Influence of Sex Preference on Demand for a Child in Bangladesh

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Abstract

If son preference were to affect the demand for additional children then, within any parity, those with one or more sons would be more likely not to want more children as compared to those who did not have any sons. Conversely, if the desire for a balance sex composition was to affect fertility within a given parity, respondent who had either all sons or all daughters would be more likely to want additional children as compared to those who had children of both sexes. Data from BDHS 2017 clearly indicates a significant evidence of son preference in Bangladesh. The findings indicate that whenever gender preferences would be eliminated, the percentage of respondents who did not want more children would be increased approximately by 10 percent. Finally, we conclude that further reduction of fertility to achieve replacement level is unlikely without considerable reduction in the desire of male children or sex preferences.

1. Introduction

In 1992, China held an "International Seminar on China's 1990 Population Census," at which many foreign scholars and a group of Chinese scholars presented papers on the 'missing girls' problem seen in China's 1990 census and previous enumerations and surveys. From these papers came the growing awareness that the death of girls in cohorts of children was not just a Chinese problem, but was an increasing phenomenon in other countries of East Asia as well as South Asian countries. Therefore, Chinese and foreign scholars proposed that the United Nations sponsor an Asia-wide symposium on the ever-worsening imbalance between the number of boys and girls and the causes and possible solutions to this perceived problem. After some location problems and postponement until after "The International Conference on Population and Development" (Cairo, September 1994), the "International Symposium on Issues Related to Sex Preference for Children in the Rapidly Changing Demographic Dynamics in Asia" was held in Seoul, South Korea, in November 1994. It was sponsored by the United Nations Population Fund and the Government of the Republic of Korea, and hosted by the Korean Institute of Health and Social Affairs (KIHASA). The sponsors invited scholars and a few officials from the following countries and regions: South Korea, Mainland China, Taiwan, India, Sri Lanka, Pakistan, Bangladesh, Thailand and Indonesia. A paper from Vietnam was later added.

In the symposium some countries of Asia including Bangladesh exhibit very strong son preference (Chaudhury, 1994; Alam and Bairagi, 1994). The decline in the total fertility rate (TFR) of

Bangladesh from more than six lifetime births per woman in the mid-1970s to slightly more than three births per woman in the early 1990s is remarkable. But total fertility rate remained relatively static (3.3) in Bangladesh between 1993 and 2000. In the past, the generalization has been made that strong son preference would slow fertility decline or prevent fertility from falling as low as it might otherwise go. But the papers presented in the symposium confirm that some areas, in spite of very strong son preference, have achieved fertility at or below replacement level- South Korea, Taiwan, Mainland China and that other areas now experience rapid fertility decline in spite of strong son preference- North India, Vietnam (Leete, 1994) where sex selective abortion is very common. Evidence suggests that couples in Bangladesh would definitely like to have one son but not more than that, an observation suggesting that son preference should not greatly slow fertility decline (Chaudhury, 1994). But this observation is controversial and it seems that there is negative impact of sex preference on fertility decline. Because in Bangladesh induced abortion is illegal except to save the life of a pregnant woman.

Looking at the number of male live births per 100 female live births (sex ratios at live birth) is often an appropriate way to assess whether there is son (or daughter) preference in a certain country. There are variations across countries in sex ratios at birth but in general sex ratios at birth range between 103 and 108 in developing countries and between 104 and 107 in developed countries. This means that for every 100 female babies born, there are about 103 to 108 male babies that are born. The fact that there are more male births than female births is biological (Waldron, 1998). However, if the sex ratio at birth is much higher than the expected rate, we can suspect that non-biological factors are contributing to the abnormally high ratio. One of these factors is the use of prenatal sex screening technologies followed by sex selective abortion due to couple's preference for sons. The evidence is sustained of the case of China, Korea and Taiwan. China, Korea and Taiwan are particularly known to have strong son preference. But in Bangladesh such prenatal sex screening technologies are far beyond the reach of rural couples. Also there is so far no convincing evidence of substantial use of prenatal sex detection followed by abortion of females.

A number of recent studies have documented evidence to show that couples have a decided preference for a particular sex combination of children. For example, in many south Asian countries, including Bangladesh there is a strong preference for sons over daughters. In fact, son preference has been considered to be one of the factors responsible for the high fertility in these countries and it is argued that such gender preferences for children may act as a major constraint in the implementation of family planning programs, particularly in countries which are beginning to experience a fertility transition.

The impact of gender preference on fertility has usually been investigated by examining data relating to the sex composition of living children of couples who do not want any more children, the assumption being that if son preference has an impact on fertility, couples who have sons are much more likely to not want more children and to practice contraception. Such an impact has been documented and empirically demonstrated in several south Asian countries. Some of the earlier studies (before 1990) conducted in Bangladesh did not find any association between son preference and higher fertility. The recent surveys conducted in Bangladesh did find that the desire for additional child was greatest among couples who had daughters only. In another study from Bangladesh, Jordan and India, Repetto observed that the fertility decisions of couples were not fully influenced by the desire to have sons. One the contrary, they were motivated by the economic

advantages associated with having children, regardless of their sex. Finally sex preference is thought to be one of the reasons for plateauing of fertility.

Most fertility surveys, which seek to measure the demand for a child and gender preference are confined to currently married women and hence assume that the women response reflects the preference of the couple. Previous research on sex preferences for children reveals that couples who have more sons among their surviving children are more likely not to desire additional children (knodel and prachuabmoh, 1976; Park, 1978; Malhi, 1993; Rahman and Da Vanzo, 1993; Pong, 1994; Malhi and Sing, 1995). Son preference has also been reported to be an important reason for use of prenatal sex identification tests and sex specific abortions (Pandhya, 1988; Yi et all, 1993).

Although most studies conducted in south and East Asian countries indicate a general preference for sons over daughters, many investigators have noted a co-existing preference for a daughter among couples with several sons. For example, Chowdhury and Bairagi (1990) found in Bangladesh among couples with three or four living children, those with no living daughter were more likely to have an additional birth than those who had a living daughter.

The literature suggests that in a society with a strong preference for boys, couples with more girls would continue childbearing till they have achieved their desired number of male children. In the past, however, not much empirical evidence was available to support this contention. Arnold (1985, 1987) developed a quantitative method to estimate the impact of sex preference on fertility behavior and applied the method to data collected during 1965-84 from 22 countries all over the world. Arnold (1987) found that the proportion of respondents who did not want more children would increase on an average by 4.5 percentage point in the absence of gender preferences.

2. Materials and Methods

Bangladesh is one of the economically backward countries with a minimum per capita income in the south Asia. Although income levels have been increasing for the last two decades with the help of domestic output, foreign aid and continuous development works of government as well as NGO's.

With regard to the status of women gender inequalities with respect to access to education, employment and health care are very pronounced. Although the female literacy rate has been increasing over the last two decades, it remains still markedly lower than the male literacy rate.

Bangladesh Demographic and Health Survey 2017 data are used in this study. The ever-married women aged 10-49 are considered here. The sample comprises 8782 respondents out of 10,544 eligible women. The respondents under sterilization, divorced, widowed etc. are excluded from the sample because they are not able to bear any more children. In the sample 6154 respondents are in rural areas and 2628 respondents are from urban areas according to their place of residence. 7655 respondents are from Muslim and 1127 are from other than Muslim according their religion. 6068 respondents are from below secondary level and 2714 are from secondary and higher according to their level of education. Simple descriptive statistics were used to analyze the data.

Cross tabulation of data pertaining to the demand for an additional child with the number of living sons and living children was done for rural & urban, Muslim & other than Muslim, Below secondary & secondary and higher level of education according to the selected background characteristics and examined to see whether the sex composition of surviving children influences future fertility intentions. Further, in order to compare the mentioned background characteristics

on sex preference an attempt was made to quantify these preferences by using the techniques proposed by Chang et al. and Arnold. The method of Chang et al. can be used to compute son preference and desire for balance ratios for respondents with two or more living children. In this chapter, these ratios were computed for respondents with two living children only who demand no more children because in Bangladesh two children is still standard family norm. The son preference ratio was obtained by dividing the percentage of respondents with two sons who did not want any more children by the percentage of respondents with two daughters who did not want any more children. The desire-for-balance ratio was computed by dividing the percentage of respondents with two children of the opposite sex who did not want any more children by the percentage of respondents with two children of the same sex who did not want any more children. In my study, percentage of respondents having two daughters is used for balance ratio.

In order to quantify the overall impact of sex preference for children on fertility and family planning behavior, the method assumes that in the complete absence of gender preferences, at any given parity all the couples, would behave in a similar fashion as those at the same parity who were most satisfied with the current sex composition of their children, that is, at the maximum rate within that parity. This technique is fairly flexible and can be used with a fertility and family planning measures. In the present study, it was used to calculate the impact of sex preference on the demand for additional children.

Table 1: Percentages of female respondents corresponding to the selected background characteristics, not wanting additional children by the number of living children.

Number of living children	Bangladesh	Types of place of residence		Difference	Religion		Difference	Educational level		Difference
		Rural	Urban		Muslim	Other than Muslim		Below secondary level	Secondary and higher level	
0	05.2	04.8	06.1		05.4	04.2		05.2	05.3	
1	19.2	17.2	23.1		18.2	25.1		19.2	19.1	
2	69.7	66.4	76.6	10.2*	66.9	84.0	17.1*	65.7	76.9	11.2*
3	85.1	84.1	87.5		83.9	92.8		83.7	89.8	
3+	95.9	95.3	97.8		96.0	95.8		95.8	96.7	

* indicates significant at p<.01

Source: BDHS data 2017.

Table 2: Percentages of female respondents corresponding to the selected background characteristics, not wanting additional children by number of living children and living sons.

No. of living children	No. of living sons	Bangladesh	Types of place of residence		Difference	Religion		Difference	Educational level		Difference
			Rural	Urban		Muslim	Other than Muslim		Below secondary level	Secondary and higher level	
0	0	05.2	04.8	06.1		05.4	04.2		05.2	05.3	
1	0	17.8	16.5	20.6		17.5	20.2		18.5	17.0	
	1	20.4	17.9	25.4		18.9	29.2		19.9	21.1	
2	0	48.4	42.4	62.6	20.2*	45.2	64.7	19.5*	42.5	59.3	16.8*
	1	80.1	77.8	84.7	06.9**	77.5	92.8	15.3*	77.8	84.1	06.3*
	2	65.0	62.6	69.9	07.3***	62.1	80.7	18.6*	59.4	75.4	16.0*
3	0	61.1	58.7	67.4		60.3	65.4		59.6	67.7	
	1	85.2	83.5	88.8		83.5	95.0		84.2	87.8	
	2	93.5	93.2	94.5		92.6	100.0		92.2	98.4	
	3	79.4	78.5	81.5		77.7	94.4		77.5	86.5	
3+	0	77.6	79.2	73.9		80.0	63.6		78.3	75.0	
	1	94.8	93.5	99.0		94.4	98.0		94.5	96.8	
	2	96.5	95.8	98.8		96.5	97.0		96.3	98.1	
	3	97.7	97.4	98.7		97.7	98.1		97.6	98.6	
	3+	96.7	96.0	99.0		96.7	96.9		96.6	97.8	

* indicates p<.01, ** indicates p<.05 and *** indicates p<.10

Source: BDHS data 2017.

Table 3: Son preference and desire for balance ratio of the selected background characteristics with two children.

| Characteristics	Bangladesh	Types of place of residence		Religion		Educational level	
		Rural	Urban	Muslim	Other than Muslim	Below secondary level	Secondary and higher level
% of respondents having two sons and not wanting another child	65.0	62.6	69.9	62.1	80.7	59.4	75.4
% of respondents having one son & one daughter and not wanting another child	80.1	77.8	84.7	77.5	92.8	77.8	84.1
% of respondents having two daughters and not wanting another child	48.4	42.4	62.6	45.2	64.7	42.5	59.3
Son preference ratio	1.34	1.48	1.12	1.37	1.25	1.40	1.27
Desire for balance ratio	1.23	1.24	1.21	1.25	1.13	1.31	1.12

Source: BDHS data 2017.

Table 4: Effect of sex preference on demand for additional children

Characteristics		% of respondents having two children want no more children		Difference Col. 2- Col. 1	1. Risk ratio Col. 2 / Col. 1
		Actual (Col. 1)	In absence of sex preference (Col. 2)		
Bangladesh		69.7	80.1	10.4*	1.15
Types of place residence	Rural	66.4	77.8	11.4*	1.17
	Urban	76.6	84.7	8.1*	1.11
Religion	Muslim	66.9	77.5	10.6*	1.16
	Other than Muslim	84.0	92.8	8.8**	1.10
Educational level	Below secondary level	65.7	77.8	12.1*	1.18
	Secondary and higher level	76.9	84.1	7.2**	1.09

Source: BDHS data 2017.

1. Risk ratio: The risk ratio takes on values between zero and infinity. One is the neutral value and means that there is no difference between the groups compared, close to zero or infinity means a large difference between the two groups on the variable concerned. A risk ratio larger than one means that group 1 has a larger proportion than group 2. If the opposite is true the risk ratio will be smaller than one.
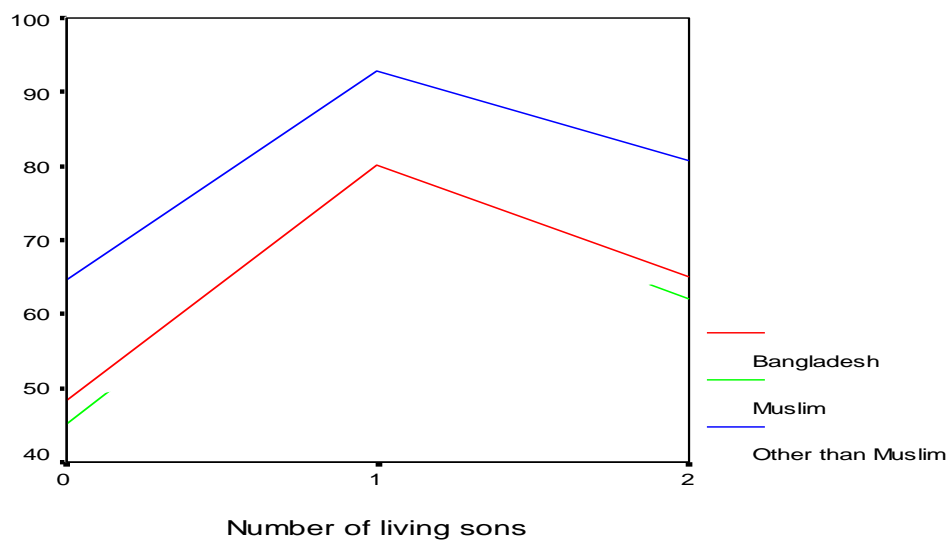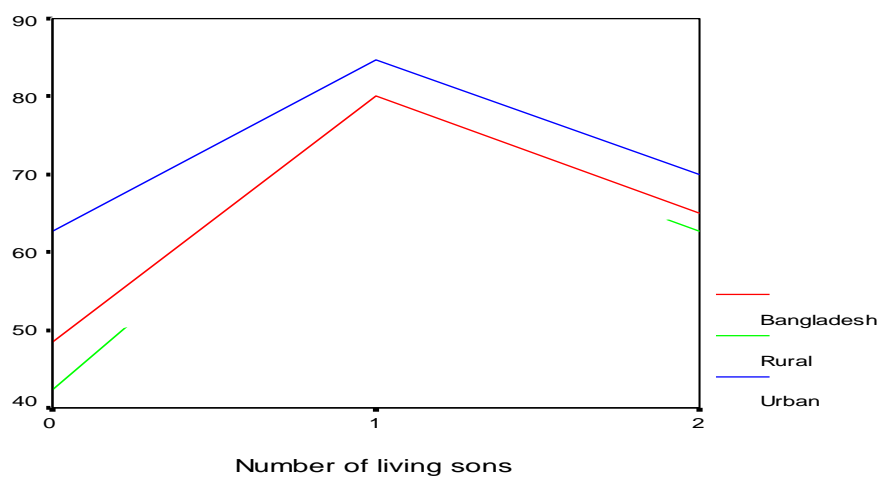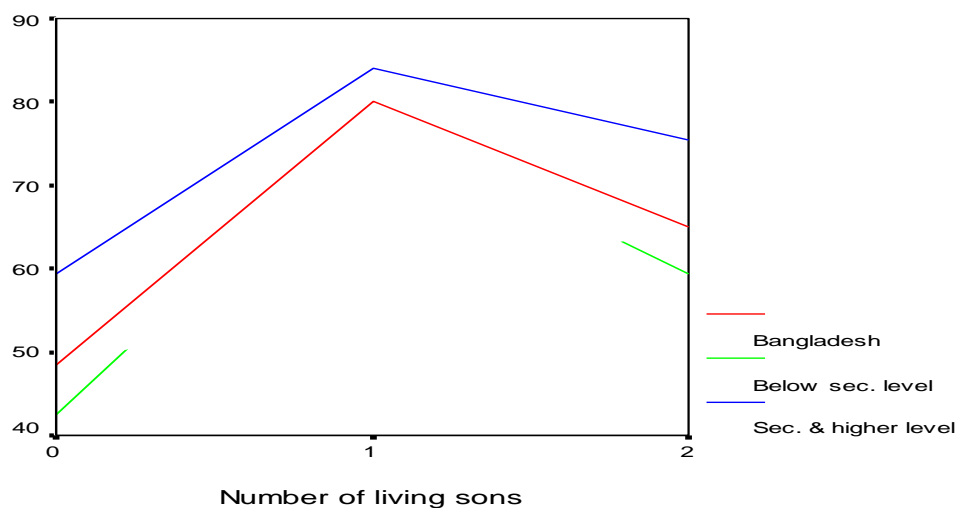
Figure 1: Comparison of % of respondents at parity 2, not wanting additional children by no. of living sons under selected background characteristics

3. Results and Discussion

Within any parity, the combination of sons and daughters associated with a relatively higher percentage of respondents who did not want more children was interpreted to mean that the respondents had achieved their preferred sex composition of children i.e. there is no sex preference or absence of sex preference. If son preference were to affect the demand for additional children then, within any parity, those with one or more sons would be more likely not to want more children as compared to those who did not have any son. Conversely, if the desire for a balance sex composition was to affect fertility, within a given parity, respondent who had either all sons or all daughters would be more likely to want additional children as compared to those who had children of both sexes. Since the family planning program in Bangladesh still actively advocates a two-child family norm, an examination of sex preferences for children among couples who currently had two children i.e. parity two was used to assess son preference and desire for balance ratios.

Table 1 presents a percentage distribution of female respondents corresponding to the selected background characteristics not wanting additional children by the number of living children. From the table, within each parity it is clear that the demand for additional children is higher among rural women than that of urban women. At parity two i.e. the women having two children, 33.1% rural women want additional children as compared to 23.4% in urban women and on the average 30.3%women want additional children in Bangladesh. The difference between proportions of rural and urban women about their demand for additional children is statistically significant. The demand is higher among rural women as compared to urban women. It may due to the fact that rural women are comparatively more economically dependent on their male family members and they will be motivated to want a greater number of children, especially sons, who are perceived as an insurance against the risks of divorce, widowhood and old age. On the contrary, the life style is complicated to bear and rear the children in urban areas as compared to rural areas. So in spite of

having son preference the couples of urban areas restrict their child bearing as soon as possible than the rural couples.

For the background characteristics religion, at parity two, 33.1% respondents belonging to the religious group 'Muslim' demand for additional children as compared to 16% respondents belonging to 'Other than Muslim'. The difference is statistically significant. The demand for additional child is higher among Muslim respondents as compared to other than Muslim women. In Bangladesh, there is still, general convention among some of the Muslim women that family planning program for restricts childbearing is against the spiritual ideology. Such spiritual ideology is limited among other than Muslim respondents.

For the background characteristics educational level, at parity two, 34.3% respondents having below secondary educational level want additional children as compared to 23.1% respondents having secondary and higher level of education. The difference is statistically significant. The significance tests for difference between two independent sample proportions are performed with the help of t-test introduced by SISA (Simple Interactive Statistical Analysis). The demand for additional child is higher among the respondents with below secondary educational level as compared to the respondents with secondary and higher level of education. This is because, the respondents with below secondary level of education are not enough conscious about the family planning program and its positive impact on society. Also such less educated respondents are fully dependent on their male children with respect to future financial support, investment and shelter as compared to the more educated respondents.

Table 2clearly indicates a significant evidence of son preference both among rural and urban women. For instance, at parity two, both rural and urban women who did not have a son may be wanted a son, while the desire for a daughter was fairly muted even among those who did not have a daughter. Further, the desire for a second daughter was virtually non-existent. This tendency was true in the other selected background characteristics. Son preference is also observed among the respondents under the religious group Muslim and other than Muslim, below secondary and secondary & higher level of education. The preference for sons is comparatively lower among the respondents with religion other than Muslim and with moderately higher level of education. Generally, the percentage of respondents who did not want additional children increased with the number of surviving sons. The comparisons are done with the help of line diagram for selected background characteristics (figure 1). The results indicated that among rural women with two children, those who had sons only were approximately 1.5 times as likely, as those who had daughters only to want no more children. In comparison, only 1.12 times among urban women wanted to terminate childbearing after two children if both children were sons as compared to those who had two daughters. Although, the desire for balance ratio was slightly higher for rural women than for urban women, the difference between the respondents under rural & urban, Muslim & other than Muslim and below secondary & secondary and higher level of education were not so pronounced as can be seen from table 3. The results of son preference ratios and desire for balance ratios are summarized in table 3.

The overall impact of gender preferences for children on demand for additional children was quantified by the technique by Arnold. The results from table 4 indicated that when gender preferences would be eliminated, the percentage of respondents who did not want more children would be increased approximately by 10% in Bangladesh (11.4% for rural women and 8.1% for urban women, 10.6% for Muslim women and 8.8% for other than Muslim women, 12.1% for below secondary educational level and 7.2% for secondary and higher level of education). Also

evidence of sex preference for selected background characteristics is statistically significant. The significance test is performed with the help of 't'test. Here paired't' test was appropriate but for paired't' test, the data are not matched because the absence of sex preference is calculated hypothetically under some assumptions. In the last column of table 4 risk ratios are calculated for the selected background characteristics as well as for Bangladesh. At parity two, the risk ratio about the demand for an additional child in Bangladesh is 1.15. It can be explained as, if sex preference for children is absent among the couples, 15% more respondents will be included with the respondents who do not want more children. Since sex preference is prevailing in our society, 15% respondents having two children are likely to take risk to achieve their preferred sex composition of living children. The risk ratio is higher among rural women than urban women. It is higher among Muslim respondents than other than Muslim respondents. Also risk ratio is higher among respondents with below secondary educational level as compared to secondary and higher level of education.

4. Conclusion

The results of present study clearly indicate that in Bangladesh son preference is still present and, as such, the fertility behavior of the respondents is influenced by a strong desire to acquire a minimum number of surviving sons in the family. Also it is argued by many population experts that further reduction of fertility is unlikely without considerable reduction in the desire of male children or sex preferences. Moreover, since women exhibit an evidence of desire for sons, remedial measures related to improving women's status in society, would be one way of hastening the erosion of prevailing social norms which supports and sustain son preference in Bangladesh. So policy makers thus need to find how to bring down son preference.

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