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Role of Gender in Contraceptive Use among Currently Married Women in Uttar Pradesh and Bihar

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Abstract

In India there is noticeable regional variation in gender preference and contraceptive use. Preference for son is often assumed to be a significant barrier to fertility reduction. Thus in this context present study tries to explore the association between gender preference and contraceptive use among currently married women in states Uttar Pradesh (UP) and Bihar of India using dataset of National Family Health Survey (NFHS-III), 2005-06 and Family Welfare Year Book 2001. The study reveals about 83 percent women having no sons have desire for more children in UP whereas this value goes up to 87 percent for Bihar. Study also reflects that only 18 and 6 percent women with no living son in UP and Bihar respectively are using any contraception indicating high preference for male child. Therefore it is concluded that the son preference have significant and strong impact on acceptance of any family planning method.

Key words: Son preference, contraceptive use, family planning.

1. Introduction

India has officially accepted a nation-wide family planning programme since 1952. After few decades Government of India initiated several family welfare programs and greater emphasis was attached to family planning program. Family planning is being recognized as one of the most important issues not only as in population growth problem as well as an issue which affect the health and lives of people, especially of women and children. Increasing contraceptive prevalence rate is one of the most important steps needed to reduce fertility in India. Besides the program part there are several other factors like socio-economic, cultural and demographic factors restricting the use of contraception (Rajaretanam *et. al*., 1994).

Prevalence of son preference has been cited as one of the reasons for high fertility and skewed sex ratio in India and its various regions and has a powerful influence on acceptance of any contraceptive method. A preference for son over daughter has found important social and economic implications. In Indian society male child is consider as a essential tool to perform various important social, cultural and religious functions like providing economic support to parents in their old age, perform funeral, and also continuing family name and female child is consider as economic burden for the family, where they suffer discrimination against male member of family. So there is benefit of male over female child. Strong son preference is one of the most important barriers in reducing fertility level.

2. Previous Researches

Parental preference for son over daughters has been documented in several available literatures. In an effort to have sons, many couples continue to have children after achieving their desired family size. This practice may have retarded India's fertility decline and therefore affecting the use of contraception.

Arnold (1987) found that the proportion of respondents who did not want more children would increase on an average by 4.5 percentages in the absence of gender preference. Gulati *et. al*. (1996), in a study observed

that preference for male child over female child is much higher in demographically backward state like Uttar Pradesh than the advanced state Kerala. According to Kulkarni *et. al.* (1998), number and sex of living children have considerable influence on acceptance of family planning method. Sex preference is a major determinant of contraceptive use.

Various studies shows that the impressive decline in fertility has been accompanied by worrisome evidence of the emergence of son preference in the past decade, which is reflected in increasingly disproportional sex ratios at birth and younger ages (Das Gupta and Bhat 199, Basu 1999, Srinivasan 2005).

3. Need for the Study

Son preference is culturally imbedded in Indian society, but its strength varies substantially from one region to another region within the country. Uttar Pradesh (UP) and Bihar are the two EAG (Empowered Action Group) states. These two states have fertility level higher than the national average. According to census 2011, the child sex ratio in the state UP and Bihar are 899 and 933 females per thousand males respectively. There are several studies which tries to examine the relationship between son preference and its impact on contraceptive use, but very few study focuses on UP and Bihar only. Therefore the present study tries to explain the role of gender preference on contraceptive use in both the states.

4. Objectives

The specific objectives of the study are;

1. To examine the son preference in state UP and Bihar of India.
2. To study the differential of contraceptive use by selected background characteristics.
3. To examine the effect of son preference on contraceptive use in both the states.

5. Data and Methodology

The data analyzed in this article come from the National Family Health Survey (NFHS), 2005-06 of India, Family Welfare Year Book, 2001, Sample Registration System and Annual Health Survey(AHS). NFHS project was initiated by Ministry of Health and Family Welfare and Coordinated by International Institute for Population Sciences, Mumbai. The major topic cover in the survey includes fertility, marriage patterns, knowledge and practice of family planning method, HIV/AIDS etc. In this article tables for UP and Bihar uses the state sample weights. Family Welfare Year Book is published by the Ministry of Health and Family Welfare, India. Each year Sample Registration system is published by Office of Registrar General of India. It provides reliable annual estimates for various demographic indicators like birth rate, death rate and other fertility & mortality indicators for national as well as sub national level also. Annual Health Survey project was sponsored by Ministry of Health and Family Welfare, India and published by Office of Registrar General of India (ORGI). This survey was conducted only in nine selected states of India which includes eight Empowered Action Group (EAG) states and Assam.

The present study is based only on the currently married women. Both bi-variate and multivariate techniques have been used in the analysis. In order to examine the effect of effect of son preference on contraceptive use among currently married women, a binary logistic regression analysis was carried out in which dependent variable is contraceptive use and independent variable is son preference. Other independent variables considered in the study are age, ideal number of children, desire for more children, household structure, residence, education, religion, caste, standard of living, mass media exposure, full vaccination and median duration of full breast feeding.

6. Findings and Discussion

Whole analysis is divided in three parts according to objectives. First section discusses the son preference and its determinants, second part talks about the trends in contraceptive prevalence rate in UP and Bihar and last section describe the impact of son preference on contraceptive use.

6.1 Gender preference

Table 1 describes the trends in sex ratio at birth of India, UP and Bihar since year 2001 to 2011 using information from Sample Registration Systems (SRS) and Annual Health Survey (AHS) fact sheet 2010-11. From table we observe that during 2001 sex ratio at birth (SRB) at national level was observed around 894 females birth per thousands male births whereas for states UP and Bihar it was 873 and 870 respectively which is much lower than the national level. From table we can also notice that situation is not much changing with time. During 2005 we observed the slight decline in SRB at national level as well as for both states. Also SRB is always favorable to male child indicating preference for male birth.

In **Table 2** we are taking into account the actual and behavioral attitude of the women regarding the sex composition of family size. Table presents the percentage of currently married women who have desire for more children according to the sex composition of family size (total number of living children). Table shows that among females having one child with one son, 30 percent in UP and 29 percent in Bihar said that they want more children. However among females having one child with no son, around 67percent in UP and Bihar both said that they want more child. We can notice that women whose family size is two with two boys have less (less than 10 percent) desire for more children as compared to women with two daughters in both the states. From table we can also conclude that women generally prefer the family with children of both sexes i.e. at least one son and one daughter. It means they are satisfied with their family size. Similar results we observed in case of family size three or four in state UP and Bihar and also at national level. Therefore table clearly indicates that in behavior there is strong preference for son over daughter in both states as well as in India.

Table 3 indicates the gender difference in median duration of breastfeeding and full vaccination of living children, which reveals differential in treatment given to girls and boys and indicates preference for particular sex. Table represents the five indicators to study the gender differences as full vaccination, mean duration of breastfeeding, neonatal mortality rate, post-neonatal mortality rate and infant mortality rate. When we talk about the full vaccination at national level we found that proportion of male children who received full vaccination is high as compared to female children. However the situation of vaccination is almost same in UP, it means there is not much differences in terms of full vaccination among girls and boys. However in Bihar full vaccination is slightly higher (87.8 percent) among male children than female (84 percent) children. Second indicator is mean duration of breastfeeding given in months indicating that at national level duration of breastfeeding are high among male child as compared to female. But in both states the difference is not much higher. When we see the differential in mortality rate we noticed that neonatal mortality rate is higher among boys than girls in India as well as in both selected states; however post neonatal mortality rate and infant mortality rate are higher among females than males in both states UP and Bihar.

6.2 Trend in contraceptive use

Table 4 provides the trend of couple protection rate (CPR) for India as well as for state UP and Bihar since 1980 to 2008 using Family Welfare Year Book 2009. Couple protection rate is the percentage of women between 15-49 years who are practicing, or whose sexual partners are practicing, any form of contraception (World Health Organization). Table point out that in year 1980 only 22 percent couples are effectively protected in India. This percentage falls up to 12 in the same year in UP and Bihar both indicating very less number of women was using any family planning method. Till 1990, CPR became just twice in India and

Bihar and thrice in UP of 1980. After 1990s rate of increase in CPR value became slow. Year book reports that only 38 percent couples are protected due to all method in UP in year 2000 and report also noticed that there is slight decline in effective CPR till 2008.Very few percentage of couples (21 percent) were protected in Bihar during year 2000.

Table 5 describes about users (temporary and permanent method of contraception) and non users of contraceptive method by age of women in UP and Bihar. Only 14 and four percent women of age group 15-19 are using any method of contraception in UP and Bihar respectively. Among females of age group 25-29, around 13 percent in UP and 21 percent in Bihar has accepted the permanent method. However 31 percent females in UP and 40 percent in Bihar, aged 45-49 have adopt the permanent method. Table also clearly point out that among women of all ages more than 55 percent in UP and more than 65 percent in Bihar are non users of family planning method. Analysis also reveals that less than 10 percent women of all ages are using temporary method for spacing among children.

6.3 Son preference and Contraceptive use

This section talks about the effect of son preference on acceptance of family planning method in state UP.

Table 6 describes the reflection of son preference on contraceptive use in UP and Bihar. Table shows that in India women whose family size is one and having one son around 31percents are non users of contraception; however women with one daughter 41 percents are not using indicating women with one daughter want to go for next child. Results also reflect that around 7 percent women of family size one with one son have adopt permanent method at national level, it means they don't want another child. In our society it is consider that more children means more helping hands contributing in household economy and as girl is consider as economic burden on family so most of the people prefer to have more male child. Analysis reveals that women whose family size is one and having one son around 26 percents in UP and 29 percent in Bihar are non users of contraception; however women with one daughter 30 and 39 percents respectively are not using indicating women with one daughter want to go for next child.
Reflection of son preference on contraceptive use better can be studied by considering family size above two. Therefore when we look in to the table we found that women of family size three with three boys, 29 percent in UP and 32 percent in Bihar adopted contraceptive method to limit the family size whereas only one percent women of family size three with three girls adopted the same in both the states. Although where the family size composition is mixed like two sons and one daughter or one son and two daughters, adoption of permanent method is high, but here also we can see that where the composition of male child is high acceptance of permanent family planning method is also high as compared to where composition of girl child is high. Thus table clearly states that son preference has strong influence on contraceptive use.

Table 7 points out the use of contraception according ideal family size composition in UP and Bihar as well as in India. It is noticeable that at national level 65 percent women, who's ideal family size is more sons than daughter, are using contraceptive method, however only 55 percent women who's ideal family size is more daughters than son are using. This indicates that they prefer to go for more children if sex composition of family is favorable to female. Similar thing is observed in case of state UP and Bihar. Only 30 percent women in Bihar and 41 percent in UP are utilizing any family planning method whose ideal family composition is equal for both sexes means equal number of daughters and sons. Therefore we observe that there is strong preference of male child over female child in Bihar and UP.

Table 8 present the result of logistic regression model of contraceptive use among currently married women by different background characteristic for Uttar Pradesh and Bihar. We assess gender preferences effects by examining differential in odd ratio for using contraceptive by sex composition of children. Result shows only 10 and 61percent currently married women in UP are more likely to use contraception in OBC and other caste respectively and also these two results are significant. However there is 22 percent decline

in using contraceptive in UP among schedule caste. Among religion, Muslim are one who used less contraceptive and many available literatures support this statement. It showed that 57percent currently married women are less likely to use contraceptive in Uttar Pradesh and 73percent are less likely to use in Bihar but the situation are different for other religion. 76 percent and 66 percent are more likely to used contraceptive in other religion in both states also the results are statistically more significant. Result clearly shows that those women who have married at age 18 or above are more likely to use contraceptive i.e. 61percent in Uttar Pradesh and 51percent in Bihar. These results are significant at 99percent confidence interval. The likelihood of currently using contraceptive method for women is higher by approximately three times for women with 10-24 years of marital duration in Uttar Pradesh and it is nearly six times higher in Bihar comparative to women whose marital duration is 0-9 years. The odd ratios are slightly declined for women having 25 and more years of marital duration in UP, it may be attributed to the fact that most women attained menopause, so less chance to use contraceptive. The chance of using contraceptive is decreased in Non-Nuclear family. The result shows that 13percent women of non-nuclear family are less likely to use contraceptive as compared to Nuclear family in Uttar Pradesh and around 7 percent more likely to use in Bihar in Non-Nuclear family. Table indicates that those women who are employed have more significant of using contraceptive. The likelihood of using contraceptive method increased by 13 percent in Uttar Pradesh but the chance of using contraceptive method in Bihar is decreased in working women and it is 10percent less likely to use.

To observe the impact of gender difference on acceptance of family planning, the reference category is taken as equal number of son and daughters in the family. The likelihood of using contraceptive is higher for women having more sons than daughters. The increase in odd ratio for women having son compared with daughters are effectively contributed by son preference effects to use contraceptive. In state UP, 63 percent women are more likely to accept the contraceptive method where the composition of male child is greater than the female child; whereas this percentage increase up to 82 among Bihar women. From table it is also clear that where the sex composition of female child is less, use of family planning method is also low.
Therefore study concludes that son preference strongly influence the acceptance of contraception and also it is higher in Bihar as compared to Uttar Pradesh.

7. Summary and Conclusions

Though the fertility level has been declined in Uttar Pradesh and Bihar due to the various family planning programmes, still there is scope of further improvements. The findings reveals that strong preference for son is an obstacle to fertility decline if couples continue having children after their over family size goal. Also desire for male children can be seen in terms of treatment seeking behavior like full vaccination and duration of breast feeding. The study observed that the contraceptive prevalence rate among currently married women in both the state is lower than the national average. Preference for male child strongly influences the use of family planning method. Therefore it can be concluded that there is significant association between son preference and contraceptive use. Apart from policies and program, all efforts to educate the girl, to increase the exposure of mass media about the value of girl children, to establish system of social security for the elderly and to strengthen and enforce existing laws to reduce the incidence of infanticide and sex selective abortion should be started from grass-root level.

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Table 1: Trend in sex ratio at birth (number of females live births per 1000 male live births) in India, UP and Bihar.

Year	India	Uttar Pradesh	Bihar
2001	894	873	870
2002	892	870	864
2003	883	861	853
2004	892	870	864
2005	880	865	862
2006	892	881	874
2011	-	904	919

Data source: Sample Registration system, Annual Health survey, 2010-11

Table 2: Percent distribution of women who have desire for more children according to family size composition, NFHS-3, 2005-06.

Number of living children	India	Uttar Pradesh	Bihar
One child			
No son	74.4	66.6	66.1
One son	32.1	30.2	29.0
Two children			
No son	68.2	58.7	57.5
Two son	4.6	7.8	4.9
Three children			
No son	64.2	52.6	55.7
Three son	0.8	1.3	1.6
Four children			
No son	70.4	67.8	57.8
four son	0.2	0.3	0.4

Data sources: National Family Health Surveys.

Table 3: Sex discrimination in treatment in UP, Bihar and India, NFHS-3, 2005-06.

Full vaccination (%)	**India**	**Uttar Pradesh**	**Bihar**
Male	89.6	95.2	87.8
Female	88.7	95.1	84.1
Ratio(M/F)	1.0	1.0	1.0
Mean duration of Breastfeeding (in months)			
Male	17.5	16.9	18.3
Female	16.5	16.7	17.7
Ratio(M/F)	1.1	1.0	1.0
Neonatal mortality rate(per 1000 live births)			
Male	40.4	49.0	43.1
Female	36.1	44.8	36.3
Ratio(M/F)	1.1	1.1	1.2
Post-Neonatal mortality rate(per 1000 live births)			
Male	13.9	19.3	13.8
Female	19.2	26.8	28.3
Ratio(M/F)	0.7	0.7	0.5
IMR (per 1000 live births)			
Male	54.3	68.2	56.9
Female	55.3	71.5	64.5
Ratio(M/F)	1.0	1.0	0.9

Data sources: National Family Health Surveys.

Table 4: Percentage effective Couple protection rate (percent of couple of reproductive age effectively using any method of contraception) due to all method for India, UP and Bihar, Family Welfare Year book, 2009.

Year	India	Uttar Pradesh	Bihar
1980	22.3	11.5	12.4
1985	32.1	17.1	17.2
1990	43.3	33.3	26.3
1995	45.8	37.1	22.4
2000	46.2	38.0	21.2
2001	45.6	37.9	17.4
2002	45.7	37.4	17.3
2003	47.1	37.1	17.3
2004	47.2	36.8	15.2
2005	46.3	36.0	14.1
2006	46.7	35.2	13.8
2007	46.2	34.6	13.5
2008	46.5	34.1	13.9

Data source: Ministry of Health and Family Welfare, 2009

Table 5: Percent distribution of women using any contraceptive methods by their age, NFHS-3, 2005-06.

	Uttar Pradesh				Bihar			
Age of Women (in years)	Non-Users	All Users	Temporary method	Permanent Method	Non-Users	All Users	Temporary method	Permanent Method
15-19	85.5	14.5	14.2	0.3	95.7	4.4	4.3	0.1
20-24	73.3	26.7	22.2	4.6	81.6	18.4	9.4	9.0
25-29	55.8	44.2	31.5	12.7	69.2	30.8	10.0	20.9
30-34	41.4	58.6	34.6	24.0	47.8	52.2	12.3	39.9
35-39	40.4	59.6	32.1	27.5	48.0	52.0	14.4	37.7
40-44	49.5	50.5	23.0	27.6	51.0	49.0	9.1	39.9
45-49	60.1	39.9	9.3	30.7	51.6	48.4	8.3	40.2
All ages	56.4	43.6	26.2	17.4	65.9	34.1	9.7	24.4

Data sources: National Family Health Surveys.

Table 6: Percent distribution of women using family planning method by sex composition of family in India, UP and Bihar, NFHS-3, 2005-06.

No of living children	India			Uttar Pradesh			Bihar		
	Non-Users	Temporary method	Permanent Method	Non-Users	Temporary method	Permanent Method	Non-Users	Temporary method	Permanent Method
One Children									
One son	*30.6*	*49.2*	*8.5*	*25.7*	*33.9*	*7.3*	*29.0*	*35.9*	*5.5*
One daughter	41.4	28.2	2.2	30.3	17.4	1.5	35.9	14.5	0.2
Two Children									
Two son	10.3	28.9	61.4	13.6	33.7	44.2	9.8	29.9	50.4
One son & one daughter	33.6	48.3	43.6	30.2	35.1	14.7	30.6	45.5	15.6
Two daughter	31.5	29.6	14.6	19.6	13.1	2.4	23.5	14.9	1.1
Three Children									
Three son	3.3	5.6	23.5	5.8	10.3	29.1	5.4	7.9	32.2
two son & one daughter	14.5	15.4	41.1	22.1	29.2	49.5	17.4	20.5	51.7
one son & two daughter	33.2	37.4	41.7	31.2	30.5	18.7	33.9	24.7	19.5
three daughter	23.6	18.3	15.0	14.9	8.8	1.1	16.8	4.0	1.2

Data sources: National Family Health Surveys.

Table7: Percent distribution of currently married women using any contraceptive method by sex composition of ideal family size.

Percentage of women whose ideal family composition	India	Uttar Pradesh	Bihar
Equal sons & daughter	50.5	40.5	30.1
More sons & daughter	65.8	55.4	49.3
More daughter than son	55.0	43.5	32.9

Data sources: National Family Health Surveys.

Table 8: Results of the logistic regression analysis for the effect of socio-economic characteristics and actual sexual composition of number of living children on use of contraceptives.

	Uttar Pradesh		Bihar	
	Odd Ratio	**95% Confidence Interval**	**Odd Ratio**	**95% Confidence Interval**
Caste				
SC®				
ST	0.7880	(0.4672, 1.3289)	2.4815	(0.5252, 11.7255)
OBC	1.1004	(0.9803,1.2353)	2.3851***	(1.8592, 3.0597)
Other	1.6112***	(1.4125, 1.8378	3.5037***	(2.5846, 4.7497)
Religion				
Hindu®				
Muslim	0.4386***	(0.3898, 0.4934)	0.2764***	(0.2132, 0.3584)
Other	1.7672*	(1.0924, 2.8590)	1.6625	(0.2628, 10.5182)
Age at Marriage				
<=17®				
18+	1.6176***	(1.4706, 1.7792)	1.5184***	(1.2536, 1.8391)
Marital Duration				
0-9®				
10-24	2.8517***	(2.5683, 3.1664)	5.7045***	(4.6305, 7.0277)
25+	1.7779***	(1.5418, 2.0500)	5.0038***	(3.8755, 6.4606)
Household Structure				
Nuclear®				
Non-Nuclear	0.8751**	(0.7967, 0.9611)	1.0745	(0.9005, 1.2822)
Working status of Women				
No®				
Yes	1.1378	(1.0270, 1.2605)	0.9008	(0.7344, 1.1049)
Number of living children				

Son=Daughter®				
Son>Daughter	1.6353***	(1.4656, 1.8248)	1.8255***	(1.4884, 2.2389)
Son<Daughter	1.0192	(0.9083, 1.1438)	0.8648	(0.6960, 1.0745)

®: reference category ***p < .001, ** p< .01 & * p< .05