteristics and the programme factors in choosing a contraceptive method.

The covariates considered for the present analysis along with their categories are shown in Table 3. The variables consisted of factors representing demographic and socio-economic characteristics, fertility intentions, perceived and actual medical risks associated with the contraceptive, social taboos and service dynamics. The results of the logic models are presented in the following sections.

IUD Cohort: Univariate and multivariate logic coefficients of covariates associated with switching among the discontinuers of IUD is given in Table 4. These coefficients were obtained for all the four models described earlier.

In the case of the first model, which examines the discontinuation of IUD and subsequent shift to any other method vs. non-use of a method, the univariate logic coefficients for the covariates type of family, desire for additional children, ideal family size, wife's age, number of living children, number of living sons and duration of effective marriage were found to be statistically significant. However, when the effects of other variables are controlled, the logic coefficients for only the variables, desire for additional children and number of living sons only are statistically significant, illustrating thereby that the future fertility intentions and the cultural bias of son preference remain the major deciding factors among Indian couples to use another method after discontinuing the IUD.

Table 3 : Covariates and Their Categories Considered for the Logic Regression Analysis

Covariate	*Categories*
1 Wife's age	Less than 25 = 1; 25-29 = 2; 30 and above = 3
2 Duration of effective marriage (in years)	0-4 = 1; 5-9 = 2; 10-14 = 3; 15 & more = 4
3 Number of living children	Upto 1 = 1; 2 = 2; 3 = 3; 4 & more = 4
4 Number of living sons	0 = 1; 1 = 2; 2 & more = 3
5 Wife's education	Illiterate = 1; Primary = 2; Secondary = 3; Colleage = 4
6 Family income	Upto Rs. 6000 = 1; Rs. 6001-12000 = 2; Rs. 12001-24000 = 3; More than Rs. 24000 = 4
7 Ideal family size	Upto 2 children = 0; 3 or more children = 1
8 Ideal spacing	Upto 24 months = 1; 25-36 months = 2; More than 36 months = 3
9 Desire for additional children	None = 0; one or more = 1
10 Perceived fear of any method	No fear = 0; Fear of at least one method = 1
11 Use of other methods in the past and satisfaction with the same	No other method used = 1; Used but nor satisfied = 2; Used and satisfied = 3
12 Complete knowledge of family planning method of contraceptive supply	Upto 3 methods = 1; 4 = 2; 5 or more = 3
13 Knowledge of sources of contraceptive supply	One = 1; Two = 2; Three or more = 3
14 Type of area of client's stay *	Remote village = 1; Sub-centre village = 2; PHC village = 3; Urban = 4
15 Type of family	Nuclear = 1; Joint = 0

* *In the case of oral pill acceptors which were taken only from urban area, this variable was replaced by :*

Distance to the nearest : ≤ 1 km = 0
Govt. health centre ≥ 1 km = 1

Table 4: Estimated Univariate and Multivariate Logic Coefficients of the Covariates Associated with the Practice of Switching in Contraceptive Methods Among the Discontinuer of IUD, Gujarat, 1988-90

Covariate	*Logic coefficients*			
	Any other method vs. no method use (Model 1)		*Sterilization vs. others (Model 2)*	
	Univ.	Multiv.	Univ.	Multiv.
1 Wife's age	0.42 ***	0.03	0.35 ***	-1.17
2 Duration of effective marriage (in years)	0.42 ***	0.07	0.48 ***	0.11
3 Number of living children	0.50 ***	0.28	0.60 **	0.29
4 Number of living sons	0.61 ***	0.43 *	0.93 ***	0.91 ***
5 Wife's education	0.16	0.17	-0.28 **	-0.32
6 Family income	0.09	0.05	-0.11	0.01
7 Ideal family size	-0.25 ***	-0.36	-0.17	-0.59
8 Ideal spacing	0.10	0.15	0.02	0.20
9 Desire for additional children	-0.87 ***	-1.49 ***	-0.98 ***	-1.95 ***
10 Perceived fear of any method	0.15	0.28	0.12	0.04
11 Use of other methods in the past and satisfaction with the same	0.07	-0.03	-0.14	-0.42
12 Complete knowledge of FP method of contraceptive supply	0.13	-0.08	-0.01	0.01
13 Knowledge of sources of contraceptive supply	0.06	-0.16	-0.24 *	-0.40 *
14 Type of area of client's stay *	0.13	-0.01	-0.15	-0.30 *
15 Type of family	0.19 *	0.12	0.22 *	0.06
1 Wife's age	0.07	-0.05	0.41 **	0.29
2 Duration of effective marriage (in years)	-0.18	-0.36	0.45 ***	0.49
3 Number of living children	-0.05	0.19	0.27 *	0.03
4 Number of living sons	0.06	-0.01	0.04	-0.24
5 Wife's education	0.78 ***	0.65 ***	0.01	0.12
6 Family income	0.33 **	0.09	0.06	0.04
7 Ideal family size	-0.29 *	0.20	-0.04	-0.27
8 Ideal spacing	0.10	0.08	0.13	0.19
9 Desire for additional children	-0.32 **	0.43	-0.10	0.07
10 Perceived fear of any method	0.15	0.32	0.04	-0.07
11 Use of other methods in the past and satisfaction with the same	0.26 *	0.34	0.02	0.10
12 Complete knowledge of FP method of contraceptive supply	0.40 ***	0.10	0.15	-0.31
13 Knowledge of sources of contraceptive supply	0.46	0.21	-0.08	-0.26
14 Type of area of client's stay *	0.39 ***	0.17	0.12	0.20
15 Type of family	0.13	0.36	-0.03	-0.31

Univ. - Univariate Coefficient; Multiv. - Multivariate Coefficient

* *Significant at 0.05 level* ** *Significant at 0.01 level*

*** *Significant at 0.001 level*

Category-wise data on the significant covariates "desire for additional children and number of living sons" shows that the couples who desired no additional child had more than two times the chance of shifting to any method of family planning than those who wanted one or more additional children. Similarly, a couple who had one living son had 31 per cent more chance to switch over to some other method of family planning than the one who did not have a living son. Further, those couples who had two or more living sons had 65 per cent more chance of switching to some method of family planning compared to those who had no living son.

In Model 2, where couples shifted to sterilization over other methods, the univariate coefficients for the covariates wife's education and knowledge of sources of contraceptive supply were found to be significant in addition to the other important covariates observed in Model 1, except the variable ideal family size. However, when the adjusted impact of the individual covariates was seen through multivariate logic coefficients, the covariates type of area of client's stay, desire for additional children, knowledge of sources of contraceptive supply and number of living sons, were found to be statistically significant (see Table 4). While the future fertility intention of the couple was a very strong and statistically significant covered for accepting sterilization, the importance of additional covered, service dynamics, in choosing terminal methods over other method is interesting to note, (beta coefficients of this covered being negative). Category-wise information of the significant covariates illustrates that the couples from remote villages had 69 per cent more chance of shifting to sterilization than those located in the PHC area. Further, the couples who discontinued IUD in sub-centre villages had 31 per cent more chance of switching over to sterilization than those residing in a PHC village. A similar pattern was also noted in the case of those couples residing in the PHC village as compared to those in the urban area. This points to the importance of health facility in the area of client's stay in the choice and sustained use of a spacing method. In the absence of such facilities, reliance on a one time method increases. Similarly, the negative

effect of knowledge of sources of contraceptive supply illustrates that couples who had knowledge of three or more sources of contraceptive supply had about two times less chance of changing over to a terminal method than those who were aware of only one source of contraceptive supply.

An analysis of the discontinuers of IUD who preferred to shift to other modern spacing methods over the other methods (Model 3) revealed that though eight of the fifteen covariates considered in the analysis were found to be individually significant in affecting couple's decision to use some modern spacing methods, when the impact of other variables is removed to see the importance of each variable, only wife's education remained the single most important factor in choosing any particular modern spacing method over some other methods. Couples with college-educated-wives had five and one-half times more chance, those with secondary-educated-wives had three times more chance while those having primary-educated-wives had about two times more chance of switching over to other modern spacing methods after the discontinuation of IUD in comparison with couples where the wives were illiterate. The direct effect of the socio-economic variable like education in the presence of other intervening variables on the choice of contraceptive methods proved to be quite complex. Nevertheless, it appears that more educated women were more likely than others to be using some spacing methods, especially the modern contraceptive methods.

Using the same covariates, the fourth model studied the shift to traditional methods over other methods. Table 4 indicates that though the univariate logic coefficients for covariates wife's age, number of living children and duration of effective marriage were found to be statistically significant, none of the multivariate logic coefficients were statistically significant. It may be noted, however, that the results obtained here for this group may not be stable, as only a small proportion of women, especially in the rural area, use rhythm,

withdrawal and other traditional methods for spacing purposes.

Oral Pill Cohort

Among the discontinuers of oral pill who shifted to any other method versus no method (Model 1), the univariate logic coefficients for covariates family income, wife's education, wife's age at acceptance of method, number of living children, number of living sons, couples' knowledge of family planning methods, duration of effective marriage, use of methods in the past and satisfaction with the same were found to be positively and significantly associated with the practice of switching to any method versus no method. (the coverages desire for additional children, and ideal family size were negatively and significantly associated with it, see Table 5). However, when the influence of other variables was removed, the desire for additional children was the single most significant covered for using any method versus using no method. Among the couples who discontinued oral pill, the chance of their adopting any other method was about 70 per cent higher in the case of those who did not desire any other child compared to those who desired one or more children.

Table 5: Estimated Univariate and Multivariate Logic Coefficients of the Covariates Associated with the Practice of Switching in Contraceptive Methods Among the Discontinuers of Oral Pills, Gujarat, 1988-90

Covered	*Logic coefficients*			
	Any other method vs. no method use (Model 1)		*Sterilization vs. others (Model 2)*	
	Univ.	*Multiv.*	*Univ.*	*Multiv.*
1 Wife's age	0.45 ***	0.22	0.54 ***	0.70
2 Duration of effective marriage (in years)	0.34 **	-0.29	0.38 **	-0.69 *
3 Number of living children	0.23 *	0.11	0.41 **	0.26
4 Number of living sons	0.40 ***	0.40	0.84 ***	1.52 **
5 Wife's education	0.32 *	0.19	-0.29	-0.10
6 Family income	0.23 *	0.09	0.11	0.21
7 Ideal family size	-0.31 **	-0.54	-0.11	-0.85
8 Ideal spacing	0.11	0.07	0.06	0.25
9 Desire for additional children	-0.72 ***	-1.12 ***	-0.95 ***	-1.27 *
10 Perceived fear of any method	-0.04	-0.02	0.02	-1.27 *
11 Use of other methods in the past and satisfaction with the same	0.42 ***	0.30	0.24	0.12
12 Complete knowledge of FP method of contraceptive supply	0.36 ***	0.32	0.19	0.26
13 Knowledge of sources of contraceptive supply	0.20	0.03	-0.07	-0.20
14 Type of area of client's stay *	-0.07	0.05	-0.01	0.39
15 Type of family	0.22	0.23	0.96	-0.02
1 Wife's age	0.11	-0.62 *	0.17	0.56 *
2 Duration of effective marriage (in years)	0.23	0.38	-0.06	-0.29
3 Number of living children	0.09	0.15	-0.09	-0.17
4 Number of living sons	0.07	-0.09	-0.09	-0.16
5 Wife's education	0.36 **	0.31	0.13	-0.01
6 Family income	0.09	-0.14	0.18	0.13
7 Ideal family size	-0.34 **	-0.70	-0.04	0.32
8 Ideal spacing	0.11	0.11	-0.10	-0.07
9 Desire for additional children	-0.43 ***	-0.66	-0.22	-0.30
10 Perceived fear of any method	-0.24	-0.74	0.16	0.59
11 Use of other methods in the past and satisfaction with the same	0.42 **	0.28	0.04	-0.02
12 Complete knowledge of FP method of contraceptive supply	0.37 **	0.36	0.18	-0.07
13 Knowledge of sources of contraceptive supply	0.22	-0.06	0.13	0.17
14 Type of area of client's stay *	-0.12	-0.11	0.02	-0.02
15 Type of family	0.33**	0.61	-0.12	-0.34

Univ. - Univariate Coefficient; Multiv. - Multivariate Coefficient

** Significant at 0.05 level* *** Significant at 0.01 level*

**** Significant at 0.001 level*

Like the IUD cohort, among couples who discontinued oral pill and switched over to sterilization (Model 2), the desire for additional children and number of living sons continued to remain important variables in influencing such a decision. Further wife's age and duration of effective marriage also assumed significance in such a switch over. The covered wife's age was the single most significant factor in the switch over to modern spacing methods (Model 3) or traditional methods (Model 4), after discontinuation of oral pill. This was found to be negatively associated in the former case while it was positively associated when the shift was towards the use of either sterilization or traditional methods. In other words, the results find credence in the explanation that reliance on modern spacing methods is more at younger ages while sterilization gains importance at old ages. The positive relationship between woman's age and use of traditional methods may be explained by the fact that reliance on abstinence as one of these methods may be prevalent at higher ages.

The above logic analyses for both IUD and oral pill cohorts, reveals that among the switchers, the number of living sons and future fertility intentions, as measured by desire for additional children, are the two most significant covariates for using any method of contraception versus non-use of any. These covariates along with the variable duration of effective marriage, for oral pill users, also assumed significance for those couples who chose sterilization over other methods. Further, among those couples switching from IUD to sterilization, two other important covariates viz., the availability of a health facility in the area of clients' stay and knowledge about various sources of contraceptive supply, are of interest because of their negative effect. The absence of health facility in the area of residence, forces clients to rely on a one time method i.e. sterilization, as does poor knowledge about various sources of contraceptive supply. Thus, the importance of these two covariates in promoting greater use of reversible methods is self evident.

It is further noted that education of wife and her age are the two most important covariates in the switch over from IUD or oral pill respectively, to other modern spacing methods. Similarly, the age of women also assumed significance in the shift from pill to sterilization or traditional methods. The influence of age in method shift is bi-directional, in that younger women rely on modern spacing methods while among the older couples the reliance is on traditional methods like abstinence.

The lack of importance of the covariates in explaining the switch over to traditional methods lies in the fact that the proportion of such couples is not large enough to provide stable results to arrive at a definite conclusion. Moreover, the use of traditional methods calls for greater commitment and cooperation on the part of couples, which could not be captured by the selected variables. Nevertheless, the lack of commonality with respect to the characteristics, points to the uniqueness of those couples who choose traditional methods over those who prefer other methods.

Concluding Remarks:

In the light of the various significant covariates of the likelihood of method abandonment/switchover, it appears that the factors most amenable for intervention are improvement in women's education and strengthening service facilities. The improvement in the former becomes a powerful tool to accord women with a sense of control over their lives and therefore their fertility and makes them better informed individuals with the capacity to seek medical assistance in case of problems associated with method use. Strengthening the component of services can have a simultaneous multi-pronged effect on method use. Improving access to health facilities and better outreach in the areas of clients' residence are the basic requirements of good service provision. Finally, the need to provide better follow-up services to remove prevalent fears and misconceptions associated with various methods, as well as to provide counselling and reassurance to overcome actual side

effects in order to sustain motivation for method use, begs the immediate attention of programme implementors.

CHOICE, ACCEPTANCE AND CONTINUATION OF SPACING METHODS IN INDIA

Prem P Talwar

Introduction

Concerns have been raised that population growth will have adverse consequences on the developmental process of developing countries. Family Planning programmes have been launched to contain population growth so as to maximize the benefits of developmental efforts. The goals at a micro-level are (i) limited people (ii) sufficient spacing between consecutive births, and (iii) limited and planned family size. At a macro-level, the goals have been expressed in terms of a reduction in the crude birth rate or in the rate of growth of population. Family Planning has become a part of the national policy in most of the developing countries.

The achievement of these goals, both at micro and macro levels as stated above, is mainly through the use of contraception by eligible couples, particularly at ages when potential fertility is high. Contraceptive prevalence rate - (CPR) is composed of an aggregate number of individuals who are practicing family planning methods. Before practicing contraception, the acceptors go through the stages of choosing the method, accepting the method and then continuing to use it (or later switching to a different method). Other variables which affect the demographic impact of the programme are (i) age at acceptance of contraception and (ii) use-effectiveness of the contraceptives.

In order to assess the demographic impact of family planning programme, it is essential to understand the following factors:

(i) Choice and acceptance of a particular method

(ii) Continuity or discontinuity of method

(iii) Its use-effectiveness, and

(iv) Age of female partner at the time of acceptance

This paper discusses these factors in regard to spacing methods, whose acceptance during peak fertility ages can bring about a faster reduction in fertility.

Choice of Methods

The term choice seems to imply personal preference of a method, but such preference is made in a social, economic and programmatic context/environment. The components of such an environment are (i) the availability and accessibility of different family planning methods (accessibility), (ii) the emphasis different family planning methods receive through the educational/motivational machinery of the programme (Programme support), (iii) the social, cultural and demographic background of the client population (Background variables) and (iv) personal preferences. These four components represent accessibility, biases of the programme and biases of the individual client. The joint effect of these particularly in a situation when there is no perfect contraceptive, determines, on aggregate basis, the contraceptive choice.

This section will discuss the situation of these components in India so that the method choice can be seen in that perspective.

Availability and Accessibility of Different Family Planning Methods

Easier availability and accessibility of a contraceptive has been found to lead to greater acceptance of the method A wider choice of methods permits a client to assess the comparative benefits and risks of each method and thus

choose a method which has greater appeal to him/her. Choice thus made is likely to give greater satisfaction with the method. In mid 1980s, a study was conducted to assess the availability and accessibility of different family planning methods in different countries including India. Not only was the availability and accessibility score was computed for each method in the countries under study, but an effort also was made to establish a relationship between availability and accessibility scores of family planning methods and its effect on the contraceptive prevalence rate through a multiple regression equation. The results of this study have relevance for choice of methods in India and their potential contribution in increasing contraceptive prevalence rate (CPR). The salient points of the study are discussed here.

Availability and Accessibility Scores of Different Family Planning Methods

Table 1: Availability Scores of Different Family Planning Methods

Country	*Contraceptive Prevalence*	*Scores of different family planning methods*					
		Sterilization		*Pills and injectable*	*Condoms*	*IUD*	*Abortion*
		Male	*Female*				
China	69.0	4.0	4.0	3.0	4.0	4.0	4.0
Republic of Korea	58.0	4.0	4.0	4.0	4.0	4.0	3.6
Indonesia	48.0	1.0	1.6	4.0	3.0	3.0	1.0
Thailand	59.0	3.3	3.3	4.0	4.0	3.0	2.5
Bangladesh	18.6	3.8	3.8	3.0	2.7	2.0	1.0
India	32.4	3.8	3.4	0.5	3.0	1.7	1.5
Pakistan	6.0	0.6	0.4	2.5	3.0	2.0	0.0

The data for this study relate to the period around 1983 and therefore the situation could be different today. But the low scores of pills, IUD and abortions in India suggest that the choice of these methods will be lower than others. That is, around 1985 greater number of people will choose sterilization and condoms (because of higher availability scores) than other methods (because of lower availability scores). This concision agrees with the method choice distribution shown in Table 4

where the popularity of spacing method has been seen to be low.

Effect of Increasing Accessibility of Spacing Methods on CPR.

A lower accessibility score on spacing methods is one reason for the lower prevalence of contraceptives in India. This is shown by a simple multiple regression equation between CPR (Y) and the overall availability and accessibility score* of contraceptives (X). It was found that the relationship is given by the equation $Y = 3.13 + 2.95 X$. This means that a one point increase in availability and accessibility score of contraceptives would increase CPR by about 3 percentage points. This analysis was carried further by considering the socio-economic status of countries. The multiple linear regression equations were recomputed by controlling socio-economic status of the country. Recomputed separate equations for the lower, middle socio-economic countries (which include India) shows that the regression coefficient is 1.28. That is, one point increase in the score of availability and accessibility of family planning methods in India is likely to increase CPR by almost 1.3 percentage points (Talwar & Sharma, 1990).

Therefore, the improvement in choice of spacing methods has a good potential in India to increase CPR. We have not been harnessing the full potential of the spacing methods like terminal methods.

Programme Support to Different Family Planning Methods

India's family welfare programme has been said to be a sterilization oriented programme. The major factor for this may lie in the general profile of our population which presents a picture of illiteracy, poverty and remoteness. One-time method obviates the need of continuous motivation and regular

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* *The overall score ranges from 0 to 24, since it is the sum of the scores for 6 methods, each of which ranges from 0 to 4. The CPR therefore, if X = 24, is 73.93 in the equation in the next sentence.*

supplies of contraceptives. Secondly, the target oriented programme often leads to the falsification of figures on acceptors, particularly of the spacing methods.

The programme emphasizes the sterilization targets. Linked with their acceptance are incentives for acceptors and providers. Obviously sterilization would be accepted by more people.

Because of this bias, program workers evince a natural concern for achieving sterilization targets and invariably emphasize this in their interpersonal communication with the potential acceptors. This leads to poor awareness among the potential acceptors of spacing methods. Only 50 to 60 per cent know these methods in comparison to sterilization (Jain, et. al., 1989). In a study conducted in 1988, users of different family planning methods and those who had never used any method of family planing were asked whether the health workers had talked to them about the spacing methods. Their responses are shown in Table 2.

Table 2: Per cent of Acceptors of Various Family Planning Methods and Never Users Who Were Told About the Use of Spacing Methods by Health and Family Welfare Workers

Talked about spacing methods	*Acceptors of*			*Never users with*	
	Sterilization	*Nirodh*	*IUD*	*No Child*	*1 or more children*
Nirodh	32.1	92.3	74.4	23.9	15.6
IUD	30.6	59.6	91.1	9.2	14.9
Oral Pill	30.8	60.6	68.9	9.2	12.8

It is clear that only a small percentage of acceptors of sterilization stated that they were told about the use of Nirodh, IUD or oral pill. Even users of spacing methods reported that they were not told about other (than what was being practiced) spacing methods - only 60 to 75 per cent reported being told about other spacing methods. In the case of never users (who were mainly younger couples) very few reported being told about the spacing methods. Being potential users of spacing

methods, the programme workers should have talked to them about these methods.

Some insight on why sterilization is popular can be had (Table 3) by the responses of the health personnel (Jain, et. al., 1989).

Table 3: Per cent of Health Officials by Reasons for Popularity of Sterilization

Reasons for Popularity of Sterilization	*M.O.*	*H.S.*	*H.W.*
Permanent method to limit family size	66.7	70.3	75.0
Easy, safe and reliable	27.8	29.6	66.2
No faith in spacing methods as they have side effects	22.2	22.2	5.9
Sterilization is an incentive-oriented	33.3	22.2	19.1
Lack of knowledge of spacing methods	33.3	14.8	19.1
More emphasis on terminal methods	11.1	7.4	8.8

M.O. = Medical Officer, H.S. = Health Supervisor, H.W. = Health Worker
Note: Total per cent exceeds 100 due to multiple responses.
Source: Jain, Et. al., 1989.

It is obvious that health personnel put more emphasis on sterilization at the cost of spacing methods.

Background of the Population

Various studies related to social, cultural and demographic factors affecting choice of contraceptives have shown certain patterns in the choices of methods. These patterns can be summarized as follows:

1 The factors in the choice of methods are: wife's age, education, number of living children, religion, rural/urban residence (Rele, et. al. 1989).

2 The number of children a women has influences her choice of family planning method. Oral contraceptive pills are used most often by low parity women (Wolf, 1980). A study in Colombia showed that women with higher education, higher socio-economic status, and who are young are preferred pills over IUD (Kahley and Gillespy, 1977).

3 Better educated women are more likely to use contraception for spacing than less educated women.

4 Wife's education shows a strong positive relationship with the overall use of contraception. This arises from strong positive relationships with non-permanent methods, which override a negative relationship with male and female sterilization (Bhende, *et al.*, 1991).

5 A multi-nominal logic analysis of data on the pattern of acceptance of family planning methods in a district in India revealed that religion and caste are important determinants of acceptance and method choice. Muslims and Hindu scheduled castes show significantly lower contraceptive use than the higher caste Hindus population (Hindus). Muslims seem to prefer non-permanent (condoms) and natural methods and have significantly lower use of both male and female sterilization. (Bhende, *et al.*, 1991)

6 Mother tongue as marker for cultural identification, also has substantial association with contraceptive use and method choice. Hindi/Urdu speakers have the lowest contraceptive use, although they have significant sterilization use. Bengali/Oriya speakers show special preference for natural methods, Punjabi for condoms and South Indians for sterilization (Bhende, *et al.*, 1991)

7 The determinants of contraceptive choice in Sri Lanka in 1987 seem to be characterized by two major factors. First, both demographic and socio-economic factors are important in distinguishing users and non-users; those who use some type of contraceptive methods are not only motivated to do so at their family building stage, but are also more likely to be urban Sinhalese who are better educated. Second, the method choice is more dependent on family life-cycle goals rather than or socio-cultural differentials; the use of sterilization is

closely associated with the goal of terminating child-bearing while temporary methods are being used for child-spacing (Malhotra and Thapa, 1991)

8 In Africa, spacing children is an important reason for using family planning; in Asia, termination of child-bearing was reported to be the predominant reason.

In the broad frame of method choice, the relative influence of all the factors, namely, accessibility, programme support, socio-economic and demographic background and personal preferences of people are reflected in the method choice of a country. The pattern of method choice in India (see table 4) suggests that the relative influence of these factors has started to cause a change after sterilization is a long dominance.

Acceptance of Family Planning Methods

Acceptance of a family planning method is a function of (i) realization of the benefits of a planned family (ii) motivation to use a family planning method, (iii) choice of the method, and (iv) availability of the service. In other words, acceptance of family planning depends on the demand and supply of the family planning services. The programmes are created to generate the demand and make the supply available to meet the demand. Though it is a good balance of these two components which determines acceptance, demand is often considered more important. That is, strong demand for family planning can lead to acceptance even if there is some slackness in the supply of contraceptives. It is less so in the reverse case.

India was the first country to take up a family planning programme in 1952 as a national effort. The goals were stated in terms of containment of the population growth. The programme has gone through various stages of evolution. Acceptance has been going up - it was slow in the beginning and reached the level of only 10.4 per cent couples protected

by 1970 -71. Since then there has been a slight acceleration; couple protection rate (one indicator of acceptance) increased from 1.5 to 2.0 percentage points every year.

The changing pattern of acceptors, different methods is shown in Table 4. Method-wise change over time suggests that the choice of methods has started showing change after overwhelming acceptance of sterilization. In other words, the relative influence of factors which determine the choice has started showing change.

Table 4: Number of Acceptors of Different Contraceptive Methods.

Year	*Total no. of acceptors (lakhs)*	*Sterilization*	*% distribution of acceptors*			*Equivalent sterilization (lakhs)*
			IUD	*Conventional contraceptives*	*O.C users*	
1970-71	3.77	35.5	12.6	52.1	-	16.0
1975-76	68.0	39.2	8.9	51.4	0.5	30.7
1980-81	64.9	31.6	9.7	57.3	1.4	24.8
1985-86	189.2	25.9	17.3	49.6	7.2	66.6
1990-91	272.5	15.1	19.5	54.4	11.4	-

Source: Year Book, GOI (1990)

Though the total number of acceptors has been increasing, their pace is slower than expected when converted in terms of couple protection rate. Besides, the decline in birth rate has not been found in consonance with the increase in acceptors and couple protection rate.

Various studies have been conducted to identify factors in India of acceptance of family planning. Table 5 gives some reasons for non-acceptance, which mostly suggest the need for strengthening machinery for demand creation.

Table 5: Reasons for Not Practicing Family Planning

Reasons	*Per cent Respondents*
Methods are not available	11.2
Do not know how to use	33.3
Husband is against	35.9
Other family members do not permit	12.4
Not reliable	11.0
Fear of side-effects	13.5
Others	6.4

Note: Multiple responses makes them more than 100 per cent.
Source: ORG (1990).

In order to increase acceptance of the methods, there is need to (i) improve accessibility of the methods (ii) provide adequate knowledge about the use of the methods to the clients and (iii) remove their fear about the side-effects by proper counselling and help in using family planning methods without any hesitation. The reasons mentioned in Table 5 suggest that interpersonal contact by workers may be a strategy to help increase acceptance of the family planning methods.

Continuation of Family Planning Methods

Acceptance of a temporary family planning method does not mean much unless it is practiced for some time and practiced effectively (effective prevalence). Therefore, the demographic potential of averting pregnancy/birth from acceptance of a method can only be harnessed by its effective continuation of use.

The contraceptive continuation rate is defined as the proportion of acceptors who are still using a particular method after a given period of exposure to the risk of discontinuing. Its complement is discontinuation rate, which measures the proportion of acceptors no longer using a method, including failure or discontinuation for other reasons (Jejeebhoy, 1991). Therefore, minimization of discontinuation is a key factor in achieving the objectives of the family planning programme namely, reduction in births. Since discontinuation could occur

for several reasons or by failure of the method, it is essential that the reasons leading to discontinuation and reasons for failure should be minimized. While the reasons for failure are specific and can easily be identified and controlled, it is discontinuations because of other reasons which are mostly non-specific and are of personal nature and hence difficult to manipulate. Since the elimination of these reasons is necessary to increase prevalence, it is important to study the reasons for discontinuations.

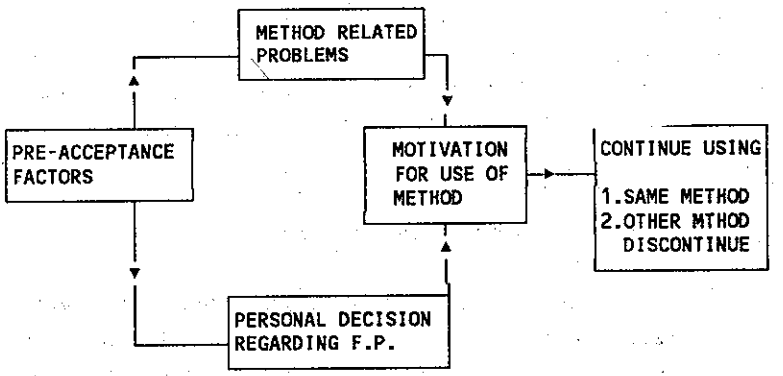
Continuation Rates of Spacing Methods

Before identifying reasons for discontinuation, it will be of interest to review available information to know the continuation rates of different contraceptive methods. It may be understood that several factors could affect continuation or discontinuation rates. An individual's decision to continue or discontinue a method depends on his/her motivation which in turn, gets affected by method related problems, personal decisions in regard to family planning and of course, situation at the time of acceptance (pre-acceptance factors) of the contraceptive methods. A framework regarding how continuity of family planning methods is affected is shown in Chart 1.

The continuation rate for any method can greatly vary, especially a method related problems are only one set of variables in bringing about discontinuity. The total motivation is dependent on several factors and carefully designed studies may be able to throw some light on the relative importance of the various determination of continuation.

In the absence of any detailed study based on this framework, continuation rates from follow-up studies of different spacing methods are shown in Table 6. In the case of IUD, most of the studies in India estimate continuation rate of

Chart 1.



Pre-acceptance factors are:-

1) Age of the acceptor
2) Motivated-acceptance or induced-acceptance
3) Whether acceptance for spacing or limitation
4) Whether first acceptance or switch over
5) Whether individual decision or couple decision

55 per cent at the end of 12 months (see 45 per cent discontinuing in the panels of table 6). This is in contrast to the figure of 62.4 per cent which the Ministry of Health and Family Welfare has been using.Though there is a need to conduct studies for the estimation of continuation rates every two to three years, the figure of continuation rate of 55 (instead of 62.4 per cent) may be used. For the future years, the geometric distribution of continuation rate may be assumed till 4 years. Accepting medical prescription of re-insertion after four years suggests that continuation rate should be taken zero at the end of four years. Thus reasonable continuation rates for IUD in India for different months can be assumed as follows:

Period ending	Probability of discontinuation
12	0.45
24	0.70
36	0.83
48	1.00

These figures seem to agree very closely with those obtained from the pooled result of the 14 studies conducted in 14 states. They have been shown in Table 6. (Jain, et.al., 1989)

Table 6: Continuation of various spacing methods

I Continuation rates of IUD

Panel-1

Period ending months	*Probability of discontinuation*	
	U.P.	*Maharashtra*
1	.045	.045
3	.160	.167
6	.241	.293
9	.291	.362
12	.371	.452
18	.416	.529
24	.465	.608
36	.535	.668
48	.556	.693

Panel-2

Geometric attrition rate of 37.6 per year, or monthly attrition rate of 3.86% per month. Reinsertion after 4 years of IUD use.

Panel-3

Period ending	*Probability of discontinuing*
6 month	.308
12	.453
24	.690
36	.810
48	.871

Panel-4

Period ending	*Probability of discontinuing*
1 month	.05
3	.183
6	.286
9	.391
12	.473

Panel-5

Country	*Continuation rates (12 months)*
Bangladesh	55
Indonesia	90
Philippines	68
Thailand	67

II. Continuation Rate Oral Contraceptives (12 months)

Panel-6

Country	*Continuation rates (12 months)*
Gujarat (India)	31
Bangladesh	30
Indonesia	64
Philippines	48
Thailand	72

III Continuation Rates of Condom at the End of 12 Months

Panel-7

Country	*Continuation rates (12 months)*
Bangladesh	20
Indonesia	56
Philippines	23

Source of Data in Each Panels of Table 6:

1 Bhatnagar S. et al. (i) " A Field Study of IUD acceptors in the State of Maharashtra". (ii) "A Field Study of IUD acceptors in the State of "Uttar Prdesh". National Institute of Health and Family welfare, New Delhi. (Mimeo).

2 Used by E&I Division of the Ministry of Health and Family Welfare for computation of couple protection rate from service statistics.

3 Results of a pooled study planned by E&I division of the Ministry of Health and Family Welfare and conducted by demographic and Evaluation Cells of 14 States of India.

4 Gandotra, M.M. and Das, N.P. "Contraceptive Choice, shift and use Continuation: A prospective study in Gujarat". Journal of Family Welfare, Sept. 1990 pp. 54-69

5 Jejeebhoy S., "Measuring Contraceptive use-failure and continuation: an overview of new approaches". Chapter in Measuring the Dynamics of contraceptive use". United Nations, New York 1991. p.p. 21-51, ST/ESA/SER.R/106.

6 Population Research Centre, Baroda. "A study of Factors associated with contraceptive use dynamics". Baroda Reporter. Issue No. 24, April 1991, for Gujarat (India). For the rest countries same.

7 Jejeebhoy S. "Measuring Contraceptive use-failure and continuation: an overview of new approaches". Chapter in Measuring the Dynamics of contraceptive use". United Nations, New York 1991. p.p. 21-51, ST/ESA/SER.R/106 .

The number of oral contraceptive pill acceptors in India has been quite low and thus only one study in Gujarat on their follow-up could be located. The continuation rate as per this study has been quite low - only 31 per cent continue the method after 12 months of use (see table 6, panel 6). This figure is close to that of Bangladesh (Table 6 panel 7). The couple years of protection by the use of OCP in India is computed by dividing the number of cycle distributed figure on oral contraceptives by 13 cycles - one year's supply for a couple. However, a good approximation of continuation rates at different periods could be obtained by making assumption similar to that of IUD - geometric distribution over time - and is shown on the next page.

Periods ending	Probability of discontinuation
12	0.69
24	0.91
36	0.97
48	1.00

In the case of condom, no study could be located for India. Since distribution figures are being used, it is implicitly assumed that every year some new acceptors are recruited for this method. However the data on continuation rates for different methods in India has been found to be quite close to that of Bangladesh. Therefore, Bangladesh data on continuation rates could be taken for India and its distribution over time can be assumed to follow geometric attrition. The continuation rate for condom for different time periods is shown below;

Period ending	Probability of discontinuation
12	0.80
24	0.96
36	1.00

Summing up the discussion above, the following recommendations are made:

1 There is a need to conduct a systematic study of acceptors of different spacing methods to determine the relative importance of different factors (shown in Fig 1) which affect continuation rates.

2 There is a need to conduct studies on continuation rates periodically as they are likely to vary over time

because of possible changes in the factors shown in Fig-1.

3 Estimates of continuation rates are given for different spacing methods which could be used till more recent estimates are obtained by conducting a systematic study.

Reasons for Discontinuation

The framework which determines continuation rates (Fig 1) indicates three sets of factors which influence the continuation/discontinuation for a contraceptive acceptor. These three sets of factors are:

(i) Pre-acceptance
(ii) Factors related to the family planning method, and
(iii) Personal decisions

Though it would have been ideal to undertake an enquiry on reasons for discontinuation in this framework, in the absence of such a study, the information on reasons asked from the discontinuation of different methods obtained in different studies are shown in Table 7.

In the case of IUD, around 5 per cent of contraceptive users get pregnant and thus are forced to discontinue the method. Another 20 to 40 per cent of IUD users discontinue because of their own decisions - either they wish to have more children or wish to switch to a permanent method. The remaining discontinue because of side-effects and other method-related reasons.

Table 7: Stated Reasons for Discontinuation of Contraception

	Uttar Pradesh	*Maharashtra*	*Orissa*	*India*
(1) Reasons for Removal of IUD				
(A) Method related reasons				
Heavy and irregular bleeding	30.4	19.0		
Heavy backache and pain in abdomen	5.0	3.4	51.3	67
White discharge	5.2	8.1		
Other medical	32.4	39.2		
Became pregnant	5.5	1.7	3.9	4
(b) Personal decisions				
Wanted more children	10.5	19.8	35.9	11
Change to permanent method	6.4	7.3	5.1	12
Change of IUD				
(2) Reasons for discontinuing Oral Contraceptives				
(a) Method related reasons				
Felt risky				3
Created menstrual problem			35	9
Caused mausea				15
Put on weight				3
Other method related			12	33
Become pregnant			12	6
(b) Personal decisions				
Want to have child			18	10
Changed to permanent method			12	10
Others			18	11
(3) Reasons for discontinuing Condom				
(a) Method related reasons				
Felt risky	-	-	-	6
Health factors	-	-	-	3
Other method related	-	-	25	24
Become pregnant	-	-	11	7
(b) Personal decisions				
Want to have child	-	-	29	25
Changed to permanent method	-	-	21	27
Others	-	-	-	8

Notes on Table 7:

1. *Bhatnagar, S. et al. (1988 (i) A Field Study of IUD Acceptors in the State of Maharashtra. (ii) A Field Study of IUD acceptors in the State of Uttar Pradesh. National Institute of Health and Family Welfare, New Delhi (Mimeo).*

2. *Khan, M.E., Patel, Bella C; Chanderseker, R (1990)* Contraceptive use Dynamics of Couples Availing of services from Government Family Planning Clinics - A case study of Orissa. Journal of Family Welfare 36(3), Sept. 1990, pp. 18-38.

3. Operations Research Group (1990). Family planning Practices in India. Third All India Survey, Vol. II.

The discontinuation for oral contraceptive pill also has a pattern similar to IUD. An Orissa study has shown a quite high failure rate - 12 per cent discontinuation due to this reason. Even an all India study has 6 per cent of the women reporting discontinuation due to failure. This high percentage of failure may suggest that their use pattern is perhaps faulty - the clients do not know how to use them. There is a need, therefore, to tell the client more about its use pattern. Another important reason for discontinuing oral contraceptive is switching over to a permanent method - probably the hassle of getting supply frequently and taking one pill every day is too much and thus women opt for a permanent method.

The reasons for discontinuation of condoms are different than those of two methods discussed earlier. The failure is not so important a factor. But, personal decisions as a category of factors are very important in the case of condoms. Of course, there are no side-effects, but there are some reasons like 'no sexual satisfaction' 'no privacy' or 'inconvenient' which go against the method.

Effective Prevalence of Contraceptive Methods.

All factors which affect choice, acceptance and continuation of contraceptive methods in India suggest that the programme focuses on sterilization at the cost of spacing methods. This was more so in the past; recently spacing methods have started receiving attention. A picture of changing trends of contraceptive mix is shown in Table 8, for current users (as distinct from acceptance, in Table 4).

Table 8: Effective Couple Protection Rate and its Percentage Distribution by Contraceptive Method

Year	*CPR*	*% distribution of Effective CPR*		
		Sterilization	*IUD*	*Other methods*
1970-71	10.4	76.9	13.5	9.6
1975-76	17.0	83.5	5.9	10.0
1980-81	22.8	88.2	4.4	7.4
1985-86	34.0	75.9	10.6	13.5
1990-91	44.1	68.7	15.2	16.3

Though the programme is still overwhelmingly sterilization - oriented, the change towards spacing methods is obvious. Still much more orientation towards spacing methods is needed. This may be clear from the experience of method-mix in other countries (Table 9). A few significant observations are;

1 Some Muslim countries have very low acceptance of sterilization though Tunisia and Bangladesh have shown impressive acceptance levels, and Indonasia has appreciable number adopting it. The programmes in

Table 9: Pattern of Current Use of Different Family Planning Methods

	Sterilization					
	Male	*Female*	*IUDs*	*Condom*	*Oral contraceptives*	*Contraceptives prevalence rate*
China	12	36	41	3	7	74
Hongkong	2	28	5	20	27	72
Rep. of Korea	13	45	11	10	6	70
Bangladesh	6	31	6	7	20	35
India			1	12	3	34
Nepal	41	45	1	4	6	14
Pakistan	0	29	9	22	16	8
Sri Lanka	8	40	3	3	7	62
Iraq	-	4	4	10	60	14
Jordan	0	18	41	2	23	26
Indonesia	0	6	28	3	34	48
Malaysia	0	15	4	15	23	51
Philippines	1	24	5	3	14	45
Singapore	1	30		33	16	74
Thailand	8	33	11	2	30	66
Lebanon	0	2	2	13	26	53
Syrian	0	2	3	3	59	20
Turkey	-	2	15	8	15	51
Fiji	0	39	12	15	20	41

Source: United Nations. Levels and Trends of Contraceptive use as Assessed in 1988. Population studies No. 10, New York, 1989

these countries, like India, has laid some emphasis on sterilization. In general, Muslim countries have shown greater interest in spacing methods.

2 Countries with contraceptive prevalence rate of more than 60 per cent have very high acceptance of spacing methods like IUD, condom or oral contraceptive pill. The exception is Sri Lanka where about 34 per cent of users are practicing traditional methods of family planning. This may be a pointer for India that its increase in CPR has to come from spacing methods.

3 Even countries with CPR of more than 40 per cent have almost half of the acceptance by spacing methods except Philippines and Turkey, which have very high acceptance of traditional methods.

The experience of other countries, therefore, suggests that to reach our goals there is no alternative but to increase the practice of spacing methods. Along with emphasizing choice and acceptance of these methods, their continuation rates have to be increased in order to maximize the impact of their practice. Some suggestions are given at the end of the paper in this regard.

Potential of Spacing Methods.

Discontinuation rates of spacing methods have been quite high in India. This may be due to a lack of proper emphasis on these methods. The workers probably do not explain the importance of these methods to the couples - many of them choosing on their own. Also it seems that these methods are being accepted for limiting family size and therefore, quite a high percentage of couples discontinue them to accept a permanent method. Therefore, a sustained and planned publicity with adequate information to clients about spacing methods might help in reaping the full potential of these methods in the Indian programme.

The demographic potential of spacing method is immense provided the acceptors are young when their potential fertility is at its peak (in the age range of 20-30 years) and they are continued effectively. Intuitively, one can imagine the demographic potential of the spacing methods if people use them and achieve the desired birth intervals. Empirically the demographic impact of the spacing method can be seen from the recent picture of sterilization acceptors compared to acceptors of IUD and Nirodh (GOI, 1990).

	Sterilization	*IUD*	*Nirodh*
Modal age	30-34	25-29	20-24
Average age (Years)	33.5	28.3	25.3
Average no. of children	4+	2.0	2.0

The levels of age specific marital fertility rates in the age group 30-34, 25-29 and 20-24 are 157, 240 and 318 respectively. This means that contribution to fertility of a married woman in the age group 25-29 is 1½ times of that of a woman in the age group 30-34 and two times that of a woman in the age group 20-24. In other words, the fertility impact of an acceptor in the age group 20-24 will be equal to two acceptors in the 30-34 age group and similarly an acceptor of 25-29 will be equal to 1½ times an acceptor in the 30-34 age group.

Another indicator of the potential of spacing methods is demand for spacing methods by younger couples. Couples were asked (in a study) about the length of the ideal birth interval. The response was 33.0 months, which according to them could be achieved by the use of spacing methods (Jain, et, al. 1989). None of the users seriously complained about the side-effects of the spacing methods - only minor side-effects were reported whose severity could be diluted by counselling acceptors about the possible side-effects and the measures to be adopted in case of such side-effects. In the case of IUD acceptors, only 30 per cent reported side-effects. In the case of Nirodh, no problem relating to supply, storing or disposal was reported.

All of this information suggests a great potential of spacing methods for the family planning programme in India. Efforts should be focussed on increasing its continuation rate by minimizing those factors which lead to their discontinuation.

Suggestions to Increase Acceptance and Continuation of Spacing Methods

It is seen that there is a strong need to emphasis spacing methods in the family welfare programme in India. Though some increase in their acceptance has been noticed recently, much greater acceptance has to be attained. Unless this is done, the potential of spacing methods cannot be harnessed for the programme.

Besides acceptance of these methods, there is a need to increase continuation rates of the spacing methods. Some of the factors which have been contributing to their discontinuation have to be minimized. This paper has tried to summarize the experience of the Indian programme in regard to the choice, acceptance and continuation of spacing methods in the context of the overwhelming sterilization orientation of the programme. Though sterilization is a very important method for India's population, there is need to emphasis spacing methods as well. This will help in the recruitment of younger couples for accepting a spacing method to accelerate fertility decline.

How to Popularize Spacing Methods?

1 The need for spacing births and the use of spacing methods for that purpose needs much greater publicity. All possible media should be utilized to achieve this objective. This will help raise awareness of these methods from the current level of 50-60 per cent to almost 100 per cent

2 Health staff of all categories are currently oriented to sterilization (Table 3). Though the programme is said to have a "cafeteria" approach, this is not true in practice.

There is a need to re-orient the staff so that their recommendations of family planning methods is need-based. This approach will have the right emphasis on different methods and will, therefore, lead to a balanced method-mix.

3 The accessibility score of spacing methods in India is low (Table 4). There is a need to ensure that they are accessible which will require wider availability and ready supply of the methods. This aspect needs close monitoring so that the accessibility score can be increased. This will help not only in increasing the acceptance of spacing methods but also in enhancing their continuation.

4 There may be a need to change/modify the strategy of target setting. Though targets may be assigned for a reasonable method-mix, total targets may be specified in terms of "Equivalent Sterilization". This approach will give an option to individual states to emphasis all the methods of family welfare without affecting the demographic impact on the country's birth rate.

5 In order to systematize working patterns at a grassroots level, the sub-centre level staff should be oriented to maintain Eligible Couple and Child Registers, and use them for identifying family planning needs of individual couples. Spacing methods should be emphasized for those who have to space their children. That is, all those of parity 0,1 and even 2 (till the 2nd child has passed one year of age) may be advised and given spacing methods.

6 Muslims have been found to have greater preference for spacing methods compared to the terminal methods.

Therefore, the programme for this section of population and geographical area where they predominantly reside should have an emphasis on spacing methods.

7 A study has also shown that the Bengali/Oriya speaking population has a greater preference for natural methods, Punjabis for condoms and South Indians for sterilization. These preferences should be kept in mind while deciding the contraceptive mix for different states of the country.

How to Improve Continuation Rates of Spacing Methods?

1 All efforts need to be made to explain and discuss the advantages of spacing methods with couples so as to motivate them to use and continue the method. A motivated couple is more likely to tolerate side-effects and other inconveniences and thus is less likely to discontinue the method.

2 As far as possible, both partners should be involved in the selection of a contraceptive. Both partners should understand the possible problems with the method; such prior information will be useful for diluting the intensity of reaction if at any side-effects appear. If both partners are aware of the possible side-effects, they can reassure each other and may not be greatly alarmed/perturbed by those side-effects.

3 The high failure rate of oral contraceptives in India suggests that it is probably related to faulty use. Therefore, there is a need to tell clients more about its use pattern.

4 Quite a bit of discontinuation of oral contraceptives suggests that getting a regular supply of OC is too much of a hassle for the OCP user. Solutions to the supply and logistical problems can help improve continuation rates of oral contraceptives. The same may be true for condom users.

QUALITY OF FAMILY WELFARE SERVICES IN INCREASING THE ACCEPTANCE AND CONTINUATION OF CONTRACEPTION
The Case of India

N. P. DAS

Introduction

The concern with achieving the set demographic goals of the country by the stipulated date has brought us to a stage where we need to assess what more should be done to increase the acceptance and continuation of contraception for the realization of these goals. To date, the impact of the present family planning programme is evident from the rural-urban age specific marital fertility rates (ASMFRs) for the country during 1972-85. These rates reveal that fertility in the age groups of 30 years and over, due to a greater reliance on terminal methods. However, such a decline has not been able to bring down the country's birth rate to the desired level, since this group of women contribute only 20-30 percent of the total fertility. It is thus evident that the programme has failed to capture women in the younger ages (below 30 years) due to its failure to promote reversible methods. Evidence based on the data of other countries has also revealed that a one-method family planning programme does not even meet the individual fertility goal, and for that matter is inadequate to meet the national fertility goal (Bruce, 1990). Jain (1988) in his analysis of assessing the fertility achievement of the country's demographic goal, also suggests that involvement of younger women (in the age group 20-29 years), extensively in the programme is an essential requirement to achieve the set demographic goal.

There are several reasons for the virtual sole reliance on sterilization over reversible methods in the country. The major ones are highlighted here :

Target Oriented Programme

Despite the philosophy of a cafeteria approach, in effect, the family planning programme has remained a sterilization oriented one. The heavily weighted sterilization targets coupled with greater incentives to service providers, motivator and acceptors of sterilization are major contributing factors for the popularity of the terminal method. This is evident from the fact that a major proportion of the current users (31 out of 45 percent) rely on terminal methods (ORG, 1990).

Lacuna in the Training of Service Providers

A major bottleneck in the present training programme is its inability to create clinical competence and skill in effective motivation and communication among the service providers which is essentially required for the acceptance and continuation of the reversible methods. A number of studies have also shown that often the workers do not have adequate and correct knowledge about the spacing methods, indicating a bias toward sterilization. This is particularly true for pills and to some extent for IUD.

The Weak IEC Component

The information and education component of the family planning programme is particularly weak. Couples, are therefore, deprived of vital information pertaining to the wide variety of methods of use, the sources of supply etc. A wide range of misconceptions about the adverse effects of spacing methods prevails among the couples, which discourages them to use these methods. The weak IEC component is unable to dispel the fear from the minds of the prospective users.

Poor Outreach Services

Inaccessibility to family planning services because of poor outreach services is another contributing factor for the reliance on the one-time method sterilization.

Lack of Follow-up

Reversible methods require continuous follow-up to sustain motivation. In practice, it is often sporadic and limited in nature. High dropout rates and negative perceptions about reversible methods are thus direct consequences. Evidence from a recent users study by the Population Research Centre, Baroda brings forth high dropout rates among user of spacing methods. About 43 and 62 per cent of IUD and oral pill users respectively discontinued their respective method by the end of the 12th month, increasing to 62 and 73 per cent by the 18th month. The major reasons for high rates of discontinuation were discomfort/side effects/physical complaints and the concern about the effectiveness and convenience of the methods apart from fertility intentions.

Weak Demand for Contraception

The acceptance and continuation rates depend mostly on the intensity of the couples desire or motivation to regulate their fertility. In a developing country like India where the level of literacy, particularly that of females, is low, desired family size is still high among the majority of couples and their desire or motivation to do something to regulate their fertility remains weak even when they complete their family size. It is argued that when couples really want to regulate their fertility they can do so, even in the absence of organized family planning programmes. To this end the Indian family welfare programme has failed to remove socio-cultural barriers and generate demand for contraception.

All of the above factors point to the lacunae in the family welfare programme, and provide clues to identify the

main thrust areas to improve the quality of family welfare services, in turn increase the acceptance and continuation of contraception.

Main Thrust Areas to Improve Quality of Services

The elements of quality of services have been defined by Bruce (1990). The main thrust areas that she suggests encompass: (i) provision of client specific contraceptive methods, (ii) adequate knowledge and information related to method use (including the benefits and contraindications and risk etc.), (iii) improved providers competence, (iv) strengthened client-provider relations to improve personal dimensions of service component, (v) adequate follow-up to encourage continuity, and (vi) appropriate constellation of services so that they are acceptable and convenient to couples. Jain (1989) in his analytical frame work linking the quality of service elements to fertility, adds to the above six elements the seventh of other factors including those of demand (desired family size and the intensity to attain it).

The above six elements thus provide a multi-dimensional perspective to the definition of quality as it pertains to the health and family planning programme. Such a working definition of quality services that incorporates the six elements is useful in assessing a country's programme, although very little empirical information is available on the effects of those elements on the acceptance and continuation of contraception. In the context of the Indian family welfare programme, which suffers from certain specific problems, described earlier, the following components of the delivery system need to be addressed to optimize the adoption and continuity of contraception.

Withdrawal of Method Specific Targets

The quality of services provided by the grass-root level workers depends largely on the nature of emphasis and targets with respect to health and family planning inputs imposed on

them by their supervisor. As mentioned earlier, the present approach of fixing targets and greater incentives to service providers, motivators and acceptors of sterilization is a major reason for the greater reliance on this method. Since the sudden withdrawal of targets and incentives can initially reduce the programme performance for one reason or another, it is necessary for the time being to withdraw at least method specific targets and incentives to promote the philosophy of a cafeteria approach, paving the way to a successful method-mix strategy in the process.

Identification of Specific Target Groups

To maximize the demographic impact of the family planning programme, it is necessary to direct motivational efforts towards the most fertile groups like young married women (below 30 years), pregnant women and those who have recently delivered. This focussed approach will avoid the dilution of efforts, provided longer time to repeated contacts to motivate women during ante natal and post natal stages and young women at low parities, help capitalize on women's receptivity as these groups are most concerned about matters like child care, family planning and next child in the process of building their families, and finally it will increase programme acceptability through its association with child survival. It is believed that the improvement in the reproductive health condition of the mother and the survival of her children will help in the promotion of method use to space or limit as desired by the client. Such strategies as such would also improve the client-provider relationship so that couples would feel positive about the service system, particularly the health personnel with whom they interact, and would trust in their capacity and have their good will.

Training of Service Providers

To address the weak training component, the service providers must be given such training that it strengthens their communication skills, make them understand the importance of

improving client-provider relations, as well as help them know the usefulness of giving information on the choices, availability and scientifically documented contraindications, risks, and benefits of various contraceptives to client. In essence, the providers should ensure that the client is able to choose a contraceptive suited to his/her needs, knows how to use the method, its potential side effects and how to manage these side effects.

Strengthening of IEC Component

There is need to develop a full range of IEC materials such as talking points, posters, charts, flash cards, audio-video aids, slides, models etc. The media unit needs to be strengthened to create the right awareness among the masses. Orientation Training Camps (OTCs) should be carried out at regular intervals. Furthermore, to strengthen IEC components there is a need for the active involvement of community leaders like the panchayat president, sarpanch, anganwadi workers, mahila mandals etc. It is noted from a number of studies that the NGOs have succeeded in the welfare programme mainly because they have been able to generate community participation.

Follow-up and Referral

The continuity of using a method depends to a large extent on the follow-up support provided by the service providers. This component needs to be strengthened through ensuring regular home visits by the workers to sustain motivation, provide contraceptive supply, management of side effects and referral of cases to the PHC doctor when necessary. The service providers should also be made to realize that improved follow-up not only helps in increasing continuation of a method but also helps in increasing their credibility in the community which in turn makes his/her work easier.

Improvement of Outreach Service

The identification of specific target groups under the existing family welfare programme, as mentioned earlier, would automatically help to improve outreach services. This component can further be improved through strengthening the existing worker-supervisory and worker-client relationship, as suggested under the training component. The main thrust under this component is to ensure increased accessibility to MCH and family planning services to all rural couples.

It is generally argued that quality of services, including supply of contraception, generates demand and helps to translate the latent demand for contraception into actual use. In situations of high demand for contraception, it may not be essential to focus on the quality of services as far as their fertility impact is concerned, though it may still be essential to do so from the individual's need perspective. On the other hand, in situations of low or weak demand for contraception it is essential to focus on quality of services as mentioned earlier, assuming that enhancement in the quality of services will sustain use among initial users and generate additional demand among others in the society. At the same time, it is necessary to strengthen the educational component that affects couples desired family size or the intensity of their desire to do something about it.

Conclusion

Adequate programme efforts through policy/political support, resource allocation, adequate infrastructure and programme management, are expected to improve quality of service elements in the programme. This in turn is expected to assist couples to translate their desire for contraception into practice through the provision of education/information, health care, contraceptive methods within easily reach and management of side effects in the programme. The effect of the quality of service elements is also likely to spill over and generate demand to practice contraception. However, since the acceptance rate of a method is also a function of demographic and socio-cultural characteristics of couples, it is necessary to strengthen non-family planning components to affect couples desired family size. An improvement in quality of service would finally affect contraceptive prevalence rate by increasing acceptance and continuation of spacing method of contraception.

STRATEGIC PERSPECTIVES ON PROMOTING SPACING METHODS

J K Satia

It has often been argued that an over reliance on sterilization has been the major weakness of the Indian Family Welfare Program and that the program should focus on promoting non-terminal or spacing methods for younger, low parity women. It is assumed that if only this could be achieved, fertility would decline faster.

To develop strategic perspectives on promoting spacing methods, this paper first examines the role of spacing methods in reaching replacement fertility level. In that context, past trends in usage patterns, available evidence on accessibility and people's perception, and constraints in promoting spacing methods are reviewed. Based upon this review, some strategies to promote spacing methods are proposed.

Reaching Replacement Fertility Level

The birth rate has declined on average around 0.6 per thousand population since 1984, much faster than the average decline of 0.25 experienced since 1970. The death rate is likely to maintain its downward trend and may reach a level of around 8 per thousand by 1995. It then may decline only slowly by about 0.2 per thousand per year comparable to that experienced in Kerala. Therefore, annual population growth rate will hover around 2 per cent until 1995 and then decline to around 1.7 per cent by year 2000 (table 1). Long term trend projections in birth and death rates suggest a continuing population growth rate of around 2 per cent. Therefore, *a major challenge for the program is to maintain the recent trend in declining birth rate decline.*

Table 1: Birth and death Rate Projections

	SRS 1990	*Estimated for 1995*		*Estimated for year 2000*	
		Using recent trends	*Using long term trends*	*Using recent trends*	*Using long term trends*
Birth rate	30.2	27.2	28.6	24.2	27.4
Death rate	9.7	7.7	8.0	6.7	7.0
Growth rate %	2.0	1.9	2.1	1.7	2.0

Source: Registrar General for provisional SRS estimates.

To reach replacement fertility level by year 2000, however, a much faster decline in birth rate, around 0.9 per thousand, would be necessary. Many observers now believe that such decline is not likely and that replacement fertility would be reached only by year 2006, 2011 or even 2016.

The considerable demographic diversity in India helps to explain causes of fertility decline. Of the effects of four proximate determinants of fertility - nuptiality (Cm), contraceptive prevalence (Cc), abortions (Ca) and post-partum infecundability (Ci), we unfortunately do not have information on the last two. However, breast feeding durations may be declining due to modern influences. Francis Plunkett (personal communication) suggested that nonsusceptibility may have declined during the period 1980-88. Unfortunately these influences remain relatively unexplored. As data in table 2 shows, nuptiality patterns perhaps play an important role. Although total marital fertility rate (TMFR), largely reflecting contraceptive usage is only 47 per cent higher in Uttar Pradesh than in Kerala (2 points difference), the total fertility rate (TFR) is higher by 160 per cent (3.2 points difference).

Table 2: Total Marital and Fertility Rates, 1988

State	*CPR*	*TMFR*	*TFR*	*Cm(=TFR/TMFR)*
Kerala	78.5	4.24	2.01	0.47
Punjab	68.5	5.35	3.35	0.63
Maharashtra	54.6	4.87	3.46	0.71
Uttar Pradesh	28.1	6.24	5.22	0.84
India	44.9	5.33	3.92	0.74

Notes: Fertility rate estimates are for 15-44 age group CPR is from ORG survey 1988 and TMFR and TFR are Registrar General's estimates

No state has achieved replacement fertility level by the high use of spacing methods (modern are IUD, condoms and pills; traditional are rhythm and withdrawal) alone. Kerala has reached near accept sterilization once their desired family size (little more than 2) has been achieved. The value of Cm, ratio of TFR to TMFR, was 0.47 compared to 0.74 for India in 1988. The Third National Family Planning Practices Survey (ORG 1988) estimates 78.5 per cent contraceptive prevalence in Kerala, 57 per cent by sterilization, 7 per cent by modern spacing methods and 15 per cent by traditional methods. Punjab provides a contrasting picture. Only 30 per cent of the married couples in the reproductive age group (MCRAs) have accepted sterilization. However, a high prevalence of 69 per cent is achieved by a very high use of modern spacing methods, estimated at 30 per cent compared to 9 per cent for India. Women do not marry early but they also do not delay marriage much beyond 20 years of age and consequently the Cm is 0.65, about a third more than Kerala. This combination has resulted in a TFR of 3.35, much higher than the replacement rate in Kerala.

Thus, an approach which incorporates learning from Kerala and Punjab, i.e., of achieving a mix of sterilization and spacing methods-use complemented by an increase in age of marriage and reduction in desired family size, would be needed to reach replacement fertility.

Of all the socio-economic variables, female education is the major determinant of age of marriage (Srinivasan 1991). Female education also influences desired family size. The

effect of education is felt at all levels, the higher the education level, the higher the average age of marriage and the smaller the size of family desired. Using path-analysis on state level data, Satia and Saseendran (1991) estimate that a 1 per cent increase in female literacy would result in a 0.9 per cent reduction in Cm. Acting both through changes in nuptiality patters and contraceptive use, 1 per cent change in female literacy is estimated to result in a 0.87 per cent change in TFR. Female literacy is a proxy for female education because the proportion of women having primary, secondary or higher education in a state is closely related to its female literacy level.

Therefore, Indian populations objectives can only be realized if (a) female education levels are increased as rapidly as possible; (b) sterilization services are provided to those who do not desire additional children; and (c) spacing methods are promoted more vigorously. Required emphases on each of these measures would depend on the demographic and socio-economic situation in each geographic area. Thus, spacing methods should be seen not as a panacea for the program but as one of the three legs of a tripod (female education, sterilization and spacing methods) on which the hopes of reaching replacement fertility rest.

Patterns in Use of Spacing Methods

Role of Spacing Methods

Sterilization is demographically less effective particularly in India because it is accepted by couples with high parity and in higher age-groups. But the effectiveness of spacing methods may also be low if couples accept it in lieu of sterilization which seems to be the case in Punjab according to ORG survey (1988). Table 3 below shows that around a fourth of all MCRAs in Punjab who want no more children nevertheless using spacing methods, resulting in high overall spacing method use. For India as a whole, 8.3 per cent of them not wanting more children still use spacing methods

(there are 60 per cent of all spacers in India) and could be termed potential limiters. The remaining 40 per cent of all spacers (5.3 per cent MCRAs) seem to use it for spacing motivations.

Table 3: Contraceptive Use, 1988

State	*Per cent MCRAs not desiring additional Children*				*Per cent od other MRCAs also spacing*	*Total MRCAs spacing*
	Total	*% Sterilized*	*% Using spacing methods*	*% Unmet need*		
Kerala	75.7	56.8	11.3	7.6	10.4	21.7
Punjab	70.4	35.8	24.2	10.4	8.5	32.7
Maharashtra	60.6	43.4	6.6	10.6	4.6	11.2
Uttar Pradesh	49.2	16.5	6.8	25.9	4.8	11.6
India	57.9	31.3	8.3 (60%)	18.3	5.3 (40%)	13.6 (100%)

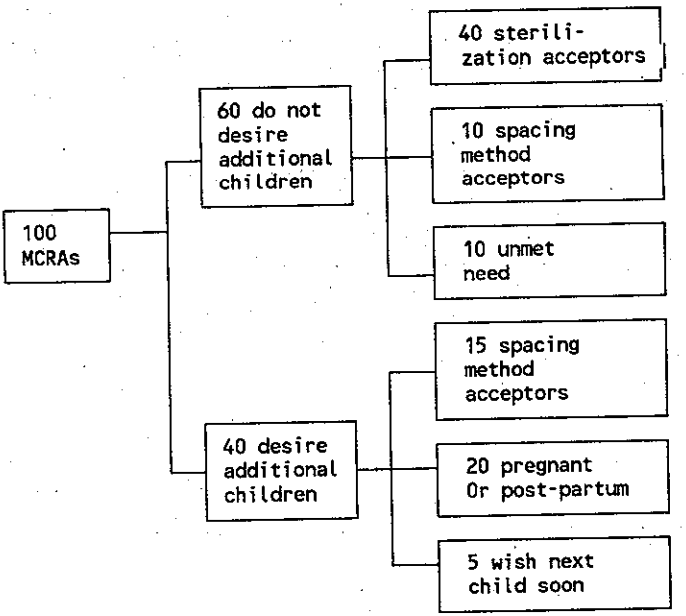
Source: ORG Survey, 1988

Therefore, sterilization and spacing methods are complementary, not competitive. The seeming conflict between the two is the artefact generated by the program's targeting system. We can distinguish between two roles of spacing methods:

a Those who do not desire additional children, are not ready to accept terminal methods, but are using or would like to use spacing methods, called potential limiters;

b Those who do want an additional child but wish to space their next child and are using or would like to use spacing methods, called spacers.

It is difficult to estimate prospective sizes of the potential limiters and spacers by year 2000. Broadly, the following picture seems to emerge from a variety of surveys.



Trends and Prospects

The program statistics suggest a gradual increase in the use of spacing methods. The number of eligible couples effectively protected by modern spacing methods has been increasing at an average rate of protected by these methods. There is some anecdotal evidence that program statistics exaggerate their use and, to that extent, this would be an overestimate.

During the period 1980-88, ORG national surveys report that the use of modern spacing methods increased by 0.4 per cent (or 0.1 per cent if traditional methods are included). If this trend is maintained by the years about 14 per cent would be using these methods (or 15 per cent if

traditional methods are included). Thus, there would be shortfall from the desired level of a 25 per cent spacing method prevalence.

Effect of Income and Education

Table 4 shows the use of terminal and spacing methods for different income groups as estimated by the ORG survey (1988). Sterilization acceptors form about 30 per cent of MCRAs among all income categories. However, the use of modern spacing methods increased from 4.7 per cent of MCRAs with a reported income per month of less than Rs. 500 to 21.2 per cent of MCRAs for those with a monthly income exceeding Rs. 2000. Use of traditional spacing methods also increases from 4.2 per cent to 8.9 per cent. Thus, **the difference in contraceptive use among different income groups is because of differential use of spacing methods.**

Table 4: Contraceptive Use by Income, 1988 (Percent MCRAs).

Current Use of	*Income Reported per Month (Rs.)*			
	<500	*500-1000*	*1000-2000*	*>2000*
Permanent methods	31.6	30.1	32.7	30.9
Modern spacing methods	4.7	7.5	13.5	21.2
Traditional methods	4.2	4.6	6.0	8.9
Total prevalence	40.5	42.2	52.3	61.0
Percent MCRAs	40.2	33.8	17.9	8.0

Source: ORG Survey, 1988

As education level increases, use of spacing methods also increases (table 5). But, acceptance pattern of terminal methods differs. As education level increases, use of terminal methods begins to increase; but, at high levels of education, terminal methods are substituted by spacing methods.

Tables 4 and 5 show that an increase in education or income is associated with the use of higher spacing methods. Therefore, ideally with the rise over time in income or education levels, the use of spacing methods would also increase. For instance, if all wives had at least primary school

education, use of spacing methods would have been higher by around 5 per cent (or an increase of 40 per cent over current levels) and contraceptive prevalence by around 10 per cent.

Table 5: Contraceptive Use By Education, 1988 (Percent MCRAs).

Current Use of	*Wife's Education Level*				*Total*
	Illiterate	*Primary*	*Secondary*	*Higher*	
Permanent methods	29.2	39.4	36.0	25.2	31.3
Modern spacing methods	4.5	8.5	13.5	28.2	8.6
Traditional methods	3.0	6.1	8.5	10.6	5.0
Total prevalence	36.7	54.0	58.0	64.0	44.9
Percent MCRAs	60.7	15.1	14.7	9.5	100.0

Source: ORG Survey, 1988

Unfortunately, female education level is increasing rather slowly. The percentage of couples where the wife is illiterate came down from 69.8 in 1980 to 60.7 in 1988, and at this rate, may reach a level of around 47 per cent by the year 2000. As the present trend indicates, overall education levels would not increase spacing method use by more than 4 per cent in year 2000 from the level reached in 1988.

Therefore, program actions would be required just to maintain the increasing trend in prevalence. Barriers to the use of spacing methods associated with income/education need to be lowered. We next discuss what these barriers could be.

Barriers to the Use of Spacing Methods

A survey in a primary health centre area of a relatively backward district of Gujarat highlights the barriers to the use of spacing methods (Satia and Mavlankar, 1992). Eighty six per cent of women who wanted more children and had the last child 8-36 months of age (or 15 per cent of all MCRAs) wanted to space their next child. But, about a third of them did not use any method. The reasons for non-use were three: lack of knowledge, dislike for spacing methods and a lack of felt need for them characterized by weak motivation levels. As these areas had good access to all the methods, lack of accessibility

as a reason for non-use needs to be added to areas where access may be difficult.

Lack of Knowledge

About half to two-thirds of MCRAs do not know of the modern spacing methods: IUD, condom and pills (ORG 1988). Various surveys show that both the quantity and quality of knowledge regarding spacing methods is increasing rather slowly. Misconceptions about these methods also persist. While it is difficult to argue that an increase in knowledge alone would improve the use of spacing methods, it is an important condition to promote their use.

Poor Accessibility

These methods require continuing contact with the service delivery system. However, services are not easily accessible. About half of all those respondents in the ORG Survey (1988) who were aware of and knew about the source of IUD said it was not available within 3 km. of their home. This proportion decreased to about a third for condoms and pills. Thus, nearly one-third to half of MCRAs did not have an easy access to these methods. Family welfare field workers could supply oral pill or condoms to only 10 per cent of users. For both of these methods, shops (around 50-60 per cent) or static facilities (around 25 per cent) were the major sources of supply.

Dislike of spacing methods

Usually, health benefits are associated with spacing children. But, this argument does not seem to carry weight with the prospective beneficiaries for two reasons. First, only about a third of all live births are within two year period, as considerable protection seems to be offered by prolonged breast feeding. Secondly, a large proportion of couples associate harmful side-effect with the modern spacing methods. Each method seems to be disliked for different reasons; IUD for menstrual problems and pains; condom for

failure, loss of sexual satisfaction or irritation and pills for a variety of side effects. An oft repeated statement to us by women in field settings goes something like this: "Why should we use spacing methods? Body is harmed. One should have as many children as desired and then have operation".

Weak Motivation

Basically couples do not seem to feel that large benefits accrue if children are spaced much beyond what they are experiencing today. We had earlier referred to the protection offered by longer breast feeding periods. On the other hand they perceive a variety of problems in the use of spacing methods. Thus, an assessment of benefits and costs shows weak motivation for their use, except when attitudinal change are wrought by higher education and income levels.

Many of the above factors combine to produce a pattern in the use of spacing methods. We had discussed the effect of education and income earlier. Settlement size also seems to be a surrogate for the above factors. For instance, urban areas comprising a fourth of all MCRAs account for half of population comprising around 58 per cent of all MCRAs reported only 5.2 per cent use of modern spacing methods compared to 8.6 per cent for India as a whole (ORG survey, 1988).

Strategies to Promote Spacing Methods

Thus, couples need to be motivated to use spacing methods by providing knowledge and easily accessible services. The bad effects of short birth intervals need to be explained and couples should be advised to use spacing methods to increase the birth interval. The cost involved in the use of these methods should be reduced by improving the quality of care and by offering assistance in the selection of an appropriate method that would reduce harmful side effects.

Following are the causes of non-use or barriers to spacing methods and specific strategies to overcome them:

Barriers	Strategies
Lack of Knowledge	Strengthen program
Poor accessibility	Improve rural accessibility Strengthen social marketing
Perceived Low Benefits	Carefully introduce new technologies Promote effective use of traditional methods

Strengthen Program Operations

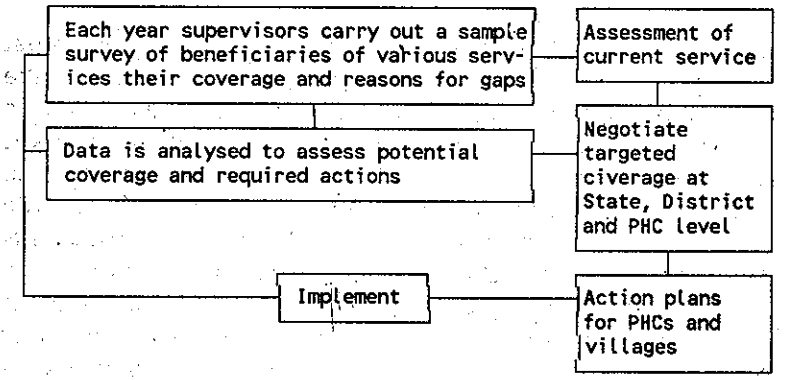
Many observers of the Indian Family Welfare Program have commented on the heavy emphasis on sterilization in the program to the detriment of spacing methods. The thrust on terminal methods is made in many ways: special campaigns, strict monitoring and target setting system (Satia and Giridhar 1991). Even now a major portion of sterilization acceptance is through camps. Overall performance is assessed in terms of equivalent sterilization. Workers would, therefore, rather concentrate on one sterilization acceptor than three IUD-acceptors or 18 equivalent condom-users or 9 pill-users because in either case the credit they get is the same. Although monetary compensation to acceptors of different methods have been stabilized now, sterilization is still favoured.

A major criticism of the program is its target orientation. In addition to a lack of emphasis on the recruitment of spacing method acceptors, it also reduces concern for quality of care. Recruitment of new acceptors is a predominant concern, while continuing users, reasons for drop outs and so on remain relatively neglected, and little attention is paid to necessary corrective action. Anecdotal evidence suggests that it may also have resulted in exaggerated reporting of achievements. A reorientation is needed from an approach based on continuing acceptors of sterilization and IUDs and estimating users of conventional

contraceptives on the basis of pieces of condoms and cycles of pills distributed to an approach based on counting couples effectively using contraception irrespective of the methods used (Jain 1989). While the program needs to strengthen its operations through staffing, service delivery, improving support systems and increasing people's involvement, a search for more effective target setting system has proved elusive.

Targets or No Targets: Some have argued that if the current target setting system cannot be remedied, targets should be abolished. This has not been possible because an alternative system of accountability would still be required and what that system should be, is still not clear. Posing the problem as "targets or no targets?" reduces options which need to be considered. The program has suffered from the lack of a planning system which would strengthen quality of care and result in as appropriate emphasis being placed on various methods and improved accountability. For a planning system to be effective, the targets set must be clearly understood by everyone, must be believed to be achievable, and must be backed by a commitment to achieve them. Therefore, plans should be based on client information of the area, should integrate inputs, activities and outputs and involve implementers in their formulation.

A schematic methodology for bottom-up planning, proposed by Satia and Mavlankar (1992), is as follows:



The advantages of the proposed methodology are that it allows realistic target setting based on existing and desired coverage level of services and allows the matching of actions with the needs. It also involves workers and supervisors in identifying constraints in service coverage and actions required to overcome them. It is necessary that the program experiment with alternate planning system models and, after testing them, embark on an exercise to institutionalize a planning system.

Quality of Care: The quality of program services will improve only if service providers (field workers, doctors) are enabled, empowered and motivated. They need to be enabled by continuing in- service training, realistic work programming and logistics support. The need to be empowered by providing flexibility to meet local needs, and motivated by measurement and intensive monitoring their quality of care.

Improve Rural Accessibility

A major reason for poor outreach and coverage is that more than half the villages are located at a distance of 5 kms or more from the nearest Government health facility (ICMR 1989). Given the size and terrain of the country, service delivery needs to be expanded in a complementary manner to the existing service delivery system by establishing a local link with these communities. The accessibility of condoms and pills in smaller settlements could be improved by community-based distribution systems, village stockiest, depot holders and so on. Oral pills may be stocked with private doctors and indigenous practitioners. Smaller local level non-government organizations (NGOs) may also be utilized to meet this need.

One major avenue for improving rural accessibility is to establish closer linkages with the Integrated Child Development Service Scheme (ICDS) which currently operates in around half the blocks and its coverage is expanding. The anganwadi worker of this program can be an excellent link in the service delivery system in the ICDS villages. Mechanisms need to be

thought of by which these linkages can be strengthened for improving rural accessibility of spacing methods.

A systematic approach is needed to ensure that spacing methods are easily accessible in smaller settlements. The district level program administrators should examine accessibility in such settlements and develop appropriate local level approaches for improving accessibility.

Strengthen Social Marketing

Social marketing can be an effective supplement and complement to the government's service delivery of spacing methods. As argued earlier, the use of these methods needs to at least double, and perhaps even triple, if replacement fertility is to be reached in the next 15 years or so. As the number of MCRAs are increasing, services would need to be provided to even larger numbers of couples than indicated by the above magnitudes.

As a third of all MCRAs are likely to be residing in urban areas by the year 2000, available social marketing channels can be utilized in these areas. The users at least share some of the costs of contraception when these methods are provided by social marketing channels. Only about half of all the couples know about the use of a particular spacing method and the social marketing approach to communication can diffuse this knowledge more widely.

However, social marketing efforts need to be considerably expanded and strengthened to achieve the above objectives. Currently such efforts are limited to condoms and pills. Roughly a third to half of the users of these methods are served by social marketing channels. So far commercial distribution channels of mass consumption goods or pharmacies have been used for social marketing. These would have to be broadened to include private medical practitioners as well, particularly for IUDs. The Indonesian experience with "Blue Circle' campaigns shows that it is possible to involve

private doctors, midwives and pharmacies in making spacing methods more widely available (Population Reports, 1991).

Package of Reproductive Health Services

Existing reproductive care for women falls far short of needs. Few women receive prenatal care, and of the women who do receive prenatal care, most get only tetanus immunizations and folic acid tablets. Consequently maternal mortality rates are quite high.

In addition to experiences of morbidity that a woman would experience during her pregnancy, the use of spacing methods a few months after delivery is perceived to produce harmful side effects on health. Thus, motivation to use these methods is further reduced . It is often argued that improving quality of care for spacing methods would improve their use. But this alone would not be sufficient as the service delivery for these methods needs to be embedded in a comprehensive health care package.

Walsh et. al. (1991) suggest a variety of programs to reduce maternal and perinatal mortality depending upon the situation. A moderate effort would include the establishment of a community outreach system for prenatal care, providing nutrition advice and pregnancy risk screening, making appropriate referrals, encouraging health facilities and provision of emergency transport. Most of the facilities needed to provide the above package of service is already in place in India. What is needed is to organize an appropriate cycle of care and remove logistic and training gaps in the system.

Srinivasan and Freymann (1990) have argued for a birth-based approach from the point of demographic effectiveness. They suggest that a birth is a proof of fertility and concentrating family planning effort on all those who deliver would both increase the efficiency and effectiveness of the program.

Whether motivated by the need to increase the use of spacing methods or by the need to improve reproductive health, it is clear that the quality of reproductive health care needs to be improved and these services need to be provided as a package.

Introduce New Contraceptive Technologies

Recently the Government has approved the use of the weekly oral pill (Centchroman) and is proposing to introduce NORPLANT on a trial basis. Injectables are now available in many countries (including Bangladesh and Sri Lanka) and have contributed to increasing contraceptive prevalence.

There is considerable concern among various segments of the Indian population about possible harmful side effects of these technologies and the ability of the health service delivery system to provide adequate quality care for them. In addition, it is not clear as to what benefits both to prospective users and program would accrue if these methods are made available in the program. It is important to evolve a national consensus on these issues through a process of dialogue and careful introduction to assess advantages and disadvantages of these methods in the Indian context.

Traditional Methods: A Neglected Dimension

It was mentioned earlier that as education levels improve, the use of traditional methods increases. Use of the permanent method is replaced by both modern and traditional spacing methods by highly educated couples. However both their efficacy and potential remain undetermined. History suggests that several population groups have successfully used these methods to moderate their fertility. It would be useful to carry out research in this area to (a) assess what program actions would be needed; and (b) what is likely to be achieved.

Responding to Demographic Diversity

We noted earlier that there was considerable inter state variations and mentioned that strategies to promote spacing methods should recognize these variations. In the states where the current use of spacing methods is low, service delivery for such methods needs to be strengthened by training staff, improving supplies of contraceptives and medicines for the treatment of side effects, and providing communications support. In the states where the use of spacing methods is already at a moderate level, the service delivery system is perhaps functioning well and needs to be systematized by changing the target setting system from recruiting new acceptors to a planning system with a focus on achieving a desired contraceptive prevalence. Redirecting efforts in this manner would result in improving the quality of care which would lead to higher continuation rates for spacing methods.

Unfortunately we do not know the current level of unmet need for spacing methods for different states and this lacuna needs to be speedily remedied. If the use of traditional methods is a surrogate for potential demand for modern spacing methods as well as a level of motivation for spacing children, the high use of traditional methods would imply that demand creation efforts can be at a moderate level. In such areas social marketing and improving rural accessibility may suffice. In areas where potential demand is low, a greater effort for demand creation is required. Here one may need to strengthen reproductive health services.

Table 6: Differential Promotion Strategies

Potential Demand	*Current use of Spacing Methods*	
	Medium	*Low*
Medium	Tamil Nadu, Gujarat, West Bengal	Kerala
	Strengthen social marketing; Install planning system	Strengthen social marketing; Improve rural accessibility
Low	Punjab, Maharashta, Haryana	Andhra Pradesh, Orissa, Madhya Pradesh, Uttar Pradesh, Rajasthan, Bihar
	Install planning system; Improve rural accessibility; Strengthen reproductive health care	Improve rural accessibility; Strengthen reproductive health care

Implementation Issues

Organizational Arrangements

Implementation arrangements for strategies to promote spacing methods need to recognize that the organization and managerial requirements differ for spacing methods compared to those of terminal methods. We illustrate these differences on page 69.

Although these differences are well recognized, the program seems to employ the same managerial processes of accountability, skills, motivational techniques and style of operations for both terminal and spacing methods. Thus, there is a continuing tension between the service delivery for terminal and spacing methods.

Characteristic	*Terminal*	*Spacing Methods*
Purpose	To limit family	Both to limit and space
Major premise	Limit population growth	Improve health and at least population growth
Service delivery	Largely clinic-based	Partly community-based not IUD
Staff	Heavily Medical	Largely paramedical
IEC	Largely to inform	Impart knowledge
Motivation	One time	Continuous
Budgeting	For services	For commodities and services (IUD)
Logistics	Easy	Need to ensure continuing availability Maintain continuing contact
Field worker	Locate and motivate	
Skills		Field-based quality assurance
Quality control	Largely clinical	Difficult to establish
Accountability	Easily established	Client centered
Style	Service centered	

It would be necessary to use different managerial processes (and even structures if economically justified). The Indian program supports a cafeteria approach to contraception. But, as it is not possible to accommodate service delivery requirements of different methods, terminal methods receive greater emphasis compared to spacing methods.

Financial Requirements

As the use of spacing methods increases, program costs are likely to increase more rapidly. Generally, voluntary sterilization and social marketing programs cost the least. Community-based and full-service clinics program cost three to five times more per couple year of protection(Population Reports 1991). In addition, commodities for some spacing methods are usually imported, often with donor assistance. These sources may not expand as needed. Therefore, programs need to develop more self-reliance in financing, use social marketing or private sources for service delivery as much as possible, and take steps to reduce commodity wastage and promote efficiency.

Conclusion

Indian population objectives of reaching replacement fertility in the next 15 years or so can only be realized if female education levels are improved rapidly, sterilization services are provided to those wishing to limit their family, and spacing methods are promoted more vigorously.

Sterilization and spacing methods are complementary; about 60 per cent of the current users of spacing methods do not desire an additional child. Both higher income and education are associated with the use of higher spacing methods. Therefore, strategies to promote spacing methods should lower the education/income barriers to their use.

The barriers to spacing methods use seem to be lack of knowledge, poor accessibility, dislike for spacing methods and weak motivation to space children beyond current levels. Strategies to promote their use include strengthening program operations through an improved planning system and quality of care, increasing rural accessibility, strengthening social marketing, offering a package of reproductive health care services, carefully introducing new contraceptive technologies and promoting the effective use of traditional methods. However, specific strategies for a geographic area would depend on its demographic and socio-economic situation.

Organizational arrangements for implementing these strategies should recognize differential managerial requirements for terminal and spacing methods. Finally increasing the use of spacing methods would require higher financial resources. Programs should use social marketing or private sources for those who can afford and take steps to reduce wastage and increase efficiency.

SOCIAL MARKETING - AN INNOVATION TOWARDS POPULATION CONTROL

V. K. Sharma and R. L. Narasimhan

Genesis

Based on an experimental study in Meerut, near Delhi, India was the first country to start social contraception programme. The Nirodh Marketing Programme in India is a unique programme of great social significance. It was started at a time when there was no such programme anywhere in the world and there were no experience to draw upon. It was socially significant because of the impact it was expected to have on the contraceptive habits of couples and it was unique because modern marketing methods were utilized for the first time for the promotion of family planning. Under this programme, six of India's largest and most experienced consumer goods marketing organizations were entrusted with the marketing of Nirodh through their regular network of sales-men, sub-distributors, wholesalers, stockists and retailers in 1967. These companies were Brooke Bond India Ltd., Hindustan Lever India Ltd., ITC Ltd., Lipton India Ltd., Tata Oil Mills Co. Ltd. and Union Carbide Ltd. Subsequently, the distribution networks of six more companies were included to strengthen the arrangements. These companies were Indian Drugs & Pharmaceutical Ltd., Smith Strainstreet, Indian Oil Corporation, Bharat Petroleum Corporation , Hindustan Petroleum Corporation and Arasn Match Industry. These companies placed the product in nearly 4 lakhs retail outlets spread all over the country, both in urban and rural areas.

Objectives

The objectives of the programme were :

1 To improve accessibility of Nirodh - make them available close to the population;

2 To create large scale primary demand for Nirodh through modern marketing techniques;

3 To price the product at a very low level to buy;

4 To give the perception of everyday necessity like soap and tea; and

5 To give leading to clients that they are paying for the services they receive for family planning.

Creating Distribution Network

To cover the distribution cost and make Nirodh within easy reach of the consumers, a retail price of Rs 15 for a packet of 3 pieces was fixed. The product was supplied to the distributing companies at the rate of Rs 8 for a packet of 3 pieces and they sold it to the retailers for Rs 12/-. The margin allowed to the distributing companies covered their distribution cost while giving a reasonable incentive to the retail outlets to stock and sell the product. This pricing structure meant that the entire distribution system was financed by consumer expenditure.

Placing Nirodh into the retail shops was not enough. The eligible couples had to be informed, educated and persuaded to accept Nirodh for contraception and to buy from the market. At that stage, the condom was largely unknown and to some it was an embarrassing item. When the programme was launched many retail outlets did not stock the product because Nirodh was a taboo. With a view to create large scale awareness about the condom as an ideal

contraceptive for younger age group couples and to persuade them to use it for contraception, a multimedia advertising campaign was launched through all available media of mass communication. The Press, Radio, Cinema, Print, Outdoor, Retail shops and Folk media were extensively used for the creation of demand for Nirodh. Although the messages were changed from time to time, the theme was largely spacing, emphasizing the benefits of child care, education, nutrition, etc. The campaign was carried out in all the languages and was perhaps the largest in Asia for a single product. It largely achieved one of its main objectives of bringing Nirodh out into the open, and gradually stockists and retailers who were originally very reluctant to stock the product started keeping and displaying Nirodh.

Expansion of the Network

Over the years, substantive changes have been introduced both in distribution arrangements and in communication campaigns. As regards distribution, new marketing organizations have been involved in the programme: these are Parivar Seva Sanstha, Population Services International and Reliance Bulk Drugs and Formulations Ltd. There are, of course, some companies who have either discontinued to work with this social programme or have become inactive due to a variety of reasons.

Addition of New Brands

With the objective of offering a wide choice to the users, a lubricated variety "Deluxe Nirodh" was introduced in 1984 and a thin and colored variety under the brand name 'Super Deluxe' in 1987. The dry variety was discontinued in 1991 and in keeping with the preference of the users another variety 'New Lubricated' was introduced beginning in 1991. Depending on the product features these varieties have been priced differently. The price structure is given below:-

Variety	*Price to Company*	*Price to Retailer*	*Price to Consumer*
New Lubricated Nirodh (pack of 3)	Re.0.32	Re.0.40	Re.0.50
Deluxe Nirodh (pack of 5)	Re.0.96	Re.1.20	Re.1.50
Super Deluxe Nirodh (pack of 4)	Re.1.92	Re.2.40	Rs.3.00

Creating Consumer Demands

The accepted theme is "Delay the first and space the second" In keeping with the overall theme of the National Family Welfare Programme the Nirodh strategy is to inform, educate and motivate the younger couples to adopt Nirodh for planning the birth of their child by choice and not leave it to chance. For this purpose, eye-catching visuals and appealing and persuading messages through media of mass communication were given. The dissemination of messages was planned to have the maximum reach and impact on the target audience. It created a greater degree of awareness and consumer pull. The reach and impact of the media has increased during the past few years. The advertising campaign for Nirodh for 1992 was planned taking the following vital facts into consideration :

Radio

AIR network is comprised of 104 radio stations. The radio coverage was 84.2 per cent by area and 95.3 per cent by population.

Doordarshan

Doordarshan has grown into one of the world's largest television networks. It covers over 75 per cent of the population.

Cinemas

There are over 13,000 cinemas in the country. Cinema houses exhibited films supplied by the Films Division under the Cinematograph Act before each main show. The Films Division released films every week in all the theaters in the country. It was estimated that these films, through theaters, reached an audience of about 10 crores every week.

Press

India has one of the largest number of newspapers in the world. In 1989, the year for which data is available, over 30,000 newspapers were on the list of the Press Registrar of Newspapers of India. These newspapers, magazines and periodicals are printed in every language of the country and have extensive reach.

Field Publicity and Song and Drama Division

Field publicity has 257 units in various parts of the country. They undertake field-based publicity programmes around the year in a planned manner to cover the maximum possible population. Similarly, Song and Drama Division has 35 Departmental Troups and 575 private parties. The Division undertakes publicity of developmental activities and programmes such as family planning including Nirodh through its units in different parts of the country. Both these Divisions also put up programmes to promote contraceptive methods.

Print

Printed material was used extensively for the promotion of products and services. The Nirodh distribution network covered about 4 lakhs retail shops in urban and rural areas and in big and small towns. The material was produced largely by the distributing companies in the local languages.

Outdoor

Outdoor media works independent of the choice of the target audience and hence is very powerful. A signboard at an important site in a town or a wall painting on a highway or a neonsign on the compound wall of a FP facility is seen by a large number of people passing that way. There is no expenditure or effort involved on the part of the viewers but they are exposed to the Nirodh messages repeatedly and effectively.

It was considered useful to collaborate with marketing organizations who have expertise in promotion and advertising of consumer products. Therefore, the system of advertising was changed to take advantage of this expertise. The Ministry took the responsibility of carrying out umbrella advertising and provided funds at the rate of 3 paise per piece sold to the distributing companies for undertaking promotional and advertising activities in the areas allocated to them. The companies have in-depth knowledge about the areas. They are better equipped to undertake area-specific promotional and advertising activities from the funds provided to them by the Ministry. In addition, some companies also spent their own resources on these activities. It may, however, be specifically pointed out that these two activities were complimentary and supplementary because the basic objective of the project was to promote the acceptance of Nirodh by employing modern marketing techniques.

The Achievements

A first achievement is a sea change in the attitude of the people generated by the Nirodh project, which has helped in overcoming the taboo associated with condoms. It has been given social legitimacy. Nirodh today has become a household word and it is being openly talked about. The second achievement of this programme is the easy availability of Nirodh at the door-steps of the prospective users and near to their work place. It is now readily available from about four

lakhs retail shops all over the country along with the daily necessities of life such as soap, tea, cooking oil, kerosene, medicines, etc. Nirodh is now being prominently displayed by hundreds of thousands of retail shops of different types all over the country. Shopkeepers no longer refuse to stock and sell Nirodh. The product and the publicity material is displayed imaginatively by hundreds of shops in a town giving it a festive look. The third achievement is in terms of increasing the off-take. The programme yielded encouraging results right from the beginning. It was estimated that before the launch of the Nirodh programme about 7 pieces (mpcs) of condoms were commercially sold in the country. The sale in the very first year of the social network programme was 15.74 mpcs and it increased to 320 mpcs in 1990-91. The programme has made remarkable gains though the sales were expected to have been much higher. (Annexure I).

The concept advertising also has contributed materially to the distribution under the Nirodh Free Supply Scheme. It has increased to 675.39 million in 1990-91 from 43.47 mpc in 1968-69. (Annexure II).

Constraints of the Programme

There are severe limitations in promoting and selling a contraceptive like Nirodh. Besides major social and economic constraints such as poverty, marriage of girls at very young age, inadequate education of girls, high illiteracy, low status of women, universal marriages, social and family pressure for the birth of the first child immediately after marriage, strong desire for a son and preference for two sons, etc. there are important distribution and advertising constraints. Some of the important ones are:

1 **Limitation of direct reach of distribution network particularly in rural areas.**

2 77 per cent of the population living in villages.

3 **Very high cost of distributing products in rural and remote rural areas.**

4 Large percentage of villages being away from road.

5 **Lack of privacy and high density of population in households in ever increasing slums in urban areas.**

6 Insignificant coverage of women by mass media in rural areas and only a little better in urban slums.

7 **Limited funds for advertising.**

Issues:

Nirodh has to play a suitable role in the achievement of the goal of the National Family Welfare Programme of 60 per cent couple protection rate by the end of the century. Experiences in some other countries have shown that condom can provide protection to more than 20 per cent of eligible couples. With this objective in view, Nirodh acceptance and usage has to be increased rapidly. In this context the following issues have to be addressed and resolved for giving a boost to the Nirodh Programme and ensuring greater coverage of couples.

1 Dry Nirodh has been withdrawn under the Social Marketing Programme, but it is continuing under the Free Distribution Scheme. A decision needs to be made whether dry Nirodh should continue to be supplied under the Free Distribution Scheme?

2 **If dry Nirodh is totally withdrawn, lubricated Nirodh would be provided under the Free Distribution Scheme. To distinguish it from a similar product being sold under the Social Marketing Programme, an economic packing would be necessary for the product. What would be a suitable packing for this purpose?**

3 What role should be assigned to the Free Distribution Scheme under the family welfare programme? Should it be confined to rural areas and urban slums or should a small price be charged?

4 **What role can NGOs play in the Free Distribution Scheme? Should any incentive be given to them?**

5 What is the extent of wastage under the Free Distribution Scheme? What role can field staff play in avoiding wastage? How can this programme be energized ?

6 **Under Social Marketing Programme Nirodh is mostly not reaching rural areas. How, can these areas be covered? Should an additional incentive, say @ 2 paise per piece sold, be given for marketing in rural areas? What system could be evolved to verify sale in urban and rural areas?**

7 For improving product distribution should more companies be inducted into the programme and allocated part of the areas of the existing companies? Alternatively, should the present territorial approach be changed and all companies allowed to operate anywhere in the country?

8 **What measures should be taken to persuade prominent companies, including existing distributors, to market their own brands anywhere in the country?**

9 How can more NGOs be persuaded to marketing their own brand of product?

10 **Should financial assistance be given to PSS and PSI to cover their expenditures on staff and promotional activities while undertaking social marketing?**

11 Should financial assistance be given to NGOs for marketing brand name condoms under the Social Marketing Programme?

12 **Can arrangement be made for involving cooperatives, industrial houses, municipalities, NGO etc. at the State level in the social marketing of condoms? What financial support can be given to them either by the Ministry or the distributing companies?**

13 How can the community based distribution of Nirodh, along the lines of Banaras Hindu University project, be organized? How can suitable agencies be identified and, if necessary, what support/assistance should be given to them?

14 **Should the present subsidy under the Social Marketing Programme be revised?**

15 What would be the appropriate strategy for undertaking a Social Marketing Programme, Free Distribution Scheme and community based distribution programme? What studies should be undertaken to decide the modalities of implementation of these schemes?

16 **How are the distributing companies utilizing the amount provided to them (@ 3 paise per piece sold) for undertaking advertising and promotional activities? What should be their strategy?**

17 How can practitioners of ISM, members of IMA, etc. be involved in strengthening and expanding the social marketing of Nirodh?

18 **What would be a suitable communication strategy to lend strong support to the programme?**

19 What lessons can be drawn from the experience of social marketing programme of Nirodh in India and other countries to give a big boost to this programme?

Future Perspectives

The feedback from the studies and surveys conducted by the Operation Research Group (ORG) indicate that awareness about Nirodh is increasing. At the time of the 3rd All India Survey conducted by ORG, 66 per cent of couples were aware of Nirodh. The feedback from the field indicate that the level of repeat purchases is increasing. To enroll new Nirodh users at a fast pace, the communication campaign is being intensified. As of March, 1991 there were 145 million eligible couples. There were 78 million couples with wives in the age group of 15 to 29 years, who are the prime target group for the promotion of Nirodh. It's a huge potential although the task is very challenging since it involves changing personal behavior in very sensitive areas. Considering the big potential which exists for the promotion of Nirodh, distribution and communication efforts are being strengthened. The distribution infrastructure has to be further augmented for intensive and extensive coverage. It has to be given the capability of reaching the interiors and placing Nirodh in substantially larger numbers of retail shops. The communication campaign has to be further intensified with the objective of achieving the coverage of a large majority of younger age couples, if not all, and to motivate more and more couples to adopt Nirodh for contraception.

Some steps for revamping this programme are the following :

1 While the broad guidelines may be provided by the government, day to day operations may be left to the experts who can respond to management problems properly promptly and adjust to rapidly changing up market conditions

2 The marketing network needs to be strengthened in the rural areas

3 Continuous market research is required to find out the number and location of potential customers, their product performance, capacity to pay and other dimensions of social marketing

Social Marketing of Oral Pills

The programme of Social Marketing of oral pills was under consideration by the Government for the past several years but was started only in 1987 after completing the modalities of the scheme and signing agreements with the distributing companies. The oral contraceptive pills have been distributed under the Free Distribution Scheme for the past several years. After approval of the composition by ICMR, the brand name 'Mala-D' was decided to be sold under the Social Marketing Programme as different from the pill which was being distributed under the Free Supply scheme with the name 'Mala-N'. The pack consists of 28 tablets, 21 of oral pills and seven placebos. Four leading pharmaceutical companies were assigned the responsibility of the distribution and sale of 'Mala-D' in exclusive territories. Dey's Medical Stores Ltd., Hoechst India Ltd., Rallies India Ltd., & Parke Davis Ltd. were allocated East Zone, North Zone, West Zone & South Zone respectively.

The production of 'Mala-D' is being carried out by Indian Drugs and Pharmaceutical Ltd. and M/s Eupharma with the raw material being provided by UNFPA as commodity assistance.

Pricing

A pack of one cycle is priced Rs.2 for the acceptors. It is being supplied to the distributing companies by the Ministry at the @ Rs 1 per cycle. The price structure, which provides for attractive margins to the retail chemists, is as follows :

Price to	*Per cycle cost*
1. Distributing Companies	Rs. 1.00
2. Retail Chemists	Rs. 1.60
3. Acceptors	Rs. 2.00

Parivar Sewa Sanstha who are one of the distributors of Nirodh, are selling Oral Pills under the brand name 'Ecroz' in Haryana. Their acceptance is following an up-ward trend and is encouraging. In 1991, PSI also started marketing oral pills under the brand name 'Pearl' from 1991.

Oral Pills are being used for contraception by over 60 million women all over the world. In many countries Oral Pills are the most popular method of contraception. The Pill is effective and easy to use by women. There are over 78 million younger age group couples in India, but the acceptance of the pill under the marketing programme is very low.

In order to create awareness and to motivate young married women to use the pill for contraception, an advertising campaign through Doordarshan, Radio and Press is being carried out by the Ministry though it is on a small scale. Point of sale material is also supplied to the distributing companies from time to time. The companies also produce display material as required by them for supply to the retail chemists in their area. In order to enlist the support of the medical practitioners and to create a favourable environment for the acceptance of the Pill, seminars for practicing doctors have been organized at national, regional and state levels. The feed back suggests that the seminars achieved their purpose to a very large extent.

This programme is still in infancy, and as has to be developed on the basis of experience in India and abroad.

Conclusion

The social marketing programme has great potential to expand. This expansion is one approach to increasing demand for spacing methods.

Annexure I

Sale of Nirodh under social marketing programme

Sr. No	Name of Company	Total off take (Million pieces)		
		1985-86	1989-90	1990-91
1	I.T.C.	56.78	120.12	125.91
2	Brook Bond	17.90	14.16	11.82
3	H L L	28.36	20.86	20.47
4	TOMCO	12.92	31.30	42.42
5	PSI (I)	-	53.58	60.11
6	P S S	-	3.18	5.61
7	Dil Companies	0.41	1.16	0.28
8	IDPL	6.31	44.99	7.64
9	Smith Strainstreet	15.86	0.19	-
10	Reliance Bulk Drirg	-	7.78	45.73
11	Arasan Match	0.39	-	-
12	Lipton, India	0.80	-	-
13	U C I	107.53	-	-
14	Other	-	0.08	-
	Total	239.37	296.96	320.38

Annexure-II

Free Distribution of Nirodh during 1981-82 to 1990-91 (In million pcs.)

Year	Free distribution
1. 1981-82	152.65
2. 1982-83	174.17
3. 1983-84	279.57
4. 1984-85	336.04
5. 1985-86	363.67
6. 1986-87	427.46
7. 1987-88	477.56
8. 1988-89	589.21
9. 1989-90	657.47
10. 1990-91	675.39

Annexure-III

	Price-Structure	*Price to Distributors*	*Price to Retailers*	*Price to Consumer*
1968	Nirodh Dry Pack of 3 pcs.	8 paise	12 paise	15 paise
1992	Nirodh Dry	19 paise	24 paise	30 paise
	New Lubricated Pack of 3 pcs.	32 paise	40 paise	50 paise
	Nirodh Deluxe Pack of 5 pcs.	96 paise	Rs 1.20	Rs 1.50
	Super Deluxe Pack of 4 pcs.	Rs 1.92	Rs 2.40	Rs 3.00

SOCIAL MARKETING OF CONDOMS IN INDIA

A Trend Analysis for the Period 1981-91

R. Narasimhan and M. E. Khan

Social Marketing is defined as "the design, implementation and control of programmes calculated to influence the acceptability of a social idea and involving considerations of product planning, pricing, communication, distribution and marketing research" (Kotler & Zoltman, 1972). Initially, most of the social marketing efforts have actually been "social advertising" such as campaigns to persuade people to stop smoking, avoid bottle feeding of new borns and immunize children. However, Contraceptive Social Marketing (CSM) in developing countries not only does "social advertising" but actually promotes and sells contraceptives at subsidized prices through commercial networks.

Contraceptive Social Marketing (CSM) in India was launched as far back as 1968-69, with the aim to make contraceptives (condoms) more widely available at a subsidized rate through the existing networks for distribution and supply of commodities - the commercial distributors, wholesalers and retailers that operate virtually all over the country.

Six companies, namely, Brooke Bond, Hindustan Lever, ITC, Lipton, Tata Mills and Union Carbide initially came forward to collaborate with the Ministry in this scheme and offered to distribute and promote sales of Nirodh (the brand name of the condom promoted by the Government) through their distribution network by treating Nirodh as an additional product in the range already handled. Subsequently, a few more companies, both public and private, were persuaded by the government to join hands towards improving the distribution coverage. With the introduction of these companies, today 12 firms are involved in this scheme and according to an ORG estimate, about 56 million outlets of various kinds spread all

over the country, both in urban and rural areas, stock and sell condoms.

Apart from social marketing, the family welfare programme also is distributing free condoms through its family planning clinics, PHCs, sub-centres and other public health centres. According to available statistics, by the end of 1991, the total distribution of condoms through commercial channels and free distribution taken together was estimated to be around 1100 million pieces, as against 319 million pieces reported in 1980. It appears that the programme has achieved impressive results. However, to get a better understanding of the performance of the social marketing scheme, in the present paper an attempt has been made to review the pattern of sales of various brands of condoms available in the market, their penetration in rural areas and the extent the scheme has actually succeeded in increasing the use of condom among eligible couples.

Data Source: Data for this review is taken from the retail store audit estimates generated by ORG. ORG is conducting such retail store audit for a large number of consumer items, including condoms. To understand the changes in the pattern of condom sales, data from the past 12 years has been analyzed and presented here.

Major Findings

1 The study shows that the total commercial distribution of condom increased from 182 million pieces in 1980 to 439 million pieces in 1991 - a 141 per cent increase in twelve years. As figure 1 shows, more or less similar increases were observed in the urban and rural areas - the gap between urban and rural areas has remained almost constant over the last 10 years. The only exception is 1991, where the gap has marginally reduced because of the decline in the sale of condoms in urban areas.

2 The estimated sales of condoms for the year 1991 is 439.6 million pieces which is 47.4 million less than the sales reported in 1990. In other words, the commercial sales of condoms in 1991 is 9.7 per cent less than the previous year. The decline is observed both in the urban and rural areas. However, this is more conspicuous in the urban areas.

3 The share of free distribution condoms in the total distribution (free + commercial) has increased from 45.9 percent in 1981 to around 60 per cent in 1991. Since then it has remained almost stationary (ranging from 53.3 to 61.6). As one of the objectives of social marketing is to increase the share of commercial distribution (and thereby increase cost recovery), the scheme has failed to achieve it.

4 A trend analysis of the condom sales by zone shows that in North Zone, the sales have increased only marginally during the period 1985-1988, but since then the increase is more consistent and visible. In South Zone, after a steep increase between 1984 and 1985, the sales of condoms is somewhat stagnant, whereas in West and East Zones the sales have actually decreased.

5 Further analysis of the sales by state shows that out of the 15 major states/UTs, between 1983 and 1991 the contribution to the total market by 9 states has declined, while the contribution by the remaining 6 states has increased. The decrease in contribution is observed in Delhi, Rajasthan, Assam, Bihar, West Bengal, Gujarat, Maharashtra, Karnataka and Kerala. The decrease in Bihar, West Bengal and Maharashtra is more conspicuous than in the remaining states. Increase in the contribution to the sales of condoms is observed in Punjab/Haryana, Uttar Pradesh, Orissa, Madhya Pradesh, Andhra Pradesh and Tamil Nadu. However, the increase is substantial only in Uttar

Pradesh (4.6 percentage points) and Andhra Pradesh (7.4 percentage points).

6 An analysis of condom sales by type of outlet shows that in 1991, the largest contribution was from chemist shops (35.8 per cent), closely followed by "others" category of shops (31.5 per cent), which largely consists of 'Panwalas', 'cigarette shops' or other petty outlets. The general stores contribute 23.3 per cent of the total sales, while the grocers have a share of 9.4 per cent in the total condoms market. A trend analysis further shows that while the share of chemist shops in the urban condom market is increasing over time, general stores and 'others' category of shops are losing share. The share of grocers, by and large, has remained constant or marginally declined (by about 1 percentage point).

7 The next question that arises is "Has the percentage of retail outlets stocking condoms increased between 1981 and 1991"? The answer is "yes", at the national level. The analysis shows that the percentage of retailers stocking condoms has increased from 11.9 per cent in 1981 to 14.9 in 1991 -the increase being more in the urban areas (7.3 per cent points -from 18.2 to 25.5) than in the rural areas (3 per cent points - from 8.8 to 11.8 per cent). However, further analysis by zone shows that while the percentage has increased in North Zone (from 19.0 to 25.3) and South Zone (from 9 per cent to 16.4 per cent), it has decreased in East (from 9.9 to 9.2) and West Zones (from 8.3 per cent to 7.4 per cent).

It is significant to note that in South Zone, the increase is of the same order in rural and urban areas (7.3 per cent points). In fact, the rate of increase is much more in rural areas (147 per cent) than in urban areas (44.7 per cent).

8 A state-wise analysis of the percentage of villages where at least one retail outlet stocking condoms is available shows that at the national level only about one-fourth of the villages have commercial outlets. The remaining three-fourth (75 per cent) of the villages still do not have any retail outlets. Further analysis by population size of villages shows that only about 15 percent of the small villages (population less than 1000) have any commercial outlet for condoms. The corresponding figures for middle size villages (1001-5000) and larger villages (more than 5000 pop) are 46.2 and 81 per cent, respectively. Knowing that majority of the villages in the country are of less than 1000 population, it indicates that majority of the rural population still have no access to condoms through commercial outlets.

Among the four zones, accessibility of condom through commercial outlets is relatively better in North Zone (27.6 per cent), followed by South Zone (25.1 per cent), East Zone (21.6 per cent) and West Zone (20.2 per cent). Among all the states, villages of Punjab/Haryana have much better access to commercial distribution of condoms compared to other states.

9 An analysis of the market shares of various brands of condoms shows that during the last ten years, Nirodh has slowly lost its first position and better quality lubricated condoms are more in demand. Presently, Nirodh Deluxe is the leading brand, followed by Nirodh and Kohinoor. It is interesting to note that the share of imported condoms has increased substantially from 2.9 per cent in 1986 to 9.4 per cent in 1991. Masti and Super Deluxe Nirodh which were introduced only a few years back, respectively, contribute 5.4 and 6.6 per cent of the market. Similar patterns are observed in urban and rural markets. In rural areas, though 'Nirodh' still occupies the first position (market share 46.4

percent), it has lost a substantial share to Nirodh Deluxe and imported condoms.

10 A comparison of the results of the three All India Family Planning Survey carried out by ORG in 1970, 1980 and 1989 shows that awareness of condoms has increased substantially. However, the increase is of a much higher order between 1970 and 1980 (28.1 percent points) than between 1980 and 1989 (12.6 percentage points). Awareness about condoms among females is still relatively low (55 percent). Similarly, awareness of condoms in rural areas is still quite low (60 percent), as against urban areas (84.5 percent). The analysis further shows that actual knowledge as to how the contraceptive is to be used is known to only 51 percent of the couples. As in the case of awareness, the increase in knowledge of condom usage is only marginal (10 percentage points) between 1980 and 1989, as compared to the increase between 1970 and 1980 (34 percentage points).

An analysis of actual use is further disappointing. In 1989, only 5.3 percent of the couples were using condoms as against 4.3 per cent in 1980, i.e. during 1980-89 the use of condoms has increased only by 1 per cent and that too because of the increase in rural areas. In urban areas, the percentage of couples using condom has remained stagnant at 10 per cent.

The analysis thus shows that during the past 10 years, the social marketing of condom has not contributed much towards the actual use or even increase in the knowledge of the method. Serious thinking is required to find out where the scheme is failing and what could be done to strengthen it. As indicated earlier, the scheme could be considered successful only if:

(a) the per cent of couples using condoms increases and

(b) the share of free distribution in the total condom distribution decreases

Impact of Social Marketing of Condom on Awareness, Knowledge and Use of Condom

	All India Survey		
	1989	*1980*	*1976*
A Changes in Awareness			
Couple	66.4	53.8	25.7
Husband	77.0	63.4	33.9
Wife	55.9	44.3	17.2
Urban couple	84.5	76.0	52.6
Rural couple	60.4	47.9	19.6
B Changes in Knowledge on Use of Condom			
Couples having knowledge			
as % of those aware of the method	NA	78.0	62.0
As % of all couples	51.0	41.0	7.0
C Change in Usage Level			
Current users as % of couples			
All India	5.3	4.3	2.6
Urban	10.1	10.2	8.2
Rural	3.7	2.7	1.3

Table 1: Trend in the Consumption of Condoms (1980-199) (Millions)

	1980	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*1991* **
Commercial distribution	182.0	180.0	177.0	189.9	217.6	259.0	294.7	342.8	360.0	396.1	487.0	435.6
i) Urban	156.0	164.0	154.02	162.7	177.7	204.4	227.2	245.1	250.7	250.1	325.0	279.2
ii) Rural	26.0	16.0	3.0	27.2	39.9	54.6	67.5	97.7	109.3	136.1	162.0	156.4
Free distribution	137.4	152.6	174.2	279.6	336.0	363.7	428.0	490.0	586.0	636.7	654.6	657.4
Total	319.4	332.6	351.2	459.5	553.6	622.7	722.7	832.8	945.0	1032.8	1141.6	1093.0

*Note: ** Estimated based on data for January - September in case of rural.*

Table 2: Zone Wise Market for Condoms (1983-91) ('000s)

None	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*1991***
All India	189,900	217,600	259,000	294,700	342,845	360,031	396,146	487,019	435,550
North	58,360	77,683	92,722	107,850	128,245	134,010	149,250	188,554	173,865
East	45,390	50,483	51,541	57,466	67,894	65,592	74,979	87,066	75,524
West	37,600	42,867	48,692	46,563	53,853	61,148	65,789	76,602	69,852
South	38,550	46,567	6,045	82,811	92,853	99,281	106,126	134,896	116,305

Source: ORG Retails Store Audit

** *Estimated based on rural data for Jan-Sept. 1991 and urban data for Jan-Dec '91.*

Table 3: State Wise Share of Condoms Market (1983-90)

State	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*
All India (Million)	189.9	217.6	259.0	294.7	342.9	360.0	396.1	487.0
				Percentage				
Delhi	4.4	4 5	4.4	3.4	4.7	4.5	4.7	3.5
Punjab, Haryana	8.9	9.3	9.4	8.5	10.8	10.3	10.8	8.3
Rajasthan	3.1	3.4	3.2	2.8	2.9	3.8	4.2	3.0
Uttar Pradesh	19.6	18.5	18.9	22.0	19.0	18.9	18.0	24.0
Assam	3.5	3.0	1.8	1.6	1.4	1.2	1.2	1.1
Bihar	7.8	5.8	7.0	6.2	7.2	6.6	5.3	5.2
Orissa	2.8	4.4	3.3	3.1	2.9	2.5	3.1	4.4
West Bengal	9.8	9.4	7.9	8.2	8.3	7.9	8.4	7.1
Gujarat	2.5	2.0	2.2	1.9	1.7	1.5	1.8	1.4
Madhya Pradesh	4.1	4.4	4.5	3.6	4.0	4.3	4.1	3.4
Maharashtra	13.3	13.2	12.1	10.3	10.0	11.2	10.7	10.9
Andhra Pradesh	5.4	5.8	8.2	8.5	7.6	9.3	10.0	12.5
Karnataka	4.3	3.9	4.0	3.3	4.9	4.1	4.1	4.0
Kerala	2.5	3.8	4.1	3.6	3.8	3.2	3.0	2.5
Tamil Nadu	8.1	7.0	9.1	12.7	10.9	11.0	9.7	8.7

Source: ORG Retail Store Audit

Table 4: Town Classwise Share of Urban Condom Market (1983-91)

State	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*1991* **
Total Market (million)	162.7	177.7	204.4	227.2	275.1	250.7	260.1	325.0	279.2
				Percentage					
Metro (above 10 lakh Popn.)	26.7	26.7	26.4	23.5	27.2	27.1	30.3	23.4	25.4
Class - I (1-5 lakh popn.)	37.3	37.5	37.6	36.8	36.3	37.6	35.9	36.3	35.0
Class - II (50-100 thousand)	15.6	14.9	14.2	13.7	13.9	13.7	13.1	15.8	14.5
Class - III (20-50 thousand)	10.9	10.1	11.7	12.0	10.9	12.0	10.9	12.7	12.2
Class - IV (Below 20 thousand)	9.4	10.8	10.2	14.0	11.8	9.7	9.8	11.9	12.9

Source: ORG Retail Store Audit

Table 5: Outlet Typewise Share of Urban Condom Market (1983-91)

State	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*1991* **
Total Market (millions)	162.7	177.8	204.4	227.2	245.0	250.7	260.1	325.0	279.2
				Percentage					
Grocer	10.4	8.1	9.5	8.9	9.1	7.5	8.4	8.3	9.4
General Store	30.8	29.7	26.3	25.4	23.4	24.0	23.9	23.9	23.3
Chemist	28.5	32.3	33.1	28.7	30.5	30.0	30.4	34.1	35.8
Others	30.2	29.9	31.1	37.1	37.0	38.4	37.3	33.7	31.5

Source: ORG Retail Store Audit

Table 6: Competition Status - Urban and Rural Markets

	All India		*Urban*		*Rural***	
	Units 000s	*M.S %*	*Units 000s*	*M.S %*	*Units 000s*	*M.S %*
Total Market (millions)	435,550	100.0	279,171	100.0	156,379	100.0
A: Indian	395,135	90.7	244532	87.6	150708	100.0
Champ	1,395	0.3	1351	0.5	44	96.3
Durapack India	1,335	0.3	1084	0.4	251	*
Durex Goasamor	2,225	0.5	1854	0.7	371	0.2
Durex Featherlight	561	0.1	297	0.1	264	0.2
Nirodh	119,149	27.4	45808	16.4	73341	0.2
Nirodh Deluxe	139,307	32.0	82966	29.7	56341	46.9
Super Dlx. Nirodh	30,303	7.0	22660	8.2	7443	36.0
Kohinoor	65,591	15.1	58352	20.9	7239	4.8
Kohinoor Fiesta	4,453	1.0	4022	1.4	431	4.6
Share	324	0.1	324	0.1	-	0.3
Moods	542	0.1	542	0.2	-	-
Ginga	1	*	1	*	-	-
Intimate	71	*	71	*	-	-
Sawan	2,258	0.5	2258	0.8	-	-
Bliss	1,074	0.2	1074	0.4	-	-
Masti	22,547	5.2	17728	6.4	4819	301
Adam	2,581	0.6	2537	0.9	44	*
Kamasutra	1,252	0.3	1252	0.4	-	-
Others	166	*	151	0.1	15	*
B: Foreign	40,415	9.8	34639	12.4	5776	8.7
Desire	153	*	148	0.1	5	*
Love Time	520	0.1	329	0.1	191	0.1
Raja	1,876	0.4	1281	0.4	645	0.4
Others	37,866	8.7	32931	11.8	4935	3.2

* *denotes less than 0.1%*

** *estimated based on data for Jan-Sept 1991*

Source: ORG Retail Store Audit

Table 7: Competition Status - Zonewise Market Share (Jan - Dec. 1991)

Brand	*All India*	*North*	*East*	*West*	*South*
Total Market (millions)	435.6	173.9	75.5	69.9	116.3
		Percentage			
Nirodh	27.4	22.4	14.6	12.2	52.2
Nirodh Deluxe	32.0	36.1	41.9	26.4	22.4
Super Dlx Nirodh	7.0	4.8	4.3	14.7	7.3
Kohinoor	15.1	11.2	21.6	24.2	11.0
Masti	5.2	12.4	0.8	0.6	-
Sawan	0.5	1.3	-	-	-
Foreign	9.3	9.0	12.3	16.7	3.2

Source: ORG Retail Store Audit

Table 8: Competition Status - Statewise on Market Share (Jan-Dec 1990)

States	*% market Share*					
	Nirodh	*Nirodh Dlx*	*Super Dlx Nirodh*	*Kohinoor*	*Masti*	*Foreign*
Delhi	0.1	0.5	0.2	0.7	0.5	1.2
Punjab,Haryana	0.8	4.3	0.6	1.3	0.1	0.6
Rajasthan	0.3	1.3	0.5	0.4	*	0.4
Uttar Pradesh	8.1	8.9	1.1	2.0	2.5	0.9
Assam	0.2	0.1	0.1	0.4	-	0.3
Bihar	2.3	1.7	0.4	0.5	-	0.3
Orissa	0.9	1.8	*	1.1	-	0.6
West Bengal	1.0	2.5	0.2	2.1	-	0.9
Gujarat	*	0.4	0.1	0.5	-	0.3
Madhya Pradesh	0.5	1.3	0.4	0.8	-	0.2
Maharashtra	1.7	2.6	1.0	3.0	-	1.9
Andhra Pradesh	8.4	2.9	0.3	0.7	-	0.1
Karnataka	0.8	1.7	0.2	0.8	-	0.1
Kerala	0.2	1.5	0.2	0.3	-	0.2
Tamil Nadu	3.6	3.3	0.4	0.9	-	0.1

Total market - 487.0 millions
* *Denotes less than 0.1%*
Source: ORG Retail Store Audit

Table 9: Trend in Competition - Urban Market (1983-91)

Brand	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*1991* **
Total (million)	162.7	177.8	204.4	227.2	245.0	25.7	260.1	325.0	279.2
				Percentage					
Nirodh	64.6	58.9	47.9	12.6	34.5	28.0	20.1	15.9	16.4
Nirodh Deluxe	-	2.8	19.5	29.2	34.2	35.3	36.0	36.9	29.7
Super Dix	-	-	-	-	0.1	7.0	7.2	7.8	8.2
Nirodh	15.2	16.8	13.6	12.3	14.7	14.3	16.3	19.8	20.9
Kohinoor	13.0	12.8	9.2	6.0	5.0	3.3	2.5	1.3	0.7
Durex Gossamer	-	-	-	-	-	0.1	2.0	4.4	6.4
Masti	-	-	-	-	-	0.1	0.1	0.4	0.8
Sawan	-	-	-	-	-	-	*	0.2	0.4
Bliss	-	1.6	3.3	3.7	5.8	6.7	10.2	10.8	12.4
Foreign									

* *denotes less than 0.1%*

Source: ORG Retail Store Audit

Table 10: Trend in Competition - Rural Market (1983-91)

Brand	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*1991* **
Total (million)	27.2	39.9	54.6	67.5	97.9	109.3	136.1	162.0	156.4
				Percentage					
Nirodh	97.4	95.5	88.3	79.6	65.7	61.9	55.6	55.4	
Nirodh Deluxe	-	0.6	7.3	15.1	26.9	28.2	34.2	32.7	36.0
Super Dix	-	-	-	-	-	0.9	1.1	1.6	4.8
Nirodh	1.4	1.8	2.7	3.1	5.1	6.1	6.0	6.3	4.6
Kohinoor	0.8	1.5	1.3	1.6	1.2	1.4	1.0	0.2	0.2
Durex Gossamer	-	-	-	-	-	-	*	0.1	3.1
Sawan	-	-	-	-	-	-	0.2	0.5	0.0
Masti	-	0.1	0.1	0.2	0.3	0.4	1.0	1.1	3.7
Foreign									

* *denotes less than 0.1%*

** *1991 estimated based on data for Jan-Sept 1991*

Source: ORG Retail Store Audit

Table 11: Competitive Status - Urban Market by Outlet Type (Jan-Dec 91)

Brand	*Grocer*	*General store*	*Chemist*	*Others*
Total market ('000s)	26,221	65,138	99,883	87,928
	Percentage			
A. Indigenous	91.0	81.3	86.9	92.1
Nirodh	20.7	10.1	8.6	28.7
Nirodh Deluxe	38.2	26.6	20.2	40.3
Super Dlx Nirodh	6.4	8.4	8.8	7.9
Kohinoor	9.3	19.3	34.1	10.5
Durex Gossamer	0.1	0.6	1.2	0.3
Champ	0.5	0.4	0.9	-
Durapack India	*	0.3	0.8	*
Durex Feather Light	-	0.1	0.3	-
Kohinoor Fiests	0.7	1.4	2.5	0.5
Bliss	0.3	0.3	0.8	*
Masti	13.5	11.2	4.1	3.2
Moods	0.1	0.2	0.4	*
Sawan	0.2	1.3	1.3	*
Adam	0.6	0.5	2.1	-
Kama Sutra	0.4	0.3	0.5	0.5
Others	*	0.3	0.4	0.4
B. Foreign	9.0	18.7	13.1	7.9
Desire	-	0.1	*	0.1
Love Time	-	0.2	0.1	0.1
Others	9.0	18.4	13.0	7.7

* *Denotes less than 0.1%*

Source: ORG Retail Store Audit

Table 12: Percentage of Dealers Distributing Condoms Urban-Rural 1991

Brand	*Urban*	*Rural*	*Total*
Dealers Est. in 00's	2236	2831	5067
	Percentage		
Champ	3.5	0.4	1.8
Durepack - India	1.7	0.6	1.1
Durex Gossamer	4.4	1.2	2.6
Durex Feather light	0.3	1.0	0.7
Nirodh	34.7	55.6	46.4
Nirodh Deluxe	49.2	46.2	47.5
Super Deluxe Nirodh	26.2	8.7	16.4
Kohinoor	42.1	18.9	29.1
Kohinoor Fiesta	12.8	2.7	7.1
Share	0.9	0.0	0.4
Moods	2.1	0.0	0.9
Sawan	2.8	0.0	1.2
Masti	22.9	13.8	17.8
Adam	5.4	0.6	2.7
Bliss	1.2	0.0	0.5
Foreign - Others	31.6	9.4	19.2

** *Rural based on July-September 1991*

Source: ORG Retail Survey Audit

Table 13: Percentage of Dealers Distributing Condoms - By Outlet Type Urban Market (Oct-Dec.1991)

Brand	*Grocer*	*Gen.store*	*Chemist*	*Others*
Dealers Est. in 00's	452	668	391	724
	Percentage			
Champ	3.7	3.8	9.3	-
Durepack - India	-	1.9	6.1	0.4
Durex Gossamer	2.1	4.6	7.3	3.9
Durex Feather light	-	0.2	1.2	-
Nirodh	26.6	21.2	31.1	47.8
Nirodh Deluxe	54.7	48.6	47.4	47.3
Super Deluxe	17.3	27.5	37.7	24.3
Nirodh	36.4	53.3	46.4	16.8
Kohinoor	6.2	16.1	30.2	4.5
Kohinoor Fiesta	-	0.2	3.0	1.0
Share	3.2	1.4	5.6	0.1
Moods	0.8	5.4	4.6	0.8
Sawan	0.8	0.4	5.4	*
Bliss	29.1	30.0	25.1	11.3
Masti	2.6	4.9	19.6	-
Adam	4.4	8.2	18.9	8.7
Kama Sutra	17.7	46.1	41.0	21.8
Foreign - Others				

* *Indicates less than 0.1%*

Table 14: Penetration of Condom Among Retail Outlets 1981-1991

	% of retail outlet stocking condom	
	1981	*1991*
All India		
Urban	25.5	18.2
Rural	11.8	8.8
All	14.9	11.9
North Zone		
Urban	30.1	23.6
Rural	23.6	15.6
All	25.3	19.0
East Zone		
Urban	21.7	17.4
Rural	5.9	7.0
All	9.2	9.9
West Zone		
Urban	18.1	13.2
Rural	4.7	6.3
All	7.4	8.3
South Zone		
Urban	23.3	16.1
Rural	12.3	5.1
All	16.4	9.0

Table 15: Spread of Condom Stocking Villages

States	*% of total villages in India*	*% of dist. of condom stocking villages*
Delhi, Punjab, Haryana	7.3	10.5
Rajasthan	6.0	2.9
Uttar Pradesh	19.4	24.9
North Zone	**32.8**	**38.3**
Assam	6.1	5.6
Bihar	11.7	12.9
Orissa	8.0	6.6
West Bengal	6.6	4.5
East Zone	**32.4**	**29.6**
Gujarat	3.1	1.2
Madhya Pradesh	12.3	13.1
Maharashtra	6.9	4.7
West Zone	**22.3**	**19.0**
Andhra Pradesh	4.7	4.3
Karnataka	4.7	4.9
Kerala	0.2	0.5
Tamil Nadu	2.8	3.4
South Zone	**12.4**	**13.1**
All India	**100.0**	**100.0**

Table 16: Availability of Condoms in Villages

States	*Village Size*			
	<1000	*1000-5000*	*>5000*	*All villages*
Delhi, Punjab, Haryana	21.3	72.7	100.0	33.4
Rajasthan	7.7	22.2	55.5	11.4
Uttar Pradesh	13.3	78.6	93.8	30.4
North Zone	**14.1**	**67.7**	**86.9**	**27.6**
Assam	21.4	22.2	50.0	21.6
Bihar	15.5	58.3	75.0	26.3
Orissa	17.6	30.0	50.0	19.2
West Bengal	0.0	46.7	83.3	16.3
East Zone	**14.2**	**45.9**	**76.2**	**21.6**
Gujarat	0.0	18.2	64.2	9.5
Madhya Pradesh	23.1	36.4	85.8	25.1
Maharashtra	10.0	25.0	88.9	16.3
West Zone	**17.2**	**27.0**	**80.0**	**20.2**
Andhra Pradesh	0.0	40.0	92.3	21.7
Karnataka	18.2	38.5	69.2	25.0
Kerala	0.0	0.0	63.6	58.8
Tamil Nadu	28.6	20.0	92.2	28.5
South Zone	**13.1**	**33.3**	**81.6**	**25.1**
All India	**14.8**	**46.2**	**81.0**	**23.7**

ROLE OF COMMUNITY BASED DISTRIBUTION IN PROMOTING SPACING METHODS OF FAMILY PLANNING

I C Tiwari

Current Status of the Programme

Rapid population growth is one of the most serious challenges facing India today. This has acted as a major impediment to the socio-economic development programmes which the country has undertaken since independence.

The year 1921 was a great water-shed in the demographic history of the country as from that year onwards, the population witnessed a steady increase. The period between 1911-21 witnessed a stable population with high mortality and high fertility levels. During 1921-51 the population grew at a slow but steady rate. The period after 1951 has witnessed a rapid increase in population growth, the average annual growth rate during the last four decades being of the order of more than two percent. Although the annual growth rate of the population has slowed down from 2.25% during 1971-81 to 2.11% during 1981-91, but it still adds to an annual population growth of 16.06 millions.

The nexus between socio-economic development and population dynamics was realized by India at the very beginning of planned development when the First Five Year Plan was launched in 1951. Realizing that the death rate would start falling on account of development programmes in general and health programmes in particular without a commensurate decline in the birth rate, at least in the initial decades, the country started the Family Planning programme with the objective of control line population growth. It thus became the first country in the world to adopt family planning as an official policy.

The family planning programme, which had a very modest beginning in 1951, has grown into a massive programme covering the entire country. The approach in the initial stages was the provision of clinic based contraceptive services to those couples who came forward to seek them. The programme gained momentum in the sixties when the extension approach replaced the clinic based approach. The major emphasis has remained on permanent methods of contraception, i.e. male and female sterilization. There were two main reasons for this thrust, (a) the contraceptive choices in the decades of fifties and early sixties were limited, IUD and oral contraceptives having arrived on the scene in late sixties only, and (b) the health infrastructure in the country, particularly in rural areas where the majority of the country's population lives, was not sufficiently developed to sustain the spacing methods of family planning service delivery, which need continuous motivation, follow-up and assured supply of contraceptives as against the one time effort needed for sterilization services. The programme has therefore, remained largely dependent on medical and para-medical personnel.

Table 1: Percentage Couples Effectively Protected by Different Methods of Contraception

Year	*Sterilization*	*IUD*	*Others*	*All methods*
1970-71	8.0	1.4	1.0	10.4
1974-75	12.6	1.0	1.2	14.8
1979-80	19.9	1.0	1.4	22.3
1984-85	24.9	2.9	4.4	32.1
1989-90	30.1	6.9	6.9	43.3

Considering the use-effectiveness of various methods of contraception, the number of couples effectively protected, as of March, 1990 was estimated to be 43.3 per cent of the total eligible couples. (Table 1) (Year book, 1991). Of the 43.3

per cent effective couple protection rate (CPR), 30.1 per cent are attributed to sterilizations, 6.3 per cent to IUD, 5.0 per cent to conventional contraceptives and 1.9 per cent to oral contraceptive pills. This heavy dependence of the programme on sterilizations has continued even though it has now been realized that a greater choice of contraceptives tends to increase the acceptance of family planning. It is, therefore, very important that other methods are emphasized if the goal of NRR = 1.0 (or CPR of 60 per cent) is to be achieved (National Health Policy, 1983). It has also been observed that the attainment of CPR targets has not resulted in a commensurate decline in the crude birth rate. One of the reasons given for this absence of correlation is the poor selection of cases for sterilizations. Table 2 shows that as many as 44.3 per cent of vasectomy cases and 36.8 per cent of tubectomy cases had four or more living children. Even in the case of IUD acceptors, 36.7 per cent of the women had three or more children.

Table 2: Number of Living Children to F.P. Acceptors

No. of living children	*Vasectomy Acceptors*	*Tubectomy Acceptors*	*IUD Acceptors*
0	0.0	0.0	1.5
1	0.9	1.1	27.2
2	18.9	24.4	34.6
3	35.9	37.7	22.5
4	28.2	24.8	10.3
5+	16.1	12.0	3.9
Total	100.0	100.0	100.0
Mean No. of living children	3.6	3.3	2.3

Three major issues in the programme performance are thus:-

1 The effective couple protection rate is still only 43.3 per cent and going by the past performance, the CPR of 60 may not be achieved by 2000 A.D.

2 Sterilization accounts for majority (about 70 per cent) of the couples protected, the share of IUD and other contraceptives is quite low, and

3 A large percentage of couples accepting family planning are of middle to high parity.

All these three aspects of the programme should receive full attention if the programme goals are to be achieved

Need for Alternative Approach

The couple protection rate cannot be substantially increased by retaining the emphasis on sterilization alone. Sterilization, being a terminal method, can be useful only for those couples who have completed their family size. Spacing methods of contraception should, therefore, receive due emphasis and in order to bring younger couples in to the programme. This does not mean that provision of sterilization needs be reduced. This method of contraception will still occupy a very important place in the future as well.

Spacing methods of contraception will also lower the average parity of family planning acceptors. Acceptance of family planning at younger ages has greater demographic effectiveness. If this approach is accepted the programme has to provide not only information and motivation for fertility control but also improve the delivery system to ensure the availability of contraceptives. The term "availability" is commonly used to mean that a variety of contraceptives are readily available at convenient locations at prices the population afford with full information about the advantages and

disadvantages of different methods. Anonymity of the user should also be assured wherever possible (Mauldin, 1981).

Community level distribution of contraceptives is one approach to make them 'available'. This approach has been tried in various countries and found to be effective in substantially improving contraceptive prevalence rate in a short time period. The two methods by which community availability of contraceptives may be raised are (a) social marketing approach and (b) community - based depots/volunteers.

Social Marketing of Contraceptives

The Contraceptive Social Marketing (CSM) programmes use commercial marketing techniques, mass media and existing commercial net-works to distribute, promote and sell contraceptives. The chief social marketing products in most countries where the programme has been implemented are condoms and oral contraceptives. These are sold of subsidized rates to those customers who have a little cash income and who prefer to buy contraceptives at a retail outlet rather than receiving them at clinic/hospitals which may not be easily accessible or are not preferred for a variety of reasons.

It has been observed that if the CSM programmes are well managed, well publicized and well adopted to local conditions, they can reach about 5-15 per cent of all couples of reproductive age (Population Report, 1985). The CSM programmes play supplementary and complementary roles to other family planning programmes. Social marketing is a useful and cost effective mechanism of increasing contraceptive availability and hence contraceptive prevalence rate. Its scope (discussed elsewhere in this publication) has not been fully exploited in India as yet. The use of condoms and oral contraceptives, the two products which are amenable to social marketing, is still quite low in the country. In percentage terms, together they account for an effective protection rate of 6.3 per cent out of 43.3 per cent couples effectively protected. Trend of sale of condom under social marketing in India is given in Table 3.

Table 3: Trend of Sale of Nirodh Under Social Marketing Programme

Year	*Million of pieces*	*Year*	*Million of pieces*
1977-78	109.7	1984-85	207.2
1978-79	106.9	1985-86	239.4
1979-80	77.8	1986-87	227.8
1980-81	129.5	1987-88	265.3
1981-82	166.1	1988-89	236.6
1982-83	162.7	1989-90	297.0
1983-84	198.3	1990-91	320.4

Community Based Distribution of Contraceptives

The community-based distribution (CBD) of contraceptives has been found to be an effective way of increasing contraceptive prevalence. Several countries have used this approach (John Hopkins Population Centre, 1981 and People, 1978). Unlike the social marketing programme, which utilizes the marketing network, the CBD system makes use of local volunteers and/or paid workers residing within the community itself for the purpose of making contraceptives available to eligible couples. CBD workers may work as depot holders alone or act as both depot holders and motivators. Since the system is dependent on lay workers volunteers, only a limited number of contraceptives viz. condoms and oral contraceptives, which do not require direct medical contact, can be distributed through the CBD system. In countries like India where oral contraceptive still are a scheduled drug, requiring prescription/dispensing by a qualified doctor/ pharmacist, it cannot be distributed through lay workers.

World experience shows that about one third of eligible couples can be reached by a good system of community-based distribution contraceptives. It has also been observed that the CBD system is more effective than the clinic-based system of contraceptive distribution because the number of clinics or dispensaries, etc., cannot be large enough to serve every part of a country. Social marketing also has a limited reach in far off rural areas where the distribution net-work of the commodities may be weak. Thus, a CBD System is of special significance for remote, inaccessible areas. A CBD System can be operated at a relatively low cost if it utilizes lay volunteers/workers who are based in the community itself, although an effective supervisory network are necessary to motivate them over a long period, replace those who discontinue, and supply them. Volunteers/workers easily accessible to the community, they also enjoy the confidence of the people.

Experience of Community Based Distribution Schemes

India had experimented with the community-based distribution of condoms through the Community Health Volunteer (lately designated as Village Health Guide) Scheme. This programme was launched in 1977 with the objective of providing primary health services to the community at the village level. Under the programme one worker/volunteer was selected in each village, or for a population of about 1000, and trained to provide advice/guidance on health matters and extend basic medical care for commonly occurring morbidities. The VHG was given a monthly stipend of Rs 50 (US $ 2) and medicines worth the same amount for carrying out the primary health care activities (Year book, 1991). One of the responsibilities of the VHG was to motivate the eligible couples for family planning. He was used as a depot holder for the condoms under the free distribution programme.

A total of 335,590 VHGs are covering about two-thirds of the villages in the country (Rural Health Statistics in India, 1991). Although the programme has run into difficulty due to a number of reasons, the Government proposes to train another

0.2 million VHG during the VIII Plan (1992-97). In the absence of reliable data it is not possible to assess the extent to which the contraceptive prevalence rate has been raised using VHGs as depot holders for the community-based condom distribution.

Experience with CBD in Varanasi

The only other experience of community-based distribution of contraceptives in India is provided by a study in Varanasi. The study was conducted by the Department of Preventive and Social Medicine, Institute of Medical Sciences, Banaras Hindu University with funding from the Family Planning Association of India. The study was initiated in 1989, and covered a total population of 1.2 million people in 1,242 villages.

The CBD programme in Varanasi aimed to (1) develop an education and distribution network of trained local volunteers to create the demand for and supply oral contraceptives and condoms, (2) promote other family planning methods such as IUD and sterilization, and (3) provide primary health care with special emphasis on services for mothers and children.

A village level volunteer called a Depot Holder was selected and trained in each village in family planning motivation and basics of contraceptive techniques. He was supported in carrying out project activities by project staff, one each for a group of about 20 villages. Although a variety of village level volunteers were trained as Depot Holders, about one third of them were practitioners of indigenous Ayurvedic and Homeopathic Medicine. The Depot Holders maintained stocks of oral contraceptives, condoms and pre-packed primary health care supplies e.g. oral rehydration salt, disposable delivery kits, etc. The clients educated through group educational methods and person to person health talks by the Depot Holders and the project staff obtained their contraceptives and primary health care supplies on payment to these Depot Holders. The cost of contraceptives was

subsidized by the project, but the price for primary health care items was charged on an actual basis.

The Impact of the Project

The overall contraceptive prevalence rate (including acceptors of Governmental family planning services) among the eligible couples increased from 7.5 per cent in 1979 to over 50.5 per cent by 1990. An evaluation done by an independent organization (Population Research Centre, Lucknow) found that the percentage of current (March, 1991) users of all methods of family planning (sterilization as well as spacing methods) was 57.1 per cent in the sampled project blocks as against 21.7 per cent in sampled non-project blocks of Varanasi district (Rastogi, 1991). It was further noted that proportion of users of spacing methods (IUD/Copper-T, condom and oral pills) at the time of the survey was 24.6 per cent in project areas as against only 5 per cent among non-project area. The analysis further showed that 60-77 per cent of current users of oral pills and condoms in the project areas were motivated for family planning by the Depot Holders or CBD Project staff, highlighting the effectiveness of motivational efforts of the volunteers/field staff. Most of the current users of condoms (83.3 per cent) and oral pills (82.6 per cent) in the project area received their supply of these contraceptives from the Depot Holders/field staff of the project (Rastogi, 1991).

Strengths and Challenges of Varanasi CBD Project Experience:

The most significant achievement of CBD programme in Varanasi was that despite difficulties in attaining sustained motivation and contraceptive use, it was able to establish an effective village-based system for the promotion and delivery of non-terminal methods of family planning. This was so despite the fact that the Government's programme, also running in the area, was largely geared to sterilization and even offered a cash incentive of Rs 150. The CBD programme was also able to overcome many of the logistical difficulties faced by the Government programme in maintaining a regular supply line for contraceptives to the periphery.

The CBD's experience has shown that low contraceptive use in rural, tradition-bound communities with low literacy rate and other social handicaps cannot be attributed entirely to the reluctance of couples to accept family planning; an equally important cause is the inability to establish an efficient distribution network at the field level to stimulate and service the latent demand. The project also showed that the CBD approach is cost-effective because it is mostly operated through local volunteers who were unpaid workers. Their motivation is derived from prestige and recognition which they received from the community.

The programme had its problems as well. The project found itself short of the effective educational materials; no provision was made to fund the project to produce such material. Thus, the benefits of mass communication, so essential in any social marketing programme, were not fully available. Dealing with the Government department for the regular and timely supply of contraceptives proved to be a cumbersome affair once the supplies from FPAI were discontinued. Socio-cultural barriers inhibiting women and persons from weaker sections of society (e.g. backward and schedule castes) from associating with a CBD programme as Depot Holders was one of the reasons that the project covered a lower percentage of couples from the weaker sections. Two weaknesses of the programme were (a) a fairly high proportion of couples who opted for contraception were of 3 or higher parity and (b) the drop out rate from the programme was high (around 10 per cent). This reflected the inadequacy of sustained motivation and continued use of contraceptives.

Future Perspectives

The international experience has shown that the community-level distribution of contraceptives - both through social marketing and through community based depot holders can be an effective mechanism for promoting the use of spacing methods of contraception. It has become increasingly apparent that India's long-term demographic goals, which

demand a CPR of 60 per cent and more by the year 2000 as against 43 per cent at present, cannot be met without a sustained increase in the use of spacing methods by younger couples.

An ever growing numbers of young Indians entering child bearing age in the 1990s will have imbibed some of the knowledge and concepts of family planning disseminated over the years through mass media, the community and their families. Initiating them into the practice of family planning will be an easier task than it was to motivate their parents. Establishing an effective contraceptive delivery system today could become the turning point for the family planning programme in India tomorrow. The community-based distribution of contraceptives, as the Indian experience shows, has to play an important role in this whole exercise of making contraceptives readily accessible and available.

Conclusion

CBD programmes have great potential in India. There is a need to expand these programmes. Their expansion is one approach to increasing the demand/distribution of spacing methods.

PRESENT STATUS AND FUTURE DIRECTIONS FOR INCREASING THE USE OF INFORMATION, EDUCATION AND COMMUNICATION FOR PROMOTING SPACING METHODS

Harish Khanna

Importance of Promotion of Spacing Methods in the Indian Context:

It is evident from the current state of the use of birth spacing methods, such as IUD and oral pill, that adequate demand still does not exist, and whatever is generated by means of some sporadic information activity is quickly dissipated or eroded by a number of negative factors, such as incomplete knowledge about the recommended contraceptive, misunderstanding about its real usefulness and anxiety about side effects. This sordid state of affairs very clearly brings forth the necessity of effective communication in spacing methods.

The Indian Family Planning programme has passed through several stages of development. The most relevant has been the shift from the clinical to extension approach. From the third Five Year Plan onwards communication has been accepted as a part and parcel of the family planning programme (Jagatdeb, 1987). However, communication strategies have not succeeded in achieving the central objectives of sustaining demand for contraception in various sections of society or eliminating resistance due to traditional prejudices or current group bias. In fact, senior leaders as well as experts have laid the blame for failure on poor and inept communications.

Seen in the larger perspective of the total impact on the people, one is struck by the fact that substantially increased mass media use has failed to transmute the general awareness

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and knowledge about the possibility of regulating pregnancies which was achieved fairly early in the sixties, into a firm acceptance, or actual and continuing use of contraceptives. Communication programmes have had little impact on contraceptive practice because of the disproportionate attention paid to macro objectives rather than micro objectives in the family planning programme. This was accompanied by a mechanistic use of communication media, more akin to one-dimensional propaganda, than education or motivation.

Over the years, a marked preference has been built for terminal methods. Sterilization seems to have emerged as the most widely accepted method of family planning in India as in many other parts of the world. However, the large-scale use of vasectomy and tubectomy, mostly the latter, has not had a sufficient impact on the birth rate. Sterilization of high parity couples has not curbed fertility (Srikantan 87).

Considering the annual rate of population growth (2.11 percent) which results in a net addition of 17 million to our population, neither the present rate of adoption nor the method mix holds out any hope that stabilization of the population will be achieved by 2000 AD. The situation could change for the better if non-terminal birth spacing methods were to gain wide acceptance, and the service delivery infrastructure performed better in the shape of reliable after-care services. Thus, the success of our population control strategy would largely depend on the vigorous promotion of spacing methods and a dynamic mobilization of socio-cultural factors, such as raising the age of marriage, improving literacy, raising the status of women etc.

In the present article, two important issues regarding the effective promotion of spacing methods are addressed. One relates to the identification of some important factors which inhibit the acceptance of the spacing methods and prohibit the continuation of their use once accepted. The other pertains to the strategies needed in the information, communication and education programme to reinvigorate the

promotion of spacing methods. The former is taken up first. After the discussion of the latter an attempt is made to outline future directions.

Factors Inhibiting Adoption of Spacing Methods

As a result of the misconception that family planning is synonymous with termination of child bearing, sterilization, a one-time intervention, is seen as the best method, because it is easy and effective.

This misconception and attitude has been greatly strengthened by the Government's undue stress on target-directed sterilization as a means of preventing unwanted pregnancies or as the government reports claim, "avoiding unwanted births". It is claimed that terminal methods are accepted after motivation,in fact it is a combination of material incentives and coercion which drive many couples to accept sterilization. So the target curve goes up but the fertility curve does not come down sufficiently.

Promotion of non-terminal methods require a more intelligent motivation, at the right ages and in positive family perspectives. An important factor depressing the use of non-terminal, spacing methods is lack of proper knowledge, as a result of which the acceptor is not able to objectively assess the advantages and disadvantages of a particular device or method; instead he/she is unduly alarmed at the first appearance of side effects, many of which are susceptible to control and moderation. The failure on the part of potential acceptor couples to accept a spacing method due to inadequate information and education has hardly been analyzed. If it were, surely failed communications will be found at the root of failed contraception.

There is also the question of strong regional variations in respect to the level of knowledge and understanding of available non- terminal methods. In the rural areas of Andhra Pradesh and Bihar, for instance, appropriate knowledge about IUD was found to be 19.3 and 44.2 per cent respectively. In

the urban areas, it was 24.5 and 43.4 per cent respectively (Khan et al; 1980). Urban based over-centralized and non-specific communications hardly raise ripples of genuine curiosity or acceptance of information in the rural areas.

A second important factor hindering the adoption of spacing methods is what Hasalkar (PRC Karnataka 89) calls psychological preparedness on the part of the acceptor-user in the context of reported side-effects, minor or major, such as disturbed menstrual cycle, intermittent bleeding, backache, and pain in uterus in the case of IUD, and dizzy spells, obesity, etc in the case of oral pill. Unfortunately, the service agency pays scant attention to these side effects. The attitude of most health personnel also lacks sufficient sympathy and understanding, which reflects their poor training. Almost 25 to 40 percent of users discard IUD in the first six months, and inadequate, poor quality follow-up is a main culprit.

A further factor responsible for the poor adoption and continuation of spacing methods is lack of sustained motivation, which a target-obsessed regime often ignores. Authority back-up before and after insertion fail to motivate or reassure the acceptor instead staff should discuss her problems and recommend more convenient and acceptable alternative methods (ICMR, 86). In fact, changes to truly informed choice could dramatically change the situation. Retention rates of IUD are better in the urban areas because the insertions are by trained staff and in more reassuring conditions than in the rural areas, where insertions are done by LHVs with little or no follow-up examination or amelioratory intervention.

Experience shows that the adoption of child spacing is associated with conscious decision to marry late, delay the first child, and avoid the second with the help of appropriate contraceptives for as long as necessary. Stable decisions are arrived at through a process of conscientious, weighing of gains and handicaps and a choice of conduct which promotes the individual's interest.

Proper family-life education before marriage and need-centred advice at the time of marriage help translate the intent to time and space births into well-thought-out decisions. Early familiarization with different types of contraceptives widens the choice and prepares the acceptor with greater ease to select the most suitable method.

A crucial point of the entry for counseling is the birth of first child. However, there is virtually no counseling during this crucial period. Mothers too tend to feel complacent during the period of breast feeding. Since the child at this stage is the focus of interest both for the father and the mother, concentrating on aspects of child care, which is also logically linked with mother's health, can help create a long-term motivation to delay the second pregnancy. Encouraging interspousal communication further helps consolidate spacing decisions.

Experts suggest that soon after marriage careful but friendly marriage counseling should assist in the choice of contraceptives. Ideally, besides the condom a woman might find barrier method less invasive with no side effects. The pill, on the other hand has side effects some of which might prove disconcerting to a young woman. After the first birth too, use of a diaphragm with spermicidal jelly may be more acceptable. Intra-uterine device may be accepted since there are no hormone-related complications for the child. After the birth of the second child, by which time the ideal family size of some couples will be obtained, a more determined use of contraception may be welcome. Even post-partum sterilization could relieve the young couple of all anxiety about unwanted pregnancies and undesirable growth of the family size provided the health and survival of the two children is beyond doubt. Evidently, this well-regulated regime presupposes efficient ante-natal and post-natal care buttressed by suitable communications and counselling service. Success of this composite strategy will largely depend on policies and programmes which encourage the postponement of marriage, especially of girls, the spacing of births by means of temporary methods, prolonged breast feeding and induced abortion as allowed by law. That alone can bring about a large scale

reduction of the high population growth rate. By causing a delay in the resumption of ovulation in the post-partum period, breast feeding postpones the next pregnancy and lengthens subsequent birth intervals (Bongaarts, 1988). It is pertinent to mention that hardly any attention is devoted to the question: when during breast feeding should a contraceptive care be provided? All such questions bring forth the utmost importance of IEC in the programme.

Information, Education and Communication: Successful spacing strategies have to rely upon well-conceived, imaginative, user-friendly and credible communications. But, what is the present situation? The IEC programme, by and large, carried out by the Mass Media Division of the Ministry of Health and Family Welfare relies upon radio and television, and the states carry out communication programmes with their ill equipped and poorly trained field extension officers. The Karnataka study describes the effectiveness of mass media communication as dismal. For, nearly 60-70 percent of the couples in the villages, friends, neighbours and relatives still constitute the prime source of information about various family planning methods (Hasalkar, 1989, Rajeshwari and Deshpande, 1987).

Before discussing new applications of IEC for promoting birth spacing in the Indian programme, it is necessary to quickly define the three distinct but inter-related constituents, namely, Information, Education and Communication. This has been admirably done in the UNFPA guidelines which are paraphrased below.

Information includes the generation and dissemination of general and technical information, facts and views to create awareness. Communication, on the other hand, is a planned dialogue process (also called two-way communication) aimed at motivating people to adopt new attitudes or behavior, or to utilize existing services. It is based on people's concerns, perceived needs, beliefs and current practices. It promotes feedback and increased understanding among various actors. It is thus an integral component of all service and outreach

activities. This form is most effective when it involves a strategic combination of mass media and inter-personal communication supported by print and other aids.

Education refers to the process of facilitating learning with a view of enabling people to make rational and informed decisions and to influence their behavior over the longer term.

Since birth spacing strategies cannot succeed in an environment of illiteracy which is vulnerable to all manner of exaggerated fears, rumors and misunderstandings, IEC is undoubtedly a crucial input into any programme. Introduction of spacing practices or devices must be preceded by proper information and education, carefully modulated to the level of comprehension of the recipient as well as to the ethno-social mores of the community. That would mean the choice of words and idiom which do not offend the susceptibility of the recipient nor leave him or her confused on account of incomprehensible technical jargon.

An educational approach requires not only patience but competence. D.Banerjee, in his usual incisive style, has ridiculed the naive enthusiasm of programme planners who "persuaded themselves that an ill-educated, ill-motivated, ill-suited and ill-trained extension educator from a city, by merely using skills of motivation will kindle a virtual social revolution in rural communities." And in the drive to keep mass education simple and widespread, the effort lost its educational component and became pure propaganda (Jagatdeb 87).

The most fatal flaw in our IEC effort is the tendency to gloss over negative factors, and an oversell of deemed advantage. Contraceptives cannot be offered as a witch-potion, wrapped in the smoke of mystery; it must be a straight forward offer to meet the specific need of the recipient. In fact, the user should, by selective education, be prepared to deal with minor problems with or without the help of the health worker. The latter often tends to make short shrift of user's complaints, a tendency which aggravates fears

and apprehensions, builds up annoyance at having been misled, and provides the starting point of adverse propaganda. Stories of user distress, transmitted by word of mouth, very often exaggerated or colored by individual perceptions, are found more credible than sanitized official explanations of the health workers, delivered with utmost nonchalance.

The success of spacing methods - condoms, pills, long acting injectable etc. also depends on sympathetic after-care as a result of which continuation is prolonged. This calls for a shift of emphasis from medical intervention to counselling intervention which rests on a sounder human dimension since it respects human dignity.

The main purpose of a well-orchestrated IEC strategy is to create intelligent demand by means of a steady flow of information supported by timely counsel. However, the long-term effectiveness of the IEC component of the programme would largely depend on assured availability of synchronous services and well targeted interpersonal communications to generate a sense of trust in the user. It would also depend on the IEC to intimately relate generalized information to specific needs of the individual and family within the realm of socio-cultural choices.

Whereas information is usually directed towards the community or groups to raise the level of knowledge, communication and counselling are meant for individuals. Communication is not just shooting off of information, which our electronic media are doing all the time, but securing understanding swiftly and precisely. This involves questions of skills and style as much as of innovation. It is good to remember that media fatigue engendered by endless repetition by visibly disinterested Government agents can kill even the best message. Our health communications are sadly in the grip of a kind of intellectual paralysis, because we are still saying the same thing about "*pehla bacha*', or "*mala pehane wali nahin, khane wali*" (beads not for wearing but for eating) etc. in the manner of commercial jingles. Messages which succeed

in establishing visual or cerebral identification, need to be reinforced by occasional variations.

A major weakness is the free standing character of population communications. These are not fully integrated into the programme, because when family planning campaigns are planned, programme planners unfortunately do not undertake a communication appraisal, which means proper definition of the social and cultural profile of the community, identification of specific perceptions or preferences of the population segment to be reached, understanding of the socio-economic environment and assessment of resources. The result: the broadcast, in the literal sense, of general messages in the shape of a one-way barrage with no possibility of interactive feedback. Since acceptor-groups are well-differentiated, so should be communications.

Future Directions: Needless to say, if more and more younger couples have to be motivated to use non-terminal and temporary methods, these must be vigorously promoted. Besides, greater stress must be laid on programmes which are intended to serve the child and generally prepare women for more purposeful roles in society. Results of the 1991 Census have once again illuminated some obscure areas. However, the SRS data are showing declines in the birthrates. Time is opportune to strike a new path. A synthesis of social activism, education and propagation of the desirability of delaying and spacing births and placing limits when the ideal family size is achieved, can be of immense importance. So what should the new approach to IEC for promoting spacing be?

A foremost goal should be to create conditions for child survival, because delaying the second birth is virtually impossible when the first born has not survived. The grim reality is that inspite of a reduction in some areas, infant mortality in a large number of areas in the country is still very high. Several of the proximate determinants of high IMR identified in a major Family Planning Study (Patil 89) can respond to well designed interventions which, besides medical support, would need dynamic IEC back-up.

A second important action is the introduction of reproductive health education for boys and girls right from adolescence. So far, in the case of Couple Protection Rate, all population communications have targeted the couples, ignoring the adolescent boys and girls. Premarital education can lay a sound basis for receiving proper counselling at the appropriate stage.

Thirdly, a vigorous spacing programme would also demand dependable and easily accessible ante-natal and post-natal services.

Fourthly, although some progress has been made in providing a scientific training to health cadres involved in MCH and Family Planning, still a stupendous number serving in far-flung areas have but a superficial knowledge and virtually no supervisory guidance. Since their services play a critical role in continuation of the use of the chosen contraceptive, the inability of health cadres to quickly determine the cause of dissatisfaction or reasons for discontinuance easily leads to rejection of contraception and the user adopting " a risk or a chance" approach.

Finally, communication needs ought to be determined fairly early, and written into the programme as a vital input, and not enumerated as a post-launch add-on. No worthwhile IEC component can be developed midway. To ensure that this is done, programme planners and managers must be trained in support communications.

But, most of all, it must be reiterated that the notion that Family Planning is only meant to stop child bearing and not raise a family by choosing the time to marry and space births, still persists in popular mythology created by perverse communication. This unfortunate notion has created an in-built resistance to the concept of birth by choice. This image must change before any birth spacing discipline is accepted, not as an imposition; but, as a cheerful choice.

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