
**DETERMINANTS OF CONTRACEPTIVE USES AMONG THE CHILD
AND ADULT MARRIED WOMEN IN INDIA**

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ABSTRACT

The present study aims to investigate the various socio-economic and cultural factor that associated with choices of contraceptive methods (from the available alternatives of modern and traditional methods vis-à-vis no usage) among child and adult married women in the developing country setting including India. India so that certain specific steps towards policy can be taken. The Multinomial logistic regression has been applied to analyze secondary data (DLHS-4(2012-13)) of 313870 married women in India. The results of this study indicated that, the Individual and household socio-economic and demographic characteristics, such as place of residence, education, religion and caste are important in determining factor for contraceptive uses among child and adult married women in India. A higher proportion of child married women do not uses any contraceptive method and a smaller proportion of women uses traditional and modern method in India. Unlike adult married women, the religion and respondents' education do not control the usage of modern methods among the child married women and there is some other variable such as empowerment, mobility, access to health facility becomes far more important in the analysis of contraceptive use in India. The policy makers have to focus on empowerment of women through formation of Self Help Groups (SHG), awareness generating campaign through various family planning programe, supply of condoms and facilities of sterilization bring more and more important for the uses of contraceptive method among child (adult) married women in India.

Keywords: Contraceptive choice; child and adult married women, socio-economic correlates; awareness; mobility; decision making power

JEL classification: C21, C38, I12, I15, I18, J12, J13

1. INTRODUCTION

According to the “**Prohibition of Indian child marriage act 2006**”, child marriage today is defined as one where the girls and boys who were married below the age of 18 and 21. Child marriage has seriously affected Sustainable Development Goals and Millennium development Goals in under developed countries, including India. Child marriage is one of the major problem in India and it's associated with various health related outcome such as pregnancy-related illnesses, abortion, infertility, risk of death and exposure to sexually transmitted diseases (STD). The uses of right choice of contraceptives can decrease this possibility of early pregnancy and STD (**Sharma, 1996**). Therefore, contraception is one of the crucial importance for the child married women, particularly in the developing countries like India.

India claims to be the first country in the world in 1952 to launch a national program to limit population growth by making contraceptive services available through clinic-based vasectomy services (**Agarwala, 2006**). However, by the late fifties, it was becoming clear that this approach was not able to reach most of the families in the country, and in 1963 the Government proposed the extension approach or visiting women at their homes primarily through Auxiliary Nurse Midwives (ANMs). However, for the first time, the National Population Policy (2000) acknowledges the importance for adolescents to have access to affordable information, counseling and services on contraceptive choices (**Wadia, 2002**). The low coverage of contraception usage and little awareness about scientific sexual life, this age group easily falls prey to unprotected and unsafe sex with his partner. Thus given the social vulnerability and lack of scientific awareness among the adolescents, the right choice of contraceptive method is one of the crucial point for highly populated country.

Broadly speaking, there are two types of contraceptive methods prevalent in developing countries: Modern and Traditional. Modern contraceptive methods include all hormonal methods (like pill, injectibles and implants), IUDs, male and female sterilization, condoms and modern vaginal methods etc. Traditional contraceptive method consists of periodic abstinence (rhythm), withdrawal, folkloric etc. Modern contraceptive methods are generally expected to be more effective in preventing pregnancy than the traditional methods, although effectiveness varies with the quality of practice (**Trussel & Kost 1987**). The choice of contraceptive methods is determined not only by information and availability, but also by education, awareness and other socio-cultural variable and it is closely linked to the reproductive health and rights of the women (**Gupta, 2000**) and decision of the male partner (**Basu, 2011**). The traditional methods are often chosen due to misconception about modern methods and religious taboos (**Juarez, Cabazon & Singh, 2005**).

Existing literature suggests that education and awareness improves contraception behavior among women (**Ramesh, Gulati, & Rutherford, 1996**). The Participation of women in labour force is found to increase contraception due to high opportunity cost of child bearing (**Becker, 1981**). Larger age gaps, small marriage length and son preference among family members truncate the communication process between couples, resulting in poorer contraceptive behaviours (**Sinha, 2006**). For young women, most of the health-related decisions are taken by the other members of the family and especially the mother-in-law. Thus structure and education of family members are expected to determine their contraceptive choices too (**Mutharayappa, Choe & Arnold, 1997**). Researchers have observed that Muslims have relatively lower contraceptive usage. (**James & Nair, 2005**). As the Muslim women typically believe that contraceptive use is forbidden according to Islam. Literature notes positive effect of public media on contraceptive use (**Agha & Rossem, 2002**). The study posits that enhancing the scope and quality of prenatal contraceptive counselling improves postpartum contraceptive use among the adolescents (**Wilson, Fowler & Koo, 2012**). The present study is attempts to find the contraceptive behavior and its socio-economic and cultural factor that associated with child and adult married women in India.

This paper is divided into six sections. The next section of the paper provides the need and objectives of the study. Section-3 of the paper discuss the data and methodology. Section-4 analyzes the various socio-economic and demographic factor that associated with contraceptive choices among child and adult married women in India. and Section-5 attempts to estimate the determinants of contraceptive uses among child and married women. Finally, Section-6 represent the Conclusion and policy direction

2. NEED AND OBJECTIVE OF THE STUDY

2.1 Need of the study

The uses of contraceptive method among women varies from country to country and from person to person due to some socio- economic condition and level of fertility. In DLHS-4 (2012-13) data, only 45.14 percent of women are not using any method, where as 12.99 percent of women using traditional method and 41.87 percent of women using only modern contraceptive method in India. So, India became a inferior in term of using traditional and modern contraceptive method compared to no method. (**Table 1**).

Table 1: Percentage of contraceptive usage among women in India

Contraceptive method	India
No method	45.14
Traditional method	12.99
Modern method	41.87

Source: Own calculation from DLHS-4 data

In **Table-2**, we can see, 27.26 (53.11) percent of child (adult) married women are using modern methods whereas 10.43 (14.13) percent of child(adult) married women using only traditional method in India. Moreover, 62.31 (32.76) percent of child (adult) married women are not using any method, which is definitely a big problem for family planning program (especially among the child married women) in India.

Table 2: Current contraceptive usage among Child and Adult Married women in India

Contraceptive method	Child Married Women	Adult Married Women
No Method	62.31	32.76
Traditional Method	10.43	14.13
Modern Method	27.26	53.11

Source: Own calculation from DLHS-4 data. All values are given in percentage

Our finding (**Table 3**) also shows that 49 percent of Child Married women non users know a source of family planning and 51 percent of Child Married women does not know the source of family planning. We can see similar thing for adult married women. In spite of knowing the source of family planning methods, a significant proportion of Child and adult married women are not using any methods. This implies that there may be a significant role of socio-economic and cultural factors on determining the contraceptive uses among child (adult) married women in India.

Table 3: Knowledge about Sources of family planning for Non-users in India

Source of family planning for Non-users	Child Married women	Adult married women
Knows a source	49	59.74
Knows no source	51	40.26

Source: own calculation from DLHS-4(2012-2013) data. All figures are in percentage.

2.2 Objectives

This paper attempts to

1. Explore the nature of contraception usage among child and adult married women in India.
2. Identify the determinants of contraception usage among child and adult married women separately to locate the differences in health seeking behavior.
3. In this study, I have tried to investigate if any relationship exists between the village Infrastructural development and contraception usage among child and adult married women in India.
4. Address the lessons for policymakers.

3. DATA AND METHODOLOGY

3.1 Data

In this study, DLHS-4 (2012-13) unit level data is used as our main data source. We use unit level household data, ever-married women data and village level data to identify the determinants of contraception usage among child and adult married women in India. We use DLHS-4 data as our main data source because this is the latest data and its gives reliable estimates of contraception usage among child and adult married women at the district level in India (**International Institute for Population Sciences, 2010**). Moreover, 88775 women (ever-married) are selected as child married women (**Women age at marriage less than 18 years**) and 225095 women (ever married) are selected as adult married women (**Women age at marriage more than 18 years**). Here I have taken 12-49 year age group of ever married women. The women were asked to detailed questions about their health seeking, decision making power, fertility and contraception behavior along with the socio-economic characteristics of their households.

3.2 Methodology

Apart from simple statistical tools, two specific econometric methods, namely, Principal Component Analysis (PCA) and Multinomial Logistic Regression have been used in this paper. Here, PCA is used for calculating women empowerment. Women **Empowerment** consists of four components. The first component named '**Domestic violence**' captures the acceptance of wife-beating by respondents. Second component '**Decision making**' considers whether the respondent faces a problems in own health care, making large household purchases, making household purchases for daily needs, visits to family or relatives and deciding what to do with money husband earns. If the score value of this factor increases, the women tend to lose her autonomy. Another component named '**Problem to access medical help**' includes the respondent's difficulty in getting medical help due to distance to health facility, lack of transport, lack of female health provider and difficulty to travel alone. Again, '**Mobility**' considers whether the respondent considers it difficult to go to market, health facility and to places outside this village/community. Thus increase in last two variables' value indicates lack of access and mobility of the woman. The fourth component '**Financial independence**' consists of two variables: whether the respondent has money for her own use and whether she has her own bank or savings account. **Multinomial logistic regression** considers the categorical **dependent variable (current contraceptive method use)** with three categories: no method with value 0, traditional method with value 1 and modern method taking the value 2. Here no method is regarded as reference category and the results show the probability of moving from no method to either traditional or modern contraceptive method according to several correlates. The **independent variables** have been divided into four groups:

A. Household characteristics:

- i)* Family structure: It has three categories, namely nuclear, non-nuclear and non-dejure residents
- ii)* Religion: Different religions have been clubbed in two categories, namely Hindu and Muslim with others
- iii)* Wealth index: The economic condition of the household has been represented by their wealth index. In the absence of any information on income, a wealth index quintile has been calculated using **Principal Component Analysis**. This is based on select assets owned by the household. It uses principal components analysis to generate quintiles—poor, middle, rich—that place households on a continuous scale of relative wealth.
- iv)* Geographical location: rural and urban

B. Couple's characteristics includes

- i)* Biological status of the respondent with two categories fecund and other (Pregnant, Amenorrheic, Infecund or menopausal)

- ii)* Respondent's education has four categories: illiterate or no education, Primary, secondary and higher
 - iii)* Husband's education too has similar categories
 - iv)* Respondent's occupation has two categories: working and non-working
 - v)* Marriage length is a continuous variable
 - vi)* Age gap between husband and wife too is continuous
 - vii)* Whether respondent wanted last child has two categories: then and later plus don't want
 - viii)* Number of children ever born is continuous
 - ix)* Heard family planning programs on radio and television last few months has two categories: yes and no
 - x)* Frequency of listening to radio and television each has three categories: never, less than once a week, at least once a week
- C. Empowerment** indicator consists of four components.
1. Domestic Violence
 2. Financial Autonomy
 3. Decision Making Power
 4. Mobility
- D. Village Infrastructure Quintile:** I have constructed a village infrastructure quintile through principal component analysis and divided the villages into three groups according to their infrastructure, group-1 having the least infrastructure and group-3 having the highest.
- E. Health facility** consists of three variables:
- i)* Place of last delivery: Home and institution.
 - ii)* Access to health facilities (considering whether respondent visited a health facility/ camp and met with Anganwadi or community health worker in past three months).

4. RESULTS

4.1 Sample profile

The socio-economic characteristics of child and adult married women are indicated in table 4. It shows that 51.87 percent of child married women are belong to the non-nuclear family which implies that most of the child married women are the members of non-nuclear family. Only 19.29 (16.43) percent of child (adult) married women are not de jure resident in India. About 86.50 (73.70) percent of child (adult) married women are living in rural area. Moreover, 56.46 (62.47) percent of child (adult) married women are Hindu whereas only 43.54 (37.53) percent

child (adult) married women are Muslim. The proportion of child (adult) married women who are falling in poor category is higher among other categories of wealth indices. Only 48.42 (29.57) percent of child (adult) married women have poor category, whereas only 19.23 (45.14) percent of child (adult) married women have rich category. In India, 44.42 (27.57) percent of child (adult) married women in the villages with least infrastructure quintile and the highest infrastructure villages, the proportions are 25.23 percent and 50.14 percent respectively. Moreover, 49.05 (38.17) percent of child (adult) married women have no education, whereas only 8.30 (9.35) percent of child (adult) married women have higher education. It has been observed that primary and secondary education is lower among child married women compared to adult married women. Moreover, 22 (27.07) percent of child (adult) married women are working in different sectors. Similarly, 69.25 (67.52) percent of child (adult) married women are wanted last child at the time of interview held. It has been observed, 41.83 (45.90) percent of child (adult) married women heard family planning on radio whereas 38.08 (44.90) percent of child (adult) married women heard family planning on television. We can see, 34.17 percent of child married women prefer to listen radio at least once a week or almost every day where as 26.05 percent of adult married women prefer to listen radio at least once a week or almost every day. About 37.55 percent child married women prefer to watch television at least once a week or almost every day where as 40.02 percent of adult married women prefer to watch television at least once a week or almost every day. This implies that child married women have more access to radio while adult married women have more access to television. Moreover, 72.92 (64.17) percent of child (adult) married women are visited any health facility or camp in past three months. Similarly, 31.25 (21.41) percent of child (adult) married women are meet any Anganwadi / community health worker in past three months. This implies that proportion of child married women keep in touch with any health facility in last three months is higher than proportion of adult married women.

Table 4: Socio-economic profile of child and adult married women in India

Socio-economic profile of Women	India	
	Child Married Women	Adult Married Women
Household structure		
Nuclear	28.84	54.21
Non nuclear	51.87	29.36
Not dejure resident	19.29	16.43
Religion		
Hindu	56.46	62.47
Muslim and other	43.54	37.53

Wealth index		
Poor	48.42	29.57
Middle	32.35	34.29
Rich	19.23	45.14
Village Infrastructure Quintile		
Least	44.42	27.57
Middle	30.35	31.29
Highest	25.23	50.14
Location		
Urban	13.50	26.30
Rural	86.50	73.70
Biological status		
Fecund	56.75	68.61
Pregnant, Amenorrheic, Infecund or menopausal	43.25	31.39
Respondent education		
No education or illiterate	49.05	38.17
Primary	27.10	35.33
Secondary	15.55	17.15
Higher Education	8.30	9.35
Husband/ partner's education		
No education or illiterate	42.09	39.16
Primary	36.15	37.42
Secondary	14.46	15.30
Higher Education	7.30	8.12
Respondent occupation		
Not Working	78.00	72.93
Working	22.00	27.07
Want last child		
Then	69.25	67.52
Later + don't want	30.75	32.48
Heard family planning on radio		
No	58.17	56.50
Yes	41.83	45.90
Heard family planning on TV		
No	61.92	55.50
Yes	38.08	44.90
Frequency of listening radio		
Not at all	52.50	61.21
Less than once a week	13.33	12.74
At least once a week+ almost every day	34.17	26.05

Frequency of watching television		
Not at all	49.80	48.35
Less than once a week	12.65	11.63
At least once a week + almost every day	37.55	40.02
Delivery		
Home	52.25	51.67
Institution	47.75	48.75
In past three months visited any health facility or camp		
No	27.08	35.83
Yes	72.92	64.17
In past three months met any Anganwadi/community health worker		
No	68.75	78.59
Yes	31.25	21.41

Source: Estimated from DLHS-4 (2012-2013) unit level data. All values are given in percentage.

4.2 Contraceptive prevalence rates (CPR)

In this case, we have seen the contraceptive uses among child married women (61.82 percent) is lower than the adult married women (73.92 percent). The higher proportion of child married women are pill users (27.02 percent) where as 19.72 percent of adult married women are pill users in the following **Table 5**. Incidence of female sterilization is very much higher (19.23 percent) among adult married women compared to child married women (3.10 percent). There is a significant difference in modern contraceptive methods user between child and adult married women due to high incidence of female sterilization among adult married women. It is interesting to see that even after huge awareness campaign about condom usage under National AIDS Control Organization (NACO), the usage has not picked up in either age groups of child and adult married women in India.

Table 5. Choice of contraceptive method among child and adult married women in India

Current use by method type	Child Married Women	Adult Married Women
Not using any method		
No method	38.18	26.08
Modern Methods		
Pill	27.02	19.72
IUD	0.6	2.17
Injections	1.13	1.28
Condom	5.12	6.86
Female sterilization	3.10	19.23
Male sterilization	.50	1.06
Traditional Methods		
Periodic abstinence	11.12	12.12
Withdrawal	10.17	8.33
Female condom	1.39	1.04
Foam or jelly	1.58	1.05
Folkloric method	0.09	1.06

Source: Author own calculation from DLHS-4 (2012-2013) unit level data

4.3. Socio-economic and demographic correlates of CPR

In following **Table-6**, I have shown Contraceptive Prevalence Rates (CPR) among child and adult married women in India. We can see that 37.59 (29.01) percent of child (adult) married women are not using any method in nuclear family. Among child married women who are not dejure resident, 54 percent are not using any method whereas the figure for adult married women is 35.74 percent. Traditional methods users are more among Hindu child married women whereas in Muslim and other religious minority groups child married women prefer to use modern methods more. Similarly, Hindu or Muslim adult married women prefer to use modern methods more than the traditional methods. The Prevalence rate of modern contraceptive methods is higher among adult married women compared to child married women for each income group such as poor, middle and rich. The half of the urban child married women are not using any method where as 27.68 percent urban adult married women are not using any methods. Data reveals that there is no significant difference between rural and urban child married women in the usage of traditional and modern contraceptive method separately. Although there is a significant difference between rural and urban adult married women in modern contraceptive method use. About 64.74 percent of illiterate child married women do not use any method of contraception, while the corresponding figure for adult married women is only about 29.08 per

cent. This shows that illiterate child married women are the most vulnerable group using very little contraception method. Similarly, 41.02 (27.16) percent of child (adult) married women whose husbands or partners have higher education are not using any method. This upholds that husband's education is necessary but not sufficient condition for contraceptives demand specifically for child married women. Moreover, 56 (31.11) percent of working child (adult) married women are not using any method. The Working child married women prefer traditional methods more than the modern methods. But working adult married women prefer modern method more than the traditional methods. Moreover, 46 percent of child married women who either wanted last child later or did not want last child are not using any method. In spite of having institutional delivery, 45.18 (24.24) percent of child (adult) married women are not using any method. Among child married women who did not visited any health facility or camp in last three months, they are using traditional methods more than the modern method. But in case of adult married women, the modern method users are substantially higher than traditional method users.

Table 6: Demographic and socio-economic characteristics of contraceptive uses among child and adult married women in India

Demographic and socio-economic characteristics of married women	Child Married women			Adult Married Women		
	No Method	Traditional Method	Modern Method	No Method	Traditional Method	Modern Method
Household structure						
Nuclear	37.59	19.67	42.74	29.01	24.52	46.47
Non nuclear	46.27	25.73	28.00	28.05	23.95	48.00
Not dejure resident	54.00	17.29	28.71	35.74	28.22	36.04
Religion						
Hindu	47.10	28.52	24.38	21.82	25.47	52.71
Muslim and other	41.00	14.00	45.00	39.22	23.19	37.59
Wealth index						
Poor	50.16	20.81	29.03	30.67	26.01	43.32
Middle	37.24	23.92	38.84	23.77	26.57	49.66
Rich	28.78	31.26	39.96	22.06	27.12	50.82
Village Infrastructure Quintile						
Least	46.16	23.81	30.03	28.67	25.01	46.32
Middle	26.78	32.26	40.96	20.41	26.57	53.02
Highest	22.92	35.20	41.88	17.52	27.82	54.66
Location						
Urban	50.00	17.39	32.61	27.68	20.36	51.96

Rural	50.75	20.10	29.15	38.41	22.05	39.54
Biological status						
Fecund	22.20	31.66	46.14	13.25	28.94	57.81
Pregnant, amenorrheic, Infecund or menopausal	82.00	7.00	11.00	76.24	10.15	13.61
Respondent education						
Illiterate	64.74	15.63	19.63	29.08	29.85	41.07
Primary	33.71	26.53	39.76	28.30	28.05	43.65
Secondary	31.05	28.06	40.89	24.58	23.60	51.82
Higher education	29.56	29.04	41.40	22.56	23.12	54.32
Husband education						
Illiterate	51.66	21.73	26.61	35.62	22.29	42.09
Primary	50.33	22.34	27.33	33.44	23.56	43.00
Secondary	45.46	23.86	30.68	31.16	23.94	44.90
Higher education	41.02	25.36	33.62	27.16	24.94	47.90
Respondent occupation						
Not working	43.57	20.92	35.51	30.20	24.22	45.58
Working	56.00	23.67	20.33	31.11	22.81	46.08
Want last child						
Then	46.92	23.47	29.61	32.09	24.85	43.06
Later+ don't want	46	17.85	36.15	28.88	20.76	50.36
Heard family planning on radio						
No	44.41	23.02	32.57	33.15	23.06	43.79
Yes	50.54	19.05	30.41	26.70	24.47	48.83
Heard family planning on TV						
No	49.66	23.34	27.00	36.63	23.04	40.33
Yes	40.44	18.05	41.51	22.29	24.27	53.44
Frequency of listening radio						
Not at all	50.76	20.26	28.98	33.63	22.82	43.55
Less than once a week	57.11	13.11	29.78	31.52	24.81	43.67
At least once a week+ almost every day	35.76	27.30	36.94	24.76	24.53	50.71
Frequency of watching television						
Not at all	50.92	22.49	26.59	37.73	23.62	38.65
Less than once a week	41.16	18.13	40.71	39.27	15.94	44.79
At least once a week+ almost every day	42.73	21.57	35.70	20.58	25.60	53.82
Delivery						
Home	49.59	21	29.41	38.27	22.68	39.05

Institution	45.18	20.09	34.73	24.24	22.31	53.45
In past three months visited any health facility or camp						
No	44.48	29.28	26.24	31.99	22.98	45.03
Yes	47.40	18.76	33.84	27.59	25.50	46.91
Met with Anganwadi /any community health worker						
No	48.94	20.82	30.24	27.05	25.24	47.71
Yes	41.33	23.33	35.33	33.28	22.56	44.16

Source: Own calculation from DLHS-4(2012-2013) unit level data

5. ECONOMETRIC ANALYSIS OF THE FINDING

Determinants of contraceptive uses among child and adult married women

The results of unordered multinomial logistic regression are presented in **Table-7**. The table presents the ratio of the probability of choosing one outcome category over the probability of choosing the baseline category (often referred to as **relative risk ratio** or **RRR**). The ratio of two categories always positive. But a value higher than one indicates a rise in probability vis-à-vis the reference category and a value lower than one represents a fall. For example, those households which are not de jure residence have lower probability of using modern methods in both age groups as the corresponding RRRs are 0.22 and 0.39 for child and adult married women respectively. If the result is insignificant statistically (without any star in the table), no conclusion can be drawn on the direction of the impact. It can just be mentioned that there is no significant impact at all. The results show that the joint families does not play any significant role to be associated with contraceptive method uses among child and adult married women in India. But religion does play a significant role in determining the choice of contraceptives, especially the traditional methods. The child and adult married women from Muslim and other religious beliefs are less likely to use the choice of traditional methods, compared to no methods. However, the choices of modern method does not depend on religion among child married women. (as the RRR 1.00 is statistically insignificant), but it is depend on adult married women (0.45). Another point which is very crucial, the wealth quintile and village infrastructure quintile does not play any significant role to determine the contraceptive choices among child and adult married women in India. Moreover, there is a limited impact of education on the choice of modern methods for child married women, but the probability of using traditional method increases significantly with higher education for both adult and child married women. The higher education play a significant role to increase the uses of modern methods among adult married women. The husband's education, on the other hand, plays exactly opposite roles, creating strong barriers for any contraceptive method choice. The RRR of higher educated husband for choosing traditional method is 0.12 for child married women, meaning a drop in probability relative to

illiterate husband. A possible reason may be the existence of socio-cultural barriers, which discourage communication with wives (Maddox, 2007). Partners may also be reluctant to share information as they think that the knowledge may empower women and increase her bargaining power within the family.

Table 7: RRR results of unordered multinomial logistic model for child and adult married women in India

Variables	Child Married Women				Adult Married Women			
	Traditional method		Modern method		Traditional method		Modern method	
	RRR	Z	RRR	Z	RRR	Z	RRR	Z
Structure (Nuclear ref)								
Non-nuclear	0.35	-1.19	0.56	-0.95	0.81	-0.69	0.96	-0.11
Not dejure resident	0.31	-1.31	0.22*	-1.91	0.68	-1.73	0.39***	-2.79
Religion (Hindu ref)								
Muslim & others	0.06***	-3.12	1.01	0.03	0.59***	-2.62	0.45***	-4.39
Wealth index (Poor ref)								
Middle	0.98	0.47	2.65	1.05	1.14	0.44	0.88	-0.58
Rich	1.51	0.39	3.27	1.13	1.25	0.66	0.91	-0.46
Village Infrastructure quintile (Least ref)								
Middle	0.91	0.39	2.39	1.04	1.02	0.41	0.87	-0.51
Highest	1.01	0.31	3.12	1.02	1.15	0.78	0.99	-0.42
Locality (Urban ref)								
Rural	1.16	0.17	1.91	0.76	0.87	-0.46	0.75	-1.15
Respondent education (No education ref)								
Primary	3.81*	1.71	2.11	1.11	1.47*	1.84	1.54*	2.02
Secondary	4.51***	1.87	1.87	0.84	1.43***	1.41	1.48***	1.76
Higher	6.01***	2.06	1.71	0.76	1.36***	1.31	1.44***	1.62
Husband education (No education ref)								
Primary	0.16*	-2.31	0.59	-0.86	0.56***	-2.55	0.65**	-2.01
Secondary	0.14*	-2.41	0.54	-0.91	0.67	-1.61	0.71	-1.22
Higher	0.12**	-2.46	0.51	-1.01	0.75	-1.35	0.78	-1.15
Respondent occupation (No work ref)								
Working	1.81	0.91	0.54	-0.88	0.57***	-2.74	0.61***	-2.74
Marriage length	1.19	0.84	1.31	1.63	1.04	0.80	0.97**	-2.42
Age gap	0.76**	-2.41	0.75***	-3.01	0.95	-1.26	0.99	-1.07
Wanted last child (Then ref)								
Later & don't want	1.44	0.62	1.94	1.36	1.23	1.25	1.59***	2.77

Children ever born	0.84	-0.31	1.99	1.32	0.92	-0.47	1.51***	3.91
Biological status (Fecund ref)								
Other(Pregnant, amenorrheic, Infecund or menopausal)	0.02***	-5.60	0.03***	-6.89	0.05***	-14.05	0.01***	-18.42
Heard family planning on radio in last few months (No ref)								
Yes	0.24*	-1.81	0.40	-1.54	0.84	-1.06	0.71	-1.39
Heard family planning on TV in last few months (No ref)								
Yes	3.21	1.28	4.89**	2.12	1.31	1.39	1.41*	1.71
Frequency of listening radio (Not at all ref)								
Less than once a week	0.31	-1.04	0.23*	-1.71	1.05	0.08	0.81	-0.71
At least once a week & almost every day	5.14**	2.21	2.51	1.52	1.36	1.21	1.41*	1.81
Frequency of viewing TV (Not at all ref)								
Less than once a week	1.13	0.12	4.39*	1.84	0.46***	-2.55	0.83	-0.62
At least once a week & almost every day	0.35	-1.2	0.62	-0.53	1.19	0.44	1.17	0.75
Domestic violence	1.14	0.44	1.21	0.69	0.81**	-1.91	0.82	-1.59
Decision making	2.16**	2.18	0.85	-0.53	1.22**	2.45	1.05	0.95
Mobility	1.25	0.77	1.26	0.87	0.87	-1.54	0.79***	-2.91
Financial independence	0.47**	-2.32	0.93	-0.29	1.05	0.56	1.12	1.38
Institutional delivery (Home ref)	0.99	-0.01	1.82	1.10	0.94	-0.31	1.43**	1.95
Access medical help	2.46***	2.94	1.20	0.74	1.48***	4.30	1.31***	3.21
Last three months met with Anganwadi /any community health worker (No ref)								
Yes	3.11*	1.77	1.57	0.80	1.44*	1.8	1.37*	1.68
In past three months visited to any health facility or camp(No ref)								
Yes	0.73	-0.53	2.66*	1.76	0.89	-0.62	0.91	-0.58
Constant	19.08***	1.94	0.25***	-0.96	3.3***	2.59	3.23***	2.76
Number of observations	88775				225095			
LR chi2(62)	209.15				879.94			
Prob> chi2	0.00				0.00			
Pseudo R2	0.60				0.58			

*** significant at 1 % level, ** significant at 5 % level , * significant at 10% level, Z-standard error. Source: Author own calculation from DLHS-4 data

The strong son preference may also encourage men to withhold information related to contraceptives. Also, the poor quality of primary education and total absence of sex-education in formal education system in most of the developing countries cannot guarantee the men with ability to comprehend knowledge about family planning methods and to transmit it to his partner.

In this context, the existence of a substantial literature pointing out that the male partner may not have right knowledge about issues relating to reproductive health (**Char, Saavala & Kulmala, 2009**)

If age gap between husband and wife increases, probability of using both methods fall among child married women, which may also imply that husbands are not disseminating their knowledge to their much younger wives. This variable is insignificant for adult married women's choice for contraceptives. Working status among child married women cannot improve their contraception choice. But for adult married women, the occupations have a significant lower effect on the uses of both traditional and modern methods. They might not get a chance to receive information about family planning due to their extended working hours at home and outside. Results show that television is an important source of information about family planning. Listening family planning programs on television increases the possibility of using modern method for both adult and child married women in India.

Two empowerment indicators (decision-making and financial independence) are significantly associated with the child married women. If the women have less autonomy, probability of using traditional method increases significantly, though there is no such effect on modern contraceptive method. Domestic violence has apparently no role in determining the contraceptive choice among the child married women. If adult married women lose their autonomy to move, probability of usage modern method falls significantly. Moreover, the empowerment indicators (Domestic Violence, Financial Autonomy, Decision Making Power and Mobility) are insignificant factor to be associated with modern contraceptive uses among child married women in India.

Difficulty in access to medical help increases usage of traditional methods for both child and adult married women. In past three months, if the respondent women had met with Anganwadi or any community health worker, usage of traditional and modern methods increase significantly among adult married women. But among child married women, only probability of using traditional method increases significantly. The usage of modern method increases significantly among child married women with visiting health care facility, which is not seen among adult married women. This implies that Anganwadi or community health workers are not influential to motivate child married women towards modern contraceptive methods use, while the health workers or nurses can effectively influence the adult married women. Again earlier experience of institutional delivery helps increasing the modern methods among adult married women without any significant impact among the child married women. That essentially means that factors like perception to access, visit to community health workers, earlier experience of delivery at institution are able to make the adult married women to follow modern contraception choices.

6. CONCLUSION AND POLICY DIRECTION

In India, the choices of traditional and modern contraception method is quite different among child and adult married women. The government policy have not been taken properly to increase the choice of modern contraceptive method among child and adult married women in India. So it is necessary to give important in the contraception policy from supply-side oriented 'condom specific' to a more broad-based and community related intervention matrix. Another point which is very crucial, the socio-economic barriers of right choice of contraceptive usage are quite different among child and adult married women in India. Moreover, most of the variables have significant effect on choosing the traditional methods of contraception choices among child married women, however, they are important for adult married women in case of modern contraceptive method uses. The religion does affect more on adult married women compared to child married women in their choice of modern methods. The husband's higher education cannot improve the choices of modern contraceptive method among child and adult married women in India. The formal education could not create any synergy among the community health providers to enhance the choice of modern methods. Thus informal and sexual awareness generation campaigns are to be emphasized in far greater way than present. To break the communication gap between either husband and wife or wife and mother-in-law, it is necessary to have a face-to-face discussion about family planning programe, methods and its need by trained family planning health workers.

Moreover, child married women are not comfortable to use modern contraceptives methods as they faces barriers related to distance from health facility, transport facility and problems of travelling alone. Thus door-to-door campaigning by community health workers can improved the knowledge and awareness about the various family planning methods in detail. The government policies seeking to empower women through formation of Self Help Groups (SHG) may also serve as alternative transmitters of reproductive knowledge. Therefore, public health policy makers must focus on these issues to enhance the coverage and efficacy of community health workers to bring more and more child married women in the contraception usage network. The policy matrix should not only focus on the supply of condoms and facilities of sterilization, but also would provide the awareness about the alternative choices that they have and their respective effectiveness

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