

Unfolding Contraceptive Technology: Where Indian Population Stands Today?

Kalyan B. Saha, D.C. Jain and Uma C. Saha*

*Regional Medical Research Centre for Tribals (Indian Council for Medical Research),
Nagpur Road, Garha, Jabalpur 482 003, Madhya Pradesh, India
E-mail: kalyansaha_icmr@yahoo.com Fax: +91-761-2370935*

**Xavier Institute of Development, Action & Studies, 4th Mile No. 8 Mandla Road, Tilhari,
Goraiyaghat, Jabalpur 482 021, Madhya Pradesh, India*

KEYWORDS Contraceptive Technology. NFHS-2. Knowledge and Use of Spacing Methods. HRP Studies

ABSTRACT The spurt in contraceptive technology particularly in spacing methods has opened up a wide variety of contraceptive choice for the potential user all over the world. India inspite of having national programs for family planning for long could not make proper use of the same. Sterilization still today remains the mainstay of the program. The current use of spacing methods in India is 7%. People still today are unaware of the importance of use and effectiveness of the spacing methods. Add to this the family planning delivery system is also not completely successful in reaching the methods to the target population and failed to achieve its goal to provide planned family to the nation. Under this situation the Indian population is far away and could not make use of the spurt in the contraceptive technology. Rigorous IEC on family planning, promoting spacing methods (introducing the use effectiveness of the new methods) and consolidating the national programme on family welfare and strengthening the outreach services can bring better results.

INTRODUCTION

Contraceptive technology has undergone a tremendous revolution with the expansion of method choice for millions of male and female through out the globe. Continuous studies are conducted on the safety and effectiveness of the modern contraceptives. The resulting evidence is used to generate norms and guidelines for use by countries in developing high quality contraceptives. Contraception for both male and female can broadly be classified into two types-terminal methods and spacing methods. Terminal methods under family planning service include vasectomy for male and tubectomy for female and both the methods aim at complete sterilization of the either gender. However, as on today very little is left for it's expansion. But there is a tremendous spurt in spacing method technology and are discussed hereunder. Since the appearance of the first intrauterine device (IUD) in the 1960s, research has led to various advances in materials and forms, with the result that modern IUDs combine high effectiveness and with a long duration of action. More than 147 million women currently use an IUD making it the second most popular contraceptive method in the world after sterilization (WHO, 2004). Modern IUDs are of basically two types: copper-bearing device and

hormone releasing devices. TCU-380A IUD and Multiload (ML) 375 copper-releasing devices were started in the early 1990s and both the devices proved highly effective in preventing pregnancy and had similar continuation rates. On the other hand levonorgestrel releasing IUD, a hormone-releasing device compared to earlier IUDs has a significantly lower pregnancy rate, but has a higher rate of removal, mainly because of menstrual disturbances.

Synthetic hormonal contraceptives first became available in the mid-twentieth century with the development of the oral contraceptive pill containing a progestogen and an estrogen. The pill is used today by some 76 million women, making it the third most popular means of contraception (WHO, 2004). It is highly effective but shows some problem among some women because of its regular consumption. As a result, other forms of contraceptive hormone have been developed such as implants and injectibles products for female.

Another type of contraception called emergency or post-coital contraception has been available for over 30 years. The efficacy and acceptability of levonorgestrel and also mifepristone as emergency contraception is proved.

Researches are going on to improve the

quality of these contraceptives. In addition, new contraception such as hormonal contraception for male combined vaginal ring and an immunocontraceptive for women are in different phases of clinical trial and development. Hormonal contraceptives on male are based on testosterone derivatives and expected to be safe, convenient and effective as those available for women. Combined vaginal ring for women is a silastic ring impregnated with hormones, which are absorbed through the vaginal wall and that do not need daily interventions and under the user's control in terms of insertion and expulsion. Immunocontraception a totally new method based on the concept of production of an immune response to specific molecules. The research and development work on the same are under progress. The quality of condoms has also improved considerably and beside male condoms, female condoms or diaphragm are also now available in the market. Spermicides are also easily available today. So today contraception does not only relates to only one gender, but options are available for both with variations in method choice.

The contraceptive methods developed over the past 50 years have found wide acceptance in many parts of the world, so that today it is estimated that over 635 million couples regularly use some form of contraception (WHO, 2004). Each of these methods has specific drawbacks whether in terms of convenience of use, reliability or side effects. Nevertheless, the availability of improved or totally new methods has a significant impact on public health by meeting the needs of millions. India being the second populous country, which adds huge increment in its annual population. In the effort to arrest the booming population, the National Family Welfare Programme in India sought to promote responsible and planned parenthood through voluntary and free choice of family planning methods best suited to individual acceptor (MOHFW, 1998a). In April 1996, the programme was renamed the Reproductive and Child Health Programme. With regard to family planning, the new approach emphasized the target free promotion of contraception use among eligible couples, the provision to couples of a choice of contraceptive method (including oral pill, IUD, condom and sterilization for male and female), and the assurance of high quality care. An important component of the programme is the

encouragement of spacing methods (MOHFW, n.d.). However, these methods are recommended for last five decades, the latest development in contraception did not find any place in the programme. Further the National population policy, 2000, adopted by Government of India has addressed unmet need for contraception in order to achieve the total fertility rate down to replacement level (2.1) by the year 2010 (MOHFW, 2000). However, in reality the family welfare programme particularly remains underutilized and there is an urgent need to promote use of spacing methods. In the present study an attempt is made to look into the level of knowledge and pattern of contraception use in India and suggest few points for developing broader strategy for improving the use of spacing methods introducing new technology.

METHODS AND MATERIAL

The country data from National Family Health Survey-1998-99 (NFHS-2) was analyzed to understand the knowledge and use of contraception in India with special reference to spacing methods. For this purpose response of 83649 currently married females in India in the age group 15-49 was explored.

ANALYSIS AND DISCUSSION

The analysis of the data reveals that the extent of knowledge of contraception method among currently married women in the age group 15-49, is nearly universal in India, with 99% of currently married women recognizing at least one method of contraception. Female sterilization is the most widely known method of contraception in India, followed by male sterilization. Overall, 98% of currently married women know about female sterilization and 89% know about male sterilization. Knowledge of the officially sponsored spacing methods (pills, IUD, and condom) is much less widespread. The best known spacing method is the pill, which is known by 80% of currently married women, followed by the condom and IUD (71% each). There are large differences in knowledge of spacing methods by residence. Seventy-five percent of rural women know about oral pills compared with 92% of urban women. For IUDs and condoms, the corresponding proportions are 65% and 88%. Although nearly all currently married women

know at least one method of contraception, only 55% have ever used a method, 49% of women have ever used a modern method, and 12% have ever used a traditional method. The most commonly used method is female sterilization, which has been adopted by 34% of currently married women, compared with 2% who have adopted male sterilization. Six to 8% have ever used each modern spacing methods (pills, condom or IUD). When the current contraceptive prevalence rate of NFHS-2 is compared with Rapid Household Survey on reproductive and Child Health (1998-99), a almost similar result is obtained. Further NFHS-2 data shows that ever use of any modern method increases with women's age up to age 35-39 (peaking at 67%) and declines at older ages. The increase in contraception, use with age up to 35-39 reflects a life cycle effect, with women increasingly adopting contraception, as their fertility goals are not met. Declining ever use of modern methods by older women reflects, at least in part, larger family size norms and lower levels of contraceptive prevalence in the past. Further 48% of currently married women were currently using some method of contraception at the time of the survey. This level compares with 83% for China and 62% for Asia as a whole (PRB, 2000). The data also reveals that female sterilization and male sterilization together accounts for 75% of current contraceptive prevalence. No other individual method of family planning is used by more than 4% of currently married women. Less than 7% of currently married women are currently using any of the three officially sponsored spacing methods. The current contraceptive use among currently married women generally increases with education, from 43% among illiterate women to 57% among women with at least a high school educated. In the case of spacing methods, use also tends to increase with education. Modern spacing methods accounts for 6% of contraception use by illiterate women and 35% of contraception use by women with at least a high school education. On the other hand, use of female sterilization declines sharply with education among literate women. The current use of any method of family planning among states varies widely from 20% in Meghalaya to 68% in Himachal Pradesh. Among the major states, Bihar and Uttar Pradesh have the lowest level of current use (25% and 28%, respectively), followed by Rajasthan (40%), Assam (43%), and Madhya Pradesh (44%). Low

rates in these states have important implications for future population growth in India because these states together accounts for more than 40% of India's population. Further early use of contraception in India is rare, 39% of ever married women (73% of ever users) began when they had three or fewer living children. This clearly shows that spacing methods need to be promoted if reduction are sought in the parity at which women first accept contraception. A large majority (65%) of women who intend to use contraception say they intend to use female sterilization. The next most preferred method is the pill (16%). Less than 1% of the women prefer that their husbands get sterilized and 3% each prefer to use the condom or IUD. The currently married women who were not using any method and did not intend to use a method at any time in future, referred to fertility related reason (54%), method related reason (22%) and lack of proper knowledge (18%) for not intending to use contraception in future. The unmet need (according to NFHS-2 i.e., women are not using any method and who do not want any more children or want to wait two or more years before having another children for spacing method is 8.3%, which is almost similar to terminal methods (7.5%). However, the total demand (i.e., sum of unmet need and met need) is quite lower for spacing method (11.8%) compared to terminal methods (52.2%). So it is evident that contraception is grossly underutilized in India and the terminal methods continue to remain the mainstay of the family planning programme. The user of spacing methods is only 7%. The main reason attributed to the lesser use of spacing method are illiteracy, desire for higher number of children, no proper knowledge of the methods and add to that the existing quality of family planning delivery system. Under the situation how Indian population can make use of the benefits of expanding spacing methods as mentioned earlier?

NEED OF THE HOUR

There is an urgent need to generate a demand for family planning among the masses with special emphasis on existing spacing methods in the Family Welfare Programme. Further commercialization of the new contraceptive technology by intensifying the mass media even at remote areas, dissemination of information of such technologies by frequently organizing work-shops,

conferences and even for public knowledge through health camps will widen people's choice for contraception. Further training the rural health workers on new contraceptives and using them as instrument for IEC will strengthen the effort towards informing and delivering contraceptive technology to the masses.

It is worth mentioning UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction, Population Council, Rockefeller foundation, John Hopkins, and many other leading the pivotal research work, clinical trials and expansion of existing and new contraceptive technology. But these developments are still far to make a dent in Indian population. It poses a serious concern and a challenge not only for the national planners but also to the contraceptive technologists and demographers to work out effective strategies to reach these research benefits to the people for a safer and planned population tomorrow. A concerted effort on the part of the service providers to reach contraceptive technologies at easy reach of the people balancing the cost effectiveness of the same and a sincere participation of the people in the process can bring about a success.

ACKNOWLEDGEMENT

The authors sincerely acknowledge with thanks International Institute for Population

Sciences, Mumbai, for allowing using NFHS-2 data set. Authors also place on record and thank Mr. K.D. Saha, Ex. Dy. Director (East Zone), All India Radio, Kolkata, who helped to enrich the manuscript. Special mention may be made of Prof. A.P. Dash, Director, Regional Medical Research Centre for Tribals (ICMR), for his continuous support, encouragement and provided the facility.

REFERENCES

- Ministry of Health and Family Welfare (MOHFW): *Family Welfare Programme in India, Year Book, 1996-1997*. Department of Family Welfare, MOHFW, New Delhi (1998).
- Ministry of Health and Family Welfare (MOHFW): *Reproductive and Child Health Programme*. Department of Family Welfare, MOHFW, New Delhi (n.d.).
- Ministry of Health and Family Welfare (MOHFW): *National Population Policy, 2000*. Department of Family Welfare, MOHFW, New Delhi (2000).
- Population Reference Bureau (PRB): *2000 World Population Data Sheet, Demographic Data and Estimates for the Countries and the Regions of the World*, Washington, D.C. (2000).
- NFHS: 1998-99, *National Family Health Survey-2 (India)*. International Institute for Population Sciences and ORC Macro, India (2000).
- RHS-RCH: 1998-99, *Rapid Household Survey on Reproductive and Child Health Project (India)*, Pphase-I&II, Ministry of Health and Family Welfare, International Institute for Population Sciences, Mumbai, India (2001).
- WHO: *Research on Reproductive Health at WHO- Pushing the Frontier of Knowledge*. Biennial Report 2002-2003. WHO, Geneva (2004).