

# **Trends in Contraceptive Use and Method Mix among Muslims in India, 1992-2016**

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## **Background**

Religion has immense social, economic, and political significance in most societies, and it plays an important role in sanctioning or promoting acceptance of or creating resistance to family planning (Pearce 2001; Mistry 1999; Adioetomo 1995; Mullatti 1995; Davis et al. 1993; Srikantan 1993; Islam et al. 1991; Caldwell and Caldwell 1988, 1987; Chamie 1981; Kirk 1968). In India, lower contraceptive use rates and higher fertility rates among Muslims than among Hindus and people of “other” religions are well documented (IIPS and ORC Macro 2000; Ramesh et al. 1996; Gulati 1996; IIPS 1995; Bhatia 1990; ORG 1990). However, the reasons for lower contraceptive use and higher fertility among Muslims are highly debated in both academic and political circles (Pai Panandiker and Umashankar 1994). Previous research in India has focused primarily on socioeconomic explanations of higher fertility and lower contraceptive use among Muslims but has found conflicting evidence. Some argue that lower contraceptive use among Muslims is mainly due to their lower socioeconomic status (Iyer 2002; Mistry 1999; Shariff 1995; Sharma 1994; Johnson 1993; Ghosh and Das 1990; Singh 1988; Ranganekar et al. 1987; Krishnan 1984; Chaudhary 1982; Khan 1979), while others argue that it is due to pronatalist ideology and greater opposition to family planning among Muslims (Alagarajan and Kulkarni 1998; Gandotra et al. 1998; Ramesh et al. 1996; Bhende et al. 1991; Das and Padhiyar 1991; Rajan and Rao 1991; Srivastava and Saksena 1989; Caldwell and Caldwell 1988; Das and Pandey 1985). Among neighboring South Asian countries, Pearce (2001) in Nepal, Mahmood and Ringheim (1996) in Pakistan, Miah (1992) in Bangladesh, and Abeykoon (1987) in Sri Lanka observe that religion is an important predictor of contraceptive use and fertility behavior, independent of socioeconomic factors. Among other explanations, some argue that lower contraceptive use and higher fertility among Muslims in India is due to their differential marriage patterns (e.g., early age at marriage and greater remarriage rates) (Bhagat and Unisa 1991; Krishnan and Yeung 1984; Davis 1951) and gender roles (e.g., seclusion and low status of women) (Mistry 1999; Krishnan and Yeung 1984). Others argue that it is due to economic and political interests and positions of different religious communities in India (Jeffery and Jeffery 1997). Still others argue that it is due to political and psychological reasons associated with the minority status of Muslims (Singh 1988; Krishnan and Yeung 1984). Much of this debate, however, is driven by ideological bias and lacks strong supporting empirical evidence; cited evidence is often based on small, non-representative case studies..

Muslims constitute about 12 percent of India's population. Eighty-one percent of India's population is Hindu, 2 percent Christian, 2 percent Sikh, and 3 percent belong to Buddhist, Jain, Parsi, or other religions. Muslims in India tend to be concentrated in urban areas, have lower education levels, and have lower levels of exposure to electronic mass media than those belonging to other religions (IIPS and ORC Macro 2016). The politicization of religion in India, the history of violence between Muslims and Hindus, and rivalry with neighboring Pakistan make the study of religious differentials in reproductive behavior a sensitive issue. A widespread narrative in India suggests that Muslims do not use contraception and produce too many children, skewing the national demographic balance. The common belief that Islam is against family planning, which is why Indian Muslims practice polygamy, has for decades caused bitter acrimony between the Hindu and Muslim communities. While it is true that Muslims in India have high fertility than Non Muslims and Total Fertility Rate is also high among Muslims than among Non Muslims. The demographic ratio has indeed changed, with clear increase in the percentage of Muslims in India - from 9.8 in 1951 to 14.2 in 2011. There is a corresponding decline in the Hindu ratio - from 84 per cent to 79.8 per cent - during the same period. Muslims have indeed the lowest level (45.3 per cent) of family planning practice, but Hindus have the second-lowest level among all communities, with a practice prevalence of 54.4 per cent. The Muslims are, however, taking to family planning fast - in fact, faster than the Hindus. This is why the family planning gap between the two communities is narrowing, despite many Muslims believing that Islam is against the concept of family planning but there is no evidence of organised resistance to family planning among the Muslims.

### **Islam and family planning**

The Quran (or Koran) is the primary source of religious authority in Islam. *Hadiths* (the recorded sayings of the Holy Prophet), *Taqreer* (verbal or silent approval of the Prophet), and *Sunnah* (acts of the Prophet) are other sources of religious teachings for Muslims (Khan 1979; Akbar 1974). In practice, most Muslims rely on interpretations of the Quran and other religious writings by local *ulama* (Islamic scholars), resulting in wide variation in the understanding of Islam across cultures and schools of religious thought (Boonstra2001). Islam encourages marriage and procreation within marriage, but there is considerable uncertainty about whether Islam favors or prohibits the use of contraception (Boonstra2001; Khan 1979; Akbar 1974). According to some, Islam is open to various interpretations regarding acceptability of contraception (Obermeyer 1994), and it neither supports nor

hinders fertility decline (Karim 1997). The Quran mentions children as the “decoration of life” and forbids infanticide, which is interpreted by some to imply that Islam does not permit contraception. On the other hand, some argue that several Quranic verses imply that the “well-being of children overrides concerns for a large family, ‘thereby suggesting that contraception is acceptable in Islam (Boonstra 2001; Underwood2000). Moreover, there is evidence from some *Hadiths* that the withdrawal or coitus interrupts method (*al’azl*) was practiced by the Prophet’s followers with his knowledge, and that he did not forbid it and may even have encouraged it (Boonstra 2001;Underwood 2000; Kamal n.d.; Akbar 1974). Most *ulama* agree that *al’azl* is permissible in Islam, but it should not be practiced without the woman’s consent. By analogy, modern temporary methods of contraception, such as the condom and diaphragm, which have the same aim as the withdrawal method—to prevent the sperm from fertilizing the egg—are also generally considered permissible (Boonstra 2001; Underwood 2000; Akbar 1974). However, some *ulama* question the acceptability of oral contraceptives and implants (Boonstra 2001). Most *ulama* agree that surgical methods to permanently end fertility, such as sterilization, are forbidden in Islam (Khan 1979; Akbar 1974).

Some Islamic countries have issued *fatwa* (direct injunctions) that allow temporary family planning methods for medical and/or economic reasons but forbid abortion and all permanent family planning methods (Boonstra 2001; Khan 1979). There is evidence to suggest that Muslims in India prefer temporary methods of family planning over sterilization (Mistry 1999; Population Research Centre, Dharwad 1991; Caldwell and Caldwell 1988; Ranganekar et al. 1987). According to Caldwell and Caldwell (1988), the local Muslim establishment in rural south India believes that both abortion and sterilization are forbidden in Islam. Ranganekar et al. (1987) observe that Muslims in central India prefer temporary methods of contraception, while Hindus and Christians prefer permanent methods. A study conducted by the Population Research Centre, Dharwad (1991) concludes that Muslim women are more likely than Hindu women to accept IUD but not sterilization. There is evidence of Muslims’ preference for non-terminal methods from other Asian countries as well (e.g., Lerman et al. 1989; Chamrathirong et al. 1986). Religious opposition is a frequently cited barrier to adoption of family planning among Muslims in India (Caldwell and Caldwell 1988). Several studies have noted greater opposition to family planning as a reason for lower use or lower desire for future use of contraception among Muslims than among non-Muslims (Mishra et al. 1999; Bhende et al. 1991).

In other Asian countries also, Islam is believed to be a barrier to widespread acceptance of family planning, but there are exceptions. For example, in Bangladesh, Miah (1992) observes that agrarian social structure and religious beliefs are the two major forces behind high fertility in the country. Roudi (1988) also notes widespread religious objection to contraception in Bangladesh, but Bernhart and Uddin (1990) find little support for the view that there is widespread religion-based resistance to family planning among Muslims in Bangladesh. In Indonesia, the Islamic religious establishment was initially opposed to family planning, but more recently it appears to have played a critical role in making the small family norm socially acceptable (Adioetomo 1995).

### **Conceptual framework**

Following Axelrod (1988) and Chamie (1981), this study conceptualizes the effects of religion on contraceptive use in a transitional framework. The hypothesis is that modernization results in higher use of contraception and lower fertility in all religious groups, but that each group adapts differently in accordance with its cultural and religious distinctions (Axelrod 1988). The effects of religion are most pronounced during the transition of a society from a rural, traditional, illiterate, high-mortality, and industrially backward status to an urban, modern, highly educated, low-mortality, and industrially advanced status (Chamie 1981). At the beginning of the transition, use of contraception is very low across all religious groups irrespective of their values and orientation toward family planning and childbearing. At the end of the transition, the differences in family planning and fertility eventually converge, with family planning acceptance high and fertility low across religious groups. During the transition, a religious group that opposes family planning and has a pronatalist ideology tends to lag behind in family planning acceptance and fertility behavior. A religious group that feels marginalized, socially or politically insecure, or lacks upward mobility may also lag behind other religious groups that are not so threatened (Goldscheider 1971; Goldscheider and Uhlenberg 1968). In addition, a religious group may lag behind in family planning acceptance and fertility transition if the family planning program has been insensitive to its needs. In India, there is clear evidence of such a lag in the southern state of Kerala, where contraceptive use has increased and fertility has declined considerably in recent decades in all three major religious groups (Hindu, Muslim, and Christian), but significant religious differentials remain (Alagarajan and Kulkarni 1998; Gandotra et al. 1998; Ramesh et al. 1996). Abeykoon (1987) observes a similar tendency in Sri Lanka, where, despite overall convergence in fertility levels and contraceptive prevalence, significant religious differentials

in fertility and family planning remained even after controlling for socioeconomic factors. In the United States, Catholics had higher fertility and lower contraceptive use than Protestants and others from the 1940s through the 1960s (Westoff and Bumpass 1973; Ryder and Westoff 1971). Although the Catholic-Protestant difference in fertility had converged by the 1970s, significant differences in contraceptive-use styles remained until much later, independent of differences in demographic, social, or economic factors (Rao and Zhao 1994; Goldscheider and Mosher 1988). In the literature, three main hypotheses are used to explain religious differentials in contraceptive use and fertility—the *characteristics hypothesis*, the *particular theologies hypothesis* and the *minority status hypothesis* (Pearce 2001; Chamie 1981; Berelson 1978; Goldscheider 1971; Goldscheider and Uhlenberg 1968). The *characteristics hypothesis* argues that religious differentials in fertility and contraceptive use result from religious differentials in demographic and socioeconomic characteristics. In other words, religious differences in fertility and contraceptive use are artifacts of socioeconomic differences, so that when socioeconomic characteristics are accounted for, the religious differences should disappear.

The *particular theologies hypothesis* (or the *religion hypothesis*) argues that religious doctrine and ideologies influence contraceptive use and fertility behavior. Religious doctrine and ideologies about marriage, family size, sex roles, and birth control provide a system of norms and attitudes that influence childbearing preferences and contraceptive choice. The *minority status hypothesis* states that marginality, insecurity, and lack of upward mobility associated with minority group status influence contraceptive use and fertility behavior. A minority group is less likely to use contraception if it wants to preserve itself, increase its power, or if it has poor chances of upward social mobility. On the other hand, a minority group is more likely to use contraception if it is upwardly mobile, suffers no insecurity or marginality in status, or has no pronatalist ideology. It has also been argued that contraceptive acceptance tends to be low in population groups with greater social exclusion of women (Mason 1984; Dyson and Moore 1983), but the evidence is not conclusive (Morgan et al. 2002).

### **Family planning program in India**

India's family planning program—one of oldest in the world—has long aimed at providing a cafeteria of family planning methods, but in practice it has remained primarily a sterilization program. At the time of NFHS-4, 54 percent of currently married women age 15–49 were using a any family planning method, but more than two-third of them were using sterilization (IIPS and ORC Macro 2017).

Family planning services, especially for sterilization, are provided mainly through the public sector. In the past two to three decades, both program targets and program performance evaluations have been based mainly on numbers of sterilizations performed, primarily through government health centers and clinics, with little incentive for program managers and field workers to promote temporary methods of contraception, such as the pill and condom. Because of the emphasis on sterilization, most Indian couples perceive family planning as a means of stopping childbearing rather than a means of spacing births, despite the well-established fact that birth spacing not only reduces fertility but also benefits the health of both mothers and children (Rajaretnam and Deshpande 1994, Jejeebhoy 1989). This situation has changed somewhat in recent years. The top-down targets for family planning have been officially abandoned, and the government has been making greater efforts to promote temporary methods (Narayana 1998). Under the new approach, community needs and participation are given high priority (MOHFW 1998), and efforts are being made to increase the supply of temporary methods through a variety of sources, including the private-sector and non-governmental organizations (NGOs)(MOHFW 2001). PPIUDs, Weekly pills and injections were added to the basket of contraceptives in the recent years. A few years back injections (Antara) as a method of contraception was also introduced in the country. The quality of services presented in the family planning program, however, was far away from satisfactory and has not improved over time. Restricted choice of methods, limited information provided to clients, poor technical standards, low levels of follow up and continuity of care, and the inflexible approach to service delivery at government facilities considered as the major weakness of the program.

## **Objectives**

This study examines whether the pattern of contraceptive use among Muslims in India changed between 1992–93 and 2015–16. Specifically, the study answers – (a) How did the method mix among Muslims change between 1992–93 and 2015–16 (b) Do the influence of factors associated with contraceptive use change between 1992–93 and 2015–16.

## **DATA AND METHODS**

The study uses data from the first four rounds of the National Family Health Survey (NFHS) conducted in the year 1992–93, 1998–99, 2005–06 and 2015–16 in 1992–93(NFHS-1), 1998–99 (NFHS-2), 2005-06 (NFHS-3) and 2015-16 (NFHS-4). The NFHS is a nationally representative household survey that provides data for a wide range of monitoring and impacts evaluation indicators

in the areas of population, health, and nutrition. The design of the surveys is developed in such a way that it should provide maximum precision in fertility and family planning indicators. For example, the sample is selected through two-stage stratified sampling with an overall response rate of 98 percent in the fourth round of NFHS. Informed consent procedures were followed, and only those respondents who voluntarily consented to participate in the surveys were included. These surveys were approved by the Institutional Review Board of the Institutions involved, and the datasets are available to the public at <https://www.dhsprogram.com> for wider use in social research. Data of the currently married women aged 15–49 years in each round, i.e., NFHS-1 (1992–92), NFHS-2 (1998–99), NFHS-3 (2005–06) and NFHS-4 (2015–16) were considered for analysis. The sample sizes were 84,327 for round 1, 84,682 for round 2, 93,089 for round-3 and 511,356 for round 4 of the survey. After incorporation of state-level or national-level sample weights, as appropriate, data from both surveys are representative at both the state and national levels.

Details of sample design are provided in the basic national survey reports for the four surveys (IIPS and ORC Macro 2017, IIPS and ORC Macro 2006, ORC Macro 2000; IIPS 1995). Each survey collected data on a number of demographic, socioeconomic, and health indicators for selected households and for all ever-married women (age 13–49 in NFHS-1 and age 15–49 in NFHS-2) in those households. These include information on religious affiliation of the household head, indicators of economic status and living standard, education levels and a range of questions relating to contraceptive use. This analysis uses both descriptive and multivariate methods, and it is based on ever-married women age 15–49 included in each survey.

The descriptive analysis focuses on sample distributions of women included in each survey by selected characteristics, and describes differentials in contraceptive use rate among Muslims and non Muslims. The multivariate test the *characteristics hypothesis*, by examining the role of socioeconomic factors in explaining use of modern methods of family planning. The response variables is proportion using a modern method of family planning. The effects of religion and selected demographic and socioeconomic factors on the response variables are estimated using multivariate regression methods. The demographic and socioeconomic variables included as statistical controls in the models are:



**Women's age**

Women's age uses a pre-coded variable in DHS standard recode data files that groups completed age into seven intervals of 5 years, ranging from age 15-19 to 45-59. The youngest age group, age 15-19, is the reference category.

**Women's education**

Women's educational attainment is captured in a categorical variable that differentiates women with no education, < 5 years of education, 5-9 years of education and 10 and above years of education). No education is the reference category in the regression models.

**Women's/ Religion**

Women religion is a dichotomous variable coded "Muslim" if the respondent is a Muslim and Non Muslim if respondent belongs to any other religion.

**Women's Caste**

Caste/Tribe, Women have been grouped into four categories on the basis of caste and tribe (SC, ST, OBC, None of these).

**Work status**

Respondent's work status is a dichotomous variable coded "yes" if she reports currently working by answering yes to the question, "Aside from your own housework, have you done any work in the last seven days?" The null category is the reference category.

**Household size**

Household size is a count of the number of household members and has three categories of <5, 6-10 and 11 or more.

**No. of children living and sons surviving**

Number of living children and No. of surviving sons have been categorized into none, 1, 2, 3 and 4 or above.

**Household wealth**

Household wealth quintile is a precoded variable (Poorest, poorer, middle, richer and richest) in DHS standard recode data files. The variable is based on a wealth index calculated using household ownership of assets, livestock, and housing materials, with 20 of surveyed households in each quintile (Rutstein and Johnson 2004).

**Residence**

Residence is a dichotomous variable that denotes whether women reside in a cluster designated as urban or rural.

**Region**

So far as the geographical region is concerned, we have divided the country into 7 regions (North, Central, East Northeast, West and South).

These variables were chosen for inclusion in the analysis because they are known to have substantial effects on contraceptive use in India and may potentially confound the effects of religion. Woman's age is included because contraceptive use and method choice are known to depend on woman's age. For example, at younger ages woman is more likely to use a temporary method of contraception. A woman's reasons for current nonuser intended future nonuse of contraception are similarly likely to depend on her age. Education is included because it is likely to be related to knowledge about various methods, knowledge about side effects, prejudice about family planning, method choice, effectiveness of use, and a host of other factors that may influence fertility decisions and contraceptive use. Work status similarly tends to be related to knowledge, exposure, access to family planning services, and attitudes about childbearing. Household wealth index reflects economic status of the household, which may also be correlated with knowledge of and access to family planning services. Exposure to family Planning messages is included because it affects family size preferences and knowledge about family planning methods and sources. Urban/rural residence is included because urban women usually have better access to information about and access to contraception, as well as access to health providers in case there is a problem in using contraception, so that residence can affect both method choice and source of supply. Moreover, Muslims in India tend to be concentrated in urban areas. Region controls for geographic differences in fertility preferences and access to family planning services.

**RESULTS****Family planning program in India**

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### **Background Characteristics of Currently Married Women**

The presentation of results first discusses characteristics of women from NFHS-1 and NFHS-2, NFHS-3 and NFHS-4 followed by differentials in contraceptive use rate by religion. State differentials in contraceptive rate from each survey are also presented, and, finally, unadjusted and adjusted proportions of women in the two religion groups—Muslims and non Muslims—are discussed for each of the response variables in the three sections mentioned above.

Table 1 shows the sample distribution of women by religion and other variables included in the analysis for each survey. Muslim women accounted for 11.9 percent of all women in 1992-93 and their proportion has steadily increased to 13.2 percent in 2015-16.6. The increase in higher proportion of Muslim women in subsequent rounds is consistent with higher Muslim fertility and a slowly rising proportion of Muslims in the country. Muslim women in all the phases of NFHS are slightly younger than Non Muslims signifying lower age at marriage among Muslims than among Non Muslims. Both Muslim and Non Muslim women have experienced same rate of decline in illiteracy but Non Muslims have registered an increase of 18 percentage points in the proportion of

women having more than 10 years of education as compared to Muslims. On the other hand Muslims have fared better in the percentage of women having education 5-9 years possibly indicating that dropout rates after primary schooling is slightly higher among Muslim than among other religious categories.

The percentage of Muslim women residing in urban areas has increased from 36 percent in 1992-93 to 45 percent in 2015-16, while this percentage has increased from 25 to 32 in case of Non-Muslims during the same period. Proportion of SC population has increased among Non Muslims from 13 in 1992-93 to 23 and proportion of ST population among Muslims has increased from less than 0.5 to about 2 in 2015-16. There is not much difference in the percentage of women with different wealth quintals but the percentage of women who are richest declined by 2 percentage points during 1992-93 and 2015-16 and among Non Muslims this proportion has marginally increased during 1992-2016. The average household size among Muslims has declined by 1.72 members during 1992-93 and 2015-16 as compared to 1.39 among Non-Muslims during the same period.

Consistent with the decline in fertility, the average No. of children ever born to women has declined among both Muslims and Non-Muslims, but the average No. of Children ever born has declined by 1.54 children during 1992-2016 among Muslims as compared to 1.21 among Non Muslims indicating that Muslim fertility is declining much faster as compared to Non Muslims. While the difference in mean number of children surviving between Muslims and Non-Muslims in 1992-93 was 0.54 children, this difference has reduced to 0.23 children in 2015-16 between these two religious groups. The average number of ideal children desired by women has also declined between NFHS-1 and NFHS-4. The ideal number of children desired has declined by 0.85 children among Muslims and 0.7 children among Non-Muslims.

Muslims women are not only less likely exposed to family planning messages on various sources of mass media in all the four phases of NFHS but the rate of growth to exposure to FP message on mass media is also low as compared to Non-Muslims. Although both Muslim and Non-Muslim women in the NFHS-4 sample are more likely to work, than are women in the NFHS-1 sample but work participation rate among Muslims in all four rounds is much lower as compared to Non Muslims. Sample distributions by region of residence are quite similar in all four surveys.

<b>Table 1: Trends in Background Characteristics of Currently Married Women by Religion in India</b>																
	<b>Non Muslim</b>				<b>Muslim</b>				<b>Total</b>							
	<b>1992</b>	<b>1998</b>	<b>2005</b>	<b>2015</b>	<b>1992</b>	<b>1998</b>	<b>2005</b>	<b>2015</b>	<b>1992</b>	<b>1998</b>	<b>2005</b>	<b>2015</b>	<b>1992</b>	<b>1998</b>	<b>2005</b>	<b>2015</b>
<b>Age of women</b>																
15-19	10.8	9.3	7.1	3.5	12.1	11.2	8.3	4.5	10.9	9248	9.6	8106	7.2	6726	3.6	18492
20-29	40.2	39.2	37.5	35.3	42.6	40.9	40.7	38.9	40.5	34289	39.4	33390	37.9	35322	35.8	182990
30-39	30.3	31.6	33.3	34.4	28.8	30.5	32.9	33.0	30.1	25509	31.5	26672	33.2	30952	34.2	175083
40-49	18.7	19.8	22.1	26.8	16.6	17.4	18.0	23.5	18.5	15633	19.5	16514	21.6	20089	26.4	134812
<b>Education</b>																
Illiterate	60.6	52.8	46.2	32.4	65.0	56.9	54.8	37.9	61.1	51768	53.4	45186	47.3	44061	33.2	169603
<5 years	7.2	8.8	8.1	6.4	9.8	11.5	9.2	8.3	7.5	6356	9.1	7726	8.2	7646	6.7	34033
5-9 years	19.5	22.9	26.8	30.5	18.8	22.1	24.9	32.1	19.4	16458	22.8	19301	26.6	24752	30.7	157004
10 and more	12.7	15.5	18.9	30.7	6.4	9.5	11.0	21.7	11.9	10096	14.7	12468	17.9	16630	29.5	150738
<b>Residence</b>																
Urban	24.7	25.0	29.8	31.7	36.0	34.5	37.2	44.6	26.1	22077	26.1	22142	30.7	28604	33.4	170870
Rural	75.3	75.0	70.2	68.3	64.0	65.5	62.8	55.4	73.9	62601	73.9	62540	69.3	64485	66.6	340507
<b>Current work status</b>																
Not working	66.2	61.7	61.8	74.3	84.7	81.9	77.8	86.9	68.4	57887	64.3	54425	63.9	59484	76.0	66878
Working	33.8	38.3	38.2	25.7	15.3	18.1	22.2	13.1	31.6	26791	35.7	30257	36.1	33605	24.0	21142
<b>Caste/T ribe</b>																
SC	13.5	20.4	21.4	22.9	1.5	2.4	1.8	2.8	12.1	10253	18.2	15380	18.8	17498	20.3	103603
ST	9.9	9.7	9.3	10.3	.3	.8	.7	1.7	8.7	7409	8.6	7281	8.2	7590	9.1	46698
OBC	.0	34.3	41.0	43.3	.0	22.9	36.1	45.7	.0	0	32.9	27846	40.3	37528	43.7	223224
None	76.6	34.7	27.7	22.9	98.1	72.5	60.6	48.2	79.1	67017	39.4	33359	32.0	29833	26.3	134339
<b>Household size</b>																
<5	38.9	44.1	52.8	59.3	28.4	30.2	41.6	48.5	37.7	31896	42.4	35870	51.3	47790	57.9	295955
6-10	47.4	44.1	39.5	35.6	50.6	50.4	46.2	43.1	47.7	40425	44.9	38011	40.4	37562	36.6	186996
11 and above	13.7	11.8	7.7	5.1	21.0	19.4	12.2	8.3	14.6	12356	12.8	10801	8.3	7737	5.6	28427
<b>Wealth Index</b>																
Poorest	19.6	19.7	18.8	18.4	16.1	16.3	18.5	16.8	19.2	16278	19.3	16336	18.7	17425	18.2	92872
Poorer	19.6	20.1	19.8	19.7	20.4	19.0	20.3	20.2	19.7	16682	19.9	16873	19.9	18495	19.7	100897
Middle	20.4	20.3	20.0	20.6	18.6	18.7	20.2	19.8	20.2	17065	20.1	16996	20.1	18671	20.5	104683
Richer	19.9	19.4	20.0	20.6	23.3	25.1	23.2	23.7	20.3	17216	20.1	17026	20.4	18985	21.0	107485
Richest	20.5	20.6	21.4	20.8	21.6	20.9	17.9	19.5	20.6	17438	20.6	17451	21.0	19513	20.6	105440

<b>No. of Children Ever Born</b>																
None	12.0	10.8	10.1	9.9	11.6	10.2	9.9	10.2	12.0	10143	10.7	9088	10.1	9391	9.9	50878
1	14.7	14.3	15.3	18.5	13.3	13.3	12.4	16.4	14.5	12297	14.2	11987	14.9	13851	18.2	93286
2	18.7	21.8	25.8	34.0	14.6	16.6	19.5	24.1	18.2	15413	21.1	17883	25.0	23267	32.7	167107
3	18.2	19.9	20.0	19.7	14.4	15.6	16.8	19.7	17.8	15063	19.4	16401	19.6	18266	19.7	100701
4 and above	36.4	33.2	28.8	17.9	46.1	44.3	41.4	29.5	37.5	31762	34.6	29323	30.4	28314	19.4	99406
<b>No. of Children surviving</b>																
None	13.4	11.8	10.9	10.4	12.7	11.1	10.5	10.8	13.3	11265	11.7	9910	10.9	10131	10.5	53479
1	16.6	16.0	17.0	19.8	14.8	14.4	13.9	17.4	16.3	13843	15.8	13397	16.6	15458	19.5	99686
2	21.5	25.1	28.3	35.9	16.1	17.7	20.9	25.4	20.9	17695	24.1	20440	27.4	25464	34.5	176423
3	20.8	21.9	21.6	19.7	16.6	17.3	18.2	20.1	20.3	17204	21.3	18056	21.2	19699	19.8	101220
4 and above	27.7	25.3	22.1	14.2	39.8	39.4	36.4	26.3	29.1	24672	27.0	22879	24.0	22336	15.8	80569
<b>No. of sons surviving</b>																
None	27.8	25.8	25.6	26.3	26.2	24.0	23.9	25.8	27.6	23379	25.6	21656	25.4	23627	26.2	134168
1	32.0	34.3	36.7	42.1	27.6	28.9	30.2	34.6	31.5	26655	33.6	28444	35.9	33404	41.1	210252
2	25.3	26.9	26.6	25.1	22.5	23.6	24.6	24.8	25.0	21155	26.5	22423	26.3	24525	25.0	127931
3 and above	14.9	13.1	11.0	6.5	23.7	23.5	21.2	14.8	15.9	13490	14.4	12159	12.4	11533	7.6	39026
<b>Ideal No. of births</b>																
None	.0	.1	.9	3.7	.1	.1	.7	4.4	.0	19	.1	102	.8	786	3.8	19275
1-2	42.2	53.9	67.3	71.4	24.4	33.8	44.7	49.5	40.1	33915	51.4	43551	64.3	59847	68.5	350436
3+	57.8	45.9	31.9	24.9	75.6	66.1	54.5	46.1	59.9	50745	48.5	41029	34.9	32456	27.7	141666
<b>Exposed to FP Message</b>																
no	57.0	44.1	41.9	36.3	59.6	47.1	49.4	44.1	57.3	48549	44.4	37640	42.9	39908	37.3	190800
yes	43.0	55.9	58.1	63.7	40.4	52.9	50.6	55.9	42.7	36129	55.6	47042	57.1	53181	62.7	320577
<b>Region of Residence</b>																
North	13.1	12.5	12.8	12.9	5.1	9.8	10.1	10.7	12.1	10256	12.2	10318	12.4	11561	12.6	64589
Central	24.9	23.9	24.3	23.4	25.5	23.7	23.9	22.7	25.0	21134	23.8	20193	24.2	22544	23.3	119406
East	21.3	21.3	22.2	22.2	28.5	27.6	30.5	29.1	22.2	18759	22.1	18682	23.3	21702	23.1	118153
Northeast	3.2	3.0	3.3	2.9	6.6	6.7	5.5	6.8	3.6	3087	3.4	2902	3.6	3308	3.4	17335
West	14.5	15.0	15.1	14.9	13.3	10.7	11.7	11.5	14.4	12157	14.5	12251	14.6	13633	14.4	73716
South	23.0	24.4	22.4	23.7	21.0	21.5	18.2	19.2	22.8	19284	24.0	20337	21.9	20342	23.1	118178
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	84678	100.0	84682	100.0	93089	100.0	511377

## Trends in Current Use of Contraception

Table 2 shows trends in contraceptive use rates between NFHS-1 and NFHS-4 for India as a whole and separately for Muslims and Non-Muslims. Overall for India as a whole, contraceptive prevalence increased from 40 percent in NFHS-1 to 56 percent in NFHS-3 but during NFHS-3 and NFHS-4, the use of any method of family planning decreased by 2.5 percentage points and India reported a contraceptive use of 53 percent. Overall, between NFHS-1 and NFHS-4 use of contraception in India increased by 13 percentage points. The use of modern methods has increased from 36 percent in NFHS-1 to 48 percent in NFHS-4. Thus use of modern methods of family planning in the country has increased by 11 percent between NFHS-1 and NFHS-4.

<b>Year</b>	<b>None</b>	<b>Any Method</b>	<b>Modern</b>	<b>Spacing</b>	<b>Traditional</b>
<b>1992</b>	59.6	40.4	36.4	5.5	4.0
<b>1998</b>	52.1	47.9	43.0	6.8	5.0
<b>2005</b>	44.0	56.0	48.7	10.2	7.5
<b>2015</b>	46.5	53.5	47.8	11.5	5.8
<b>Change</b>		13.2	11.4	6.0	1.7

Among the modern methods of family planning Female sterilization is the most popular method, which was used by 31 percent of women in NFHS-1. The use of sterilization has increased to 36 percent in NFHS-2 and further to a high of 38 percent in NFHS-3. After NFHS-3, sterilization has started to decline as better spacing methods were made available and use of sterilization declined by 2 percentage points between NFHS-3 and NFHS-4. The use of spacing methods like condom, Pill, IUD has increased with each phase of NFHS from 5 percent in NFHS-1 to 11 percent in NFHS-4. Thus between the first and the fourth phase of NFHS, use of spacing methods has increased by 6 percentage points in the country. Traditional methods of family planning like periodic abstinence, withdrawal etc were used by 4 percent of women and use of these methods consistently increased to 7 percent in NFHS-3 but between NFHS-3 and 4, the use of traditional methods declined around 2 percent. So the use of Traditional methods has increased the least among all methods in the country.

### Trends in Current Use of Contraception by Religion

The trend in the use of contraception among Non Muslims follows the national trend. Consistent with higher fertility among Muslims, the contraceptive prevalence rate is lower among Muslims than among non-Muslims in each survey. At the time of NFHS-1, 27 percent of Muslim women (or their husbands) used a contraceptive method compared with 42 percent of Non-Muslims women. Contraceptive prevalence rate among Muslims steadily increased from 27.4 percent in 1992-93 to 45.4 percent in 2005-06 but slightly declined to 42.6 percent during 2015-16. Among Non Muslims, it increased from 42 percent in 1992-93 to 58 percent during 2005-06 and declined to 54.8 percent in 2015-16. Thus between NFHS-1 and NFHS-4, contraceptive prevalence increased by 17.5 percentage points among Muslims but it increased only by 12.5 percentage points among Non Muslims. The increase from 27 in NFHS-1 to 45 in NFHS-4 among Muslims is statistically significant ( $p = 0.001$ ) as is the increase from 42.2 in NFHS-1 to 54.8 percent in NFHS-4 among Non-Muslims ( $p < 0.05$ ). The CPR in the country declined by 3 percentage points between 2005-06 and 2015-16 but among Muslims, it remained unchanged.

**Table 3 : Trends in Current use of Contraception in India and Muslims and Non Muslim, 1992-2016**

Year	Non Muslims					Muslims				
	None	Any Method	Modern Method	Spacing Method	Trad Method	None	Any Method	Modern Method	Spacing Method	Trad Method
1992	57.9	42.1	38.3	5.5	3.9	72.6	27.4	22.2	6.1	5.3
1998	50.5	49.5	44.8	6.4	4.8	63.4	36.6	30.3	9.9	6.4
2005	42.4	57.6	50.5	9.5	7.2	54.6	45.4	36.6	14.6	9.0
2015	45.2	54.8	49.3	10.7	5.5	57.4	42.6	35.4	14.9	7.2
<b>Change % Points</b>		12.7	11.0	5.2	1.7		15.2	13.2	8.8	1.9

Overall modern methods have seen a significant increase in use since NFHS-1 both among Muslims and Non-Muslims, with the largest increases occurring between NFHS-1 and NFHS-2. Use of modern methods of contraception has increased from 22 percent in NFHS-1 among Muslims to 38 in NFHS-4. Among Non-Muslims modern contraceptive use has increased from 38 in NFHS-1 to 50 in



NFHS-3 but declined by 1.2 percentage points between NFHS-3 and NFHS-4. Thus use of modern methods between NFHS-1 and NFHS-4 has increased by almost 16 percentage points among Muslims but only by 11 percentage points among Non-Muslims. Changes between first three surveys are statistically significant but between more recent surveys the changes are not statistically significant both among Muslims and Non-Muslims.

### **Female sterilization**

Although female sterilization is the most popular method among women in India but it is not so popular among Muslims mainly due to religious reasons. In fact 90 percent of the difference in the contraception use among Muslims and Non Muslims is due to the differential female sterilization. While 29 percent of Non-Muslim women in India were using female sterilization in NFHS-1, the corresponding use among Muslims was only 14 percent. Thus use of female sterilization among Non-Muslim women in India was almost double than that of Muslim women. Female sterilization among Non-Muslims steadily increased from 29 percent in NFHS-1 to 39.7 percent in NFHS-3 and then slightly declined to 38.3 in NFHS-4. But among Muslim women, Female sterilization increased from a low of 14 percent in NFHS-1 to 21 percent in NFHS-4. Thus there was about 7 percentage points increase in the use of female sterilization among Muslims and 10 percentage points increase among Non Muslims between NFHS-1 and NFHS-4. While the female sterilization declined by 1.4 percentage points among Non Muslims between NFHS-3 and NFHS-5, but among Muslims this decline was insignificant. Thus, the female sterilization has stalled both among Muslims as well as among Non Muslims. The confidence intervals indicate that the increases in female sterilization between NFHS-1 and NFHS-2 and between NFHS-2 and NFHS-3 are both statistically significant ( $p < 0.001$ ) both among Muslims and Non-Muslims. The apparent decline between NFHS-3 and NFHS-4 is not.

### **Male Sterilization**

Male sterilization has steadily declined in India both among Muslims and Non Muslims. During NFHS-1, less than 4 percent of Non-Muslim couples were using male sterilization and this percentage has dropped to 0.3 percent during NFHS-4. The corresponding percentages among Muslims were 1.6 and 0.1 percent. There is almost identical decline in male sterilization rate both among Muslims and Non-Muslims. So, male sterilization has almost disappeared from the family planning basket of both Muslims and Non-Muslims. The confidence intervals indicate that the decline in male sterilization between NFHS-1 and NFHS-2 and between NFHS-2 and NFHS-3 is statistically significant

(p 0.001) among Non-Muslims. The apparent decline among Muslims between NFHS-2 and NFHS-3 and between NFHS-3 and NFHS-4 is not.

	FSTER			MSTER			PILL			IUD		
Year	Hindu	Muslim	Gap	Hindu	Muslim	Gap	Hindu	Muslim	Gap	Hindu	Muslim	Gap
1992	29.1	14.4	14.7	3.7	1.6	2.1	1.1	1.9	-.9	1.9	1.7	.2
1998	36.2	19.6	16.6	2.1	.8	1.3	1.8	4.1	-2.3	1.7	1.5	.1
2005	39.7	21.3	18.5	1.1	.6	.5	2.7	5.7	-3.0	1.7	1.8	-.1
2015	38.3	20.8	17.5	.3	.1	.2	3.5	8.0	-4.5	1.6	1.4	.1
Change	31.8	44.7		-91.8	-95.5		215.6	310.0		-18.5	-17.4	
	CONDOM			INJECTION			Periodic Abstinence			WITHDRAWAL		
Year	Hindu	Muslim	Gap	Hindu	Muslim	Gap	Hindu	Muslim	Gap	Hindu	Muslim	Gap
1992	2.4	2.4	.0	.0	.0	.0	2.5	3.7	-1.2	1.4	1.6	-.2
1998	2.9	4.2	-1.3	.0	.0	.0	3.0	3.6	-.6	1.9	2.8	-.9
2005	5.0	6.8	-1.8	.1	.3	-.2	4.8	5.6	-.7	2.4	3.4	-1.0
2015	5.4	7.2	-1.8	.2	.3	-.2	3.4	4.1	-.6	2.1	3.3	-1.1
Change	121.3	199.0		112.1	25.3		38.3	10.5		51.4	99.0	

### **Pill**

Pill is the only modern method which is more popular among Muslims than among Non Muslims in all the four rounds of NFHS. The use of Pill among Muslims has increased from about 2 percent in NFHS-1 to 8 percent in NFHS-4 and among Non-Muslims it has only marginally increased from 1 percent to 3.5 percent between NFHS-1 and NFHS-4. While the use of Pill among Non-Muslims between NFHS-1 and NFHS-4 has doubled but among Muslims it has registered a three-fold increase. The confidence intervals indicate that the increase in the use of pill between NFHS-2 and NFHS-3 and between NFHS-3 and NFHS-4 is statistically significant (p 0.001) both among Muslims and Non-Muslims. The increase is statistically significant (p 0.001) both among Muslims and Non-Muslims. The increase in the use of Pill is statistically significant among Muslims between NFHS-1 and NFHS-2 also.

### **IUD**

IUD is the least popular method among spacing methods in the country as a whole irrespective of religious affiliation. Less than 2 percent of couples in India were using IUD during NFHS-1 and this percentage has declined to 1.6 percent during NFHS-4 among Non Muslims and 1.4 percent among

Muslims. Thus the decline in the use of IUD is of almost of similar magnitude among the two religious groups. The decline in the use of IUD is not statistically significant between successive rounds of NFHS both among Muslims and Non-Muslims.

### **Condom**

Among modern spacing methods, although condom is the most popular method in India, but in each phase of NFHS, it was found to be used by higher proportion of Muslim than by Non Muslims. Condom was used by 2.4 percent of couples both Muslim and Non-Muslim couples in NFHS-1 but its use has almost tripled among Muslims between NFHS-1 and NFHS-4. The highest increase of 2.6 percentage points was observed between NFHS-2 and NFHS-3. Among Non-Muslims, condom use has increased from 2.4 in NFHS-1 to 5.4 percent in NFHS-4. The increase in condom use is statistically significant ( $p < 0.001$ ) between successive rounds of NFHS both among Muslims and Non-Muslims.

### **Injections**

Injections were lately added to the basket of contraceptives in India and results from NFHS-4 indicate that less than 0.5 percent of women have reported their use in NFHS-4. There are no religious differentials in the use of injections as a method of contraception.

### **Trends in Traditional Methods**

The trend in the current use of traditional methods of contraception in India follows that of modern contraception, although at lower levels. The prevalence of traditional methods of contraception has increased between NFHS-1 and NFHS-3 and has since declined both among Muslims and Non-Muslims. The use of traditional methods in all phases of NFHS is higher among Muslims than Non-Muslims. During NFHS-1, the use of traditional method among Muslims was 1.5 more than Non Muslims but this gap has increased to 1.8 percent during NFHS-4. The increase from 6.4 in NFHS-2 to 9 in NFHS-3 among Muslims is statistically significant ( $p < 0.001$ ) as is the decrease to 9 in NFHS-4 ( $p < 0.05$ ). Same is the case with Non-Muslims. Among Non-Muslims, the highest percentage (7) of traditional method users were reported in NFHS-3 and this proportion has declined to 5.5 in NFHS-4.

### **Periodic Abstinence**

Among various traditional methods, periodic abstinence is somewhat more popular among both Muslims and Non-Muslims. Use of periodic abstinence has increased among Muslims from 3.7

percent in NFHS-1 to 5.6 percent in NFHS-3 and thereafter declined to 4 percent in NFHS-4. Same trend can also be observed among Non-Muslims although at somewhat lower levels. Further, the difference in use of periodic abstinence between Non-Muslims and Muslims in NFHS-1 was 1.5 percent and this difference has narrowed down to 0.6 percent in NFHS-4 indicating that more and more Non-Muslims are using PA. The increase is statistically significant ( $p < 0.001$ ) among both Muslims and Non Muslims between NFHS-2 and NFHS-3 as is the decrease between NFHS-3 and NFHS-4 ( $p < 0.05$ ).

### **Withdrawal**

Use of withdrawal as a method of contraception is also more popular among Muslims than among Non-Muslims. Around 2 percent of couples are reported to be using withdrawal in various rounds of NFHS among Non Muslims but among Muslims, this proportion has stagnated at around 3 percent between NFH-2 and NFHS-4. While the use of withdrawal has almost doubled among Muslims between NFHS1 and NFHS-4 but its use has slightly declined among Non Muslims during NFHS-3 and NFHS-4. The change in the use of withdrawal between various phases of NFHS both among Muslims and Non Muslims is not statistically significant.

### **Differentials in modern contraceptive use across surveys**

In all survey years, the use of modern contraception varies significantly by various socio-economic and demographic factors— age, residence, education, wealth index, as shown in Table 2. This indicates substantial differentials or inequities across socioeconomic groups.

### **Age and Contraceptive use**

Use of modern contraception generally increases with age (age 15 to 39) both among Muslims and Non-Muslims in all phases of NFHS. After age 40, it declines among both religious groups. Use of modern contraception is higher in younger age group of 15-19 among Muslims than among Non-Muslims. This is true for all four phases of NFHS. While the use of modern methods of contraception after age 20 is lower among Muslims' than among Non-Muslims, but Muslims have registered higher growth in the use of modern methods of contraception among older age groups. Use of modern methods among Non Muslim women age 20 or older has increased from 61 percent in NFHS-1 to 66 percent in NFHS-4, corresponding increase among Muslims is from 38 percent to 56 percent. This indicates that more and more women are accepting modern methods of contraception among Muslims

now than before. On the contrary, use of modern methods among elder women (40-49) seems to have stagnated among Non Muslims but not among Muslims. Further, the gap in the use of modern methods of contraception between Non-Muslims and Muslims in each age group is narrowing down with each phase of NFHS.

	Any Method								Change in CPR 1992-2016		Gap in CPR between Non Muslims and Muslims			
	Non Muslim				Muslim				NM	M	1992	1998	2005	2015
	1992	1998	2005	2015	1992	1998	2005	2015						
<b>Age</b>														
15-19	6.2	7.5	12.2	14.0	12.1	11.4	17.5	19.2	7.8	7.1	-5.9	-3.9	-5.3	-5.2
20-29	32.5	38.9	46.3	40.2	23.5	31.1	39.8	36.1	7.7	12.6	9.0	7.8	6.5	4.1
30-39	60.6	66.6	73.5	65.9	38.1	50.9	58.3	56.2	5.3	18.1	22.5	15.7	15.1	9.7
40-49	54.0	63.9	68.5	65.1	30.8	41.6	48.3	50.2	11.1	19.4	23.2	22.3	20.2	14.9
<b>Education</b>														
Illiterate	35.1	43.7	54.0	56.1	21.5	30.3	39.5	42.3	21.0	20.8	13.7	13.4	14.5	13.9
<5 years	53.8	57.7	64.3	62.0	40.0	45.5	55.8	52.9	8.1	12.9	13.8	12.2	8.5	9.1
5-9 years	51.4	54.8	59.5	56.3	36.7	44.8	51.7	49.0	4.9	12.2	14.7	10.1	7.9	7.3
10+	55.0	57.8	61.8	50.4	42.5	45.8	53.2	42.2	-4.6	-.4	12.4	12.0	8.6	8.2
<b>Residence</b>														
Urban	54.1	60.9	65.6	58.9	34.6	43.9	54.6	49.0	4.8	14.3	19.4	17.0	11.0	9.9
Rural	38.3	45.9	54.5	52.9	23.5	32.9	40.2	42.3	14.6	18.8	14.8	13.0	14.3	10.6
<b>Work status</b>														
Not working	40.2	47.2	54.4	52.9	26.5	35.4	43.8	45.2	12.7	18.7	13.7	11.8	10.6	7.7
Working	46.1	53.6	63.2	65.2	33.3	42.8	51.7	56.0	19.1	22.7	12.8	10.8	11.6	9.2
<b>Caste</b>														
SC	34.7	44.9	55.1	55.3					20.6	.0	34.7	44.9	55.1	55.3
ST	32.7	38.7	47.9	49.8	38.5	35.6	25.1	32.3	17.1	-6.2	-5.8	3.1	22.8	17.5
OBC	.0	48.1	55.7	53.1	.0	32.0	40.4	41.5	53.1	41.5	.0	16.0	15.3	11.6
None	44.7	57.6	66.1	59.9	27.5	38.9	49.1	50.0	15.2	22.4	17.2	18.7	17.0	9.9
DK	.0	32.7	66.6	43.4	.0	24.0	41.3	47.7	43.4	47.7	.0	8.8	25.3	-4.3
<b>Household size</b>														
<5	44.5	52.6	59.9	56.5	27.5	39.9	48.6	48.1	12.0	20.6	16.9	12.6	11.3	8.4
6-10	42.3	48.6	56.1	52.8	29.2	37.6	44.8	43.8	10.4	14.6	13.1	11.1	11.2	9.0
11+	35.2	42.7	52.2	49.3	23.4	29.6	37.9	36.6	14.1	13.2	11.8	13.1	14.2	12.7
<b>Wealth Quintile</b>														
Poorest	28.6	34.5	42.9	43.3	20.1	24.6	33.5	33.5	14.6	13.4	8.5	9.9	9.5	9.7
Poorer	32.4	40.0	52.7	52.9	19.6	31.1	39.6	45.5	20.6	25.9	12.8	8.9	13.1	7.5
Middle	40.7	50.8	58.6	57.1	23.6	33.8	43.7	47.1	16.4	23.5	17.1	17.0	14.9	9.9

Richer	48.3	57.5	64.0	58.7	30.5	41.0	53.6	48.8	10.4	18.4	17.9	16.5	10.3	9.9
Richest	60.1	65.1	68.9	60.6	40.6	48.8	56.4	49.0	.5	8.4	19.5	16.2	12.5	11.6
<b>CEB</b>														
None	4.1	4.2	7.3	8.2	4.8	5.7	8.3	7.7	4.1	2.9	-.6	-1.5	-1.0	.6
1	18.4	22.7	33.2	34.7	17.1	19.4	27.3	32.0	16.3	14.9	1.3	3.4	5.9	2.7
2	45.6	58.6	69.3	67.4	28.0	38.9	55.7	54.3	21.8	26.4	17.6	19.6	13.6	13.1
3	59.7	67.5	75.7	69.0	35.4	52.5	59.8	59.9	9.3	24.5	24.3	15.0	15.9	9.1
4+	53.9	59.6	65.9	61.8	33.6	42.8	49.4	48.5	7.9	14.9	20.3	16.8	16.4	13.3
<b>Child Surviving</b>														
None	4.1	4.4	7.2	8.2	5.0	5.5	8.2	7.6	4.1	2.6	-.9	-1.0	-1.0	.5
1	19.4	24.1	34.8	35.9	17.0	20.8	28.6	32.7	16.5	15.7	2.4	3.3	6.2	3.2
2	47.7	59.9	71.3	68.2	29.5	40.0	55.5	55.3	20.5	25.8	18.2	19.9	15.8	12.9
3	61.4	68.9	75.9	69.6	35.4	53.8	60.5	59.5	8.3	24.2	26.0	15.1	15.4	10.1
4+	55.6	60.3	65.7	61.0	34.6	42.5	49.7	48.4	5.4	13.9	21.0	17.8	16.0	12.6
<b>Sons Surviving</b>														
None	14.7	18.6	26.4	28.2	12.7	15.9	24.1	25.1	13.5	12.4	1.9	2.7	2.3	3.1
1	42.5	51.8	62.4	60.2	26.5	39.3	49.6	50.4	17.8	23.8	15.9	12.6	12.8	9.9
2	63.5	71.2	78.1	71.4	38.8	50.3	60.3	58.1	7.9	19.4	24.7	20.9	17.8	13.2
3+	56.8	61.3	66.6	63.3	34.3	41.5	47.1	47.0	6.5	12.6	22.5	19.9	19.5	16.3
<b>Exposure to FP Message</b>														
No	35.3	40.7	51.6	50.2	21.1	27.7	38.0	40.8	14.8	19.7	14.2	13.0	13.6	9.3
Yes	51.3	56.7	62.3	57.4	36.9	44.8	52.9	48.8	6.2	11.9	14.3	11.9	9.3	8.6
<b>Region</b>														
North	45.9	54.6	57.6	64.3	26.3	36.5	42.6	47.5	18.4	21.1	19.5	18.0	15.1	16.8
Central	26.5	34.4	49.9	49.8	14.2	24.2	33.3	39.4	23.3	25.2	12.3	10.2	16.7	10.4
East	39.6	45.4	51.7	49.3	25.3	35.1	43.8	42.6	9.7	17.3	14.4	10.3	7.9	6.7
Northeast	42.7	45.7	56.1	48.8	31.1	32.4	45.7	49.8	6.0	18.6	11.6	13.3	10.4	-1.0
West	54.2	61.0	67.5	59.0	35.7	51.8	59.0	53.9	4.9	18.2	18.5	9.3	8.5	5.1
South	51.7	59.2	66.1	57.7	40.6	46.5	57.6	48.3	6.0	7.7	11.1	12.7	8.5	9.4

### Education and modern Contraceptive use

There is a close relationship between education and use of contraception. Use of contraception increases with an increase in the level of education and this is true for Muslims as well as for Non-Muslims in all the four phases of NFHS. For example in NFHS-1, contraceptive use among Non-Muslims has increased from 35 percent among Illiterate women to 55 percent among women with 10 or more years of education. Similarly among Muslims, the corresponding proportions have increased from 21 percent to 42 percent.

The contraception rate has increased by 20 percentage points during NFHS-1 and NFHS-4 both among Muslims and Non-Muslims but among women who have 5-9 years of education, it has increased more among Muslims than among Non Muslims. Similarly, among women with 10 or more years of education, the contraception acceptance has declined by about 12 percent between NFHS-3 and NFHS-4, it has declined by only 8 percent among Muslims. Another way to look at the trends in contraception rate by education is to calculate the gap in the acceptance over the various rounds of NFHS. There was a difference of about 14 percent in the contraception rate between Muslims and Non Muslims in NFHS-1 but this gap has not changed in the subsequent rounds of NFHS. However, this gap has narrowed down in case of literate women particularly among women who have completed 5-9 years of education and women with 10 or more years of education. This indicates that more and more educated Muslim women are accepting a method of family planning.

### **Residence and modern Contraceptive use**

It has been found that the use of modern methods of family planning in India is higher among urban women as compared to rural women in all the four phases of NFHS. This is true for both Muslims as well for Non Muslims. Further, the use of contraception has increased between NFHS-1 and NFHS-3 irrespective of religion and place of residence and has declined during NFHS-3 and NFHS-4 both among Muslims and Non Muslims irrespective of rural urban residence but the rate of increase is more in case of both rural and urban Muslims as compared to Non Muslims. CPR has increased by 5 percent among urban Non Muslim women as compared to 14 percent among Urban Muslim women and similarly, among rural areas, CPR has increased by 15 percent among Non Muslims as compared to 19 percent among Muslims. The gap in CPR over the years between Non Muslims and Muslims is narrowing both in rural as well as urban areas. The gap has narrowed down more in urban areas than in rural areas indicating that more and more Muslim women residing in urban areas are coming forward to accept contraception as compared to Non Muslim counterparts.

### **Work Status and Contraceptive use**

It has been found that the use of family planning in India is higher among women who are working as compared to women who are not working in all the four phases of NFHS. This is true for both Muslims as well for Non Muslims. Among Non Muslim women who are not working, the use of contraception has increased between NFHS-1 and NFHS-3 but has slightly declined during NFHS-3

and NFHS-4, while among working women it has consistently increased between NFHS-1 and NFHS-4. There is an overall increase of 13 percentage points among Non Muslims women who are not currently working as compared to 19 percentage points among working Non Muslim women. Among Muslims use of any method has consistently increased both among working and non working women between NFHS-1 and NFHS-4. The difference in change among Muslims between working and not working is smaller than non Muslims. The gap in use between Non Muslims and Muslims both among working and non working women has narrowed down with each phase of NFHS. There was a gap of 14 percent among working women between Muslims and Non Muslims in NFHS-1 and this difference has declined to 8 percentage points. Similarly, there was a gap of 13 percent among not working women between Muslims and Non Muslims in NFHS-1 and this difference has declined to 9 percentage points. This indicates that more and more Muslim women who are not working are coming forward to accept contraception as compared to Non Muslim counterparts.

#### **Caste and modern Contraceptive use**

Use of contraception in all the phases of NFHS is lower among women belonging to Scheduled tribes and Schedules Tribes as compared to other women. CPR among Scheduled Tribes in all the NFHS phases is lower among Muslim women as compared to Non Muslims. Besides, while the CPR among ST Muslim women had generally declined during NFHS-1 and NFHS-4, but among Non Muslims STs women it has increased by 17 percent during NFHS-1 and NFHS-4. Among women who do not belong to any caste, CPR has increased by 15 percent during NHS-1 and NFHS-4 but among Muslim not belonging to any caste/tribe, it has increased 22 percent between the two phases of NFHS. Further, Non-Muslim and Muslim gap in CPR among general category has narrowed down by half between NFHS-1 and NFHS-4, indicating while SC and OBC women continue to have low CPR but more and Muslim Women who do not belong to any Caste/tribe are coming close to their counterparts among Non Muslims so far as CPR is concerned.

#### **Family Size and modern Contraceptive use**

Studies have shown that CPR among women residing in a in joint family system have lower CPR as compared to the women who live in a nuclear family. The present study also tried to see if the size of the family is associated with CPR and whether women belonging to different religious affiliations behave similarly on this account. CPR has increased from 44 percent in NFHS-1 to 56 percent in



NFHS-4 among Hindu women with a family size of 5, while as among Muslim, corresponding increase in TFR is from 27 percent to 48 percent. Between NFHS-1 and NFHS-4, CPR has increased by 21 percent among Muslim with a low family size as compared to only 12 percent among Hindus of same family size. Further, the gap in CPR has narrowed down during NFHS-1 and NFHS-4 between Hindus and Muslims having a family size of less than 5 and 56-10, but this gap has increased for couples with a family size of more than 11, indicating that fewer women with larger families among Muslims are accepting modern methods of contraception.

### **SLI and modern Contraceptive use**

There is a direct relationship between wealth quintiles and use of contraception. The percentage of currently married women who use a modern method of family planning increases with the wealth quintile in each phase of NFHS. For example among Non Muslims in NFHS-1, the modern CPR is 29 percent among women in households in the lowest wealth quintile to 60 percent among those in the highest wealth quintile. Among Muslims, modern contraceptive use in NFHS-4 increases 34 percent of women in the lowest wealth quintile to 49 percent of women in the highest quintile. CPR has increased by similar magnitude among poorest women both among Muslims and Non Muslims and consequently, the gap in CPR between Non Muslims and Muslims among poorest women has not changed much between NFHS-1 and NFHS-4. But among Middle, Richer and Richest women, the CPR has increased more in case of Muslims than in case of Non Muslims and consequently the differences in CPR between the two communities has narrowed down. For example, among richest group, the difference has come down from 18 percent in NFHS-1 to 10 percent in NFHS-4 indicating that higher proportion of Muslim women from well off families are now accepting modern methods of family planning as compared to non Muslim women.

### **No. of Children Ever Born and Modern Contraceptive Use**

The percentage of women using any method of contraception is associated with children ever born. In NFHS-1, among Non Muslims; it rises from 18 among those with 1 CEB to 46 and 60 respectively among women with 2 and 3 CEB. Similarly among Muslim, the corresponding figures are 17, 28 and 35. Use of contraception has increased marginally among Muslims with no CEB between NFHS-1 and NFHS-4, but it has increased substantially (25) among Muslim women with 2 and 3 CEB. Ever Born Barring women with no CEB, the increase in the use of contraception between NFHS-1 and

NFHS-2 among Muslims is higher than Non Muslims. Another important finding which emerges from the data is that the gap in the use of contraception between Non Muslims and Muslims has narrowed down in case of women with 2, 3 and 4 or more births indicating that Muslim women with 2 and 3 CEB are increasingly accepting modern methods of contraception.

#### **No. of Children Surviving and Modern Contraceptive Use**

The percentage of women using any method of contraception is associated with number of children surviving. In NFHS-1, among Non Muslims; it rises from 19 among those with 1 CEB to 61 and 56 respectively among women with 2 and 3 CS. Similarly among Muslim, the corresponding figures are 17, 35 and 35. Use of contraception has decreased marginally among Muslims with no CS between NFHS-1 and NFHS-4, but among women with 2 and 3 CS, it has increased substantially (25). Barring women with no CEB, the increase in the use of contraception between NFHS-1 and NFHS-2 among Muslims is higher than Non Muslims. Another important finding which emerges from the data is that the gap in the use of contraception between Non Muslims and Muslims has narrowed down in case of women with 3 or more births indicating that Muslim women with 3 CS are increasingly accepting modern methods of contraception.

#### **No. of Sons Surviving and Modern Contraceptive Use**

The percentage of women using any method of contraception is associated with number of sons surviving in each phase of NFHS. This is true for both Muslims and Non Muslims. In NFHS-4, among Non Muslims; it rises from 28 among those with no son surviving to 71 among women with 2 sons surviving. Similarly among Muslim, the corresponding figures are 25 and 58 during NFHS-4. Use of contraception has increased more among Non Muslims than Muslim women with no son between NFHS-1 and NFHS-4, but among women with 2 and 3 sons, it has increased by 24 and 19 as compared to 18 and 8 among Non Muslims. This has resulted in narrow differences in contraceptive use between Non Muslims and Muslims with 1 or 2 surviving sons. For example the difference in CPR between Muslims and Non Muslims in NFHS-1 was 25 but it has narrowed down to 13 in NFHS-4. So the acceptance of contraception among Muslim women is increasing once a woman at least has one surviving son. This is equally true for non Muslims indicating that Muslim and Non Muslim women behave similarly so far as son preference and use of family planning is concerned.

### **Exposure to Family Planning Messages and Modern Contraceptive Use**

Women in India who have heard a family planning message on media have a higher probability of using contraception than women who are not exposed to media messages on family planning. This is true for both Muslims and Non Muslims for all phases of NFHS. During NFHS-4 among Non Muslims 57 of women exposed to FP were using contraception as compared to 50 among those who are not exposed. The corresponding percentages among Muslims during the same period were 41 and 49. While there was an increase of 15 percentage points in CPR between NFHS-1 and NFHS-4 among Non Muslims who are not exposed to FP messages, the corresponding increase was almost 20 among Muslims during the same period. Among Non Muslims who are exposed to FP messages, there was an increase of 15 percentage points in CPR between NFHS-1 and NFHS-4, the corresponding increase was almost 20 among Muslims during the same period. The gap between those exposed to FP message and those non-exposed to FP messages by religion has narrowed down by almost equal magnitude.

### **Region of residence and Modern Contraceptive Use**

Use of contraception has consistently increased between NFHS-1 and NFHS-4 in North and Central India both among Non Muslims and Muslims. Among Non Muslim belonging to East, North East, West and South, it increased between the first three phases of NFHS but between NFHS-3 and NFHS-4, it decreased by about 8 percentage points in North East, West and South Indian states. Among Muslim women, CPR decreased in only West and South India between the first three phases of NFHS but between NFHS-3 and NFHS-4, it decreased by 5 percentage points in West and 10 percentage points in South Indian States. While looking at the overall increase between NFHS-1 and NFHS-4, there is not much difference in the percentage growth in CPR between Non Muslims and Muslims in North, South and Central India. However, in East, North- East, West India, the CPR has increased by about 18 percentage points among Muslims and by less than 10 percentage points among Non Muslims. The gap in CPR between Non-Muslims and Muslims has narrowed down in almost all regions. In fact the gap in CPR in North-east has completely wiped out and the Muslim CPR is 1 percentage higher than Non Muslims.

## **State wise Trends in use of Modern Contraception among Muslims and Non Muslims**

The following paragraphs try to examine the trends in the use of modern contraception among Muslims and Non-Muslims women residing in different States in India. The study will focus only on those States, which have at least 10 percent Muslim population. The States included in the analysis are Jammu and Kashmir, Delhi, Uttar Pradesh, Bihar, Assam, West Bengal, Maharashtra, Karnataka and Kerala. We will first examine the trends in modern contraception for each of the State by religion. Then we will calculate the change in modern contraception by religion during NFHS-1 and NFHS-4. Finally we will calculate the gap in the use of modern contraception between Non-Muslims and Muslims in each phase of NFHS.

### **Jammu and Kashmir**

Muslims in J&K had a lower use of modern contraceptive in each phase of NFHS than Non Muslims. However, with each phase of NFHS, use of modern methods of contraception increased both among Muslims as well among Non Muslims. While it increased by about 9 percent among Non Muslims but among Muslims it increased by 18 percentage points. This higher use in subsequent phase of NFHS resulted in narrowing down the gap in the use of modern methods of contraception. From example, the Modern CPR among Non Muslims was 16 percent higher than Muslims but difference got reduced to only less than 8 percent in NFHS-4. Thus, Muslims in J&K are increasingly opting for family planning.

### **Delhi**

In Delhi, MCPR among Muslims was always very low compared to Non Muslims. While the MPCR among Non Muslims in Delhi slightly increased by 2 percentage points between NFHS-1 and NFHS-2 but after NFHS-2, it started to decline among Non Muslims and in 2015-16, only half of couples in Delhi were using a modern method of contraception. Among Muslims, the MCPR has declined from 43 percent in NFHS-1 to 35 percent in NFHS-4 and between NFHS-3 and NFHS-4, the use of modern contraception has declined by 12 percent. Thus overall use of modern methods of family planning has declined both among Muslims and Non Muslims, but the decline is more among Muslims (8) than among Non-Muslims (5 percent). Consequently, the difference in use of modern methods of contraception between Muslims and Non Muslims has widened and in NFHS-4, Muslims had 16 percentage points lower use than Non Muslims.

## **Uttar Pradesh**

In UP use of modern Methods of contraception among Non Muslims has increased from 20 percent in NFHS-1 to 34 percent in NFHS-4. Among Muslims corresponding increase is from 9 percent to 24 percent. The highest increase among Non-Muslims can be observed between NFHS-2 and NFHS-3 but among Muslims the highest improvement was between NFHS-1 and NFHS-2. Between NFHS-1 and NFHS-4, the use of Modern methods has increased by similar magnitude both among Non Muslims and Muslims and since the use of modern methods among Hindus has also not improved much, therefore the gap in the use of modern methods by Muslims and Non Muslims has not registered any decline. While the use of modern methods was 11 percent higher among Non Muslims in NFHS-1, this difference continued to be 11 percent in NFHS-4. This indicates that both Muslims and Non-Muslims have feared equally between the first and fourth phase of NFHS, so far as use of Modern methods of family planning is concerned.

## **Bihar**

In Bihar use of modern Methods of contraception among Non Muslims has increased from 24 percent in NFHS-1 to 29 percent in NFHS-4. Among Muslims corresponding increase is from 6 percent to 13 percent. The highest increase among both Non-Muslims and Muslims can be observed between NFHS-2 and NFHS-3. Between NFHS-1 and NFHS-4, the use of Modern methods has increased by 4 percentage points among Non Muslims and 7 percentage points among Non Muslims. Since the use of modern methods among Hindus has improved slightly, and Muslims also have not registered any significant increase in the use of modern methods of family planning, therefore the gap in the use of modern methods between Muslims and Non Muslims has not registered any major improvement. The use of modern methods was 19 percent higher among Non Muslims in NFHS-1, this difference has marginally declined to 16 percent in NFHS-4. This indicates that both Muslims and Non-Muslims have feared almost equally between the first and fourth phase of NFHS, so far as use of Modern methods of family planning is concerned.

## **Assam**

The use of modern Methods of contraception among Non Muslims in Assam has increased from 23 percent in NFHS-1 to 37 percent in NFHS-4. Among Muslims corresponding increase is from 12 percent to 37 percent. Thus Muslims have registered almost three fold increase in use of modern

methods of family planning. Between NFHS-3 and NFHS-4, while the use of contraception in India has generally declined both among Muslims and Non Muslims, but the use of modern methods among Muslims in Assam has doubled from 18 percent to 37 percent. Since the use of modern methods among Hindus has improved marginally and Muslims have registered a significant increase in the use of modern methods of family planning, therefore the gap in the use of modern methods by Muslims and Non Muslims has narrowed down and during NFHS-4, this gap has vanished and both Muslims and Non Muslims have almost same rate of modern contraception (37 percent).

### **West Bengal**

The use of modern Methods of contraception among Non Muslims in West Bengal has increased from 41 percent in NFHS-1 to 59 percent in NFHS-4. Among Muslims corresponding increase is from 24 percent to 52 percent. Thus Muslims have registered more than two fold increase in use of modern methods of family planning between NFHS-1 and NFHS-4. Between NFHS-3 and NFHS-4, while the use of contraception in India has generally declined but the use of modern methods of family planning in West Bengal both among Muslims and Non Muslims has increased. Among Non Muslims, it has improved by 5 percentage points but among Muslims it has increased by 10 percentage points. Since the use of modern methods among Muslims has improved more than Non Muslims, therefore the gap in the use of modern methods between Muslims and Non Muslims has narrowed down and now the modern CPR among Muslims is only 7 percentage points lower than Non Muslims.

### **Maharashtra**

The use of modern Methods of contraception among Non Muslims in Maharashtra has increased from 55 percent in NFHS-1 to 63 percent in NFHS-4, thereby there is an increase of 8.4 percentage points in the use of modern methods of contraception. Among Muslims corresponding increase is from 35 percent to 56 percent and accordingly there is an increase of 21 percentage points in the use of modern methods of contraception. Between NFHS-3 and NFHS-4, among Non Muslims, it has declined by 3 percentage points but among Muslims it has declined by only by 1 percentage point. Since the use of modern methods among Muslims has improved more than Non Muslims during NHS-1 and NFHS-3, and it has declined more among Non Muslims than among Muslims between

NFHS-3 and 4, therefore the gap in the use of modern methods between Muslims and Non Muslims has narrowed down from 20 percent in NFHS-1 to only 7 percentage points in NFHS-4.

### **Karnataka**

The use of modern Methods of contraception among Non Muslims in Karnataka has increased from 49 percent in NFHS-1 to 63 percent in NFHS-3, thus during this period there was an increase of 14 percentage points in the use of modern methods of contraception among Non Muslims. Among Muslims corresponding increase is from 36 percent to 56 percent and accordingly there is an increase of 20 percentage points in the use of modern methods of contraception during the same period. Between NFHS-3 and NFHS-4, use of modern methods of family planning has declined by 9 percentage points both among Non Muslims and Non Muslims in Karnataka. Since the use of modern methods among Muslims has improved more than Non Muslims during NHS-1 and NFHS-3, and it has declined by an equal proportion both among Non Muslims and Muslims between NFHS-3 and 4, therefore the gap in the use of modern methods between Muslims and Non Muslims has narrowed down from 13 percent in NFHS-1 to only 6 percentage points in NFHS-4.

### **Kerala**

Kerala had achieved a high CPR before the commencement of National Family Health Surveys in India. Thus, there was not much scope for CPR to improve. Consequently, the use of modern methods of family planning has stabilized at around 63 percent between NFHS-1 and NFHS-3 among Non Muslims. But during NFHS-3 and NFHS-4, it has declined by 9 percentage points. However, Muslims in Kerala had a low rate of modern contraceptive use of 32 percent in NFHS-1 and it increased to 45 percent in NFHS-3 but again declined to 40 percent in NFHS-4. Thus overall modern use of contraception among Muslims increased by around 9 percentage points between NFHS-1 and NFHS-4 but among Non Muslims it declined by 8 percentage points during the same period. Since the use of modern methods among Non Muslims has stagnated during NFHS-1 and NFHS-3 and has declined considerably between NFHS-3 and NFHS-4, while as it has slightly improved among Muslims between NFHS-1 and NFHS-3 and has slightly declined between NFHS-3 and 4, therefore the gap in the use of modern methods between Muslims and Non Muslims has narrowed down from 30 percent in NFHS-1 to 14 percentage points in NFHS-4. Thus Muslims in Kerala continue to be

lagging behind in using modern methods of family planning compared to Muslims residing in Karnataka, Maharashtra and West Bengal.

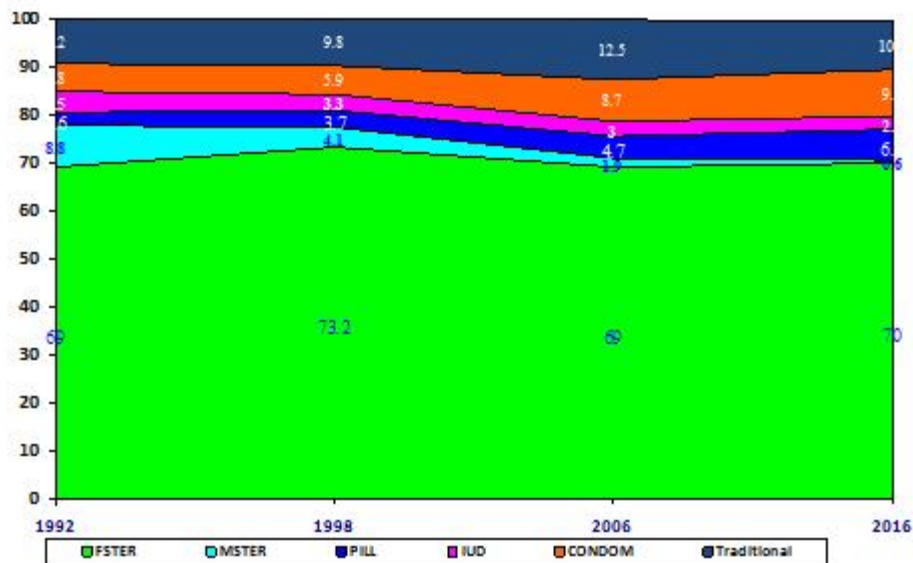
<b>Table 6: State wise trends in use of Modern Methods of Contraception among Muslims and Non Muslims</b>						
<b>STATE</b>	<b>Religion</b>	<b>1992</b>	<b>1998</b>	<b>2005</b>	<b>2015</b>	<b>Change between 1992-2016</b>
<b>J&amp;K</b>	Non Muslims	42.5	44.4	48.1	51.2	8.7
	Muslims	26.0	40.1	43.0	43.6	17.6
	Hindu-Muslim Gap	16.5	4.3	5.0	7.6	
<b>DELHI</b>	Non Muslims	55.9	57.8	57.4	50.6	-5.4
	Muslims	43.0	42.3	47.3	34.9	-8.1
	Hindu-Muslim Gap	12.9	15.4	10.2	15.7	
<b>UP</b>	Non Muslims	20.2	23.2	32.7	34.5	14.3
	Muslims	9.5	16.0	21.1	23.9	14.4
	Hindu-Muslim Gap	10.7	7.2	11.5	10.6	
<b>BIHAR</b>	Non Muslims	24.5	25.1	32.2	28.9	4.4
	Muslims	5.6	7.5	15.0	13.1	7.4
	Hindu-Muslim Gap	18.8	17.6	17.2	15.8	
<b>ASSAM</b>	Non Muslims	23.4	32.5	30.2	36.8	13.5
	Muslims	11.7	15.1	18.7	37.3	25.6
	Hindu-Muslim Gap	11.7	17.4	11.6	-5	
<b>WEST BENGAL</b>	Non Muslims	41.3	50.5	53.5	58.7	17.4
	Muslims	23.6	38.0	41.2	51.7	28.1
	Hindu-Muslim Gap	17.7	12.5	12.3	7.0	
<b>MAHARASHTRA</b>	Non Muslims	55.0	61.3	66.0	63.4	8.4
	Muslims	35.2	47.9	56.9	55.9	20.6
	Hindu-Muslim Gap	19.8	13.3	9.1	7.6	
<b>KARNATAKA</b>	Non Muslims	48.8	58.2	63.4	52.1	3.4
	Muslims	36.1	43.7	55.5	45.9	9.8
	Hindu-Muslim Gap	12.7	14.5	7.9	6.2	
<b>KERALA</b>	Non Muslims	62.3	63.3	63.2	54.3	-8.0
	Muslims	31.9	41.1	45.3	40.5	8.6
	Hindu-Muslim Gap	30.3	22.2	17.9	13.7	



## Trends in Method Mix

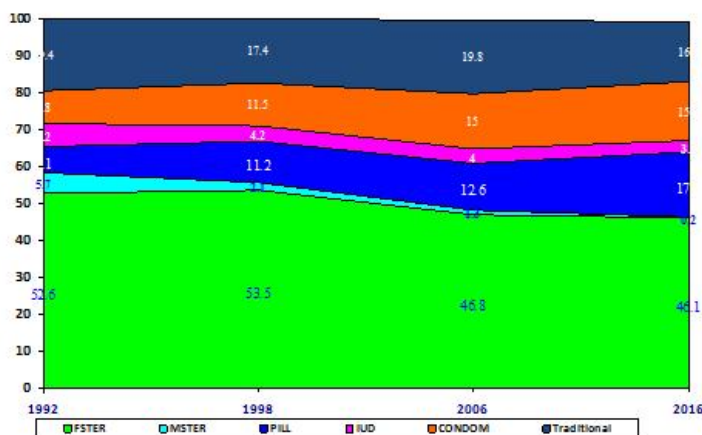
The share of female sterilization in contraceptive method among Non Muslims continued to be high and remained almost unchanged (69–73%) in various rounds of NFHS (Fig. 1). The contribution of male sterilization however gradually declined during the same period; down from 8% in

**Fig 1: Trends in Method Mix Among Non Muslims**



1992–93 to 4% in 1998–99, 2% in 2005–06 and less than one percent (0.6%) in 2015–16. The share of IUD in contraceptive method use also declined from 4% in 1992–93 to 3% in 2015–16. The percentage of women adopting pill increased between 1992–93 and 2015–16; up from 3% in 1992–93 to 6% in 2015–16. The role of condom in contraceptive method use increased from 6% in 1992–1999 to 9% in 2005–06 and further to 10% in 2015–16. The role of traditional method increased from 9% in 1992–1999 to 13% in 2015–16 but declined to 10% in 2015–16.

**Fig 2: Trends in Method Mix Among Muslims**



The share of female sterilization in contraceptive method among Muslims continued to be high but its share has declined from 53 percent in NFHS-1 to 46 percent in NFHS-4 (Fig. 2). The contribution of male sterilization however gradually declined during the same period; down from 6% in 1992–93 to 2% in 1998–99, 2% in 2005–06 and less than one percent (0.2%) in

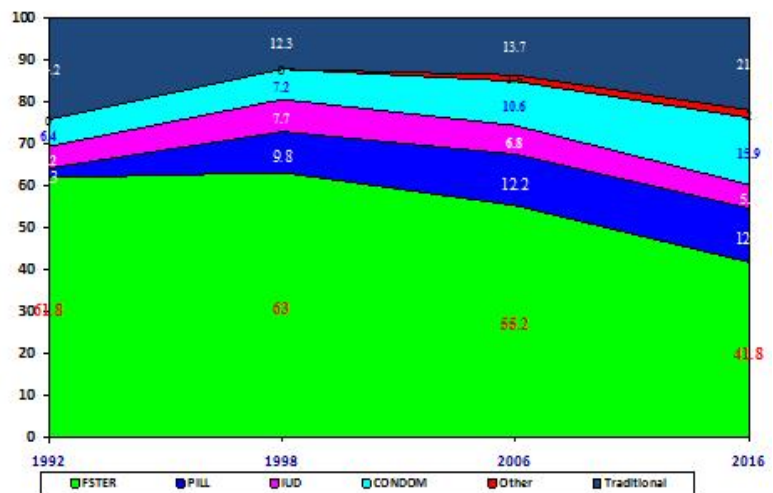
2015–16. The percentage of women adopting pill increased between 1992–93 and 2015–16; up from 7% in 1992–93 to 18% in 2015–16. The share of IUD in contraceptive method use also declined from 6% in 1992–93 to 3% in 2015–16. The role of condom in contraceptive method use increased from 9% in 1992–1999 to 15% in 2005–06 and further to 16% in 2015–16. The role of traditional method has generally declined but continues to be high. Use of traditional methods declined from 20% in 1992–1999 to 17% in 1998–99 and but declined to 16% in 2015–16.

### Jammu and Kashmir

The share of female sterilization in contraceptive method among Muslims in Jammu and Kashmir continued to be high but its share declined from 62 percent in NFHS-1 to 42 percent in NFHS-4 (Fig. 3).

The percentage of women adopting pill increased between 1992–93 and 2015–16; up from 2% in 1992–93 to 13% in 2015–16. The share of IUD in contraceptive method use also

**Fig 3: Trends in Method Mix Among Muslims, J&K**

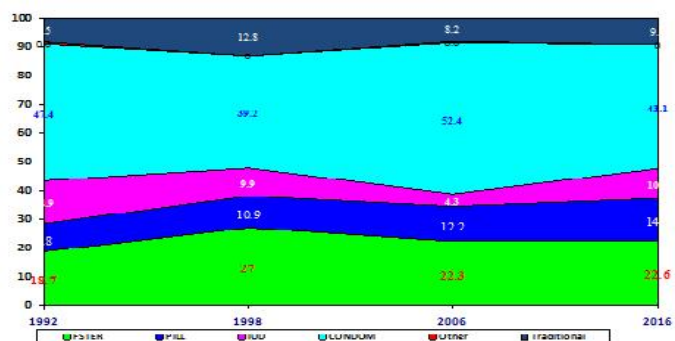


declined from 6% in 1998–99 to 16% in 2015–16. The role of condom in contraceptive method use increased from 9% in 1992–1999 to 15% in 2005–06 and further to 16% in 2015–16. The role of traditional method declined between 1992 and 2006 but after 2006, it has increased substantially and contribution of traditional methods increased from 12% in 199 to 22% in 2015–16.

### Delhi

The share of condom in contraceptive method among Muslims in Delhi continued to be high but its share declined from 47 percent in NFHS-1 to 43 percent in NFHS-4 (Fig. 4). The percentage of women adopting sterilization increased between 1992–93 and 2015–16; up from

**Fig 4: Trends in Method Mix Among Muslims, Delhi**

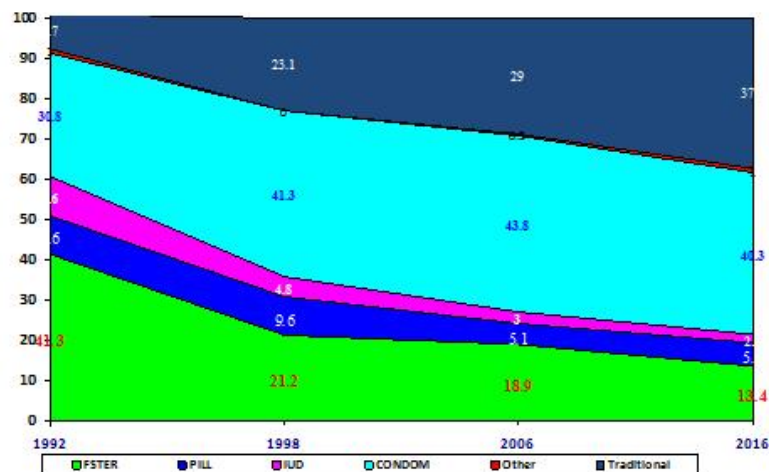


19% in 1992–93 to 23% in 2015–16. The percentage of women using Pill increased between 1992–93 and 2015–16; up from 10% in 1992–93 to 14% in 2015–16. The share of IUD in contraceptive method use has declined from 15% in 1992–93 to 4% in 2005–06 but has increased to 10% in 2015–16. The role of traditional method has marginally increased from 8% in 1992 to 9% in 2015–16.

## UP

The share of female sterilization in contraceptive method among Muslims in Uttar Pradesh has continuously declined from 41 percent in NFHS-1 to 13 percent in NFHS-4 (Fig. 5). The contribution of Condom has however gradually increased during the same period; up from 31% in 1992–93 to 40-44% during 1998-2016. The percentage of women adopting pill and IUD has

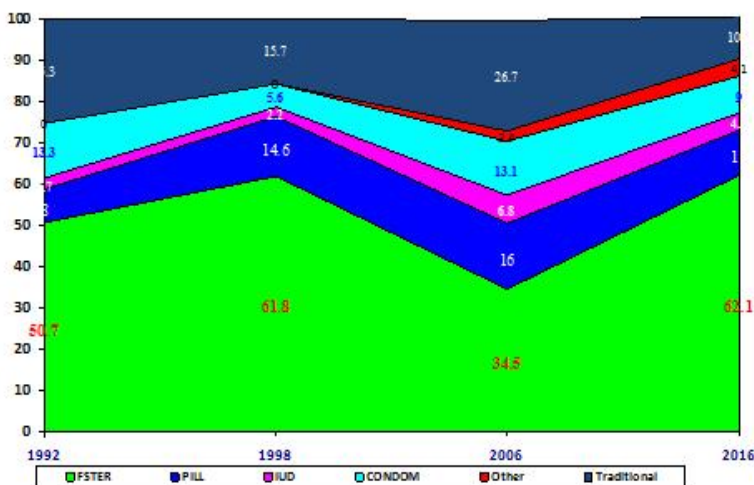
**Fig 5:Trends in Method Mix Among Muslims, UP**



declined between 1992–93 and 2015–16. The share of IUD in contraceptive method use declined from 10% in 1992–93 to 6% in 2015–16. The contribution of traditional methods has steadily increased from less than 10 percent in 1992 to 29 percent in 2005-06 and further to a high of 37 percent in 2015-16.

## Bihar

**Fig 6: Trends in Method Mix Among Muslims, Bihar**



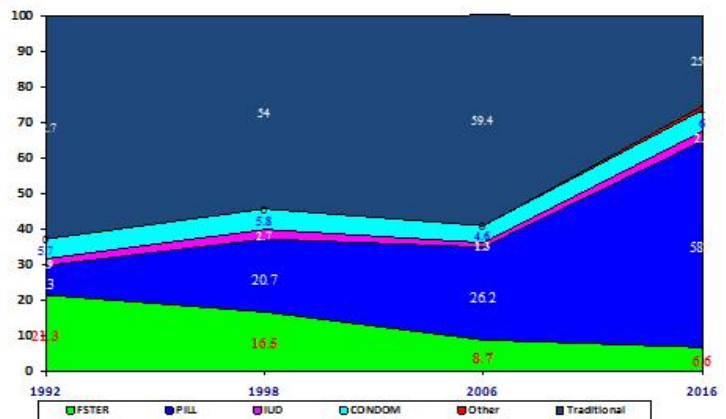
The share of female sterilization in contraceptive method among Muslims in Bihar has continuously increased from 51 percent in NFHS-1 to 62 percent in NFHS-4 (Fig. 6). There was however a dip in the contribution of sterilizations in 2005-06. Contribution of Condom has fluctuated with a declining trend from 13% in 1992–93 to 9% during 2015-016. The percentage

of women adopting pill increased during 1992-2005-16 but declined during 2015-16. The percentage of women using Pill increased from 8% in 1992-93 to 16% in 2005-06 but declined to 11 percent in 2015-16. The share of IUD has remained less than 5 percent during 1992-1998 and 2015-16 with a high of 7 percent in 2005-06. The contribution of traditional methods has steadily fluctuated between 1992 and 2016 with a low of 10 percent in 2015-16 and a high of 27 percent in 2005-06.

### Assam

Assam is exactly following the trend in method mix of contraception observed in West Bengal. The share of sterilization in contraceptive methods among Muslims in Assam has continuously declined from 21 percent in NFHS-1 to 7 percent in NFHS-4 (Fig. 7). The share of Pill in contraceptive continued to be high and its share increased from 8 percent in NFHS-1 to

**Fig 7: Trends in Method Mix Among Muslims, Assam**



58 percent in NFHS-4 (Fig. 7). The contribution of both Condom and IUD has not seen any change in method mix in the State since 1992-93. The share of IUD has remained around 1-3 percent and the Condoms contributed 5-6 percent in method mix between 1992-2016. The percentage of couples using a traditional method to limit family size has drastically declined and the share of traditional methods in contraception has declined from a high of 63 percent in 1992-93 to 59 percent in 2005-06. Contribution of traditional methods has witnessed a huge decline between 2006-2015 and traditional methods were reported by one-quarters of all users in 2015-16 as compared to about 60 percent in 2005-06.

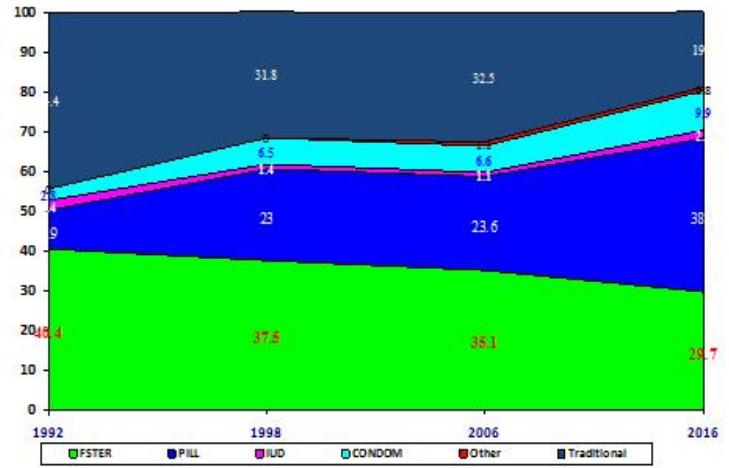
### West Bengal

The share of sterilization in contraceptive methods among Muslims in West Bengal has continuously declined from 40 percent in NFHS-1 to 30 percent in NFHS-4 (Fig. 8). The share of Pill in contraceptive continued to be high and its share increased from 10 percent in NFHS-1 to 38 percent in NFHS-4 (Fig. 4). IUD is not a popular method among Muslims in West Bengal as its contribution in method mix has remained constant at around 2 percent between 1992 and 2015. The percentage of women using Condom has increased between 1992-93 and 2015-16; up from 3% in 1992-93 to 10%



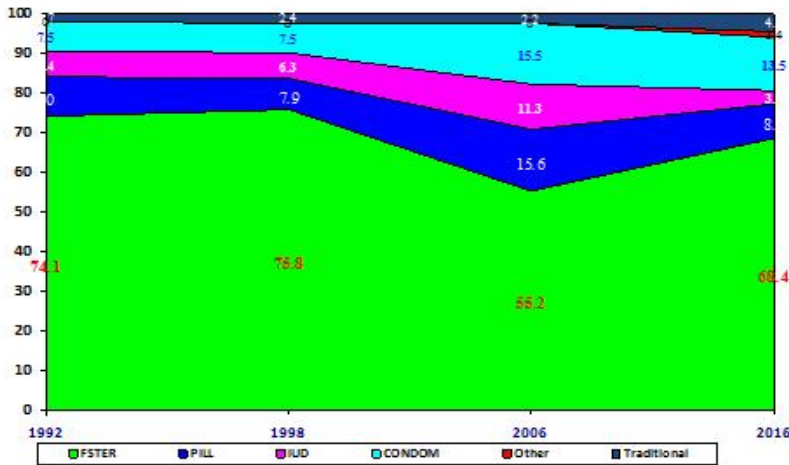
in 2015–16. The role of traditional method has considerably declined from a high of 44 percent in 1992-93 to 32 percent in 2005-06 to a further low of 19 percent in 2015-16.

**Fig 8: Trends in Method Mix Among Muslims, West Bengal**



**Maharashtra**

**Fig 9: Trends in Method Mix Among Muslims, Maharashtra**



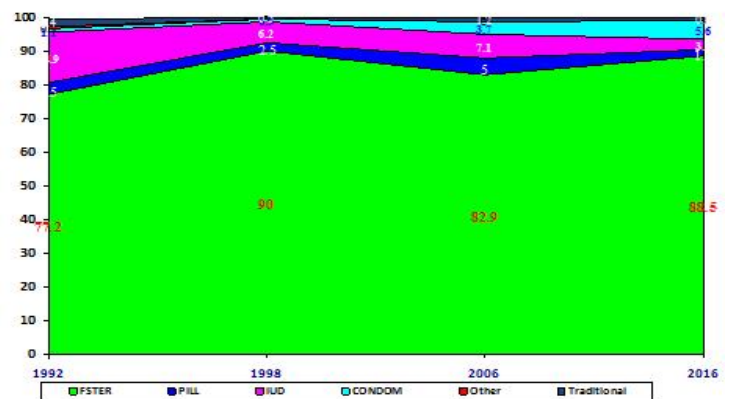
Maharashtra seems to be a unique case. All methods follow a fluctuating trend with a very little difference in the change in the contribution during reference period. There is little difference in the contribution of each method during 1992-93 and 1998-99 (Fig 9). For example contribution of sterilization has remained at 75 percent, IUD 6 percent and condom 7 percent during 1992-1998. Between 1998 and 2016, the contribution of sterilization

has slightly increased and the contribution of all the spacing methods has declined and IUD has experienced the highest decline from 11 percent in 2005-06 to 3 percent in 2015-16. The contribution of traditional methods has remained constant at about 2 percent during the first three phases and has increased to 4 percent in 2015-16.

**Karnataka and Kerala**

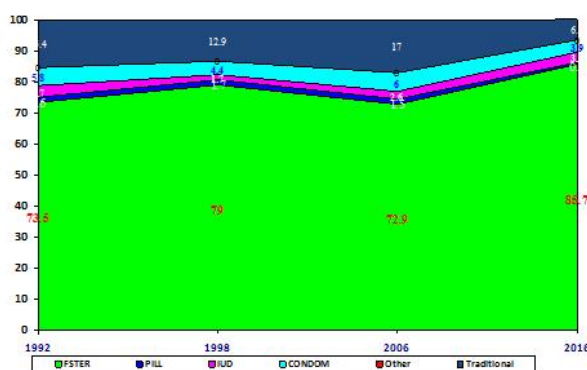
These two States almost follow the same pattern in method mix (Figs 10 and 11). The contribution of sterilization among Muslims in both Karnataka and Kerala has increased. In Karnataka it increased from 77 percent in 1992 to 88 percent in

**Fig 10: Trends in Method Mix Among Muslims, Karnataka**



2016 and in Kerala it increased from 73 percent to 86 percent during the same period. The contribution of Pill in 1992 in Karnataka was 3 percent and has declined to less than 2 percent in 2016.

**Fig 11: Trends in Method Mix Among Muslims, Kerala**



In Kerala, the contribution of Pill has remained constant at around 1-2 percent between 1992 and 2016. The contribution of IUD in 1992 in Karnataka was 15 percent but its share has come down to 3 percent and in Kerala it has fluctuated between 2-4 percent. The percentage of women using Condom in Karnataka has increased from 1% in 1992–93 to 6% in 2006 and in Kerala, its contribution has declined from 6 percent to 4 percent in 2015–16.

Traditional methods contributed only 2 percent in Karnataka in 1992 and its share is now less than 1 percent. But in Kerala, traditional methods accounted for 15 percent of contraceptive users and barring 2015-16, its contribution has remained between 13 and 17 percent. However, during 2015-16 has experienced a dip in the share of traditional users and they contributed only 7 percent of contraceptive users among Muslims in Kerala.

Characteristics	1992			1998			2005			2015		
	Exp(B)	95% C.I		Exp(B)	95% C.I.		Exp(B)	95% C.		Exp(B)	95% C.I.	
		Lower	Upper		Lower	Upper		Lower	Upper		Lower	Upper
<b>Age</b>												
<20 (ref)	1.00			1.00			1.00			1.00		
20-29	1.09	0.80	1.48	1.35	1.02	1.79	1.05	0.81	1.37	1.23	1.08	1.39
30-39	1.59	1.15	2.20	2.30	1.71	3.09	1.45	1.10	1.90	1.66	1.46	1.89
40-49	1.02	0.73	1.43	1.40	1.03	1.91	0.95	0.71	1.26	1.30	1.14	1.48
<b>Education</b>												
None (ref)	1.00			1.00			1.00			1.00		
<5 years	0.57	0.45	0.71	0.60	0.49	0.72	0.96	0.81	1.13	1.04	0.98	1.10
5-9 years	0.67	0.52	0.86	0.88	0.71	1.09	1.42	1.17	1.74	1.39	1.29	1.50
=>10	0.75	0.60	0.93	0.90	0.75	1.08	1.02	0.87	1.20	1.23	1.17	1.30
<b>Residence</b>												
Rural (ref)	1.00			1.00			1.00			1.00		
Urban	1.12	0.98	1.28	0.99	0.88	1.12	1.41	1.27	1.56	1.05	1.01	1.10

<b>Caste</b>												
SC (ref)	1.00			1.00			1.00			1.00		
ST	2.19	0.93	5.13	1.27	0.67	2.44	0.72	0.39	1.36	0.99	0.83	1.17
OBC				1.22	0.86	1.74	0.84	0.60	1.18	1.31	1.17	1.46
General	0.98	0.62	1.55	1.52	1.08	2.13	1.08	0.78	1.50	1.75	1.56	1.95
<b>Type of Family</b>												
Extended (ref)	1.00			1.00			1.00			1.00		
Nuclear	1.43	1.21	1.69	1.55	1.33	1.81	1.51	1.31	1.75	1.44	1.34	1.54
Joint	1.29	1.11	1.48	1.39	1.22	1.59	1.25	1.08	1.44	1.27	1.19	1.36
<b>Wealth Quintile</b>												
Poorest (ref)	1.00			1.00			1.00			1.00		
Poorer	1.12	0.91	1.38	1.52	1.28	1.81	1.11	0.96	1.28	1.42	1.34	1.51
Middle	1.33	1.08	1.65	1.57	1.30	1.88	1.29	1.12	1.50	1.35	1.27	1.44
Richer	1.63	1.31	2.03	1.87	1.54	2.26	1.53	1.30	1.80	1.50	1.40	1.61
Richest	1.97	1.54	2.53	2.27	1.82	2.83	1.56	1.29	1.89	1.63	1.51	1.76
<b>Media exposure</b>												
No (ref)	1.00			1.00			1.00			1.00		
Yes	1.71	1.52	1.92	1.44	1.29	1.61	1.47	1.34	1.61	1.34	1.29	1.39
<b>Children surviving</b>												
0 (ref)	1.00			1.00			1.00			1.00		
1	4.41	2.69	7.22	3.99	3.68	6.76	2.23	1.40	3.53	2.88	1.78	3.36
2	5.10	3.77	8.20	4.98	3.19	5.42	3.31	2.84	3.99	4.38	3.50	6.90
3+	5.27	4.03	6.25	8.93	6.58	9.59	6.01	4.83	7.51	6.33	5.79	6.93
<b>Sons surviving</b>												
0 (ref)	1.00			1.00			1.00			1.00		
1	1.61	1.31	1.98	1.83	1.54	2.18	1.46	1.27	1.68	1.38	1.31	1.46
2	2.62	2.10	3.26	2.34	1.93	2.83	2.07	1.77	2.42	1.67	1.57	1.77
3+	2.15	1.70	2.72	1.80	1.46	2.22	1.62	1.36	1.93	1.33	1.24	1.44
<b>Ideal family Size</b>												
1 (ref)	1.00			1.00			1.00			1.00		
2.00	1.74	0.38	7.92	2.79	0.71	10.96	1.46	0.93	2.28	2.51	2.30	2.73
3+	0.83	0.18	3.76	1.33	0.34	5.20	0.76	0.49	1.19	1.24	1.14	1.35
<b>Region</b>												
North (ref)	1.00			1.00			1.00			1.00		
Central	0.56	0.43	0.73	0.60	0.50	0.72	0.55	0.47	0.64	0.63	0.59	0.67
East	0.87	0.66	1.13	0.98	0.82	1.18	0.77	0.66	0.91	0.96	0.90	1.02
North-East	0.61	0.43	0.86	0.48	0.36	0.62	0.41	0.32	0.52	0.86	0.79	0.94
West	1.29	0.99	1.69	1.39	1.14	1.70	1.51	1.26	1.80	1.44	1.34	1.54
South	1.59	1.23	2.07	1.36	1.14	1.62	1.79	1.52	2.12	1.41	1.32	1.50
Constant	0.01			0.00			0.00			0.00		

To assess the adjusted effects of the selected explanatory variables on modern contraceptive use among Indian Muslims in each survey point, we considered four logistic regression models, one for each of the survey. The results are presented in Table 8. The regression analysis revealed that in 1992, women aged 30-39 years were 60% (OR = 1.59, 95% CI = (1.15, 2.20)) more likely to use contraception than the women aged 15–19 years. In 1998, women aged 30-39 years were 2.3 times (OR = 2.3, 95% CI = (1.7, 3.0)) more likely to use contraception than the women aged 15–19 years. According to NFHS-3, women aged 30-39 were only 45% (OR = 1.45, 95% CI = (1.10, 1.90)) more likely to use contraceptives than women aged 15-19 years, while in NFHS-4, the odds were 66% (OR = 1.66, 95% CI = (1.460, 1.89)) more likely.

With regards to education in first two surveys periods, women who attained primary education and again those having secondary and higher levels of education were less likely to use contraceptives than women having no education, but in 2006 and 2014, women who attained primary education and again those having secondary and higher levels of education were more likely to use contraceptives than women having no education. In 2005, the urban women were 41 percent (OR = 1.41, 95% CI = (1.27, 1.56)) more likely to prefer contraceptives than their rural counterparts. In other surveys, there is not much difference between urban and rural women.

Scheduled-caste and scheduled-tribe and OBC women tend to have lower contraceptive use rates than women belonging to non-SC/ST groups, but the effects tend to be small in 2005 and 1992. But in 2015, women who do not belong to any caste/tribe group were 75 percent (OR = 1.75, 95% CI = (1.56, 1.95)) more likely to prefer contraceptives than their ST counterparts.

Women in extended households (either with in-laws or other extended household forms) have a 40-60% lower adjusted risk of using modern methods than women in Nuclear families, while women in other joint households have a 14% lower relative risk of using modern methods compared to women in nuclear households. Women in households with more residents have a lower probability of using contraception in all the four surveys.

In 1992, the women who lived in the richest household were almost 2 times more likely to use contraceptives than women who resided in poor households. Similarly the OR of women living in the richest, richer and middle categories in 1998 were 2.27, 1.87, and 1.57 times respectively greater than that of women in poor category. The results for 2015 showed that women from rich and richest



households was (50% and 63%, respectively) more likely to use contraceptives than women in the poor households.

In 1992, the odds of women who were exposed to family planning information in the media were 71% (OR = 1.71, 95% CI = (1.52, 1.92)) more likely to use modern contraception as compared to married women that were not exposed family planning information in the media. The impact of media exposure seems to have declined during 1998, 2005 and 2016, but the odds for women exposed to media remain higher ranging from 1.44 in 1998 to 1.47 in 2005 and 1.34 during 2015.

Also as hypothesized, number of surviving children strongly influences women's contraceptive use in all the four rounds. In 1992, women with 4 or more surviving children are 4.8 times more likely to use contraceptives relative to women with 1 child. In the same way, the ORs of women with 4 children were 5, 4 and 3.75 times greater than that of women with 1 child in 1998, 2005 and 2016 respectively. The multivariate analysis implied that the OR increased with the number of living sons in all four surveys. In 1992; women with 2 and 3 sons are 2.64 times and 2.15 more respectively likely to use contraceptives than women with no sons. The role of sons over the years has declined but still in 2014, women with 2 sons are 1.67 times more likely to use contraceptives than women in the reference category. Similarly, women with an ideal family size of 2 are more likely to use contraceptives than women with an ideal family size of 3. In 1992, the women from South India (OR = 1.59, 95% CI = (1.23, 2.07)) and Western India (OR = 1.29, 95% CI = (0.99, 1.69)) are more likely and those of Central India (OR = 0.56, 95% CI = (.43, 0.73)) and East (OR = 0.87, 95% CI = (0.66, 1.13)) were less likely to use contraceptives compared to those of North India. In 1998, 2005 and 2015 also women from South, Western India were more likely to use contraceptives compared to those of East, North-east, Central and North India.

## **CONCLUSION**

The analysis shows that Muslim women in India have considerably lower contraceptive than Hindu women or women belonging to other religions but the contraceptive use is increasing more among Muslims now than among Non Muslims. The results of this study indicate differential socioeconomic status of Muslims does explain their higher fertility.

Contraceptive prevalence rate among Muslims steadily increased from 27.4 percent in 1992-93 to 45.4 percent in 2005-06 but slightly declined to 42.6 percent during 20015-16. Overall modern methods have seen a significant increase in use since NFHS-1 both among Muslims and Non Muslims between NFHS-1 and NFHS-4. The use of modern methods between NFHS-1 and NFHS-4 has increased by almost 16 percentage points among Muslims but only by 11 percentage points among Non-Muslims.

Although female sterilization is the most popular method among women in India but it is not so popular among Muslims mainly due to religious reasons. In fact 90 percent of the difference in the contraception use among Muslims and Non Muslims is due to the differential female sterilization. Further, the female sterilization has stalled both among Muslims as well as among Non Muslims and Male Sterilization is now vanishing both among Muslims and Non Muslims.

Pill is the only modern method which is more popular among Muslims than among Non Muslims in all the four rounds of NFHS. The use of Pill among Muslims has increased from about 2 percent in NFHS-1 to 8 percent in NFHS-4. IUD is the least popular method among spacing methods in the country as a whole irrespective of religious affiliation and its use is declining and the decline in the use of IUD is of almost of similar magnitude among the two religious groups.

Use of Condom in each phase of NFHS was found to be higher among Muslim than by Non Muslims. Condom was used by 2.4 percent of couples both Muslim and Non-Muslim couples in NFHS-1 but its use has almost tripled among Muslims between NFHS-1 and NFHS-4. The use of traditional methods in all phases of NFHS is higher among Muslims than Non-Muslims. During NFHS-1, the use of traditional method among Muslims was 1.5 more than Non Muslims but this gap has increased to 1.8 percent during NFHS-4.

### **Differentials in modern contraceptive use across surveys**

In all survey years, the use of modern contraception varies significantly by various socio-economic and demographic factors— age, residence, education, wealth index, work status,

media exposure, etc. While comparing the socio economic and demographic characteristic of users of contraception between Muslims and Non Muslims, it was found that the use in each of these socio-economic categories is increasing more among Muslims and the gap in the difference is narrowing down in each category. For example use of modern methods among Non Muslim women age 20 or older has increased from 61 percent in NFHS-1 to 66 percent in NFHS-4, corresponding increase among Muslims is from 38 percent to 56 percent. This indicates that more and more women are accepting modern methods of contraception among Muslims now than before. On the contrary, use of modern methods among elder women (40-49) seems to have stagnated among Non Muslims but not among Muslims. Similarly so far education is concerned the contraceptive use among Non Muslims has increased from 35 percent among Illiterate women to 55 percent among women with 10 or more years of education but among Muslims, the corresponding proportions have increased from 21 percent to 42 percent.

While looking at the overall increase between NFHS-1 and NFHS-4, there is not much difference in the percentage growth in CPR between Non Muslims and Muslims in North, South and Central India. However, in East, North- East, West India, the CPR has increased by about 18 percentage points among Muslims and by less than 10 percentage points among Non Muslims. The gap in CPR between Non-Muslims and Muslims has narrowed down in almost all regions. In fact the gap in CPR in North-East has completely wiped out and the Muslim CPR is 1 percentage higher than Non Muslims.

### **State wise Trends**

Muslims in J&K had a lower use of modern contraceptive in each phase of NFHS than Non Muslims. However, with each phase of NFHS, use of modern methods of contraception increased both among Muslims as well among Non Muslims. While it increased by about 9 percent among Non Muslims but among Muslims it increased by 18 percentage points. This higher use in subsequent phase of NFHS resulted in narrowing to only less than 8 percent in NFHS-4. Thus, Muslims in J&K are increasingly opting for family planning.

In Delhi, use of modern methods of family planning has declined both among Muslims and Non Muslims, but the decline is more among Muslims (8 percent) than among Non-Muslims (5 percent). Consequently, the difference in use of modern methods of contraception between Muslims and Non Muslims has widened and in NFHS-4, Muslims had 16 percentage points lower use than Non Muslims. In UP use of modern Methods of contraception between NFHS-1 and NFHS-4, has increased by similar magnitude both among Non Muslims and Muslims, indicating both Muslims and Non-Muslims have feared equally between the first and fourth phase of NFHS, so far as use of Modern methods of family planning is concerned.

Between NFHS-1 and NFHS-4, the use of Modern methods has increased by 4 percentage points among Non Muslims and 7 percentage points among Non Muslims in Bihar. Since Muslims have not registered any significant increase in the use of modern methods of family planning, therefore the gap in the use of modern methods between Muslims and Non Muslims has not registered any major improvement. In Assam, the use of modern methods among Muslims has doubled from 18 percent to 37 percent. Since the use of modern methods among Hindus has improved marginally, therefore the gap in the use of modern methods between Muslims and Non Muslims has narrowed down and during NFHS-4, this gap has vanished and both Muslims and Non Muslims have almost same rate of modern contraception (37 percent). The use of modern Methods of contraception among Non Muslims in West Bengal has increased from 41 percent in NFHS-1 to 59 percent in NFHS-4. Among Muslims corresponding increase is from 24 percent to 52 percent. Thus Muslims have registered more than two fold increase in use of modern methods of family planning between NFHS-1 and NFHS-4. Since the use of modern methods among Muslims has improved more than Non Muslims, therefore the gap in the use of modern methods between Muslims and Non Muslims has narrowed down and now the modern CPR among Muslims is only 7 percentage points lower than Non Muslims.

The use of modern Methods of contraception among Muslims in Maharashtra has improved substantially between NFHS-1 and NFHS-4, therefore the difference in the use of modern methods between Muslims and Non Muslims has narrowed down from 20 percent in

NFHS-1 to only 7 percentage points in NFHS-4. The use of modern Methods of contraception among Non Muslims in Karnataka has increased from 49 percent in NFHS-1 to 63 percent in NFHS-3, thus during this period there was an increase of 14 percentage points. Among Muslims corresponding increase is from 36 percent to 56 percent and accordingly there is an increase of 20 percentages during the same period. The use of modern methods among Muslims has improved more than Non Muslims during NHS-1 and NFHS-3, and it has declined by an equal proportion both among Non Muslims and Muslims between NFHS-3 and 4, therefore the gap in the use of modern methods between Muslims and Non Muslims has narrowed down from 13 percent in NFHS-1 to only 6 percentage points in NFHS-4. The modern use of contraception among Muslims in Kerala has increased by around 9 percentage points between NFHS-1 and NFHS-4 but among Non Muslims it declined by 8 percentage points during the same period. The gap in the use of modern methods between Muslims and Non Muslims has narrowed down from 30 percent in NFHS-1 to 14 percentage points in NFHS-4. Thus Muslims in Kerala continue to be lagging behind in using modern methods of family planning compared to Muslims of residing in Karnataka, Maharashtra and West Bengal.

### **Trends in Method Mix**

The share of female sterilization in contraceptive method among Muslims continued to be high but its share has declined from 53 percent in NFHS-1 to 46 percent in NFHS-4 (Fig. 1). The contribution of male sterilization however gradually declined during the same period; down from 6% in 1992–93 to 2% in 1998–99, 2% in 2005–06 and less than one percent (0.2%) in 2015–16. The percentage of women adopting pill increased between 1992–93 and 2015–16; up from 7% in 1992–93 to 18% in 2015–16. The share of IUD in contraceptive method use also declined from 6% in 1992–93 to 3% in 2015–16. The role of condom in contraceptive method use increased from 9% in 1992–1999 to 15% in 2005–06 and further to 16% in 2015–16. The role of traditional method has generally declined but continues to be high. Use of traditional methods declined from 20% in 1992–1999 to 17% in 1998–99 and but declined to 16% in 2015–16.

### **State wise Variation in Method Mix among Muslims**

The share of female sterilization among Muslims in Jammu and Kashmir has declined from 62 percent in NFHS-1 to 42 percent in NFHS-4. The share of Pill and Condom has increased and the role of traditional method has increased substantially from 12% in 1992 to 22% in 2015–16. The share of condom in contraceptive method among Muslims in Delhi continued to be high but its share declined from 47 percent in NFHS-1 to 43 percent in NFHS-4 and the share of sterilization has declined from 27% in NFHS-2 to 23% in 2015–16. The share of Pill has increased from 10% in 1992–93 to 14% in 2015–16. The share of IUD has declined from 15% in 1992–93 to 10% in 2015-16. The share of female sterilization in Uttar Pradesh has continuously declined from 41 percent in NFHS-1 to 13 percent in NFHS-4. The contribution of Condom has however gradually increased from 31% in 1992–93 to 40% during 2016. The percentage of women adopting pill and IUD has declined and the contribution of traditional methods has steadily increased 10 percent in 1992 to 37 percent in 2015-16.

The share of female sterilization in Bihar has continuously increased from 51 percent in NFHS-1 to 62 percent in NFHS-4. The share of IUD and Condom has fluctuated with a declining trend. The contribution of traditional methods has steadily fluctuated between with a low of 10 percent in 2015-16 and a high of 27 percent in 2005-06. The share of sterilization in contraceptive methods among Muslims in West Bengal has continuously declined from 40 percent in NFHS-1 to 30 percent in NFHS-4. The share of Pill in contraceptive has increased from 10 percent in NFHS-1 to 38 percent in NFHS-4. IUD is not a popular method among Muslims in West Bengal and the share of Condom has from 3% in 1992–93 to 10% in 2015–16. The role of traditional method has considerably declined. The share of sterilization in contraceptive methods among Muslims in Assam has continuously declined from 21 percent in NFHS-1 to 7 percent in NFHS-4. The share of Pill has increased from 8 percent in NFHS-1 to 58 percent in NFHS-4. The contribution of both Condom and IUD has not seen any change in method mix in the State since 1992-93. The share of traditional methods has declined from a high of 63 percent in 1992-93 to 25 percent 2015-16. Maharashtra seems to be a unique case. All methods follow a fluctuating trend with a very little difference in the change in the contribution during reference period.

For example contribution of sterilization has remained at 75 percent, IUD 6 percent and condom 7 percent during 1992-1998.

The two southern States namely Karnataka and Kerala almost follow the same pattern in method mix. The contribution of sterilization among Muslims in both Karnataka and Kerala has increased. In Karnataka it increased from 77 percent in 1992 to 88 percent in 2016 and in Kerala it increased from 73 percent to 86 percent during the same period. The contribution Pill, Condom and IUD has declined. Both the States have experienced a dip in the share of traditional methods.

So far as the contribution of various socio-economic and demographic characteristics in the use of modern methods of contraception among Muslims are concerned , it was found that women aged 30-39 years are more likely to use contraception than other women. With regards to education, women who attained primary education and those having secondary and higher levels of education were more likely to use contraceptives than women having no education. Scheduled-caste and scheduled-tribe and OBC women tend to have lower contraceptive use rates than women belonging to non-SC/ST groups. Women in extended households (either with in-laws or other extended household forms) have a 40% lower adjusted risk of using modern methods than women in Nuclear families. The results for 2015 showed that women from rich and richest households was (50% and 63%, respectively) more likely to use contraceptives than women in the poor households. The impact of media exposure seems to have declined during 1998, 2005 and 2016, but the odds for women exposed to media remain higher ranging from 1.44 in 1998 to 1.47 in 2005 and 1.34 during 2015.

Also as hypothesized, number of surviving children strongly influences women's contraceptive use in all the four rounds. Similarly, women with an ideal family size of 2 are more likely to use contraceptives than women with an ideal family size of 3. In 1998, 2005 and 2015 women from South, Western India were more likely to use contraceptives compared to those of East, North-east, Central and North India.

In sum, the study finds that although use of contraception is increasing among Muslims in India, but there use is still very low and the unmet need for family planning is very high. Besides, the Muslims generally prefer spacing methods but the choice of method mix is not similar in all the States among Muslims. Further the education, media exposure wealth index are important predictors of contraception among Muslims.

What should one conclude from these findings? As hypothesized, religious differentials in contraceptive use and fertility are transitional phenomena. Fertility is falling and contraceptive use is rising among Muslims as well as among non-Muslims, so with progress in socioeconomic conditions and improvements in family planning services, fertility in all religious groups is expected to fall and converge eventually, with some lag for Muslims. During the transition, a number of policy and program measures may help increase use of family planning and lower fertility among Muslim women. These include: promoting greater availability and use of modern temporary methods; promoting greater involvement of the private sector in providing family planning services; addressing privacy and other concerns associated with public-sector services; strengthening education and motivation programs aimed at addressing opposition to family planning; and improving the quality of services.

Contraceptive use, method mix, the profile of the users, and determinants of contraceptive use has changed considerably during 1992–93 to 2015–16 in India. Increased use of modern spacing methods albeit continuous dominance of female sterilization in method mix suggests relooking at the family planning implementation strategy and the strategy needs to State specific and not contradicting with their religious sentiments.