

Caste as a Differential Factor in Fertility and Contraception Rates

G. Tharun¹, B. Muniswamy²

¹Research Scholar, ²Professor, Department of Statistics, Andhra University, Visakhapatnam, Andhra Pradesh, India, 530003.

e-mail: ¹govadatharun10@gmail.com, ²munistats@gmail.com

Article Info

Page Number: 656-677

Publication Issue:

Vol. 71 No. 4 (2022)

Article History

Article Received: 25 March 2022

Revised: 30 April 2022

Accepted: 15 June 2022

Publication: 19 August 2022

Abstract

The study aims to throw light on the severe lacking of awareness about the adverse effects of an unchecked rise in population in the rural, uneducated and financially deprived communities. This is evident from the higher Mean number of child born (MCB) of the respective categories. The study finds that the usage of contraceptive depends on factors such as literacy, geographical location and socio-economic conditions. It is found that females in nuclear families tend to practice family planning more than females in joint families. Similar patterns in variables such as the financial conditions, literacy and cultural factors are studied. These aforementioned variables remain the major grounds for the lack of awareness that has been prevalent still. This research paper can be considered to provide a comprehensive, yet insightful understanding of the growing need to promote awareness among the communities of the downtrodden and underprivileged.

Keywords: contraceptive methods, family planning, Poisson regression, logistic regression.

Introduction

The overall development of the country depends on the various intercessors and subgroups. It is most important to measure development based on economy, education, caste and politics. The case is a basic configuration to measure social interconnection in India. Fertility is generally used to indicate the actual performance of women or female groups. The speed at which the population to measure birth rate is to be produced is usually evaluated by the number of births to some sizes of the population, such as the number of married couples to the number of children. There are numerous factors that contribute to higher fertility. It has been observed that fertility levels and patterns differ significantly between different subgroups of the same population. These subgroups can be based on education, marriage age, occupation, mortality, contraceptive use, place of residence, religion, caste, race, and more.

Studying fertility differences is also important in implementing a family planning program. It helps identify high fertility groups that focus on the program's efforts. After marriage, the woman is considered to be at home and regulates the home and the father's children. As a result, employment opportunities and educational facilities are limited, so women always live at home and enjoy raising children and playing. Also, the higher the level of education, the higher the level of information will be provided about creating a lasting motivation to maintain contraception and reduce the number of family members to achieve a better standard of living. As women's education level rises, fertility rates decline. The same is true for literacy situations (the higher the literacy level of women in the area, the lower the

fertility). This also means that educated women must have lower fertility levels compared to illiterate people. This shows that as the level of education increases, both women and men are less likely to live in polygamy communities. The desire to limit the birth of children is more pronounced at higher education levels than in lower grades (MOHP, 2011). Women of different professions have different levels of fertility. It was generally observed that the wives of working people had the lowest fertility.

Fertility rate is measured by different types such as Crude Birth rate(CBR), General Fertility Rate(GFR), Age Specific Fertility Rate (ASFR)and the Total Fertility Rate(TFR). Parity progression ratios have the advantage of describing directly the family building process. Estimates of Period Parity Progression Ratios (PPPRs) from birth to first marriage imply nearly universal marriage, with 96 percent of all Indian women eventually marrying. However, this overall figure masks some diversity among the states. In the country as a whole, the progression ratio from first to second birth is also quite high, at 93 percent. At higher parities, progression ratios fall off more rapidly. How rapidly depends to a considerable extent on the general level of fertility in a particular state.

The major drivers of fertility transition in India have been through use of contraceptives. Contraceptive use in the country has shown a significant improvement over the last several decades. The decrease in fertility is the function of three main factors – the use of contraception, increase in the age of marriage and abortions. Family Planning has been the most enhanced programme in the health sector in India, because of the continuing concerns of over-population. But what these results have shown is that it can be achieved with increased contraception and robust health delivery systems.

The increased use of contraception across the country has been a major factor in preventing unwanted pregnancies, leading to a decrease in India's Total Fertility Rate (TFR) to below replacement level, the recently-released data from National Family Health Survey (NFHS 5) has shown. In just five years, from NFHS-4 (2015-16) to NFHS-5 (2019-20), the use of modern contraceptives for family planning has jumped by 8.7 percentage– from 47.8 percent to 56.5 percent. Contraceptive use can be characterized in terms of both prevalence of different contraceptive methods and specific characteristics of acceptors which differentially influence use of different contraceptive methods. The challenge is how to classify contraceptive use patterns on the basis of a selected set of characteristics of acceptors. Identification of similarities and dissimilarities in the acceptors of different contraceptive methods is important in understanding contraceptive use dynamics.

India, the first country in the world to adopt an official population policy and launch an official family planning programme way back in 1952 which remains the ministry of family planning efforts. During its previous years, the programme is focussed on the health rationale of family planning. Family planning as a strategy for population stabilization received attention only after the 1971 population census. This strategy resulted in an increase in the proportion of couples effectively protected from 12.4 percent during 1971-72 to 46.5 percent during 1995-96 but remained stagnant during 1995-96 through 2003-04 and decreased to 40.4 during 2010-11. After the launch of the National Rural Health Mission (NRHM) in 2005, the

official family planning programme has been subsumed in the reproductive and child health component of the Mission. However, universal adoption of the small family norm still remains a distant dream in India. During 2007-08, only about 54 percent of the currently married women aged 15-49 years or their husbands were using a contraceptive method to regulate their fertility and the contraceptive prevalence rate appears to have stagnated after 2004. Moreover, contraceptive practice in India is known to be very heavily skewed towards terminal methods which means that contraception in India is practiced primarily for birth limitation rather than birth planning.

Although there is considerable variability among states in the effect of caste and tribe on contraceptive use, there is a strong tendency for women from scheduled castes or scheduled tribes to have lower contraceptive use rates than other women. Exposure to the electronic mass media (radio, television, and cinema) has a large, positive effect on contraceptive use. This effect persists after residence and education are controlled. Utilization of health services for antenatal care or delivery tends to have a positive effect on contraceptive use, even after residence and education are controlled, but this effect varies considerably by state.

With over half of its populace inside the reproductive age institution and 68.84 in keeping with cent of India's populace living in villages, possibilities are plenty however so are the challenges. It is nevertheless an unrealized dream of the healthcare system that allows you to attain the closing mile, particularly girls belonging to scheduled castes and tribes (SC and ST) in distant and remote elements of the country. As a result, the mortality among these corporations is excessive. Scheduled tribes in India have the best total fertility fee (3.12), followed by SC (2.92), other backward class (OBC) (2.75) and other social groups (2.35). Contraceptive use is the bottom among ladies from ST (48%) observed via OBC (54%) and SC (55%) even as woman sterilization is the highest among girls from OBC (40%) followed by SC (38%), ST (35%) and other social agencies (61.8%).

Review of Literature

1. **JE Laing (1985)** the study aims to estimate the fertility effects of a particular family planning programme, namely the Philippine National Acceptor Survey (NAS) in 1974. Using a sample data of nearly 3000 family planning acceptors, the study finds insights into pregnancy, continuation and fertility following acceptance in the families. The four major programmes for Contraception are – pills, IUDs, rhythm and condoms.
2. **S IrudayaRajan, U S Mishra, T K Vimala (1990)**, propose a study on the preference of male child. The preference of one particular sex interferes with the natural fertility regime. This creates an impact where the family size eventually exceeds the desired family size leading to excess fertility. The study found out that the change in the composition of the population can be attributed to the increase in the use of Contraceptive. The study played in the imp role and enhancing the understating of the role different Contraceptive and family planning approaches.
3. **A Jain (1997)** finds out the discrepancy in Total Fertility Rate (TFR) and Contraceptive Prevalence Rate (CPR) rates in six states, namely Andhra Pradesh, Rajasthan, Madhya Pradesh, Bihar, Odisha. The study finds out that there is no internal consistency

between NFHS estimates in different states when juxtaposed with the country as a whole. The assumed Total fecundity value is suggested to be lower than that of the 15.3 birth average assumed prior.

4. **S. Barman (2013)** attempt a study investigating the differentials of Contraceptive use in two regions including the Empowered Action Group (EAG) states and select states in south India. The regions are selected by taking socio-economic and demographic data as parameters. Using the NFHS-3 data, variables like the economic status, exposure to media, female autonomy and ethnic differences are found to be important variables in determining the data for the usage of Contraceptives.

5. Here **Subhagata Roy, K.K. Singh, B.P. Singh, K Gupta (2015)** deduces that controlling fertility is an important goal, especially for developing countries like India. Indicators like CBR, ASFR and TFR are utilized to study the temp of fertility among 7342 married females between the age of 15-49 from Uttar Pradesh. The aim of the study was to measures the impact of Contraceptives through the total children born (TCB) data in the last five years. The results indicate lesser children born in families where the women are highly educated and are in urban location.

Objectives

1. To study the different types of contraceptives at caste differentials.
2. To study the influence for using the contraceptive by socio-cultural and demographic variates.
3. To observe the live births over past 5 years among different castes four states like Andhra Pradesh, Karnataka, Kerala and Tamil Nadu respectively.
4. To observe the difference among the temporary and permanent usage of contraceptives by Univariate logistic study.
6. To observe the fertility of rate by Possession regression for four states.

Methodology

In this paper, to begin with the distribution on different background characteristics has been studied for the females of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. Initially the effect of background characteristics has been observed that one by one using univariate study to know the impact on contraceptive use and total children born (TCB) in last five years and further multivariate study has been carried out to know the effect of background characteristics and behaviour on TCB in the last five years jointly caste differentials. Different variables used in this study have been categorized as births in last five years (0-4 births), type of place of residence (urban, rural), educational attainment (no education, primary, secondary, higher), child death ever (yes, no), type of contraceptive (on user, temporary, primary), wealth index (poor, moderate, rich), existing children (son at home, daughter at home).

In regression analysis, the outcome(dependent) variable and explanatory (independent) variables taken into the study should be highly correlated. The study provides the impact on type of use of contraceptive based on different socio-cultural and demographic variations. Thus, this analysis will provide the variable affecting the dependent variable (type of contraception).

The logistic regression model,

$$\ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_n X_n$$

where,

1. $0 < p < 1$, coming from dependent variable Y.
2. X_i 's ($i = 1, 2, \dots, n$) are indicator variables, coming from independent variables.

For knowing the variation of number of births in last five years, a simple Poisson regression analysis has been carried out. This technique is useful for the count data analysis and since number of births in last five years has count measure, the technique has been efficiently applied by considering the assumptions of Poisson regression.

The Poisson regression Model:

X is a r.v., follows Poisson distribution with parameter λ . Thus

$$\text{Prob.}(X = x) = \frac{e^{-\lambda} \lambda^x}{x!}, \text{ where } x \geq 0$$

In this model mean is $\text{mean} = E(X) = \lambda$ and we write it as:

$$\ln(E(X)) = \ln(\lambda) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_n X_n$$

where, $\ln(\lambda) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_n X_n$

This model is known as Poisson regression with 'n' independent variables.

Result and discussion

In the present analysis, the study of type of contraceptive at caste differentials has been carried out and the influence has been observed by many socio-cultural and demographic variates. Also observed the current fertility, the studies of number of births in last five years for the females of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu have been carried out. The analysis contains the females whose marital duration is more than five years. Firstly, the distribution of females according to different demographic, socio-economic and cultural factors has been done. The effect of demographic, socio-economic and cultural variables on the use of contraception has been carried out at different caste differentials.

Table: 4.1:

States	Andhra Pradesh	Karnataka	Kerala	Tamil Nadu
Demographic Variables	Percentage			
Births in last 5 years				
0	78.2	77.7	80.7	78.6
1	14.2	15.6	16.3	15.8
2	6.9	6.2	2.9	5.3
3	0.6	0.5	0.1	0.3
Place of Residence				
Urban	31.8	34.2	38.0	44.4
Rural	68.2	65.8	62.0	55.6
Educational Attainment				
No education	33.9	26.3	1.4	16.6
Primary	13.8	11.2	4.2	11.5
Secondary	40.8	51.6	66.1	53.3
Higher	11.5	10.9	28.3	18.6
Existing Children Group				
Male More	55.2	56.6	52.4	53.8
Female More	44.8	43.4	47.6	46.2
Child Ever Died				
Yes	13.8	6.7	2.1	5.9
No	86.2	93.3	97.9	94.1
Type of Caste or Tribe				
General	10.3	10.2	30.7	1.5
OBC	54.8	54.3	56.3	67.1
SC/ST	34.9	34.7	13.0	31.4
Type of Contraceptive Use				
Not user	42.1	58.9	59.5	60.2
Temporary	0.40	1.7	3.3	2.2
Permanent	57.5	39.5	37.2	37.6
Wealth Index Group				
Low	18.4	28.8	3.0	19.1
Medium	32.9	31.0	14.4	30.1
High	48.7	40.2	82.6	50.8

Table 4.1, shows that the distribution of females of four states respectively under various socio-economic and demographic factors. The table clearly explain 78.2%, 77.7%, 80.7%, 78.6% of females of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu had no child births in the last five years respectively. In totality, maximum females (i.e., 99%) of four states are having less than or equal to two births in last five years. Based on the place of residence is concerned, from the table approximately 32%, 34%, 38%, 44% of the females belongs to urban areas of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu respectively. Almost 34% in Andhra Pradesh, 26% in Karnataka, 1% in Kerala and 17% in Tamil Nadu have never taken any formal education whereas 54%, 63%, 70% and 65% have been educated from primary to secondary level in Andhra Pradesh, Karnataka, Kerala and Tamil Nadu respectively. The proportions of highly educated females are below 30% in all the four states (11.5%, 10.9%, 28.3%, 18.6% in Andhra Pradesh, Karnataka, Kerala and Tamil Nadu). And there is around 53% of male children more than female children at home. From the table, it is evident that around 14%, 7%, 2%, 6% females in Andhra Pradesh, Karnataka, Kerala and Tamil Nadu have ever experienced child death in their life.

Most of the females in Andhra Pradesh, Karnataka, Kerala and Tamil Nadu (almost 54%, 54%, 56%, and 67% respectively) belongs to OBC category, almost 35%, 35%, 13%, 31% belong to SC/ST category and rest of the females belong to general category. The proportion of females who do not use any type of contraceptive are almost 42%, 59%, 60%, 60% in Andhra Pradesh, Karnataka, Kerala and Tamil Nadu respectively, and the rest of them use either temporary or permanent contraceptives. The wealth is concerned, about 18%, 29%, 3%, 19% belong to low wealth class; about 33%, 31%, 14%, 30% belong to the medium class and rest of the females are belong to the high wealth class in Andhra Pradesh, Karnataka, Kerala and Tamil Nadu respectively.

Table 4.2: Mean number of children ever born for complete and last five-year birth history among currently married females of age 15-49 by caste in Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, 2015-16.

Table 4.2.1: Andhra Pradesh

Demographic Variables	SC/ST		OBC		Gen		Exposed Females
	complete	Last 5 years	complete	Last 5 years	complete	Last 5 years	
Place of Residence							
Urban	2.63	0.24	1.64	0.27	1.51	0.23	3305
Rural	2.88	0.35	1.83	0.33	1.74	0.27	7082
Education							

No education	2.49	0.84	2.43	0.2	2.36	0.07	3517
Primary	2.06	0.65	2.09	0.3	2.13	0.22	1426
Secondary	1.27	0.15	1.33	0.42	1.47	0.33	4246
Higher	0.74	0.16	0.73	0.28	0.89	0.31	1198
Existing Children Group							
Male More	2.51	0.4	2.36	0.19	2.24	1.07	6030
Female More	2.47	0.53	2.36	0.51	2.24	0.41	4357
Child Ever Died							
Yes	3.45	0.32	3.41	0.31	3.05	0.25	713
No	1.69	0.33	1.66	0.27	1.58	0.31	9674
Type of Contraceptive Use							
Not user	0.82	0.35	0.73	0.31	0.75	0.28	4378
Temporary	1.8	0.33	1.47	0.37	1.6	0.5	44
Permanent	2.7	0.29	2.47	0.31	2.32	0.23	5965
Wealth Index Group							
Low	1.24	0.39	1.92	0.38	1.91	0.26	1906
Medium	1.52	0.37	1.83	0.32	1.87	0.29	3417
High	1.4	0.2	1.66	0.28	1.57	0.24	5064
Age Group of the Females							
15-19	0.12	0.12	0.12	0.12	0.08	0.08	147
20-24	1.02	0.85	1.01	0.82	0.79	0.68	1447
25-29	1.8	0.66	1.81	0.69	1.68	0.72	1820
30-34	2.17	0.21	2.12	0.22	1.94	0.24	1427
35-39	2.4	0.05	2.25	0.05	2.04	0.05	1751
40-45	2.69	0.01	2.49	0.01	2.28	0.01	1777
45-49	3.02	0.01	2.8	0	2.49	0	2018

Table 4.2.2:Karnataka

Demographic Variables	SC/ST		OBC		Gen		Exposed Females
	complete	Last 5 years	complete	Last 5 years	complete	Last 5 years	
Place of Residence							
Urban	1.59	0.06	1.55	0.05	1.51	0.06	7922
Rural	1.75	0.08	1.67	0.06	1.65	0.07	15650
Education							
No education	2.48	0.05	2.50	0.03	2.41	0.02	6339
Primary	2.02	0.08	2.28	0.05	2.28	0.06	2656
Secondary	1.18	0.10	1.33	0.07	1.35	0.08	12055
Higher	0.56	0.09	0.73	0.07	0.81	0.09	2522
Existing Children Group							
Male More	2.58	0.09	2.46	0.07	2.43	0.07	12906
Female More	2.67	0.11	2.52	0.09	2.46	0.11	10666
Child Ever Died							
Yes	3.66	0.09	3.64	0.07	3.54	0.13	1502
No	1.64	0.07	1.55	0.06	1.56	0.07	22070
Type of Contraceptive Use							
Not user	0.97	0.10	0.93	0.08	0.92	0.09	13689
Temporary	1.20	0.09	1.60	0.09	1.71	0.13	376
Permanent	2.77	0.04	2.62	0.03	2.59	0.04	9507
Wealth Index Group							
Low	1.85	0.08	1.83	0.05	1.88	0.06	6961
Medium	1.67	0.07	1.72	0.06	1.70	0.07	7292
High	1.50	0.06	1.60	0.05	1.56	0.06	9319
Age Group of the Females							
15-19	0.08	0.08	0.05	0.05	0.04	0.04	205
20-24	0.84	0.68	0.68	0.57	0.78	0.67	1827
25-29	1.71	0.70	1.58	0.72	1.66	0.84	3694
30-34	2.28	0.31	2.07	0.34	1.96	0.35	4402
35-39	2.46	0.07	2.33	0.09	2.21	0.08	4882
40-45	2.66	0.32	2.47	0.02	2.44	0.03	4403
45-49	2.86	0.01	2.61	0.00	2.45	0.01	4159

Table 4.2.3: Kerala

Demographic Variables	SC/ST		OBC		Gen		Exposed Females
	complete	Last 5 years	complete	Last 5 years	complete	Last 5 years	
Place of Residence							
Urban	1.29	0.04	1.42	0.04	1.23	0.04	3969
Rural	1.36	0.05	1.46	0.05	1.27	0.04	6572
Education							
No education	2.60	0.01	2.35	0.01	2.58	0.01	142
Primary	2.06	0.03	2.28	0.01	2.18	0.01	434
Secondary	1.322	0.05	1.58	0.05	1.41	0.03	6938
Higher	0.66	0.07	0.88	0.07	0.97	0.06	3027
Existing Children Group							
Male More	2.10	0.07	2.17	0.06	1.95	0.05	5789
Female More	2.14	0.06	2.17	0.07	1.93	0.06	4752
Child Ever Died							
Yes	3.34	0.03	3.26	0.07	2.93	0.10	214
No	1.32	0.04	1.42	0.04	1.24	0.04	10327
Type of Contraceptive Use							
Not user	0.69	0.05	0.90	0.05	0.74	0.05	6314
Temporary	1.32	0.21	1.43	0.13	1.36	0.08	241
Permanent	2.32	0.03	2.29	0.03	2.07	0.03	3986
Wealth Index Group							
Low	1.46	0.04	1.45	0.03	1.26	0.01	323
Medium	1.44	0.05	1.52	0.04	1.41	0.05	1540
High	1.22	0.04	1.43	0.05	1.24	0.04	8678
Age Group of the Females							
15-19	0.02	0.02	0.01	0.01	0.02	0.02	22
20-24	0.39	0.34	0.34	0.31	0.19	0.18	441
25-29	1.15	0.61	1.29	0.67	0.94	0.59	1009
30-34	1.70	0.42	1.88	0.44	1.64	0.43	1874
35-39	1.96	0.10	2.12	0.14	1.80	0.15	2178
40-45	2.13	0.02	2.17	0.04	1.99	0.02	2688
45-49	2.00	0.00	2.16	0.00	1.88	0.01	2329

Table 4.2.4: Tamil Nadu

Demographic Variables	SC/ST		OBC		Gen		Exposed Females
	complete	Last 5 years	complete	Last 5 years	complete	Last 5 years	

Place of Residence							
Urban	1.48	0.06	1.41	0.05	1.42	0.04	12735
Rural	1.64	0.07	1.53	0.05	1.56	0.08	15992
Education							
No education	2.40	0.01	2.17	0.02	2.16	0.03	4771
Primary	2.20	0.04	2.13	0.02	2.15	0.02	3303
Secondary	1.34	0.09	1.41	0.06	1.54	0.07	15309
Higher	0.58	0.09	0.77	0.07	0.83	0.07	5344
Existing Children Group							
Male More	2.39	0.08	2.14	0.06	2.15	0.04	16586
Female More	2.43	0.10	2.17	0.07	2.11	0.08	12364
Child Ever Died							
Yes	3.48	0.06	3.20	0.06	3.10	0.10	2045
No	1.52	0.03	1.43	0.05	1.41	0.06	26905
Type of Contraceptive Use							
Not user	0.98	0.08	0.97	0.06	0.97	0.06	17303
Temporary	1.60	0.20	1.54	0.13	1.42	0.17	638
Permanent	2.54	0.04	2.28	0.03	2.19	0.05	10786
Wealth Index Group							
Low	1.72	0.06	1.64	0.05	1.88	0.05	5505
Medium	1.60	0.07	1.54	0.05	1.54	0.07	8671
High	1.43	0.06	1.40	0.04	1.39	0.05	14551
Age Group of the Females							
15-19	0.05	0.05	0.03	0.03	0.06	0.06	163
20-24	0.68	0.59	0.63	0.55	0.72	0.68	1820
25-29	1.57	0.76	1.44	0.73	1.21	0.65	4981
30-34	2.02	0.34	1.87	0.35	1.89	0.47	3283
35-39	2.30	0.07	2.08	0.08	1.88	0.04	8081
40-45	2.44	0.01	2.10	0.02	1.92	0.02	3707
45-49	2.53	0.01	2.17	0.00	2.10	0.00	6692

Table 4.2, are bivariate tables which show caste-wise distribution of mean no. of children born (MCB) for the last five years and complete child bearing age, on the basis of various socio economic and demographic factors mentioned above for Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. From the tables it is clear that MCB of rural women stands to be more than that of urban women for both complete and last five years birth in all four states, which may be due to lack of awareness of education, contraceptive usage, etc. On the basis of caste-wise categorization, it is established that general category females (both urban and rural) have the least MCB whereas SC/ST women have maximum MCB from the data complete and last five years birth history.

On the basis of education, it is found that uneducated females of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu across all caste have the highest MCB in their complete reproductive span. The MCB in last five years is quite opposite for complete reproductive, maximum in all four states MCB for last five years is highest.

When the variable children ever born is considered, it is clear that females with more MCB have more daughters ever born than sons across all four states and caste considered for both complete and last five years birth history, which clearly indicates that in expectation of a male child, females keep on delivering more children. The tables clearly show that MCB of females who have experienced any child death is quite high than those who have not experienced it. For the complete birth history, MCB is equal or more than 3 in all four states and across all caste groups. In

When it comes to contraceptive usage, females who adopt any contraceptive method, have the highest MCB in complete birth history. The females who use temporary methods have lesser MCB than those who use permanent methods. This shows that females, who have attained a desired family size, generally opt for permanent contraceptives across all states. The table also indicates that MCB decrease as wealth increase which can be marked from the figures of all four states and across all states for both complete and last five years births. The age-group of females has been divided into seven categories with class width of five and both limits inclusive from 15-19 years to 45-49 years. From the last 5 years birth history data it is clear that females belonging to age group 25-29 years have the highest MCB, except two cases, for all caste differentials and states. The current fertility decreases and becomes almost negligible for the age-group 44-49 years for all castes across all states. If we talk in terms of complete fertility- Andhra Pradesh has the highest (3.01), Karnataka stands second (2.86), Tamil Nadu stands third (2.53) fertility level. Similarly, highest fertility for both complete and current, could be observed for SC/ST females across all age-groups and states, except for 4 cases. General category females have lowest fertility for both complete and current as compared to their OBC and SC/ST counterparts for each age-group and states.

Table 4.3: Univariate logistic study showing influence of caste on the user of contraceptives against non-user due to other socio-cultural and demographic factors in Andhra Pradesh, Karnataka, Kerala, Tamil Nadu.

Table 4.3.1: Andhra Pradesh

Variables	Caste Group	Temporary Contraceptive Use				Permanent Contraceptive Use			
		Exp(B)	P- Value	95% C.I.		Exp(B)	P- Value	95% C.I.	
				Lower	Upper			Lower	Upper
Place of Residence									
Urban	SC/ST	0.32	0.052	0.20	1.06	0.24	0.001	0.18	0.56
	OBC	0.43	0.162	0.13	1.41	0.30	0.005	0.22	0.69
	Gen	0.24	0.020	0.10	0.80	0.31	0.006	0.13	0.71
Education									
Primary	SC/ST	0.26	0.162	0.01	2.23	0.09	0.027	0.01	0.76

Secondary		0.57	0.337	0.02	4.14	0.17	0.049	0.11	1.39
Higher		0.90	0.179	0.01	2.43	0.14	0.051	0.10	0.46
Primary	OBC	1.32	0.000	0.98	2.01	0.25	0.050	0.06	1.06
Secondary		1.89	0.000	1.14	1.93	0.36	0.162	0.09	0.51
Higher		2.51	0.000	1.22	3.43	0.42	0.238	0.10	1.77
Primary	Gen	1.08	0.150	0.82	3.52	0.72	0.108	0.40	1.07
Secondary		1.29	0.112	0.88	3.11	0.80	0.172	0.59	1.10
Higher		2.09	0.095	0.92	2.13	0.57	0.120	0.24	1.39
Existing Children Group									
Sun at home	SC/ST	0.34	0.020	0.06	1.80	0.35	0.048	0.12	0.99
	OBC	0.46	0.366	0.10	2.42	0.52	0.215	0.18	1.45
	Gen	0.30	0.050	0.05	1.59	0.47	0.015	0.16	1.31
Child Ever Died									
Yes	SC/ST	0.21	0.000	0.18	0.52	0.25	0.240	0.03	2.50
	OBC	0.41	0.000	0.25	1.95	0.40	0.436	0.04	3.93
	Gen	0.36	0.000	0.18	0.74	0.29	0.301	0.03	2.95
Wealth Index Group									
Medium	SC/ST	0.59	0.629	0.07	5.10	0.44	0.182	0.13	1.46
High		0.23	0.028	0.06	0.84	0.28	0.283	0.02	2.81
Medium	OBC	0.65	0.695	0.08	5.59	0.50	0.254	0.15	1.64
High		0.29	0.042	0.08	1.06	0.36	0.388	0.03	3.56
Medium	Gen	0.55	0.590	0.06	4.83	0.48	0.233	0.14	1.60
High		0.24	0.036	0.07	0.91	0.25	0.223	0.02	2.36

Table 4.3.2: Karnataka

Variables	Caste Group	Temporary Contraceptive Use				Permanent Contraceptive Use			
		Exp(B)	P-Value	95% C.I.		Exp(B)	P-Value	95% C.I.	
				Lower	Upper			Lower	Upper
Place of Residence									
Urban	SC/ST	0.39	0.013	0.12	1.32	0.96	0.188	0.56	1.62
	OBC	0.58	0.039	0.46	1.95	0.92	0.287	0.55	1.56
	Gen	0.67	0.051	0.57	2.30	0.88	0.166	0.51	1.52
Education									
Primary	SC/ST	0.11	0.000	0.08	1.19	1.12	0.502	0.51	2.71
Secondary		0.26	0.006	0.10	0.68	1.82	0.036	1.40	3.20
Higher		0.89	0.010	0.02	0.60	0.97	0.000	0.04	1.89
Primary	OBC	0.21	0.000	0.16	1.37	1.66	0.229	0.72	3.82
Secondary		0.47	0.106	0.18	1.17	2.29	0.004	1.30	4.00
Higher		1.21	0.050	0.04	1.59	1.05	0.000	0.97	2.31
Primary	Gen	0.73	0.000	0.56	1.45	1.80	0.180	0.76	4.28

Secondary		0.99	0.036	0.18	1.28	2.23	0.006	1.26	3.95
Higher		1.81	0.050	0.04	1.93	1.22	0.000	0.91	2.03
Existing Children Group									
Sun at home	SC/ST	0.22	0.001	0.08	0.54	2.10	0.000	1.40	3.15
	OBC	0.50	0.122	0.21	1.20	1.99	0.001	1.33	2.98
	Gen	0.63	0.321	0.25	1.57	1.87	0.003	1.23	2.83
Child Ever Died									
Yes	SC/ST	1.20	0.000	1.05	3.50	1.27	0.812	0.17	4.15
	OBC	1.39	0.000	1.11	2.84	1.94	0.510	0.27	3.95
	Gen	1.21	0.000	1.20	2.18	1.90	0.532	0.25	4.48
Wealth Index Group									
Medium	SC/ST	0.26	0.041	0.06	1.17	1.84	0.051	0.99	3.42
High		0.26	0.009	0.10	0.71	1.28	0.339	0.76	2.16
Medium	OBC	0.39	0.120	0.09	1.69	1.97	0.030	1.06	3.65
High		0.47	0.113	0.18	1.19	1.29	0.324	0.77	2.16
Medium	Gen	0.48	0.261	0.10	2.29	2.10	0.021	1.12	3.95
High		0.46	0.128	0.17	1.24	1.12	0.669	0.66	1.89

Table 4.3.3: Kerala

Variables	Caste Group	Temporary Contraceptive Use				Permanent Contraceptive Use			
		Exp(B)	P-Value	95% C.I.		Exp(B)	P-Value	95% C.I.	
				Lower	Upper				
Place of Residence									
Urban	SC/ST	1.20	0.000	0.68	2.09	2.21	0.236	0.59	4.19
	OBC	1.62	0.000	0.42	3.16	2.09	0.261	0.57	3.36
	Gen	1.33	0.000	0.49	2.04	2.18	0.237	0.59	3.99
Education									
Primary	SC/ST	0.17	0.000	0.08	1.93	1.03	0.085	0.20	4.09
Secondary		0.24	0.033	0.06	0.89	1.67	0.257	0.68	4.07
Higher		0.27	0.019	0.02	2.73	0.30	0.197	0.04	1.86
Primary	OBC	0.14	0.000	0.11	0.99	1.07	0.072	0.81	3.08
Secondary		0.78	0.030	0.07	0.87	1.84	0.173	0.76	4.45
Higher		1.09	0.050	0.02	2.19	0.45	0.095	0.07	2.76
Primary	Gen	0.20	0.000	0.19	1.07	1.33	0.091	0.91	2.57
Secondary		0.24	0.029	0.06	0.86	1.96	0.136	0.80	4.75
Higher		0.59	0.032	0.02	2.40	0.59	0.079	0.29	3.58
Existing Children Group									
Sun at home	SC/ST	0.33	0.112	0.25	1.29	2.44	0.051	0.99	4.99
	OBC	0.31	0.077	0.08	1.13	1.86	0.160	0.77	4.51
	Gen	0.48	0.270	0.13	1.77	2.13	0.094	0.87	5.18

Child Ever Died									
Yes	SC/ST	1.12	0.000	0.19	1.83	1.50	0.172	0.58	5.04
	OBC	1.07	0.012	0.27	1.63	0.53	0.121	0.17	1.63
	Gen	0.95	0.036	0.37	1.51	0.96	0.071	0.74	2.38
Wealth Index Group									
Medium	SC/ST	0.52	0.000	0.11	2.88	2.09	0.088	0.53	4.19
High		0.21	0.011	0.06	0.71	0.12	0.097	0.09	2.30
Medium	OBC	0.56	0.000	0.29	2.84	1.85	0.073	0.47	3.23
High		0.22	0.008	0.07	0.67	0.09	0.103	0.08	2.48
Medium	Gen	0.79	0.000	0.41	2.66	1.65	0.074	0.41	2.54
High		0.24	0.014	0.08	0.75	0.11	0.064	0.48	2.50

Table 4.3.4: Tamil Nadu

Variables	Caste Group	Temporary Contraceptive Use				Permanent Contraceptive Use			
		Exp(B)	P- Value	95% C.I.		Exp(B)	P- Value	95% C.I.	
				Lower	Upper			Lower	Upper
Place of Residence									
Urban	SC/ST	1.61	0.000	1.02	3.12	0.28	0.314	0.11	1.16
	OBC	1.12	0.000	0.92	2.10	0.45	0.300	0.10	2.02
	Gen	0.94	0.000	0.79	2.54	0.40	0.402	0.11	2.38
Education									
Primary	SC/ST	1.01	0.000	0.50	2.96	0.52	0.102	0.15	1.95
Secondary		1.15	0.000	0.29	2.55	0.34	0.247	0.05	2.08
Higher		1.55	0.000	0.64	3.17	0.09	0.341	0.07	0.68
Primary	OBC	0.88	0.000	0.54	1.98	0.78	0.121	0.08	1.54
Secondary		1.17	0.000	0.17	2.44	0.87	0.319	0.06	2.40
Higher		1.51	0.000	0.37	1.72	0.42	0.402	0.12	1.12
Primary	Gen	0.91	0.030	0.23	1.58	0.43	0.000	0.41	1.87
Secondary		1.02	0.005	0.34	2.12	0.65	0.051	0.08	2.97
Higher		1.72	0.022	0.55	3.10	0.52	0.072	0.41	2.54
Existing Children Group									
Sun at home	SC/ST	0.51	0.000	0.31	2.08	0.30	0.072	0.22	3.89
	OBC	0.79	0.000	0.28	3.17	0.21	0.098	0.19	3.43
	Gen	1.09	0.000	0.37	2.07	0.76	0.125	0.22	4.20
Child Ever Died									
Yes	SC/ST	1.07	0.000	0.18	2.07	2.57	0.075	0.91	2.82
	OBC	1.05	0.005	0.38	1.97	2.32	0.099	0.85	3.04
	Gen	1.10	0.010	0.94	3.10	1.94	0.076	0.72	4.66
Wealth Index Group									
Medium	SC/ST	1.07	0.000	0.50	3.28	0.62	0.046	0.28	4.45
High		1.11	0.000	0.27	2.18	0.67	0.067	0.09	2.63

Medium	OBC	1.30	0.000	0.71	2.87	0.61	0.058	0.28	4.46
High		0.94	0.000	0.80	3.10	0.66	0.107	0.08	4.30
Medium	Gen	1.26	0.000	0.12	2.04	0.57	0.095	0.20	4.30
High		1.07	0.000	0.74	2.57	0.71	0.098	0.10	3.19

Table 4.3, represent the influence of caste the usage of contraceptive due to different cultural and socio-economic factors. The above tables provide the results of caste-wise univariate logistics study depicting the usage of permanent and temporary methods of contraceptives with respect to non-user group, for different socio-economic and demographic background characteristics as independent variables.

From the tables, the females with urban place of residence have higher chance of using contraceptives as compared to the females belonging to rural living are and the usage of contraceptives differs significantly with the change in place of residence among different caste groups. For Andhra Pradesh, the likelihood of using temporary contraceptives among urban females of SC/ST, OBC, General categories are respectively 0.32 times, 0.43 times and 0.24 times higher than the rural females of Andhra Pradesh and the difference is maximum quite significant. When it comes to the usage of permanent contraceptives, the urban SC/ST, OBC, General categories females use them respectively 0.24 times, 0.30 times and 0.31times mora than their rural counterparts and the difference is significantly high. If we compare the usage of permanent and temporary methods among rural and urban females, the table shows that SC/ST, OBC urban females depend more on temporary methods than rural females where as General urban females use permanent contraceptive more than rural females. In case of Karnataka, the urban females of SC/ST, OBC, General categories have respectively 0.9 times, 0.9 times and 0.8 times higher chance of using permanent contraceptives as compared to their rural counterparts and the difference in the usage pattern is quite significant. Similarly for Kerala, there are higher chance of using permanent contraceptives for the urban females of all categories as compared to rural females. In the case of Tamil Nadu, there are higher chance of using temporary contraceptives for the urban females of all categories as compared to rural females.

For three categories females of four states, increment of education attainment leads to increment in the use of contraceptives. In the states of Andhra Pradesh, Tamil Nadu, primary, secondary and higher educated females temporary method of contraception is more preferred. But, in Karnataka, Kerala has the chance of using permanent contraception is more preferred.

From the table, observed that son preferring females of Andhra Pradesh with children at home prefer permanent method of contraceptives across all caste differentials. When compared with the females who do not prefer sons, the chance of using permanent contraceptive of son preferring females are 65 percent, 48 percent, 53 percent higher for SC/ST, OBC, General respectively. In Karnataka, son preferring all category females are likely to higher the contraceptive usage. They are 2.1 times, 2.0 times, 1.9 times higher than the non-son preferring females. Similarly in Kerala, son preferring all category females are likely to higher the contraceptive usage. They are 2.4 times, 1.1 times, 1.8 times higher than

the non-son preferring females. In Karnataka, son preferring all category females are likely to lower the contraceptive usage. In SC/ST and OBC category, they are 49 percent, 21 percent less likely to use temporary contraceptives usage, on the other, General category females more on temporary contraceptives and their chances of using it are 1.1 times higher than the non-son preferring females.

The variable child ever died in Andhra Pradesh, SC/ST category females who have ever experienced child death, have 79 percent lower chance, OBC category females have 59 percent lower chance and General category 64 percent of using temporary contraceptives and the effect of child is significant. For using permanent method of contraception, the effect of child death is insignificant at caste differentials. In Karnataka, the SC/ST, OBC, General category females have 20 percent ,39 percent and 21 percent high chances of using temporary methods, while the chance of using permanent methods appears to be insignificant. In case of Kerala, the females have even lesser chances of using temporary methods than permanent methods except OBC category. The SC/ST and General category females are respectively 50 percent high and 4 percent less likely to use any permanent method of contraception than those females who have not experienced any child-death.

In Andhra Pradesh, middle class females of three categories of medium wealth category are more likely to use temporary contraceptives than their low-wealth counterparts, while the females of high wealth group of three categories are more likely to use temporary contraceptives than their low-wealth. In Karnataka, middle, high wealth class females of three categories are more likely to use permanent contraceptives than their low-wealth. In Kerala, middle class females of three categories of medium wealth category are more likely to use permanent contraceptives than their low-wealth counterparts, while the females of high wealth group of three categories are more likely to use temporary contraceptives than their low-wealth. In Tamil Nadu, middle and high wealth class females of three categories are more likely to use temporary contraceptives than their low-wealth.

Table 4.4: Poisson regression analysis showing influence of caste differentials on the births in last five years due to other socio-cultural and demographic factors in Andhra Pradesh, Karnataka, Kerala, Tamil Nadu respectively.

Table 4.4.1: Andhra Pradesh

Parameters	SC/ST				OBC				Gen			
	IRR	P-Value	95% C.I.		IRR	P-Value	95% C.I.		IRR	P-Value	95% C.I.	
			Lower	Upper							Lower	Upper
Place of Residence ¹												
Urban	0.64	0.036	0.29	3.77	0.72	0.046	0.33	3.39	0.59	0.023	0.29	2.73
Education ²												
Primary	0.50	0.084	0.48	3.72	0.46	0.098	0.31	3.08	0.71	0.072	0.22	2.28
Secondary	0.75	0.248	0.44	4.60	0.39	0.228	0.17	3.74	0.62	0.037	0.36	4.32
Higher	0.86	0.304	0.64	1.17	0.69	0.053	0.47	1.13	0.57	0.051	0.29	3.02
Existing												

Children Group³												
Sun at home	2.43	0.038	1.08	4.74	1.15	0.044	1.03	6.16	1.46	0.067	0.91	4.72
Present contraceptive use⁴												
Yes	1.45	0.056	0.54	3.14	1.58	0.053	0.47	1.20	1.18	0.074	0.43	3.18
Child Ever Died⁵												
Yes	0.51	0.062	0.16	1.63	0.37	0.095	0.11	1.18	0.46	0.096	0.14	1.49
Wealth Index Group⁶												
Medium	2.19	0.063	0.54	4.76	1.90	0.074	0.47	3.25	1.72	0.054	0.42	3.62
High	0.93	0.091	0.29	2.93	1.31	0.063	0.42	3.09	1.13	0.083	0.36	2.52

Reference category:¹Rural, ²No education, ³daughter at home, ⁴No, ⁵No, ⁶Poor.

Table 4.4.2: Karnataka

Parameters	SC/ST				OBC				Gen			
	IRR	P-Value	95% C.I.		IRR	P-Value	95% C.I.		IRR	P-Value	95% C.I.	
			Lower	Upper							Lower	Upper
Place of Residence ¹												
Urban	0.62	0.010	0.43	0.89	0.58	0.003	0.41	0.82	0.66	0.030	0.45	0.96
Education ²												
Primary	1.97	0.071	0.73	4.29	1.51	0.041	0.53	4.05	1.66	0.062	0.61	4.32
Secondary	0.65	0.002	0.49	0.85	0.56	0.000	0.43	0.74	0.65	0.003	0.49	0.86
Higher	0.69	0.074	0.25	1.82	0.63	0.073	0.23	1.70	0.64	0.089	0.23	1.75
Existing Children Group ³												
Sun at home	0.93	0.066	0.69	1.25	0.84	0.084	0.62	1.12	0.94	0.096	0.69	1.27
Present contraceptive use ⁴												
Yes	0.44	0.028	0.21	0.91	0.44	0.019	0.22	0.87	0.51	0.076	0.24	1.07
Child Ever Died ⁵												
Yes	0.93	0.092	0.23	3.77	0.73	0.065	0.18	2.92	0.66	0.085	0.15	2.83
Wealth Index Group ⁶												
Medium	0.89	0.064	0.46	1.92	0.83	0.091	0.53	1.30	0.85	0.095	0.63	1.61
High	-	-	-	-	-	-	-	-	-	-	-	-

Reference category:¹Rural, ²No education, ³daughter at home, ⁴No, ⁵No, ⁶Poor.

Table 4.4.3: Kerala

Parameters	SC/ST				OBC				Gen			
	IRR	P-Value	95% C.I.		IRR	P-Value	95% C.I.		IRR	P-Value	95% C.I.	
			Lower	Upper							Lower	Upper
Place of Residence ¹												
Urban	0.57	0.082	0.20	1.59	0.62	0.078	0.29	2.08	0.58	0.087	0.21	1.57
Education ²												
Primary	0.38	0.097	0.09	1.64	0.63	0.000	0.01	0.92	0.36	0.007	0.01	0.47
Secondary	0.74	0.075	0.35	1.47	0.74	0.098	0.36	1.48	0.50	0.058	0.25	1.02
Higher	0.94	0.093	0.23	3.84	0.93	0.092	0.23	3.73	0.80	0.076	0.20	2.37
Existing Children Group ³												
Sun at home	1.05	0.098	0.49	2.23	0.99	0.099	0.47	2.09	0.86	0.096	0.04	1.81
Present contraceptive use ⁴												
Yes	0.58	0.092	0.21	1.59	0.61	0.083	0.23	1.64	0.52	0.072	0.19	1.42
Child Ever Died ⁵												
Yes	0.33	0.068	0.10	1.08	0.59	0.021	0.26	1.33	-	-	-	-
Wealth Index Group ⁶												
Medium	0.55	0.074	0.20	1.50	0.56	0.082	0.21	1.50	0.49	0.081	0.18	1.37
High	0.86	0.070	0.40	1.84	0.97	0.094	0.46	2.04	0.80	0.069	0.38	1.69

Reference category:¹Rural, ²No education, ³daughter at home, ⁴No, ⁵No, ⁶Poor.

Table 4.4.4: Tamil Nadu

Parameters	SC/ST				OBC				Gen			
	IRR	P-Value	95% C.I.		IRR	P-Value	95% C.I.		IRR	P-Value	95% C.I.	
			Lower	Upper							Lower	Upper
Place of Residence ¹												
Urban	0.93	0.091	0.23	3.72	0.90	0.098	0.22	3.62	0.70	0.067	0.17	2.89
Education ²												
Primary	0.29	0.082	0.07	1.16	0.24	0.045	0.06	0.97	0.23	0.064	0.04	1.08
Secondary	0.37	0.068	0.19	1.01	0.52	0.091	0.19	1.29	0.48	0.096	0.12	1.03
Higher	1.06	0.073	0.75	1.49	1.07	0.066	0.77	1.50	0.89	0.036	0.19	2.03
Existing Children Group ³												
Sun at home	1.59	0.075	0.39	2.63	1.45	0.095	0.36	2.83	1.02	0.097	0.24	3.18
Present contraceptive												

use⁴												
Yes	1.73	0.081	0.76	3.93	1.36	0.065	0.60	3.04	0.76	0.062	0.34	2.19
Child Ever Died⁵												
Yes	0.93	0.087	0.41	2.13	0.71	0.087	0.41	2.11	0.62	0.074	0.41	2.61
Wealth Index Group⁶												
Medium	0.90	0.074	0.35	3.15	0.79	0.087	0.60	2.61	0.97	0.067	0.65	1.98
High	0.94	0.081	0.55	1.98	0.98	0.088	0.28	1.90	0.74	0.062	0.32	1.09

Reference category:¹Rural, ²No education, ³daughter at home, ⁴No, ⁵No, ⁶Poor.

Tables 4.4, represents the results of influence of different socio-economic cultural factors on the total child birth (TCB) in last five years with the help of Poisson regression model for different caste group in four states. The values describe the caste wise effect of various demographic and socio-economic cultural variables on the current fertility.

In Andhra Pradesh, place of residence has a very high impact on child birth in last five years. The table shows that urbanization leads to population control and that across all categories. The TCB of the females who are living in urban areas is significantly high than the females who are residing in rural areas in all caste groups. The maximum difference in TCB is observed in General category. The females in General category with urban residence has 41% less risk of high TCB in comparison of females residing in rural areas. The figures 36% and 28% respectively for SC/ST, OBC category females. In Karnataka, the females in OBC category with urban residence has 42% less risk of high TCB in comparison of females residing in rural areas. The figures 38% and 34% respectively for SC/ST, General category females. In Kerala, the females in SC/ST category with urban residence has 43% less risk of high TCB in comparison of females residing in rural areas. The figures 38% and 42% respectively for OBC, General category females.

For Andhra Pradesh, the analysis for education attainment is observed that SC/ST, OBC, General category females who are primary educated, have 50%, 54% and 29% lower risk of high TCB, secondary educated females have 25%, 61% and 38%, in higher educated females have 14%, 31% and 43% lower risk of high TCB in last five years as compared to the females who have no education. In Karnataka the primary educated of all three category females who have respectively 97%, 51%, 66 % higher chance of high TCB as compared to the no education females and in the secondary educated females have 35%, 44% and 35% lower risk of high TCB, in higher education 31%, 37% and 36% lower risk of high TCB. In Kerala, all the females of all castes have lower chance of high TCB in higher educated females as compared to uneducated females. In Tamil Nadu, SC/ST and OBC females of higher educated females have 6% and 7% higher chance of high TCB as compared to the illiterate females, in General category higher educated females have 21% lower risk of high TCB.

Son at home among the females of Andhra Pradesh, Tamil Nadu and their families have a high impact of higher chance of high TCB in last five years, in all categories of Andhra Pradesh and Tamil Nadu 2.4 times, 1.1 times, 1.5 times and 1.6 times, 1.5 times, 1 time

respectively. In Karnataka, all category females have the 7%, 16%, 6% lower risk of high TCB in last five years. In Kerala, SC/ST category females have only 1 time higher chance of high TCB in last five years, in OBC and General category females have 1% and 14% lower risk of high TCB in last five years.

Contraceptive usage has also similar type of impact in some states as lowering the risk of high TCB in last five years as compared to non-users. In Andhra Pradesh females have 1.5 times, 1.6 times, 1.2 times high impact of higher chance of high TCB in last five years. In Karnataka and Kerala lower risk of high TCB in last five years like 56%, 56%, 49% and 42%, 39%, 48% respectively. In Tamil Nadu, General category females have 24% lower risk and in SC/ST and OBC category females have 1.7 times, 1.4 times high impact of higher chance of high TCB in last five years.

As far as the variable child ever died is concerned, it has no significant impact on lowering TCB in last five years as the females who have lost their child. All the four states show similar results and the females have lower chance of high TCB across all caste differentials.

The analysis of wealth index differentials, increment in wealth index reduces the current fertility for each category in three states except in Andhra Pradesh. The results of three states show that the females of high wealth index have more contributed more in reducing the fertility levels as compared to middle class females. But, in general, all females belonging to all categories have lesser risk of high TCB as compared to low wealth index group of females.

Conclusion

In outline, we can conclude that the women from the rural area and lower caste are not using any contraceptive methods. We conducted this study using mean number, univariate logistic and Poisson regression. Clearly, we can observe that the female who did not use any contraceptive methods raised more children compared to the other irrespective of socio-economic conditions. When it comes to contraceptive usage, females who adopt any contraceptive method, have the highest MCB in complete birth history. The females who use temporary methods have lesser MCB than those who use permanent methods. This shows that females, who have attained a desired family size, generally opt for permanent contraceptives across all states.

Univariate logistic study concludes that the females from urban places are using more contraceptives and they have knowledge on birth control. We can see a pattern in all the different four states higher educated women are using more it might be because of knowledge they had on contraceptive methods. In the states of Andhra Pradesh, Tamil Nadu, primary, secondary and higher educated females temporary methods of contraception are more preferred. But, in Karnataka, Kerala the chance of using permanent contraception is more preferred.

The Poisson regression concludes that the lowering total childbirth has no impact on the child ever died. Also, we can see that there is a lower risk of high TCB for the women with

primary and secondary education unlike the female with no education. We can see the TCB of the females who are living in urban areas is significantly higher than the females who are residing in rural areas in all caste groups. The maximum difference in TCB is observed in the General category.

References

- [1] Arokiasamy, P., 2009, "Fertility Decline in India: Contributions by Uneducated Women using Contraception", *Economic and Political Weekly*, 44 (30), pp.55-64.
- [2] McNay, K., Arokiasamy, P. and Cassen, R.H. 2003. "Why are Uneducated Women in India using Contraception? A Multivariate Analysis", *Population Studies*, 57, pp. 21-40.
- [3] Mookerjee, D., 2005. "Nowadays Who Wants Many Children? Balancing Tradition and Modernity in Narratives Surrounding Contraception Use among Poorer Women in West Bengal, India", *Journal of International Women Studies*, 7(1), pp. 26-39.
- [4] Roy S., Singh, K.K., Singh, B.P. and Gupta, K., 2015. "Study of Influence of Caste Differentials on Fertility and Contraception", *Journal of Statistics Applications and Probability Letters*, 2(2), pp. 149-160.
- [5] Singh, K.K., Singh, B.P. and Gupta, K., 2012. "Estimation of Total Fertility Rate and Birth Averted due to Contraception: Regression Approach", *International Journal of Statistics and Applications*, 2(5), pp. 47-55.
- [6] Srinivasan, K., 1988. "Modernization, Contraception and Fertility Change in India", *International Family Planning Perspectives*, 14(3), pp. 94-102.
- [7] SoheilaEhsanpour, MaedehMohammadifard, Shahlashahidi, Nafise Sadat Nekouyi., 2010. "A comparative study on attitude of contraceptive methods users towards common contraceptive methods", *Iranian Journal of Nursing Midwifery Research*, 15(Suppl1): 363-370, PMID: PMC3208930.
- [9] ArupendraMozumdar, Vandana Gautam and et. al., 2019, "Choice of contraceptive methods in public and private facility in rural Indian" *BMC Medical Informatics and Decision Making*.
- [10] Jenit A. Osborn, Rm Sriram and et.al., 2021, "A study on contraceptive prevalence rate and factors influencing it in a rural area of Coimbatore, South India", *Journal of Family Medicine and Primary care*, 2246-2251.
- [11] Jin Rou New, MA, Naimh Cahill and et.al., 2017, "Levels and trends in contraceptive prevalence, unmet need, and demand for family planning for 29 states and union territories in India: a modelling study using the family Planning Estimation Tool" *the Lancet Global Health*.
- [12] Aalok Ranjan Chaurasia, 2014, "Contraceptive use in India: A data mining approach", *International Journal of Population Research*, Article ID 821436.