DOI: 10.7860/JCDR/2015/16152.6714

Review Article

Community Medicine Section

Family Planning Practices, Programmes and Policies in India Including Implants and Injectables with a Special Focus on Jharkhand, India: A Brief Review

JANMEJAYA SAMAL[1], RANJIT KUMAR DEHURY[2]

ABSTRACT

The National Family Health Survey (NFHS)-3 clearly delineates that the usage of contraceptive practices has increased considerably but is more inclined toward terminal methods of contraception especially the female sterilization. The fact is also evident from various studies carried out from time to time in different Indian states. Given the context we carried out a short review to understand the family planning practices, programs and policies in India including implants and injectable contraceptives with a special focus on the state of Jharkhand. We found that among the reversible methods IUCD (intra uterine contraceptive devices), OC (oral contraceptive) pills and condoms are the most commonly used methods. In this review, in addition to national picture, we specially focused on the state of Jharkhand owing to its very gloomy picture of family planning practices as per NFHS -3 reports. The current usage of any methods of contraception in Jharkhand is only 35.7% out of which terminal methods especially female sterilization accounts to 23.4% and male sterilization being only 0.4%. Similar picture is also reflected in the conventional methods such as; IUCD-0.6%, oral pill -3.8% and condom-2.7%. Compared to the national figure the unmet need for family planning in Jharkhand is also relatively high for the conventional reversible methods than that of terminal methods which is 11.9 and 11.3 respectively. Injectable contraceptives are available only through private or social marketing channels, because of which their use is limited. The studies carried out in different Indian states show improvement in contraceptive prevalence but the same needs further improvement.

Keywords: Contraceptive, Female sterilization, Prevalence, Reversible methods

INTRODUCTION

Effective family planning services play a pivotal role in controlling population growth and reproductive health care. The NFHS-3 figures clearly delineate that the usage of contraceptive practices has increased considerably but is more inclined toward terminal methods of contraception especially the female sterilization which is 37.3% where the male sterilization being only 1%. On the contrary the usages of conventional reversible methods are not encouraging which accounts to 1.7% for IUCD, 3.1% for oral pills and 5.2% for condoms [1]. However the unmet needs for family planning is relatively more for the reversible methods which accounts to 6.6% compared to 6.2% for the terminal methods [1]. Again the usages of other modern and advanced contraceptive techniques are not very much prevalent in India which includes injectables and contraceptive implants [2].

The status of contraceptive prevalence in India: Studies regarding contraceptive practices among different Indian states revealed that the contraceptive usage has increased and more and more people are getting covered under contraceptive usage [3-8]. A study in urban slums of Lucknow city with a sample size of 540 from July 2009 to July 2011 revealed that the acceptance of family planning methods, both temporary and permanent, increased with the level of literacy of women. About 53.40% adopted IUCD, 38.83% OC pills & only 7.77% of their partners used condoms. About 66.6% have undergone laparoscopic & 33.4% mini-lap sterilization. Vasectomy was not done for even a single partner. More number of illiterate and primary educated couples accepted permanent method after 3 or more children than higher educated couples who accepted it after 1 or 2 children. Among acceptors of permanent methods, total 70.27% were experiencing side effects and among temporary method users, it accounted 23.30% [3]. Nevertheless the inclination toward terminal methods is more compared to the conventional reversible methods. The study also revealed that 1.1% of the respondents knows about injectable contraceptives [3].

A similar study among women attending an urban health center in Punjab from January 2011 to December 2011 with a sample size of 260 revealed that contraceptive prevalence was 53.84%. It measured the contraceptive prevalence of permanent methods such as Tubectomy and Vasectomy which accounted for 4.23% and 1% respectively. Similarly the prevalence of reversible methods of contraception was 41.6% for condoms, 28.4% for OCPs and 8.0% for IUDs. Among different religions, Hindus and Sikhs have shown almost same level of acceptance of family planning with 54.96% and 56.52% respectively [4]. The study showed that the existing difference in socio-economic status acts as a major factor for determining acceptance of family planning services among the low socio-economic groups. Vasectomy method was also prevalent among the male population.

Another glaring picture was divulged from a study conducted in a maternity home in Bangalore regarding family planning practices among women before adopting sterilization method. This cross sectional study that was carried out among 399 tubectomy acceptors between November 2004 to November 2005 revealed that majority 295 (73.9%) of the study subjects had not practiced any method of contraception before they underwent sterilization [5]. The study revealed a gloomy picture of contraceptive usage in Bengaluru which was carried out in a corporation hospital, Bengaluru, India.

A Knowledge, Attitude and Practice (KAP) study carried out in All India Institute of Medical Sciences (AIIMS), out patients department, Raipur regarding emergency contraceptive (EC) pills revealed that 56% of women had heard of EC pills but only 19.3% had ever used it. There was high level of misinformation and poor knowledge about the EC pills. This is so owing to limited and unreliable information disseminated by the electronic media which is the main source of information [6].

In another KAP study conducted among 200 married women in obstetrics & gynaecology outpatient department (OPD), North

Eastern Indira Gandhi Regional Institute of Health & Medical Sciences, Shillong, Meghalaya revealed that 174 (87%) women had knowledge about contraceptive methods. The main source of knowledge was health workers followed by media and social networks that accounted for 58.6%, 24.1% and 15.5% respectively. Despite a high level of knowledge majority of male (55.5%) and female (51.5%) showed negative attitude toward the acceptance of contraceptive methods. It was further observed that 76 (38%) of women were using any of the contraceptive methods; such as condom (38.2%) followed by oral contraceptive pills (27.6%), intra uterine contraceptive device (15.8%), etc [7].

A study on contraceptive practices and awareness among Muslim women regarding the use of emergency contraception in Raichur, Karnataka showed that 63 (77%) were literate among the total sample of 82 ever married women. The family size of 50 (61.0%) women was less than or equal to 5. Early marriage was observed in the area which is below the legal age at marriage in India. This incident accounts for 44 (53.7%) marriages at the age of 16-19 years and 8 (9.8%) marriages between 12-15 years of age. The maximum number of child births was 3-4. Families having male child preference went up to 5-6 issues. A major chunk of women, 34 (41.5%) had one year of birth interval and around 20% of women virtually had no birth interval. 32 (39.0%) women didn't adopt any contraception till they completed family. Birth spacing practice was poor in the area that accounts for 34 (41.5%) births at an interval of one year. Further, 19.5% births did not have birth interval at all. Almost 71 (85%) women had sound knowledge of contraceptive methods. The doctor of that locality played pivotal role in disseminating the information to almost 35% of women. However the concern is more on the lack of knowledge about Emergency Contraception which is confined to only 13% of the women [8].

The State of Jharkhand: Jharkhand is predominantly a rural state with 76.5% of its population of 30.5 million living in villages, and over one quarter (28%) of its population is tribal. Infrastructure is not well developed, and only 45% of villages have electricity. Compared to the national statistics the figures delineated in NFHS-3 for the state of Jharkhand seems little gloomy. The current usage of any methods of contraception in the state is only 35.7% out of which terminal methods especially female sterilization accounts to 23.4% and male sterilization being only 0.4%. Similar picture is also reflected in conventional methods such as; IUCD-0.6%, oral pill-3.8% and condom-2.7% [9]. Compared to the national figure the unmet need for family planning in Jharkhand is also relatively high for the conventional reversible methods than that of terminal methods which is 11.9 and 11.3 respectively [9]. Again the percentage of married women with two children wanting no more children in Jharkhand is 65.8% (excluding pregnant women) [9] who would otherwise be requiring either of the methods of contraception.

In addition a study on EAG (Empowered Action Group) states revealed that the unmet need among ST women is highest (43%) in Jharkhand. The same study also depicted that in Jharkhand among several reasons, opposition by husband and lack of knowledge were reported as the most prevalent reason for not using contraception [10]. Provision of medical termination of pregnancy in the state is not adequate. This is evident from a recent study showing poor access and utilization of government services. Rampant practice of MTP by informal providers, local dais and ANMs is reported. Lack of confidentiality and poor quality of care is also documented. Legal awareness regarding MTP is also lacking. In one rapid assessment poll of 22,476 individuals less than a quarter of them had awareness regarding MTP [11]. As per the study private gynaecological clinics in Jharkhand have also started to use MTP, but use was conservative and inaccurate information on doses and protocols was common. Although pharmacies were the most common source of drugs, only 35% of large outlets stocked Mifepristone and Misoprostol [11].

Another study regarding the adoption and continuation of contraception following medical or surgical abortion in Bihar and Jharkhand showed that the rates of adoption and continuation of contraception were similar in both of these groups, although with some notable distinctions in the timing of adoption of contraception and the method of contraception adopted. Adoption of contraception in the month following medical abortion by the women was relatively less (58% vs 86%), however this difference had narrowed considerably by the end of the second month (82% vs 91%); and by the end of sixth month (89% vs 94%), respectively. No significant differences between the medical abortion and the manual vacuum aspiration groups were observed with respect to the continuation of reversible contraception [12].

Family planning programs and policies: India being the first country to introduce a nationwide family planning programme in 1952 still struggles to create an impressive impact in the realm of family planning [13]. The contraceptive usage of any method in India by 2030 is estimated to be only 64.6% by WHO (World Health Organization) (median estimate). Family planning services can help in controlling population growth which is mainly due to following three reasons. The first one is being the unmet need of family planning which is always higher for reversible methods both at the national level and at the state level of Jharkhand [14]. The second cause is the age at marriage and first child birth [14]. In India 22.1% of the girls get married below the age of 18 years. Similarly out of the total deliveries 5.6% are among teenagers i.e. 15-19 years and is worse in Jharkhand which accounts to 36%. Delaying the age at marriage and first child birth could reduce the impact of population growth [14]. The third being the spacing between births which improves the chances of survival of infants and also helps in reducing the impact of population momentum on population growth if a minimum of 3 years of spacing is maintained. NFHS-3 data shows that in India spacing between two childbirths is less than the recommended period of 3 years in 61% of births [1]. Looking at these it is imperative that the family planning services need to be strengthened.

As a part of national program, following eight methods of contraception are in use with their service provider and centers where the services can be availed [Table/Fig-1].

Injectables and Implant contraceptives: Apart from these the newer techniques such as injectables and contraceptive implants pose greatest potential of providing contraceptive coverage owing to several of their advantages. The injections of long acting hormonal contraceptives at interval of 1, 2 and 3 months and hormonal

Methods of contraception	Service provider	Service location
Spacing methods		
IUCD 380 A and Cu IUCD 375	Trained & certified ANMs, LHVs, SNs and doctors	SC and Higher level
Oral Contraceptive Pills	Trained ASHAs, ANMs, LHVs, SNs and doctors	Village level Sub centre & higher levels
Condoms	Trained ASHAs, ANMs, LHVs, SNs and doctors	Village level Sub centre & higher levels
Limiting methods		
Minilap	Trained & certified MBBS doctors & Specialist Doctors	PHC & higher levels
Laparoscopic Sterilization	Trained & certified Specialist Doctors (O&G Sp. & General Surgeons)	Usually CHC & higher levels
NSV: No Scalpel Vasectomy	Trained & certified MBBS doctors & Specialist Doctors	PHC & higher levels
Emergency contraceptive pills		
Emergency Contraceptive Pills (ECPs)	Trained ASHAs, ANMs, LHVs, SNs and doctors	Village level Sub centre & higher levels

[Table/Fig-1]: Methods of contraception used in India under public system
*Source, National Rural Health Mission, MOHFW, Govt. of India, New Delhi, India

implants of 3-5 years of interval provide highly effective protection [15]. Studies reveal that Indonesia and Thailand show highest usage of injectables which accounts to 15% and 12% respectively [16]. Most clinical trials report less than 1 pregnancy per 100 women in first year of use. DMPA (Depot Medroxyprogesterone Acetate) with a dosage of 150mg every three months is the most widely used regimen. A 200 mg of NETEN (Norethisterone Enanthate) every two months is accepted by IPPF (International Planned Parenthood Foundation) and WHO [17]. Cyclofem and Mesigyna (combined hormonal contraceptives) can also be used every month [18]. The implant contraceptives also provide up to 99% of protection [19].

More than 80% of the women were using implants on a long term basis as per a recent Cochrane review and the usage extended till the end of two years [20]. Continuation rate of implants ranged between 78%-96% at one year and 56%-86% at three years as reported by multi country clinical trials and observational studies. There are several advantages to the use of implants and the most important disadvantage is unpredictable and irregular bleeding which may be a nuisance. This may create problem in terms of acceptance as studies reveal that women (ranging from 53% in United Kingdom and 91% in India) do not wish to use any method that causes bleeding problem and amenorrhea [21]. Few studies have been carried out on women using injection or implant contraceptives. In one study in three different clinics in USA (United States of America), 74% of young women said that they would stop using a contraceptive method if it causes irregular bleeding and 66% said they would stop if it causes amenorrhea [22]. One of the studies in Thailand reported that amenorrhea was considered in wicked light and is treated as unhealthy and perceived to have adverse effect on women's appearance in public. Two-rod levonorgestrel releasing hormone is listed in WHO model list of essential medicines published in March 2007 for creation of greater awareness at government level. This is important from the perspective of program implementation and policy analysis [15].

Injectable contraceptives, especially DMPA and NET-EN, have been approved by Drug Controller General of India for retail sale in India. Among the two DMPA is commonly used in India. Ironically injectable contraceptives are not provided in the basket of contraceptive methods under the Reproductive and Child Health program which is largely because of the fear of their appropriateness among Indian women [23]. For the time being the injectable contraceptives are marketed through private or social marketing channels which extensively undermine their usefulness. As per the studies conducted in Bihar, Delhi, Jharkhand, Madhya Pradesh and Maharashtra, as reported by the Population council of India, there is a demand for injectable contraceptives [2]. The studies have also reported the determinants of usage of injectable contraceptives such as factors for women seeking contraception, reasons for discontinuation and switching to other methods. The studies unearthed the prevalence of widespread side effects and improper counseling for most of the users. In addition women and the providers were divided about the acceptability of injectable contraceptives [2].

Contraceptive acceptance and usage at individual and community level depends on the following important factors:

- The intrinsic nature of contraceptives;
- Acceptability at individual and community level;
- Knowledge, attitude, skills and credibility of the provider;
- Effective communication;
- Appropriate delivery mechanism;
- Cost of the contraceptives [24].

CONCLUSION

Strengthening family planning services has always been a major thrust area by the MOHFW (Ministry of Health and Family Welfare), Government of India and the respective states as well. Various studies carried out in different states show improvement in contraceptive prevalence but the same needs further improvement. In most of the states the inclination toward terminal methods are more compared to conventional reversible methods. However, the unmet needs of family planning are more for the conventional reversible methods than that of terminal methods of contraception. Jharkhand, one of the EAG states under NRHM (National Rural Health Mission) shows a gloomy picture in contraceptive usage and offers scope for further improvement. Health workers need further training and orientation on counseling and health education and promotional activities which would otherwise increase awareness in the community. Furthermore implants and injectable contraceptives pose potential for implementation owing to several of the advantages. Similarly the problems of bleeding disturbances can be pursued and educated to the beneficiaries.

REFERENCES

[1] National Family Health Survey. International Institute of Population Sciences, Mumbai, India. http://www.rchiips.org/nfhs/pdf/India.pdf (Accessed on 15/07/2015).

[2] Jejjebhoy SJ, AJ Francis Zavier. Injectable contraceptives: perspectives and experiences of women and health care providers in India. New Delhi. *Population Council*. 2012.

[3] Kumar A, Bhardwaj P, Srivastava JP, Gupta P, et al. A study on family planning practices and methods among women of urban slums of Lucknow city. *Indian Journal of Community Health*. 2011;23(2):75-77.

[4] Balgir RS, et al. Contraceptive practices adopted by women attending an urban health center in Punjab, India. *Int J Res Dev Health*. 2013;1(3):115-19.

[5] Srividya V, Kumar J. Family planning practices prior to the acceptance of family planning: A study among women attending a maternity home in Bangalore. *Journal of clinical and diagnostic research*. 2013;7(8):1640-43.

[6] Singh V, Thakur P, Nayak PK, Agrawal S. Knowledge attitude and practice (KAP) of emergency contraceptive pills among women of reproductive age group attending AIIMS OPD Raipur (C.G.). *Int J Adv Med*. 2014;1:105-12.

[7] Pegu B, Gaur BPS, Sharma N, Singh AS. Knowledge, attitude and practices of contraception among married women. *Int J Reprod Contracept Obstet Gynaecol*. 2014;3(2):385-88. doi:10.5455/2320-1770.ijrcog20140620

[8] Ade AD, Patil R. Contraceptive practices and awareness of emergency contraception among Muslim women of urban slum of Raichur, Karnataka. *Int J Reprod Contracept Obstet Gynaecol.* 2014;3:70-74.

[9] National Family Health Survey. International Institute of Population Sciences, Mumbai, India. http://www.rchiips.org/nfhs/pdf/Jharkhand.pdf (Accessed on 10/07/2015)

[10] Sengupta R, Das A. Contraceptive practices and unmet need among young currently married rural women in empowered action group (EAG) states of India. *The Journal of Family Welfare*. 2012;58(1):1-14.

[11] Baneerji SK, et el. Evaluation of a multi-pronged intervention to improve access to safe abortion care in two districts in Jharkhand. *BMC Health Services Research*. 2014;14:227.

[12] Kalyanwala S, Acharya S, Zavier AJF. Adoption and continuation of contraception following medical and surgical abortion in Bihar and Jharkhand, India. *International Journal of Gynaecology and Obstetrics*. 2012;118:S47–51.

[13] Chaurasia AR. Contraceptive Use in India: A Data Mining Approach. *International Journal of Population Research*. 2014;2014:821436. 11 pages. doi:10.1155/2014/821436

[14] National Rural Health Mission, MOHFW, Govt. of India, New Delhi. http://nrhm.gov.in/nrhm-components/rmnch-a/family-planning/background.html (Accessed on 05/07/2015)

[15] Roy S, et al. New developments in hormonal injectables and implant contraceptives for women: Program induction guidelines. *Health and Population-Perspectives and Issues*. 2008;31(1):1-30.

[16] Hall PE, WHO Task Force on Research on Introduction and Transfer of Technologies for Fertility Regulation. The Introduction of Cyclofem into National Family Planning Programmes. Experience from Studies in Indonesia, Jamaica, Mexico, Thailand and Tunisia. *Contraception*. 1994;49(5):489-507.

[17] ICMR Task Force on Hormonal Contraception. Comparative Evaluation of Contraceptive Efficacy of Norethisterone Enanthate (200mg) Injectable Contraceptive Given Every Two or Three Months. *Contraception.* 1984; 30(6): 561-74.

[18] Sang GW, Shao QX, Ge RS, et al. A Multicentred Phase III Comparative Clinical Trial of Mesigyna, Cyclofem and Injectable No.1 Given Monthly by Intramuscular Injections to Chinese Women: Contraceptive Efficacy and Side Effects. *Contraception*. 1995;51(3): 167-83.

[19] Upadhyay UD, Ramchandran D. Implants: Tools for Providers. INFO Reports No. 15, Baltimore Johns Hopkins Bloomberg School of Public Health. 2007.

[20] Power J, French R, Cowan F. Subdermal Implantable Contraceptives versus Other Forms of Reversible Contraceptives or other Implants as Effective Methods of Preventing Pregnancy. *Cochrane Database of Systematic Review*. 2007;3:CD 001326.

[21] Koetsawang S. Once a Month Injectable Contraceptives: Efficacy and Reasons for Discontinuation. *Contraception*. 1994;49(4):387-97.
[22] Brache V, Faundes A, Alvarez F, et al. Transition from Norplant to Jadelle in a Clinic with extensive experience providing contraceptive implants. *Contraception*. 2006;73(4): 364-67.
[23] Roy S. Introduction of contraceptives in National Family Planning Programme: Injectable and Implants. *Health and Population- Perspectives and Issues*. 1983;6(1):3-22.
[24] WHO. What Makes a Contraceptive Acceptable? PROGRESS in Human Reproduction Research No 43. 1997.

PARTICULARS OF CONTRIBUTORS:
1. Independent Public Health Researcher, Pune, Maharashtra, India.
2. Faculty, Goa Institute of Management, Panaji, Goa, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Janmejaya Samal,
A/8, Gulmohar Colony, Pimplegurav, Pune-411061, Maharashtra, India.
E-mail: jaytheworld@gmail.com

FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: **Aug 09, 2015**
Date of Peer Review: **Sep 09, 2015**
Date of Acceptance: **Sep 27, 2015**
Date of Publishing: **Nov 01, 2015**