

Son Preference and Contraceptive Prevalence in West Bengal: An Empirical Analysis

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ABSTRACT

This article investigates the relationship between contraceptive prevalence and son preference in West Bengal, one of the India's Eastern states with huge population. Son preference refers to the prevalent cultural inclination towards granting priority to sons over daughters. Using data from the National Family Health Survey (NFHS-IV), the study employs Arnold's index to gauge the impact of son preference on contraceptive adoption among women in West Bengal. The analysis focuses on women of different parities, namely 1, 2, 3, 4, 5, and above, to comprehend the extent of son preference's influence on contraceptive practices. The findings reveal a notable trend: women with one or more living sons are more inclined towards adopting contraception, whereas couples without sons or with a majority of daughters display lower contraceptive usage. Moreover, the study identifies a monotonic increase in contraceptive acceptance with an escalating number of living sons in a family. Importantly, the desire for additional children among women is significantly influenced by their current count of living sons; women with a higher number of sons exhibit maximum contraceptive usage. Additionally, the results highlight a strong manifestation of son preference in the West Bengal region.

Introduction

Son preference, denoting the inclination to prioritize sons over daughters, has been extensively documented in traditional and male-dominated patriarchal societies, such as China (Arnold and Zhaoxiang, 1986) and Korea (Park, 1983). The manifestation and intensity of this preference are heavily influenced by economic, social, cultural, and psychological factors. In communities where sons traditionally assume the role of providing income for old-age maintenance and where the family structure follows a patriarchal framework (Cain, 1981), there tends to be a pronounced favoring of sons by couples (Ahmed, 1981; Bairagi and Langston, 1986; Mason and Bennet, 1977). In the Indian context, where the custom of dowry persists, parental preference for sons over daughters remains common. The complex interplay of societal norms and economic considerations plays a pivotal role in shaping this preference.

The preference for sons over daughters has deep-rooted implications in many societies, particularly in regions with patriarchal family structures. Sons are often sought as valuable assets, capable of providing family labour for farming or family businesses, and crucial support during their parents' old age (Leung and Zhang, 2008; Begum et al., 2018). Additionally, son's marriage brings domestic assistance through daughters-in-law and financial contributions in the form of dowry payments. Moreover, within a patriarchal framework, having at least one son is deemed essential for upholding the family line, while possessing multiple sons elevates the family's stature in the community. This preference for children of a specific sex significantly influences fertility planning and regulation, particularly in developing countries. In India, various states, including West Bengal, exhibit marked preferences for sons due to traditional beliefs that ascribe economic and social significance to male offspring. This preference is deeply intertwined with complex cultural and social factors, contributing to a society-wide emphasis on the hope for a male child, especially as the firstborn or in families with only daughters. Moreover, in agrarian societies, the possession of one or more sons offers access to social insurance programs, representing one of the few available sources of support for the elderly. These strong desires for sons exert a compelling influence on family size and ultimately impact population growth in these societies. Understanding the multifaceted factors driving son preference is crucial for comprehending the intricate dynamics of fertility patterns and social structures in regions where such preferences persist.

West Bengal is the one of the eastern states of India having population 9.12 crores in which male constitutes nearly 51% (4.68 crore) and female is nearly 49% (4.44 crore) of the total population of West Bengal as per census 2011 and the decadal population growth of West Bengal is 13.8% as compared to 17.7% of India. The sex ratio of West Bengal is 950 females for 1000 males, which is more than the national average of 943 females per 1000 males as per latest census of 2011. There are a number of studies conducted in various parts of India which explain the relationship between fertility behaviour, contraceptive use and son preference (Bairagi, 2001; Bhat and Zavier, 2001; Malhi,1999; Mutharayappa,1997; Sinha,2006). Despite the critical significance of understanding fertility behavior and contraceptive practices in West Bengal, there remains a dearth of comprehensive studies on this subject. In light of this gap, the current investigation endeavors to explore the interplay between son preference and contraceptive adoption in this region. By assessing the prevalence of son preference, the study focuses on evaluating the impact of sex composition of surviving children on the utilization of modern contraceptive methods in West Bengal. Through this nuanced examination, it is aimed to shed light on the complex relationship between son preference and family planning choices in the state. The findings of this study are poised to contribute valuable insights to the field of reproductive health and inform targeted interventions to address pertinent issues in the domain of fertility and contraceptive behavior in West Bengal.

Data and Methodology

Source of data

The data for the present study has been taken from National Family Health Survey (NFHS-IV). NFHS-IV has been conducted under the ministry of Health and Family Welfare (MoHFW), Government of India. MoHFW designated the International Institute for Population Sciences (IIPS), Mumbai, as the nodal agency for this survey. NFHS-IV survey was conducted in all 19 districts of West Bengal. NFHS-IV extensively collected data on a wide array of parameters, encompassing fertility, infant and child mortality, maternal and child health, family planning, contraceptive usage among couples as well as the number of children ever born to women aged 15-49, and many other vital indicators. An index has been created utilizing data on the sex composition of the desired number of children along with contraceptive usage in order to comprehend the level of son preference. Women are assumed to prefer sons if they state that the desired number of sons is greater than the ideal number of girls for women.

Methodology

Arnold's index has been calculated to assess the impact of a son's preference on the usage of contraceptives by the women. According to Arnold, it can handle any type of sex preference (boy preference, girl preference, balance preference or any combination of these), it can be used with a number of behavioural and attitudinal measures related to fertility and family planning and this method requires data only on the number of living children by sex along with any fertility related dependent variables such as contraceptive use etc.

Arnold (1985) proposed this method and the measure is defined as

$$I_p = \frac{\sum_i C_i * P_i}{\sum_i P_i} \dots\dots\dots (1)$$

Where, C_i = maximum contraceptive use rate at each parity 'i'

P_i = number of women at each parity 'i'

The extent of son preference on contraceptive use = contraceptive use in absence of sex Preference (in %) – actual contraceptive use (in %) (Sinha et al, 2005).

In order to assess the presence of son preference, in NFHS-IV, the pattern of modern contraceptive use by sex composition of the surviving children would be analysed by considering residence and other socio-economic backgrounds of eligible/ever married women from whom data has been collected.

In NFHS IV, in the sample of 17668 eligible/ever married women in West Bengal, 74.4% (13145) has at least one child and 45.5% (8032) of them are using modern method of contraceptives, giving prevalence rate of 45.5%. The distribution in rural and urban areas of West Bengal are 72.2% (12760) and 27.8% (4908) respectively. The figures using modern contraceptive out of these women are 47% (5996) and 41.5% (2036) providing contraceptive prevalence rate of 47% and 41.5% in rural and urban areas respectively. In West Bengal, rural population is about 72.2% and urban population is about 27.8%. People who are literate is 57% and illiterate is 43%. People belong to Hindu community is 71.6%, Muslim is 24.7% and other religious community, in which Sikh, Christians, Jains, Buddhist/Neo-Buddhist, Jewish and Parsi are there, population constitute about 3.7% of the total population. OBC constitute about 12.5%, SC constitute nearly 29.4%, ST

constitute 7.8% and General constitute 33.4% of the total population. Poorest class constitute about 23.8%, Middle constitutes about 21.8% and Richest class constitute about 7.4% of the total population of West Bengal. Table 1 provides the rural and urban distribution of contraceptives use by sex composition of surviving children born to women. In all categories in all the tables, the first column shows the number of eligible/ever married women, the second column shows the percentage of women who are actually using modern methods of contraceptives in each parity along with specified sex composition of children. The third column shows the percentage of women who would use contraception in the absence of sex preference of the children. For example, from the Table 1 in rural areas, 70.9% of women with two boys are using modern contraceptives as compared to 55.9% of those with two daughters. It is assumed that if sex of the child is no longer make any difference, then women with two girls would be equally satisfied as women with two boys and hence, they would have the same rate of contraceptive use. With this assumption, the figures of the third column in each parity is obtained for all categories in all the tables and at the end of the table Arnold index is calculated to see sex preference of the child.

Table 1: Contraceptive Use by Sex Composition of Living Children and Residence in West Bengal

NFHS 4						
SEX COMPOSITION OF LIVING CHILDREN	URBAN			RURAL		
	NOS.OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)
ONE CHILD						
ONE BOY	755	44.4% (335)	44.4	1366	47.1% (644)	47.1
ONE GIRL	577	42.1% (243)	44.4	1119	41.3% (462)	47.1
TWO CHILDREN						
TWO BOYS	304	69.1% (210)	69.1	1098	70.9% (779)	70.9
ONE BOY & ONE GIRL	680	64.4% (438)	69.1	2005	67.5% (1353)	70.9
TWO GIRLS	237	59.9% (142)	69.1	592	55.9% (331)	70.9
THREE CHILDREN						
THREE BOYS	61	72.1% (44)	72.1	235	71.3% (168)	71.3
TWO BOYS & ONE GIRL	199	68.8% (137)	72.1	789	70.2% (554)	71.3
ONE BOY & TWO GIRLS	216	71.1% (154)	72.1	712	69.5% (495)	71.3
THREE GIRLS	50	68% (34)	72.1	210	64.8% (136)	71.3
FOUR CHILDREN						
FOUR BOYS	15	60% (9)	72.7	41	70.5% (29)	70.5
THREE BOYS & ONE GIRL	52	71.2% (37)	72.7	193	66.8% (129)	70.5
TWO BOYS & TWO GIRLS	94	65.9% (62)	72.7	316	63.6% (201)	70.5
ONE BOYS & THREE GIRLS	51	58.8% (30)	72.7	240	69.2% (166)	70.5
FOUR GIRLS	11	72.7% (8)	72.7	79	55.6% (44)	70.5
FIVE CHILDREN						
ALLBOYS	4	75% (3)	75	10	40% (4)	69.6
MOST BOYS	17	64.7% (11)	75	52	63.5% (33)	69.6
MORE BOYS	25	52% (13)	75	102	69.6% (71)	69.6
MORE GIRLS	29	55.2% (16)	75	124	58.9% (73)	69.6
MOST GIRLS	26	38.5% (10)	75	70	68.6% (48)	69.6
ALL GIRLS	8	37.5% (3)	75	14	42.9% (6)	69.6
TOTAL	3411	59.15%	$I_p=62.75\%$	9367	63.04%	$I_p=66.30\%$

Overall, it is seen from the Table 1 that sex preference has effect on contraceptive use in both urban and rural areas since the contraceptive use rate would increase from 59.15% to 62.75% in the urban areas and 63.04% to 66.30% in rural areas in the absence of sex preference.

The results from the Table 1 reveal the preference for sons in both urban and rural areas. It is seen that among women residing in urban areas with one child, those with one boy i.e. 44.4% of them reported using modern method of contraceptives as compared to 42.1% of women with one girl in the urban areas. Similarly, for women residing in rural areas with one child, those with one boy i.e. 47.1% of them reported using modern method of contraceptives as compared to 41.3% of the women with one girl in the rural areas. For women in urban areas with two children, those who have both sons, among them 69.1% of women are using contraceptives as compared to 64.4% of women who have one male child and one female child. This shows that there is decrease in contraceptive use from two male children to one male and one female children. But the contraceptive use among the women is reduced more when compared to two male children to two female children to women i.e. from 69.1% to 59.9%. This shows that there is preference of male child in second parity. Similarly, same pattern can be seen in rural areas also. For women residing in rural areas with two children, those who have both sons, among them 70.9% of women are using contraceptives as compared to 67.5% of women who have one male child and one female child. This shows that there is decrease in contraceptive use from two male children to one male and one female children. But the contraceptive use among the women is reduced more when compared to two male children to two female children to women i.e. from 70.9% to 55.9%. This shows that there is preference of male child in second parity. Again, in case of three children, the most preferred sex composition is three boys for urban and rural women with contraceptive prevalence rates of 72.1% and 71.3% respectively. In order of preference, this is followed by one boy and two girls in urban women and two boys along with one girl in rural women with contraceptive prevalence rates of 71.1% and 70.2% respectively. In case of four children, the most preferred sex composition is all four girls in urban women and all four boys in rural women with contraceptive prevalence rates of 72.7% and 70.5% respectively. In order of preference, this is followed by three boys and one girl in urban women and one boy along with three girls in rural women with contraceptive prevalence rates of 71.2% and 69.2% respectively. But when women go for five and above five parities, there is large number of children and as a result the preference for certain sex composition of children is gradually diminishing.

Table 2: Contraceptive Use by Sex Composition of Living Children and Literacy in West Bengal

NFHS 4						
SEX COMPOSITION OF LIVING CHILDREN	ILLITERATE			LITERATE		
	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)
ONE CHILD						
ONE BOY	554	43.5% (241)	43.5	1567	47.1% (738)	47.1
ONE GIRL	441	32.4% (143)	43.5	1255	44.8% (562)	47.1
TWO CHILDREN						
TWO BOYS	735	74% (544)	74	667	67.2% (448)	67.2
ONE BOY & ONE GIRL	1321	67.7% (894)	74	1364	65.8% (897)	67.2
TWO GIRLS	354	56.5% (200)	74	475	54.9% (261)	67.2
THREE CHILDREN						
THREE BOYS	216	70.8% (153)	72.3	80	76.2% (61)	76.2
TWO BOYS & ONE GIRL	761	72.3% (550)	72.3	227	71.8% (163)	76.2
ONE BOY & TWO GIRLS	641	71.1% (456)	72.3	287	68.6% (197)	76.2
THREE GIRLS	158	65.8% (104)	72.3	102	62.7% (64)	76.2
FOUR CHILDREN						
FOUR BOYS	48	66.7% (32)	69.8	8	87.5% (7)	87.5
THREE BOYS & ONE GIRL	210	68.1% (143)	69.8	35	65.7% (23)	87.5
TWO BOYS & TWO GIRLS	350	63.1% (221)	69.8	60	60% (36)	87.5
ONE BOY & THREE GIRLS	235	69.8% (164)	69.8	56	57.1% (32)	87.5
FOUR GIRLS	67	55.2% (37)	69.8	23	47.8% (11)	87.5
FIVE CHILDREN						
ALL BOYS	11	54.5% (6)	65.8	3	33.3% (1)	77.8
MOST BOYS	54	61.1% (33)	65.8	15	73.3% (11)	77.8
MORE BOYS	114	65.8% (75)	65.8	13	69.2% (9)	77.8
MORE GIRLS	132	57.6% (76)	65.8	21	61.9% (13)	77.8
MOST GIRLS	87	58.6% (51)	65.8	9	77.8% (7)	77.8
ALL GIRLS	15	33.3% (5)	65.8	7	57.1% (4)	77.8

TOTAL	6504	65.69%	$I_p=69.54\%$	6274	58.37%	$I_p= 61.81\%$
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The results from the Table 2 reveal that sex preference has effect on contraceptive use in both illiterate and literate section, since the contraceptive use rate would increase from 65.69% to 69.54% in illiterate and from 58.37% to 61.81% in the literate section in the absence of sex preference.

Among the women with one child, those with one boy i.e. 43.5% of them reported using modern method of contraceptives as compared to 32.4% of women with one girl in the illiterate section whereas in literate section, among women with one child, those with one boy i.e. 47.1% of them reported using modern method of contraceptives as compared to 44.8% of women with one girl. As it is seen that contraceptives use in both cases, whether it is a boy or a girl is less, this means that women want to go for next child birth. In case of two children, the most preferred sex composition is two boys in both illiterate and literate women with contraceptive prevalence rates of 74% and 67.2% respectively. In order of the preference, this is followed by a son and a daughter with contraceptive prevalence rates of 67.7% and 65.8% in illiterate and literate women respectively. For three children, most popular combination is two boys and one girl for illiterate women with contraceptive prevalence rate of 72.3% and three boys among literate women with contraceptive prevalence rate 71.8%. In order of preference, this is followed by one boy and two girl children to illiterate women with contraceptive prevalence rate of 71.1%, two boys along with one girl children combination among literate women having contraceptive prevalence rate of 71.8%. In case of four children, the most preferred sex composition is one boy and three girls for illiterate women with contraceptive prevalence rate of 69.8% and all four boys for literate women with contraceptive prevalence rate of 87.5%. In order of preference, this is followed by three boys and one girl in illiterate section of the women as well as for literate women having contraceptive prevalence rate of 68.1% and 65.7% respectively. But when women go for five and above five parities, there is large number of children and as a result the preference for certain sex composition of children is gradually diminishing.

Table 3: Contraceptive Use by Sex Composition of Living Children and Religion Wise in West Bengal

NFHS 4									
SEX COMPOSITION OF LIVING CHILDREN	HINDU			MUSLIM			OTHERS		
	NOS.OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)
ONE CHILD									
ONE BOY	1675	46% (771)	46	383	45.4% (174)	45.4	63	54% (34)	54
ONE GIRL	1295	42% (544)	46	335	40% (134)	45.4	66	40.9% (27)	54
TWO CHILDREN									
TWO BOYS	1095	73.7% (807)	74.1	252	57.5% (145)	57.5	55	72.7% (40)	73.4
ONE BOY & ONE GIRL	2120	74.1% (1570)	74.1	486	56.2% (273)	57.5	79	73.4% (58)	73.4
TWO GIRLS	637	57.9% (369)	74.1	173	46.8% (81)	57.5	19	63.1% (12)	73.4
THREE CHILDREN									
THREE BOYS	198	75.3% (149)	75.6	84	60.7% (51)	63.6	14	76.1% (10)	76.1
TWO BOYS & ONE GIRL	659	75.6% (498)	75.6	283	63.6% (180)	63.6	46	76.1% (35)	76.1
ONE BOY & TWO GIRLS	677	72.7% (492)	75.6	206	61.7% (127)	63.6	45	75.6% (34)	76.1
THREE GIRLS	195	70.3% (137)	75.6	55	45.5% (25)	63.6	10	60% (6)	76.1
FOUR CHILDREN									
FOUR BOYS	25	80.1% (20)	80.1	30	60% (18)	62.1	1	0% (0)	60
THREE BOYS & ONE GIRL	126	73.8% (93)	80.1	104	61.5% (64)	62.1	15	60% (9)	60
TWO BOYS & TWO GIRLS	254	70.5% (179)	80.1	146	51.4% (75)	62.1	10	30% (3)	60
ONE BOY & THREE GIRLS	189	70.4% (133)	80.1	87	62.1% (54)	62.1	15	60% (9)	60
FOUR GIRLS	66	54.5% (36)	80.1	22	54.5% (12)	62.1	2	0% (0)	60
FIVE CHILDREN									
FIVE BOYS	9	55.6% (5)	71.9	5	40% (2)	58.6	0	0% (0)	100
MOST BOYS	32	71.9% (23)	71.9	36	58.3% (21)	58.6	1	0% (0)	100
MORE BOYS	60	71.6% (43)	71.9	61	57.4% (35)	58.6	6	66.7% (4)	100
MORE GIRLS	75	66.7% (50)	71.9	72	51.4% (37)	58.6	6	33.3% (2)	100
MOST GIRLS	65	60% (39)	71.9	29	58.6% (17)	58.6	2	100% (2)	100
ALL GIRLS	14	42.9% (6)	71.9	8	37.5% (3)	58.6	0	0% (0)	100
TOTAL	9466	65.91%	$I_p=68.61\%$	2857	54.61%	$I_p=57.34\%$	455	66.38%	$I_p=69.81\%$

The results from the Table 3 reveal that sex preference has effect on contraceptive use among Hindu, Muslim and others religious community women since the contraceptive use rate would increase from 65.91% to 68.61%, 54.61% to 57.34% and 66.38% to 69.81% respectively in the absence of sex preference.

Among Hindu women with one child, those with one boy i.e. 46% of them reported using modern method of contraceptives as compared to 42% of women with one girl. Similarly, it is observed that among Muslim women with one child, those with one boy i.e. 45.4% of them reported using modern method of contraceptives as compared to 40% of women with one girl but in others religious community in which Christians, Buddhist/Neo-Buddhist, Sikh, Jains and all other religion women are there, it is seen that women with one child, those with one boy i.e. 54% of them reported using modern method of contraceptives as compared to 40.9% of women with one girl. In case of two children, the most preferred sex composition is one boy and one girl to the Hindu and Others community women with contraceptive prevalence rates of 74.1% and 73.4% respectively whereas two boys for Muslim women with contraceptive prevalence rates of 57.5%. In order of the preference, this is followed by two boys in Hindu and others community women with contraceptive prevalence rates of 73.7% and 72.7% respectively whereas in Muslim women, one son and one daughter are their second preference. Similarly, for three children, most popular combination is two boys and one girl for Hindu, Muslim and others community women with contraceptive prevalence rate of 75.6%, 63.6% and 76.1% respectively. In order of preference, this is followed by three boys in Hindu, Muslim and others community women with prevalence rate of 75.3%, 60.7% and 76.1% respectively. In case of four children, the most preferred sex composition is all four boys among Hindu women, one boy along with three girls among Muslim women as well as among others community women with contraceptive prevalence rates of 80.1%, 62.1% and 60% respectively. In order of preference, this is followed by three boys and one daughter among Hindu, Muslim and Others community women with contraceptive prevalence rates of 73.8%, 61.5% and 60% respectively. But when women go for five and above five parities, there is large number of children and as a result the preference for certain sex composition of children is gradually diminishing.

Table 4: Contraceptive Use by Sex Composition of Living Children and Community Wise in West Bengal

NFHS4												
	SCHEDULED CASTE (SC)			SCHEDULED TRIBE (ST)			OTHER BACKWARD CASTE (OBC)			GENERAL		
SEX COMPOSITION OF LIVING CHILDREN	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)
ONE CHILD												
ONE BOY	569	47.8% (272)	47.8	137	37.2% (51)	37.2	239	49% (117)	49	809	47.1% (381)	47.1
ONE GIRL	456	44.3% (202)	47.8	129	34.1% (44)	37.2	191	45% (86)	49	639	41.6% (266)	47.1
TWO CHILDREN												
TWO BOYS	464	75.9% (352)	75.9	105	67.6% (71)	67.6	173	75.1% (130)	75.1	438	67.1% (294)	67.1
ONE BOY & ONE GIRL	849	73.1% (621)	75.9	200	64% (128)	67.6	338	70.1% (237)	75.1	939	65.4% (614)	67.1
TWO GIRLS	222	57.7% (128)	75.9	56	55.4% (31)	67.6	100	53% (53)	75.1	312	56.1% (175)	67.1
THREE CHILDREN												
THREE BOYS	97	77.3% (75)	77.3	31	83.8% (26)	83.8	25	80% (20)	80	94	66% (62)	71.8
TWO BOYS & ONE GIRL	335	77.3% (259)	77.3	79	75% (59)	83.8	106	70.8% (75)	80	312	69.6% (217)	71.8
ONE BOY & TWO GIRLS	321	73.2% (235)	77.3	85	68.2% (58)	83.8	122	71.3% (87)	80	284	71.8% (204)	71.8

THREE GIRLS	97	71.1% (69)	77.3	24	70.8% (17)	83.8	22	79.6% (17)	80	82	54.9% (45)	71.8
FOUR CHILDREN												
FOUR BOYS	10	80% (8)	80	4	75% (3)	75	7	71.4% (5)	72.2	21	71.4% (15)	78.1
THREE BOYS & ONE GIRL	64	73.4% (47)	80	25	72% (18)	75	33	69.6% (23)	72.2	64	78.1% (50)	78.1
TWO BOYS & TWO GIRLS	135	65.2% (88)	80	33	66.6% (22)	75	55	65.4% (36)	72.2	118	66.9% (79)	78.1
ONE BOY & THREE GIRLS	110	70.9% (78)	80	26	65.4% (17)	75	36	72.2% (26)	72.2	76	71.1% (54)	78.1
FOUR GIRLS	30	60% (18)	80	6	33.2% (2)	75	18	61.1% (11)	72.2	25	48% (12)	78.1
FIVE CHILDREN												
ALL BOYS	3	33.3% (1)	91.7	0	0% (0)	80	4	50% (2)	87.5	4	50% (2)	69.4
MOST BOYS	12	91.7% (11)	91.7	11	45.5% (5)	80	8	87.5% (7)	87.5	18	55.6% (10)	69.4
MORE BOYS	34	70.6% (24)	91.7	9	77.8% (7)	80	22	77.3% (17)	87.5	36	69.4% (25)	69.4
MORE GIRLS	39	69.2% (27)	91.7	8	75% (6)	80	17	29.4% (5)	87.5	53	58.5% (31)	69.4
MOST GIRLS	34	52.9% (18)	91.7	10	80% (8)	80	7	57.1% (4)	87.5	27	59.3% (16)	69.4
ALL GIRLS	10	50% (5)	91.7	1	0% (0)	80	2	0% (0)	87.5	6	50% (3)	69.4
TOTAL												
TOTAL	3891	67.61%	$I_p=71.92\%$	979	62.54%	$I_p=67.98\%$	1525	65.19%	$I_p=70.31\%$	4357	60.66%	$I_p=63.98\%$

The results from the Table 4 reveal that sex preference has effect on contraceptive use in either SC or ST or OBC or General community since the contraceptive use rate would increase from 67.61% to 71.92%, 62.54% to 67.98%, 65.19% to 70.31% and 60.66% to 63.98% respectively in the absence of sex preference.

In the first parity it is seen that among women with one child, those with one boy i.e. 47.8%, 37.2%, 49% and 47.1% of them reported using modern method of contraceptives in SC, ST, OBC and General respectively as compared to 44.3%, 34.1%, 45% and 41.6% women with one girl in SC, ST, OBC and General community respectively. Further, it is observed that two patterns of modern contraceptive use are emerging when the parity increases. First, a higher percentage of women use contraception once they have more boys than girls, indicating that they are most satisfied with the sex composition of their children, demonstrating a clear preference for male child. The next larger percentage of women using contraceptives is visible when there is balance in the sex composition of the children. In case of two children, the most preferred sex composition is two boys among the SC, ST, OBC and the General community women with contraceptive prevalence rates of 75.9%, 67.6%, 75.1% and 67.1% respectively. In order of preference, this is followed by one boy and one girl among the SC, ST, OBC and the General community women with contraceptive prevalence rates of 73.1%, 64%, 70.1% and 65.4% respectively. For three children, most popular combination is all three boy children among SC, ST and OBC community women with contraceptive prevalence rate of 77.3%, 83.8% and 80% respectively whereas in General community women, most popular combination is one boy along with two girls with contraceptive prevalence rate of 71.8%. In order of preference, this is followed by two boys and one girl in SC and ST women with contraceptive prevalence rate of 77.3% and 75% respectively, among OBC community women this is followed by all three girl children with contraceptive prevalence rate of 79.6% whereas in general community women this is followed by two boys along with one girl. In case of four children, the most preferred sex composition is all four boys in SC and ST community women with contraceptive prevalence rate of 80% and 75% respectively whereas one boy and three girl children among OBC community women with contraceptive prevalence rate of 72.2% and three boys along with one girl among General community women with contraceptive prevalence rate of 78.1%. In order of preference, this is followed by

three boys along with one girl child in SC, ST and OBC community women and all four boys among General community women with contraceptive prevalence rate of 73.4%, 72%, 69.6% and 71.4% respectively. But when women go for five and above five parities, there is large number of children and as a result the preference for certain sex composition of children is gradually diminishing.

Table 5: Contraceptive Use by Sex Composition of Living Children and Wealth Wise in West Bengal

NFHS4									
SEX COMPOSITION OF LIVING CHILDREN	POOREST			MIDDLE			RICHEST		
	NOS. OF WOMEN	PERCENT AGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)	NOS. OF WOMEN	PERCENTAGE USING CONTRACEPTIVES	IN THE ABSENCE OF SEX PREFERENCE (PERCENTAGE)
ONE CHILD									
ONE BOY	343	46.6% (160)	46.6	513	46% (236)	46	273	44.7% (122)	46.7
ONE GIRL	292	34.9% (102)	46.6	380	43.2% (164)	46	199	46.7% (93)	46.7
TWO CHILDREN									
TWO BOYS	315	74% (233)	74	323	71.5% (231)	75.5	81	67.9% (55)	67.9
ONE BOY & ONE GIRL	631	66.2% (418)	74	583	75.5% (440)	75.5	156	66% (103)	67.9
TWO GIRLS	177	51.4% (91)	74	203	70.1% (143)	75.5	71	62% (44)	67.9
THREE CHILDREN									
THREE BOYS	94	69.1% (65)	73.3	59	72.8% (43)	73.8	10	80% (8)	80
TWO BOYS & ONE GIRL	311	73.3% (228)	73.3	186	65.6% (122)	73.8	31	74.2% (23)	80
ONE BOY & TWO GIRLS	258	73.3% (189)	73.3	172	65.7% (113)	73.8	33	72.7% (24)	80
THREE GIRLS	82	59.8% (49)	73.3	61	73.8% (45)	73.8	5	80% (4)	80
FOUR CHILDREN									
FOUR BOYS	21	76.2% (16)	76.2	11	63.6% (7)	80.1	2	50% (1)	100
THREE BOYS & ONE GIRL	77	71.4% (55)	76.2	53	66% (35)	80.1	4	50% (2)	100
TWO BOYS & TWO GIRLS	130	69.2% (90)	76.2	84	80.1% (68)	80.1	4	100% (4)	100
ONE BOY & THREE GIRLS	104	65.4% (68)	76.2	55	67.3% (37)	80.1	4	75% (3)	100
FOUR GIRLS	35	65.7% (23)	76.2	16	37.5% (6)	80.1	1	0% (0)	100
FIVE CHILDREN									
ALL BOYS	6	83.3% (5)	83.3	3	66.6% (2)	71.4	1	0% (0)	100
MOST BOYS	28	64.3% (18)	83.3	11	54.5% (6)	71.4	2	100% (2)	100
MORE BOYS	43	65.1% (28)	83.3	25	56% (14)	71.4	0	0% (0)	100
MORE GIRLS	50	60% (30)	83.3	24	45.8% (11)	71.4	3	100% (3)	100
MOST GIRLS	38	60.5% (23)	83.3	14	71.4% (10)	71.4	1	0% (0)	100
ALL GIRLS	8	37.5% (3)	83.3	5	40% (2)	71.4	1	0% (0)	100
TOTAL	3043	64.74%	$I_p=70.83$ %	2781	65.16%	$I_p=68.67$ %	882	58.54%	$I_p=61.05$ %

The results from the Table 5 reveal preference for sons in all classes of society/ people whether they are the Poorest, Middle or Richest person.

Overall, it is seen that sex preference has effect on contraceptive use in the poorest, middle and richest class since the contraceptive use rate would increase from 64.74% to 70.83%, 65.16% to 68.67% and 58.54% to 61.05% respectively.

Among the poorest women with one child, those with one boy i.e. 46.6% of them reported using modern method of contraceptives as compared to 34.9% of women with one girl. Similarly, it is observed that among the middle-class women with one child, those with one boy i.e. 46% of them reported using modern method of contraceptives as compared to 43.2% of women with one girl whereas among the richest class women with one child, those with one girl i.e. 46.7% of them reported using modern method of contraceptives as compared to 44.7% of women with one boy. In case of two children, the most preferred sex composition is two boys among the poorest and the richest class women with contraceptive prevalence rates of 74% and 67.9% respectively whereas among the middle-class women, the most preferred sex composition is one boy along with one girl with contraceptive prevalence rate of 75.5%. In order of preference, this is followed by one boy and one girl among the poorest and richest class women with contraceptive prevalence rates of 66.2% and 66% respectively and two boys among the middle-class women with contraceptive prevalence rates of 71.5%. Similarly, for three children, most popular combination is two boys and one girl for poorest, all three girls among middle class as well as among the richest class women with contraceptive prevalence rates of 73.3%, 73.8% and 80% respectively. In order of preference, this is followed by one boy and two girls in poorest class, all three boys among the middle class and the richest class women with contraceptive prevalence rates of 73.3%, 72.8% and 80% respectively. In case of four children, the most preferred sex composition is all four boys in the poorest class women, two boys along with two girls in the middle class and the richest class women with contraceptive prevalence rate of 76.2%, 80.1% and 100% respectively. In order of preference, this is followed by three boys and one girl children among the poorest class women while one boy along with two girl children among the middle class and the richest class women with contraceptive prevalence rate of 71.4%, 67.3% and 75% respectively. But when women go for five and above five parities, there is large number of children and as a result the preference for certain sex composition of children is gradually diminishing.

Table 6: Effect of Son Preference on Contraceptive Prevalence in West Bengal

Socio-Economic/Residence background	Contraceptive Prevalence Rate		Difference (Percentage)
	Actual (Percentage)	In the absence of sex preference (Percentage)	
Rural	63.05	66.51	3.46
Urban	59.15	62.75	3.60
Literate	58.37	61.81	3.44
Illiterate	65.69	69.54	3.85
Hindu	65.91	68.61	2.70
Muslim	54.61	57.34	2.73
Others	66.38	69.81	3.43
SC	67.61	71.92	4.31
ST	62.54	67.98	5.44
OBC	65.19	70.31	5.12
General	60.66	63.98	3.32
Poorest	64.74	70.83	6.09
Middle	65.16	68.67	3.51
Richest	58.54	61.05	2.51
Total	62.68	66.50	3.82

In the Table 6, the enhancement in the contraceptive prevalence rate of women belonging to different socio-economic and residence background is analysed under the assumption that if women are satisfied with their present sex composition of children. In this table, the first column represents the actual contraceptive prevalence while second column depicts the enhancement in the contraceptive use in the absence of sex preference. This table tells that in all socio-economic /residence background of the women there is gain in

contraceptive prevalence rate of less than 3.85% except in SC, ST, OBC and poorest class where gain is 4.31%, 5.44%, 5.12% and 6.09% respectively. From the present analysis based on the index proposed by Arnold (1985), a strong son preference is found among women/couples in West Bengal.

Conclusion

Considering all factors along with background characteristics, it is interesting to see that at which level of son preference is prevailing in the Eastern state with huge population i.e. West Bengal. For this purpose, a simple but powerful index i.e. Arnold's index based on modern contraceptive status of eligible/ever married women by sex composition of living children is adopted. The analysis reveals that there is strong son preference across residence and socio-economic background of the women/couples in West Bengal. Son preference is stronger in every field of the society

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