

## Factors Affecting Desire for Further Fertility

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### Summary

In this study, covering a period of 1 year from 1-1-96 to 31-12-96, 10,592 women delivering at Nowrosjee Wadia Maternity Hospital were evaluated to ascertain what influenced a couples desire to have further children. Various parameters were studied.

Antenatal visits and admission status had no effect on desire for further fertility.

Education, previous Caesarean Section and previous Still Birth had a small dampening effect on the desire for further fertility.

Sex and number of living children had a significant effect on desire for further fertility. Most couples desired a second child irrespective of the sex of the first child. Beyond the second child, sex of the living children played a major role in desire for further children. There was a strong tendency for son preference.

It was noted that 90% of third births and 100% of fourth births could be avoided if son preference could be abolished.

### Introduction

Fertility control is the nation's top priority today. The population explosion needs to be tackled on a war footing. Understanding what makes a couple desire further children, would go a long way in designing programs to reduce fertility.

With this aim in mind the present study was undertaken.

### Material and Methods

In this study which covers a period of 1 year, 10,592 women delivering at Nowrosjee Wadia Maternity Hospital were asked how many more children they

desired.

A trivariate analysis of relationships between various demographic factors viz. number & sex of surviving children, education, antenatal status, admission status, prev. Caesarean Section and prev. stillbirth and number of children desired was carried out. Further, the influence of gender preference on fertility was studied and the results are discussed below.

### Results

Thus, only gender of the living children seems to have a considerable impact on desire for further fertility and education, previous stillbirth and previous Caesarean Section make a smaller contribution towards

Table 1 : Effect of Number and Sex of Surviving Children on desire for further fertility.

No. of Additional Children Desired	Grand Total Y-axis	No. of Living Children														
		None	One		Two			Three				Four			Others	
			M	F	2M	2F	1M/1F	3M	3F	1M/2F	2M/1F	4F	1M/3F	2M/2F		3M/1F
Grand No.	10592	214	3003	2921	812	859	1576	88	204	455	320	15	54	40	15	16
Total %	100	2.02	28.32	27.58	7.67	8.11	114.88	0.83	1.93	4.30	3.02	0.14	0.51	0.38	0.14	0.15
ONE	3723 35.15%	2.8	1	0.41	96.31	30.27	98.10	100	51.96	97.80	99.06	100	90.74	97.5	100	81.25
ONE	6534 61.69%	31.31	98.47	99.31	0.86	62.68	1.08	0	17.16	1.54	0.94	0	7.41	0	0	6.25
TWO	137 1.29%	59.35	0.1	0.03	0.12	0.35	0.06	0	0	0	0	0	1.85	0	0	0
THREE	2 0.02%	0.47	0	0	0	0	0	0.49	0	0	0	0	0	0	0	0
NOT SURE	196 1.85%	6.07	0.43	0.45	2.71	6.4	0.76	0	30.39	0.66	0	0	0	2.5	0	12.5

- Almost 98% and more with one child would desire to have atleast one more child.
- Those with two or more children with at least one male child, more than 90% were satisfied with their families size, and did not desire further children.
- A significant number of women with 2 or 3 female children desired to have another child. In the group with two female 62.68% women desired to have one more child, 30.27% were satisfied with their family size and 6.4% were undecided. In the group with 3 females, though only 17.16% of women desired to have one more child, 30.39% were undecided and were likely to be biased to have another child. Only 51.96% decided not to have any further children.

The group with 2 and 3 female children were further studied to evaluate if any additional factor influenced the decision to have additional children.

Table II : Effect of Education on desire for further fertility.

No. of Additional Children Desired	Group Total	Two female Educational Qualification					Group Total	Three Female Educational Qualification				
		None	1-4	5-8	9-12	13+		None	1-4	5-8	9-12	13+
NONE	859 (100)	88 (10.24)	34 (3.96)	122 (14.2)	370 (43.07)	245 (28.52)	204 (100)	28 (13.73)	8 (3.92)	45 (22.06)	89 (43.63)	34 (16.67)
	260 (30.27)	18 (20.45)	9 (26.47)	7 (5.74)	98 (26.49)	128 (52.24)	106 (51.96)	11 (39.29)	5 (62.50)	8 (17.78)	52 (58.43)	30 (88.25)
ONE	541 (62.98)	65 (73.86)	23 (67.65)	103 (84.43)	239 (64.59)	111 (45.31)	35 (17.16)	5 (17.86)	1 (12.50)	17 (37.78)	9 (10.11)	3 (8.82)
TWO	3 (0.35)	0	0	1 (0.82)	2 (0.54)	0	0	0	0	0	0	0
THREE	0	0	0	0	0	0	1 (0.49)	0	0	0	1 (1.12)	0
NOT SURE	55 (6.40)	5 (5.68)	2 (5.88)	11 (9.02)	31 (8.38)	6 (2.45)	62 (30.39)	12 (42.86)	2 (25.0)	20 (44.44)	27 (30.34)	1 (2.94)

- Higher Education (> 13+) had dampened the desire of the women for further fertility.

Table III: Effect of Admission Status on Desire for further fertility.

No. of Additional Children Desired	Group	Two Female Admission Status				Group	Three Female Admission status		
		Total	Free	P.P.	P.N.H.		Total	Free	P.P.
No.		820	667	25	128	195	173	4	18
%		100	81.34	3.05	15.61	100	88.72	2.04	9.23
None	No.	253	201	8	44	102	89	2	11
	Y %	30.85	30.13	32	34.38	52.3	51.45	50	61.11
One	No.	512	428	17	68	33	32	1	0
	Y%	62.43	64.17	64	53.13	16.92	18.5	25	0
Two	No.	3	2	0	1	0	0	0	0
	Y%	0.36	0.30		0.78				
Three	No.	0	0	0	0	1	1	0	
	Y%					0.51	0.58		
Not Sure	No.	52	36	1	15	17	9	1	7
	Y%	6.34	5.40	4.00	11.72	8.72	0.42	25.0	38.89

In patients seeking admission to higher class and therefore, possibly from a higher economic class, it was seen that

- Marginally more women are sure that they do not desire any further children.
- In this group, though the desire to have further children is decreased, a significant number are undecided, and are likely to become pregnant again.

reducing desire for further fertility. Quantum of antenatal care has no effect on reducing desire for further fertility.

Arnold (1985) has developed a method to estimate the influence of gender preference on fertility levels in quantitative terms. First, women with a specific number of children are grouped according to their children's sex. The influence of gender preference is then estimated by identifying the group of women least likely to have another child. The assumption is that if there were no gender preference all women would be just as likely to have another child as this group. The difference between this lowest percentage having another child and the percentage of all women having another child is taken as a measure of the 'extra' fertility that is due to gender preference.

## Discussion

Family Planning Researchers have been

concerned, that inspite of various efforts, our family planning programmes have failed to achieve the desired target.

It would help to know what influences a couple's decision to have further children.

It seems that with one child, most couples would desire to have atleast one more child irrespective of any other factors influencing them. In this study, more than 98% of couples with one child desired to have atleast one more child.

In those with two children, the desire to have another child is mostly influenced by the sex of the surviving children. In those with 1M + 1F only 1.14% desired to have another child and 0.76% were undecided. With two males only 0.98% desired to have another child, while 2.7% were undecided. In those with two females 63% desired to have another child and 6.4% were

Table IV : Effect of Antenatal Care on Desire for Further Fertility.

No. of Additional Children Desired	Group Total	Two Female Antenatal status							Group Total	Three Female Antenatal status						
		6	4-5	3	2	1	Ref	Emerg.		6	4-5	3	2	1	Ref.	Emerg.
No. Grand Total	820	439	162	99	62	54	1	3	195	99	37	23	18	16	1	1
Y%	100.0	53.54	19.76	12.07	7.56	6.59	0.12	0.37	100.0	50.77	18.97	11.79	9.23	8.21	0.51	0.51
No. None	253	140	49	29	15	19	0	11	102	50	18	11	11	11	1	0
Y%	30.85	31.89	30.25	29.29	24.19	35.19		33.33	52.31		50.51	48.65	47.83	61.11	68.75	100.0
No. One	512	269	98	66	44	32	1	2	33	19	5	4	2	3	0	0
Y%	62.44	61.28	60.49	66.67	70.97	59.26	100.0	66.67	16.92	19.19	13.51	17.39	11.11	18.75		
No. Two	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Y%	0.37	0.23	1.23													
No. Three	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
Y%									0.01		0.01					
No. Not Sure	52	29	13	4	3	3	0	0	59	30	13	8	5	2	0	1
Y%	6.34	6.61	8.02	4.04	4.84	5.56			30.26	30.30	35.14	34.78	27.78	12.50		100.0

- No significant association is seen between the quantum of antenatal care and desire for further fertility.

undecided.

After evaluating varied factors that may influence the desire to conceive it is evident that son preference has a most dramatic effect.

Our study estimates that 90% of third births and 100% of fourth births could be avoided if gender preference could be abolished. The results of the Muthayappa et al 1997 NFHS (National Family Health Survey) 92-93, are less dramatic and estimate that, amongst women with 3 children fertility would be decreased by about 15% and amongst women with 2 children fertility would be decreased by about 8%, if gender preference could be abolished.

The NFHS has further shown that the impact of gender preference is stronger in urban areas than in rural areas. Mumbai being more urban than urban India, the gender preference is very, very strong and may explain the difference in the Muthayappa et al 1997 NFHS and our study.

It is however, clear from the studies under consideration that gender preference has a big role to play in the decision of the couple to have more children or not. All population programmes to be successful, will need to address this problem.

Social measures like, education, urbanization etc. have reduced fertility rates, but they have not been able to make much impact on son preference, and in fact have shown to create stronger preference for sons.

Social development of the women in form of education, media exposure and opportunity to work outside the homes can provide access to new ideas, but the cultural and economic factors that underlie attitudes such as son reference needs to be transformed. This is a monumental task and shall take a long time.

Under the circumstances there is a compelling need to stimulate research in pre-selection techniques and to offer women an effective control over the gender of their offspring.

Table V : Effect of Previous Still Birth on desire for Further Fertility.

No. of Additional Children Desired	Group Total	Two Female Previous Stillbirth			Group Total	Three Female Previous Stillbirth		
		None	One	Two		None	One	Two
No. Grand Total	820	784	0.28	7	195	186	8	1
Y%	100.0	95.61	3.54	0.85	100	95.38	4.10	100
No. None	253	239	13	1	102	95	6	0
Y%	30.85	30.48	44.83	14.28	52.31	51.08	75.0	
No. One	512	491	16	5	33	32	1	0
Y%	62.44	62.63	55.17	83.33	16.92	17.20	12.5	
No. Two	3	3	0	0	0	0	0	0
Y%	0.37	0.38						
No. Three	0	0	0	0	1	1	0	0
Y%				0.51	0.54			
No. Not Sure	52	51	0	1	59	58	1	0
Y%	6.34	6.51		16.67	30.26	30.26	12.5	

- Previous Obstetric tragedy like stillbirth, acted as a small deterrent, for desire for further fertility, in all group of patients but the numbers are very small.

I know that a lot of people will, oppose this notion, but I agree with Readly (1996) "What is so wrong with giving people control over gender ? The disadvantage is said to be that too many people will choose boys, leaving the population short of women. Yet this is evidently untrue in western societies; the vast majority wants one of each. Even if it were true, the shortage of girls would so quickly become apparent that others would see the advantage and redress the balance by having girls. Through out the world there are many societies that bias their inheritance and care towards daughters rather than sons. Changes in the age of marriage can and do quickly adjust to unbalanced sex ratios. When women are scarce, men marry later and women early. It is conceivable that society might decide that none of the supposed drawbacks of a gender-choosing society outweigh the advantages of making individuals happy by granting them their wishes."

### Conclusions

- Gender preference has a strong influence on desire for further fertility
- Education is the only social intervention that is likely to make an impact on gender preference.
- Pre-natal sex-determination and selective foeticide being unlawful, only preconceptional sex-selection remains an important medical intervention that may be considered in population programs and further research in this area is warranted.
- If gender preference can be abolished from the minds of the community many of the third pregnancies could be avoided.
- Employed women may have a lesser desire for further fertility and may show a lower gender preference but we would not analyse this as most of the women in our study group were house wives.

Table VI: Effect of Previous Cesarean Section on Desire for further fertility.

No. of Additional Children Desired	Group Total	Two Female			Group Total	Three Female		
		Previous Caesarean Section				Previous Caesarean Section		
		None	One	Two		None	One	Two
Grand Total	820	778	38	4	195	182	7	6
Y %	100.0	94.88	4.63	0.49	100.0	93.33	3.59	3.08
None	253	234	18	1	102	94	4	4
Y%	30.85	30.08	47.37	0.01	52.51	51.65	57.14	0.04
One	512	498	14	0	33	32	0	1
Y%	62.44	64.01	36.84		16.92	17.58		0.01
Two	3	3	0	0	0	0	0	0
Y %	0.37	0.03						
Three	0	0	0	0	1	1	0	0
Y%					0.01	0.01		
Not Sure	52	43	6	3	59	55	3	1
Y%	6.34	5.53	15.79	75.00	30.26	30.22	42.86	0.01

- Previous Cesarean section reduced the desire for further fertility but a significant number were undecided.

Table VII: Gender Preference and Fertility

No. of Male Children No. of Total	4 M		3M		2M		1M		No Male		Extra Fertility due to Gen. Pref.		Births avoidable in absence of Gen. Pref	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Two 649 3250 19.97%	N.A		N.A		<u>20</u> 812 2.46		<u>30</u> 1576 1.96		<u>599</u> 859 69.73		585 18.01		<u>585</u> 649 90	
Three 119 1017 11.25%	N.A.		<u>0</u> 88 0		<u>3</u> 320 0.93		<u>10</u> 455 2.19		<u>106</u> 204 51.96		119 11.25		<u>119</u> 119 100	
Four 6 124 9.83%	0		<u>0</u> 15 0		<u>1</u> 40 2.54		<u>5</u> 54 9.25		<u>0</u> 15 0		6 9.83		<u>6</u> 6 100	

- As the number of children increase the desire for more children decreases, and women desire further children only to fulfill their desire for a child of a particular gender.
- If women could be assured of a child, as per their gender preference, 90% of 3<sup>rd</sup> births and 100% of 4<sup>th</sup> and 5<sup>th</sup> births could be avoided. Overall, 91.73% of pregnancies beyond the 2<sup>nd</sup>, could be avoided if gender preference could be abolished.

Table VIII : Influence of various parameters on Gender Preference in women with 2 children.

Parameters Studied	2M		1M		No Male		Extra fertility due To Gender Pref.		% of preg. Avoidable if no Gen. Pref.
	No.	%	No.	%	No.	%	No.	%	
Education (> 13 +)	<u>2</u> 208	0.96	<u>4</u> 384	1.04	<u>111</u> 245	45.30	109	13.01	93.16
Antenatal Care (> 6 visits)	<u>3</u> 438	0.68	<u>9</u> 888	1.01	<u>269</u> 439	61.27	269	15.24	95.72
Prev. C.S.	0		<u>1</u> 116	0.86	<u>14</u> 42	33.33	15	9.49	100
Prev. Stillbirth	0		<u>2</u> 63	3.17	<u>21</u> 37	56.75	23	23.23	100
Admission Status (Pvt. N.H.)	0		<u>4</u> 230	1.6	<u>68</u> 128	53.12	72	19.04	100

- Of the various parameters studied only Education and Previous Cesarean section seem to have significantly decreased the gender preference. Thus, educating the women is a potent intervention for fertility control.

#### References

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