Socio-economic inequality in informed choice of contraceptive use among women of Maharashtra: A concern for reproductive and sexual health and right

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Abstract

Access to quality, evidence-based, comprehensive sexual information is vital for people. This study attempts to examine socio-economic inequality in informed choice of contraceptive methods use among women and successively find out its main determinants. This study utilised the fourth round of National Family Health Survey (NFHS-4) data to fulfil the study objectives. Variables related to informed choice of contraception were the primary outcome variables. Bivariate and logistic regression techniques have been applied to see the significant effect of the predictor variables on the outcome variable. The study found that a large proportion of women were denied from the basic right of informed choice of contraception as only 23.8 per cent had informed choice of contraception. The likelihood of being informed about the contractive methods use was significantly higher among those women who were using the IUD (OR= 2.626; $p<0.001$) and oral contraceptive pills (OR:1.629; $p<0.01$) than those who were sterilised. The informed choice of contraception was significantly varied with the socio-economic characteristics of respondents. These results deliver a good sign to warrant intervention to increase the coverage of counselling provided to family planning clients to guarantee women's sexual and reproductive health rights and increase the acceptance of the spacing method of contraception. Further, reproductive health programmes should address the socio-economic and cultural hurdles and consider multiple cost-effective strategies such as mass media to promote awareness of modern temporary methods.

Keywords: Informed choice, Contraceptive use, Women, Maharashtra, Inequality

Background

Nearly half of the conceptions are accidental (Bearak, et al., 2018), and in the low resource setting, where the access to health care services are limited, unintentional pregnancies could have terrible maternal and child health outcome, which lead to maternal and child mortality (WHO, 2019). Therefore, access to effective family planning methods is one of the most cost-effective interventions to come out from the negative reproductive health outcome. Hence, it is vital that people be able to continue to access contraceptive information and services. The evidence shows that the unmet need for family planning remains high across the globe. About 218 million women and girls are not using modern contraception, despite wanting to avoid pregnancy (Riley et al., 2020). Family planning has been encompassed the broader framework of sexual and reproductive health and rights in the ICPD Programme of Action. One of the Programme of Action main accomplishment arguments on family planning is that "all countries should assess the extent of national unmet need for good-quality family-planning services…seek to provide universal access to a full range of safe and reliable family planning methods and to related reproductive health services which are not against the law" (UNFPA, 2014).

In the last two decades, the initial global indicators have mainly focused on family planning use or unmet need for family planning regardless women have the opportunity to access and use of family planning. Yet, the programme emphasis on family planning quality has lagged. Moreover, in recent years, Sustainable Development Goals (SDG) include access to sexual and reproductive health services and the fulfilment of reproductive rights, among their targets. Hereto, transforming our World, the 2030 Agenda for Sustainable Development places the aims in a broader obligation to human rights doctrines, gender empowerment, and a change of substructure and public services that will empower people, enhance their prospects and choices, protect them from excessive harm.

Moreover, previous evidence shows that overall satisfaction with the quality of services is a significant factor of continued use of contraception and utilisation of family planning services. These can be augmented by stressing both structural and process quality of care (Williams, et al., 2000; Mariko, et al., 2003). Women's informed family planning use decisions can be boosted if the role of service providers in the family planning counselling is more supportive and active (Kim, et al. 1998). A study conducted on the early

discontinuation of Norplant asserted that family planning providers should appropriately counsel the couple before providing any contraceptive method, including informing about the method-related side effects and exploring women's expectations of the method (Huda, et al., 2014).

Need of the study

There are three components of quality- services, supplies and information that are stated in India's Vision FP2020 document. Further, information exchange between service providers and clients is one of the six important fundamentals of a quality-of-care framework (Bruce, 1990). Maharashtra is one of the most socio-economically developed states of India. Though only 63 per cent of the women were using any modern method of contraception, out of total users, more than half (51%) of the women had gone through female sterilisation. Sterilisation is a permanent method that cannot be reversed, so it should be performed only after being informed about the side effects and consequences of the same. Nevertheless, about 10% of women worldwide experienced regret because of sterilisation. In India, according to NFHS-4, around 7 % of women regretted their sterilisation decision. Moreover, little is known about the type of information women using contraception in Maharashtra are getting about their methods. Hence, the prime aim of this paper is to fill this gap. As per the NFHS-4 report, many women have been adopting the permanent method of contraception while ignoring the temporary method. The issue of quality of care may not be significant for improving continuation for the negligence of temporary method over permanent method with no discontinuation, but it is still vital because individuals who use a permanent method of contraception have a right to receive good quality services and a basic level of knowledge about contraceptive methods. Additionally, the issue of quality of care remains critical for those adopting reversible methods because better quality and information received at the time of contraceptive commencement is likely to improve the consequent persistence of family planning method use.

Objectives

The prime objective of the study is to fill this gap in knowledge by documenting the level and correlates of the extent to which women received information about the contraceptive method they were using in Maharashtra. To fulfil the purpose mentioned above, the specific objectives of the study are:

1. To examine the level and differentials in different type of modern contraception use among women in Maharashtra.
2. To study the economic inequalities in the information provided to women related to contraceptive use in Maharashtra across the place of residence and source of services obtained.
3. To study the level and differential in the information (potential side effects, informed about what to do if they experienced side effects, and informed about the alternate methods available) provided to women related to contraceptive use.

Data and methods

Data

Data for the present study has been extracted from the fourth round of the National Family Health Survey (NFHS-4) conducted during 2015-16. The current research is based on currently married women who were started using any modern methods (pill, IUD, injectable or sterilisation) in the last three year from the survey date (since 2013; N=10502). The study is restricted to the last three years to reduce the effect of recall lapses and learnings over the period. NFHS is the nationally representative household survey that provides a wealth of information on fertility, mortality, sexual and reproductive health, and a wide range of monitoring and impact evaluation indicators in the areas of population and health at the state and district level.

The NFHS-4 was conducted under the stewardship of the Ministry of Health and Family Welfare (MoHFW), Government of India, and International Institute for Population Sciences (IIPS), Mumbai was the nodal agency for same. The survey methodology has been discussed elsewhere (IIPS and ICF, 2017). Briefly, however, data were collected using a stratified two-stage cluster sample design. The 2011 census served as the sampling frame for selecting the Primary Sampling Units (PSU) in rural and urban areas using the probability proportional to size. In the second stage, 22 households were randomly selected with systematic sampling in every selected rural and urban cluster. The survey's response rate was 98 %, 97%, and 92 % for households, eligible women, and men, respectively.

Outcome variables

Informed choice of contraception is the main outcome variable of the study. At the time of data collection, women were asked whether or not at that time (when they started using the

method) they were told about the side-effects of the method they currently used, what to do if they experienced these side effects and about other methods they could use. In addition, women who were sterilised were also asked whether or not they were told that sterilisation was permanent (IIPS and ICF, 2017). Though all the questions do not cover all features of knowledge transfer between service providers and clients, but do capture some significant features. Additionally, all these questions have been used to create the Method Information Index (MII) for the specific method currently used. The overall Method Information Index for pill, IUD and injectable users, and for those who were sterilised have been calculated from the percentage of users who responded 'yes' to all three questions – a) Were you told about other methods? b) Were you told about the side effects of the method selected? c) Were you told what to do if you experience these side effects?

Predictor variables

Based on the literature review, all possible socio-economic and demographic variables will be incorporated as independent variables in the study. The independent variables used in the analysis were women' current age (15-24, 24-34 and 34-49 years), place of residence (urban or rural), an education level (no education, primary, secondary, and higher), religion (Hindu, Muslim and others), caste (Schedule tribe, Schedule caste, other backward caste and others) wealth quintile (poorest, poor, middle, rich and richest), media exposure (yes and no), exposed to family planning massage (no and yes), the number of household members (<6, 6 or more). The study did not include the source of the method as a predictor variable in the analysis for the oral contraceptive pill because a substantial proportion of pill users had obtained their last supply from a commercial outlet with little scope for counselling. Additionally, the survey has no information about the initial supply for oral contraceptive pill users.

Statistical techniques for data analysis

Bivariate and multivariate statistical techniques have been used for data analysis. In multivariate analysis, logistic regression has been applied to see the significant adjusted effects of independent variables on method information index (MII) for female sterilisation, the oral contraceptive pill and IUD/PPIUD and on combined method information index. Besides, concentration curve and index have been applied to check the inequality in the information provided to women. The state sample weight has been applied for the analysis. STATA Version 14 software has been used for data analyses in the present study.

Results

Level and patterns of informed choice for modern contraception use.

Table 1 shows the prevalence of female sterilisation, the oral contraceptive pill and IUD/PPIUD in Maharashtra, 2015-16. Female sterilisation was the dominating method of contraception, as about 12% of the respondents were obtained female sterilisation as a contraceptive method. 2.8 % and 1.9 % of the respondents were pill users and IUD/PPIUD users at the time of the survey. There have been considerable socio-economic differentials observed in the use of family planning methods. The use of female sterilisation was higher among women 24-34 years (17.9 %), residing in rural areas (14.6 %), among primary educated women (13.7 %), follower of Hindu religion (53.8 %), belongs to scheduled tribes (15.2 %), belonged to poorest households (20.0 %), not exposed to any media (12.6 %), not exposed to any family planning massage (12.3 %) and having 6 or more members in the family (14.2 %). In contrast, the pill users were higher among women belonged to 15-24 age groups (3.2 %), residing in an urban area (3.3 %), completed higher education (2.7 %), followers of Muslim religion (5.0 %), belongs to rich wealth quintile (3.8 %) and exposed to media (2.9 %). Like pills users, similar patterns have been observed in the case of IUD/PPIUD users.

Table 2 depicts the informed choice among the female sterilisation acceptors. 33.1 per cent of the female sterilisation acceptors were told about side effects, little more than one-fourth (26.8 %) were told about side effect management, and 40.7 per cent were told about other possible methods of contraception. Only 19.5 % of sterilised women had information about all three of the above indicators, and the level of communication varied considerably by women's socioeconomic and demographic characteristics. Better education status increased the chances of receiving method related information. The MII for informed choice of female sterilisation was higher among women who had operated in the private health facilities (20.5%), women of the urban areas (20.5%), women with higher education (27.8%), belonged to the OBC caste group (24.2%), women from rich households (25.0%), and exposed to family planning massage (22.2%).

Table 3 depicts the informed choice among the oral pill acceptors. Of the oral contraceptive pill users, 43.2 % were told about side effects, 38.1 % were told about side effects management, and 69.0 % were told about other possible methods of contraception. Thirty-

five per cent of oral contraceptive pill users were informed about all three of the above indicators. The level of communication varied considerably by women's socioeconomic and demographic characteristics.

Table 4 indicates the informed choice among the IUD/PPIUD acceptors. 59.2 % of IUD users were informed about side effects, more than half (52.4 %) were informed about the side effects management, and 68.5 % were informed about the other available methods of contraception. Overall, 41.4 % of IUD users were informed about all three indicators of informed choice. The MII for the informed choice of IUD was higher among women whose source of the method was Private health facilities (44.1%), belonged to age group 24-34 years (45.3.1%), women of rural area (44.9%), women with no education (79%), belonged to the poor household (68.1%), and exposed to family planning massage (46.6%). This peculiarity in the result is because of less sample size in the respective category.

Table 5 depicts the informed choice of modern contraceptive (female sterilisation, pill, IUD/PPIUD and injectable) users. Of the modern method users, only 24.4% were informed about all three indicators of informed choice (possible side effects, side effects management before their acceptance and other available methods of contraception). The level of method information index (informed choice for all three indicators) varied considerably by women's socioeconomic and demographic characteristics. The MII of all three indicators of informed choice of modern contraceptive was higher among women whose source of the method was private facilities (28.8%), were using IUDs (42.2%), women of urban area (27.5%), completed higher education (30.2%), belonged to OBC caste group (29.2%), belonged to rich households (28.7%) and exposed to family planning massage (28.0%).

Economic inequality in informed choice (Method information index; MII) of modern contraception use

Concentration curve and index have been applied to measure the economic inequality in informed choice of modern contraception use by place of residence and source of the method obtained (figure 1 & 2). The pro-rich inequality has been observed in the informed choice of the modern method of contraception use. Further, the curve of rural areas everywhere lies far below the line of equality and total curves, indicating a higher inequality in rural with an index value of 0.161 against the CI value of 0.068 for Maharashtra. For the urban area, we have observed pro-poor economic inequality MII as the concentration curve for urban areas is above the line of equality. The concentration index value for the urban area was -0.085.

Economic inequality in method information index (MII) for modern contraception use in Maharashtra, 2015-16

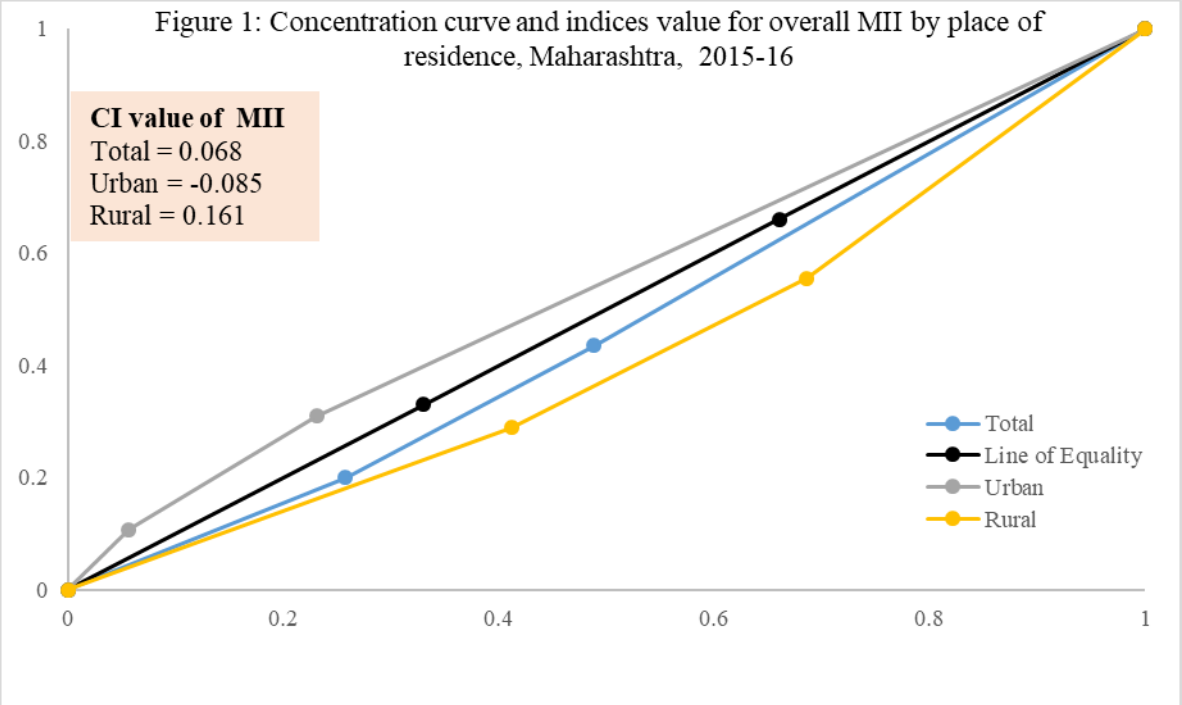
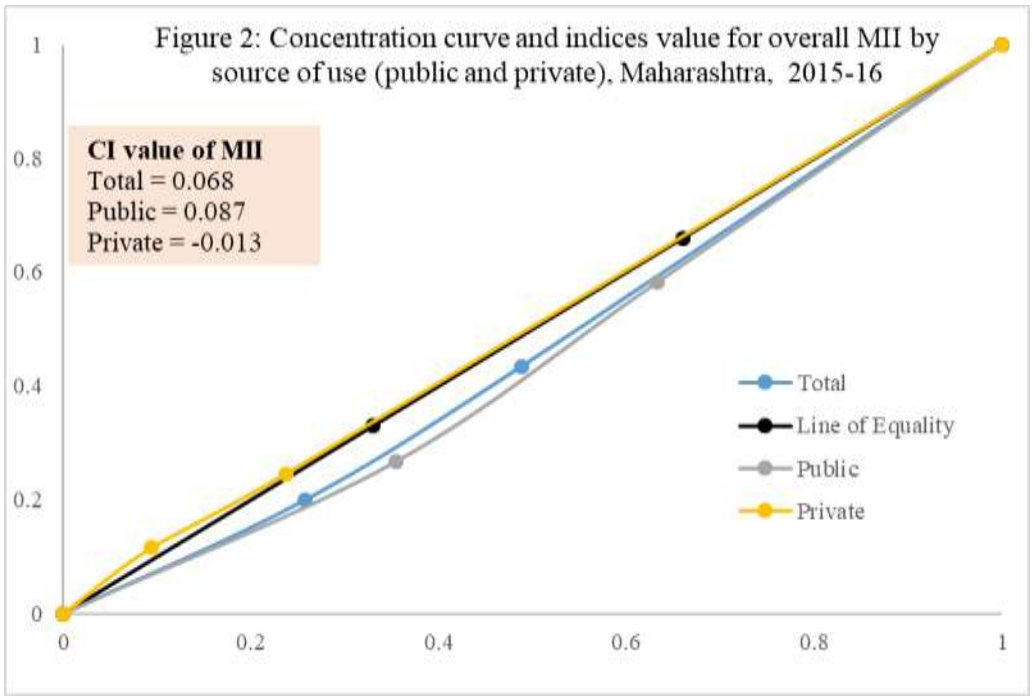


Figure 2 shows the economic inequality for MII by the source of methods obtained (public and private). From the curve, we can see that the concentration curve of the public section lies everywhere below the concentration curve of the private sector, indicating there is less inequality for MII in the private sector than in the public sector.



Determinant of informed choice of different method of contraception use

Table 6 depicts the logistic regression result for method information index for female sterilisation and method information index for all methods (female sterilisation, pill, IUD/PPIUD and injectable). We have not applied the regression analysis for other methods of contraception included in the study separately due to sample size restrictions. The analysis found that women's education, caste and exposure to family planning massage were the main determinants of the method information index for female sterilisation. For illustration, the odds of MII for female sterilisation was 1.9 times higher among women who had completed higher education than women with no education. Similarly, the likelihood of being informed about the female sterilisation was 1.3 times and 1.4 times higher among women who belonged to other backward castes (OBC) and were exposed to family planning messages than their counterparts, respectively. In the case of MII for all methods, after controlling the effects of the socio-demographic characteristics of users, the likelihood of being informed about the methods was significantly higher among those using the oral contraceptive pill (OR: 1.65; CI: 1.14- 2.37), IUD (OR: 2.85; CI: 1.96–4.150) and injectable (OR: 1.67; CI: 0.66–4.19) compared with sterilised women. The chances of being informed about the methods were significantly higher among method users: belongs to the rich wealth quintile (OR:1.72: CI: 1.02-1.90) and exposed to Family Planning messages (OR: 1.58; CI: 1.14–2.1) than their respective counterparts. The likelihood of receiving methods related information was significantly lower (OR: 0.58; CI: 0.36-0.94) among users who belonged to higher age groups than their counterparts. Moreover, the likelihood of receiving the method related information was lower among users who obtained methods from a Private health facility, exposed to any media than their respective counterparts, though these results are not significant.

Summary and Discussion

In the last few decades, public health experts and policymakers have shifted their focus to the quality of care in family planning programmes worldwide. In a country like India, where a large proportion of the population belongs to rural areas and depends only on public health facilities, the quality of care has become increasingly prominent. The quality of care is not a new concept. Bruce (1990) defined quality of family planning as an index of six elements from the client's perspective - choice of methods, the information given to clients, technical competence, interpersonal relations, follow-up and continuity mechanisms, and the appropriate counselling services (Bruce, 1990). The International Conference on Population

and Development (ICPD) in 1994 manifested a paradigm shift from a macro-level demographic outlook to individual-level improvements in reproductive health and quality. It generated a shared commitment to reproductive health and quality of care. However, most of the programs in Asia and other parts of Latin America were created earlier to the ICPD, when donors and programs were more focused on decreasing overall fertility and population growth rates.

Past evidence shows that women are not counselled adequately about the other contraceptive methods, nor are they educated enough about the possible side effects during and after sterilisation (Koeing, et al., 2003). The interpersonal relationship between beneficiaries and services providers is one of the critical components of quality of care, and women in India are not received substantial information about the permanent method of contraception, which leads to the sterilisation regret among them (Jain, 2016). Past studies also asserted that women experienced harsh and disrespectful behaviour while seeking family planning services in the public sector (Ganatra et al., 1998; Gupta, 1993; Nataraj, 1994).

The present study focuses on the informed choice of the family planning method used among women of Maharashtra using the fourth round of National Family Health Survey (NFHS-4) data. The general picture that emerged from the analysis can be summed that a large proportion of modern family planning methods users are being neglected from the basic rights of informed choice in Maharashtra. The utilisation of the family planning method is not only vital from a public health perspective but also a matter of the sexual and reproductive health rights of women. The study's finding indicates that one out of ten currently married women of Maharashtra were using sterilisation as a family planning method. Among them, only one-fifth were given the information on all three indicators of informed choice; which is side effects, side effects management and other methods. Sterilisation choice is common among women belongs to 24 -34 years of age group, among women of rural areas, among uneducated women and completed primary education, women belong to poor households; socially disadvantaged ethnic groups, especially those belonging to schedule tribe communities, among follower of Hindu religion and had no media exposure. Undoubtedly, the persistent supremacy of sterilisation use amongst the poor women shows the national family planning programmes weakness in promoting wider method choices.

Moreover, Sterilisation is generally pre-planned, and acceptors usually would have taken the decision to accept the method before the procedure; therefore, health providers might not

have counselled them adequately about alternative methods. Also, lack of adequate and right information about spacing methods and poor affordability and accessibility of spacing methods have been shown to affect women's choice of female sterilisation (Pandey et al., 2012). Besides, in India, women who belong to poor households generally have been deprived of access to education and health care services. These women usually have lower autonomy within and outside the household and have marginal control over their reproductive and contraceptive choices. The situation is more prone among newly married women with poor education, who lack security and often capitulation to the ideals, norms and expectations of their in-law's family.

The informed choice for temporary methods of contraception such as pill and IUD/PPIUD was also found to be insufficient among women of Maharashtra. Only 2.8 and 1.9 per cent of the currently married women were users of oral contraceptive pills and IUD/PPIUD, and the Method Information Index value for both was 35.1 and 41.4 respectively. Earlier studies have also shown that the least information is provided by the health service provider on sterilisation than other temporary methods (Jain, 2016). Except for women using an IUD/PPIUD, the value of MII was uniformly low across all strata of society. Lack of adequate knowledge or wrong information and beliefs are common hurdles in acceptance of contraception (Orji, E.O., Onwudiegwu, 2002; Shrestha, et al., 2000). Fear of side effects and misconceptions is widespread and has been the most important explanation for the non-use of contraception (Srivastava, et al., 2005). It is evident from the previous studies that multiple counselling sessions increase the acceptance of PPIUD (Makings et al., 2018), especially during antenatal care periods (Agarwal et al., 2015). Under the program being implemented by the Government of India, pregnant women are counselled for the use of IUCDs during the antenatal period itself and the IUCD is inserted soon after the delivery, following proper consent (MoHFW, GOI, 2018).

The overall method information index (MII) varies by the socio-economic characteristics of the respondents. Women exposed to Family Planning messages were found to have received better information on contraceptive choice. An earlier study found that many targeted family planning messages/interventions using print or electronic media encourage women to seek more method-related information, enhancing informed choice in method acceptance (Modugu, et al., 2018). This consciousness may also inspire women to investigate more from the service providers before accepting a family planning method.

The study also found that the economic inequality in the informed choice of family planning was higher in rural areas than urban areas. In the urban area, it was concentrated among the poor, whereas it was concentrated among the wealthier in the rural area. Similarly, the public section shows the more pro-rich economic inequality in the informed choice than the private section. This can be because the primary source for family planning in India is the public sector which is usually constrained in terms of manpower, training infrastructure, commodities and supplies (Koenig, et al., 2000). The other picture can be as reported by ICRW in Bihar, is the bad quality of care in public hospitals. In the state, the health facilities were overloaded, and clients were not informed about the side effects associated with the procedure of female sterilisation (Achyut, et al., 2015). They also reported that women were neither checked before getting discharged nor given the necessary information on rest, bath, and follow-up visits. Andrew (2013) has also reported that women were neither informed about the side effects associated with the process nor were told about the other family planning methods.

Policy recommendations

In conclusion, from the policy point of view, these results deliver the adequate sign to knock interventions to increase the coverage of counselling provided to family planning acceptors to promise women's sexual and reproductive health rights and needs. Frontline health workers i.e. ASHA and Anganwadi workers can be motivated to encourage women to adopt more temporary methods as they are reversible and relatively more information is given on it than the permanent method of family planning. In addition, if the health care provider can provide all the information and provide a basket of choice to the women then women can be able to decide the best suitable method for themselves, which can significantly minimise the discontinuation of contraceptive methods and prevent the health hazard among women. The reproductive health programmes should address the socioeconomic and cultural hurdles and consider multiple cost-effective strategies such as mass media to promote awareness of modern temporary methods. Further, there is a need to establish Quality Assurance Committees for quality of care in Family Planning services at the district level and at the block level.

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Table 1: Prevalence of modern contraceptive use (female sterilisation, pill and IUD or PPIUD among currently married women, Maharashtra, 2015-16

Background Characteristics	Female sterilised	Pill user	IUD or PPIUD user	N
Age				
15-24	7.6	3.2	1.6	3,921
24-34	17.9	3.1	2.6	4,480
35-49	6.2	1.6	1.0	2,101
Place of residence				
Urban	8.7	3.3	2.4	5,109
Rural	14.6	2.4	1.4	5,393
Education				
No education	11.8	2.0	0.3	1,076
Primary	13.7	4.0	0.4	1,179
Secondary	12.9	2.8	1.9	6,552
Higher	5.7	2.7	3.9	1,695
Religion				
Hindu	12.6	2.5	1.8	8,080
Muslim	7.7	5.0	2.3	1,490
Others	10.4	2.1	1.8	932
Caste				
Schedule Tribe	15.2	3.5	1.3	1,321
Schedule caste	11.4	2.7	1.7	1,742
OBC	10.6	2.0	2.4	2,582
others	11.6	3.4	1.9	4,525
Wealth quintile				
Poorest	20.0	2.6	0.2	795
Poor	13.5	2.8	1.3	1,546
Middle	13.1	2.2	0.8	2,456
Rich	10.3	3.8	2.0	2,937
Richest	8.7	2.5	3.6	2,768
Media exposure				
No	12.6	2.1	0.6	1,052
Any exposure	11.5	2.9	2.0	9,450
Exposed to family planning massage				
No	12.3	2.2	1.0	2,834
any exposed	11.5	3.1	2.2	7,668
Number of family member				
5	9.5	2.8	1.8	5,541
6 or more	14.2	2.9	2.0	4,961
Total	**11.7**	**2.8**	**1.9**	**10,502**

Note: Percentage and number are weighted. Cases may not be equal due to missing value.

Table 2: Percentage of female sterilisation acceptors told about side effect, side effect management and other methods, and Method Information Index (MII), Maharashtra, 2015–16

Background characteristics	Side effects or problems	side effects management	Other methods that could be used	Method Information Index	N
Source of method use					
Public	32.2	26.4	39.3	19.3	940
Private	36.5	28.2	45.9	20.5	310
Age					
15-24	31.9	27.5	44.4	23.2	299
24-34	34.2	26.8	39.2	18.0	811
35-49	29.3	24.9	41.9	20.0	145
Place of residence					
Urban	38.9	31.9	42.7	20.5	454
Rural	29.9	23.9	39.6	19.0	801
Education					
No education	26.5	23.8	32.5	14.7	138
Primary	27.6	19.7	36.8	17.2	164
Secondary	34.5	28.2	40.9	19.7	854
Higher	39.3	30.5	57.3	27.8	99
Religion					
Hindu	32.6	26.0	39.0	18.3	1039
Muslim	39.6	35.8	61.7	33.5	116
Others	30.4	24.3	35.1	15.9	100
Caste					
Schedule Tribe	24.8	19.2	33.6	11.9	203
Schedule caste	34.6	30.8	32.2	16.6	206
OBC	34.9	28.3	46.9	24.2	277
Others	34.7	27.0	43.7	20.3	534
Wealth quintile					
Poorest	22.0	17.2	30.5	11.1	161
Poor	29.5	22.3	38.5	16.9	214
Middle	32.6	26.1	40.5	20.6	334
Rich	39.5	35.8	47.7	25.0	305
Richest	36.4	26.8	41.2	19.0	242
Media exposure					
No	26.1	18.9	35.8	13.5	145
Any exposure	34.0	27.8	41.4	20.3	1110
Exposed to family planning massage					
No	28.3	21.6	30.9	12.6	357
any exposed	35.0	28.8	44.7	22.2	898
Number of family member					
5	39.3	32.1	40.4	21.0	538
6 or more	28.5	22.8	41.0	18.3	717
Total	33.1	26.8	40.7	19.5	1255

Note: Percentage and numbers are weighted. Cases may not be equal due to missing value.

Table 3: Percentage of oral contraceptive pill acceptors told about side effect, side effect management and other methods, and Method Information Index (MII), Maharashtra, 2015–16

Background characteristics	Side effects or problems	side effects management	other methods that could be used	Method Information Index (MII)	N
Source of method use					
Public	48.7	44.1	66.0	38.1	95
Private	39.8	35.6	70.6	33.9	192
Others	54.3	30.8	67.6	30.8	11
Age					
15-24	44.3	40.4	64.3	36.5	125
24-34	44.2	40.9	68.9	37.9	140
35-49	38.0	18.4	86.8	18.4	34
Place of residence					
Urban	44.9	40.3	73.5	40.2	168
Rural	41.1	35.3	63.3	28.5	130
Education					
No education	49.0	49.0	67.7	46.3	22
Primary	18.3	16.8	56.5	16.4	47
Secondary	53.4	45.5	70.4	42.0	184
Higher	24.9	24.9	77.2	21.0	45
Religion					
Hindu	46.3	41.1	66.9	37.2	203
Muslim	32.2	26.3	69.6	24.9	75
Others	52.8	52.8	88.3	52.8	20
Caste					
Schedule Tribe	50.6	50.6	69.3	46.9	46
Schedule caste	34.4	34.4	83.7	33.4	48
OBC	40.1	34.9	52.7	30.1	51
others	43.9	35.6	70.8	34.3	152
Wealth quintile					
Poorest	19.8	19.8	57.2	17.3	21
Poor	47.0	37.1	55.5	35.7	43
Middle	53.3	52.1	62.1	42.5	54
Rich	40.4	39.7	78.6	39.7	111
Richest	44.4	30.7	71.1	26.9	69
Media exposure					
No	23.5	23.5	56.1	18.6	22
Any exposure	44.8	39.3	70.1	36.4	276
Exposed to family planning massage					
No	28.0	26.0	53.2	21.9	62
any exposed	47.2	41.3	73.2	38.6	236
Number of family member					
5	49.6	44.2	74.9	42.2	157
6 or more	36.1	31.4	62.5	27.3	141
Total	**43.2**	**38.1**	**69.0**	**35.1**	**298**

Note: Percentage and numbers are weighted. Cases may not be equal due to missing value.

Table 4: Percentage of IUD acceptors told about other methods, side-effects and side-effect management, and Method Information Index (MII), Maharashtra, 2015–16

Background characteristics	Side effects or problems	Side effects management	Other methods that could be used	MII	N
Source of method use					
Public	55.4	51.8	68.4	38.0	76
Private	62.7	53.8	69.9	44.1	124
Others	21.2	21.2	21.2	21.2	1
Age					
15-24	55.5	46.7	70.4	34.8	66
24-34	63.0	57.9	66.0	45.3	116
35-49	49.6	39.8	77.1	39.8	20
Place of residence					
Urban	60.0	53.7	65.2	39.4	129
Rural	58.0	50.2	74.3	44.9	73
Education					
No education	100.0	79.0	79.0	79.0	3
Primary	59.3	59.3	91.3	59.3	5
Secondary	56.6	48.7	68.5	39.1	128
Higher	62.6	57.9	66.2	42.6	66
Religion					
Hindu	57.1	49.5	69.0	39.1	150
Muslim	66.4	59.5	74.6	57.2	34
Others	64.0	64.0	52.7	30.0	18
Caste					
Schedule Tribe	59.8	57.4	95.1	57.4	17
Schedule caste	34.9	28.2	67.0	15.0	34
OBC	73.7	66.2	63.8	50.0	62
others	59.6	52.2	66.5	43.2	87
Wealth quintile					
Poorest	42.4	42.4	100.0	42.4	1
Poor	68.1	68.1	75.2	68.1	21
Middle	56.9	53.7	81.2	52.6	19
Rich	58.1	51.9	60.7	32.1	62
Richest	58.7	49.4	69.2	39.5	99
Media exposure					
No	47.2	47.2	47.2	47.2	6
Any exposure	59.6	52.6	69.2	41.2	196
Exposed to family planning massage					
No	31.6	28.7	23.8	15.1	33
any exposed	64.7	57.1	77.4	46.6	169
Number of family member					
5	63.7	56.0	67.8	45.6	98
6 or more	55.1	49.1	69.3	37.3	104
Total	**59.2**	**52.4**	**68.5**	**41.4**	**202**

Note: Percentage and numbers are weighted. Cases may not equal due to missing value.

Table 5: Percentage distribution of Method Information Index (MII) for all methods (sterilisation, pill, IUD/PPIUD, injection) by women's socio-demographic and economic characteristics, Maharashtra, 2015–16

Background characteristics	Method Information Index (MII)	N
Source of method use		
Public	22.0	1,123
Private	28.8	651
Method using		
Female sterilization	20.3	1,255
Oral contraceptive pill	34.1	298
IUD	42.2	202
Injection	15.5	39
Age		
15-24	28.1	500
24-34	23.4	1,084
35-49	20.9	211
Place of residence		
Urban	27.5	779
Rural	22.1	1,015
Education		
No education	20.0	164
Primary	17.2	227
Secondary	25.4	1,187
Higher	30.2	216
Religion		
Hindu	23.3	1,408
Muslim	32.0	245
Others	22.4	141
Caste		
Others	25.2	798
Schedule Caste	19.0	292
Schedule Tribe	20.5	271
OBC	29.2	391
Wealth quintile		
Poorest	12.0	183
Poor	23.5	278
Middle	24.9	414
Rich	28.7	494
Richest	24.9	425
Media exposure		
No	15.3	173
Any exposure	25.4	1,621
Exposed to family planning massage		
No	14.0	455
Any exposed	28.0	1,339
Number of family member		
5	28.1	798
6 or more	21.5	996
Total	**24.4**	**1,794**

Note- SC: scheduled caste; ST: scheduled tribe; OBC: other backward caste. Cases may not be equal due to missing values

Table 6: Result from logistic regression showing the odds ratio for female sterilisation and Method Information Index (MII) for all methods (sterilisation, pill, IUD/PPIUD, injection), Maharashtra, 2015–16

Background characteristics	MII (Female Sterilization)		MII for all methods	
	Odds ratio	Confidence Interval	Odds ratio	Confidence Interval
Source of method use				
Public®				
Private	1.12	[0.769,1.636]	0.95	[0.704,1.276]
Method using				
Female sterilization®				
Oral contraceptive pill			1.65**	[1.144,2.367]
IUD			2.85***	[1.955,4.150]
Injection			1.67	[0.660,4.198]
Age				
15-24®				
24-34	0.88	[0.637,1.214]	0.91	[0.700,1.189]
35-49	0.61	[0.341,1.081]	0.58*	[0.364,0.938]
Place of residence				
Urban®				
Rural	1.32	[0.895,1.932]	1.16	[0.864,1.568]
Education				
No education®				
Primary	1.12	[0.620,2.015]	0.85	[0.498,1.439]
Secondary	1.12	[0.670,1.878]	1.00	[0.636,1.581]
Higher	1.92	[0.907,4.055]	1.34	[0.739,2.442]
Religion				
Hindu®				
Muslim	1.69*	[1.024,2.801]	1.09	[0.734,1.606]
Others	1.23	[0.649,2.327]	1.37	[0.783,2.405]
Caste				
Others®				
SC	0.88	[0.510,1.516]	0.70	[0.430,1.125]
ST	1.08	[0.692,1.694]	1.07	[0.730,1.572]
OBC	1.26	[0.891,1.789]	1.21	[0.909,1.623]
Wealth quintile				
Poorest®				
Poor	1.11	[0.660,1.877]	1.23	[0.747,2.010]
Middle	1.19	[0.705,2.016]	1.42	[0.867,2.331]
Rich	1.35	[0.758,2.398]	1.72*	[1.017,2.900]
Richest	0.94	[0.468,1.902]	1.18	[0.65,2.141]
Media exposure				
No®				
Exposure	1.12	[0.693,1.817]	0.95	[0.612,1.479]
Exposed to family planning massage				
No®				
Exposed	1.35	[0.961,1.897]	1.53**	[1.136,2.063]
Number of family member				
5®				
6 or more	0.97	[0.729,1.295]	0.92	[0.720,1.165]

Note: - Level of significant: * p<0.05, ** p<0.01, *** p<0.001; ®= reference category. SC: scheduled caste; ST: scheduled tribe; OBC: other backward caste.

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