Gender Inequality : Is the National Population Policy's Objective of Two Child Norm Heading the Correct Way?

SR Patrikar*, Col R Bhalwar⁺, Col A Datta[#], DR Basannar**

Abstract

Background: Male Preference is well known phenomena world wide from ancient ages. A descriptive study was carried out to assess the attitude of women towards birth of son, use of contraception methods and sex determination methods in rural village Kasurdi in Pune district.

Methods: Univariate analysis was carried out by considering each factor determining sex preference separately as well as using a Logistic Regression Model. Adequacy of fit of the model has also been tested.

Result and Conclusion: Out of 110 respondents interviewed, 62.7% felt that male child is necessary in the family. Univariate analysis revealed that sex of first child, concern undergone for second pregnancy with regards to sex of the child, number of children in family and type of family were significant factors contributing to the son preference. The analysis under the logistic regression model revealed that sex of the first child and concern undergone in second pregnancy with respect to the sex of the second child are the most dominating and significant factors in the causation of son preference. The difference between family sizes when compared with the sex of first child was statistically significant signifying that if the first child is a male then it hardly matters whether the second child is male or female, but if the sex of first child is female then the families land up with bigger family size. On an average most of the respondents favour two children with an equal share of male and female children.

MJAFI 2008; 64 : 221-223

Key Words : Logistic regression; Female foeticide; Son preference

Introduction

Preference for male sex is well known phenomena from ages. India shares a distinctive feature of the South Asian population with regard to the sex ratio, with a century old deficit of females. The 2001 census shows a rise of six more females per 1000 males than the 927 of previous census. The fall in sex ratio of upto six years population is however continuing and the gender gap is expanding [1]. The census has revealed that sex ratio in the age-group of upto six years in India has further gone down sharply from 945 females per 1000 males in 1991 to 927 in 2001. In a country like India which is undergoing demographic transition, sex ratio at birth in combination with the under enumeration of female births, or excess female mortality throughout the life course, have a potentially large effect on the overall sex ratio [2]. In India, the preference for son is very strong and has been frequently cited as one of the major obstacles for reducing the national fertility level [3,4].

A descriptive study was undertaken to assess the attitude of women towards birth of a son in a rural village Kasurdi in Pune. The study also assesses the knowledge and use of contraception methods and sex determination

methods. This paper seeks to analyse the transition in terms of family size, sex of first child and sex preference in a set of rural women of Pune.

Material and Methods

Kasurdi village is situated around 40 kms from Pune. The total population of the village is 1796 consisting of 328 families. There were a total of 212 married females in the reproductive age group of 15 to 49 years. A pilot study was carried out to find the prevalence of son preference. The pilot study revealed the estimate of son preference to be nearly 70%. Thus taking a prevalence of 70% with 5% precision on either side of the true value and 95% confidence interval with finite population correction, a sample size of 128 was decided and data was collected accordingly using a structured questionnaire. The respondent was the female spouse in the reproductive age group. There were eight respondents without any children and ten respondents did not give complete information, therefore the data on 110 respondents was analysed. The respondents were interviewed about their socioeconomic background, family size, practice of contraception and the use of sex determination methods. The preference for son was assessed by getting the information whether the respondents felt that a male child is necessary in the family. The responses were obtained on various attributes like age,

*Lecturer (Statistics and Demography), ⁺Professor and Head, [#]Associate Professor, ^{**}Sc 'E', Department of Community Medicine (PSM), Armed Forces Medical College, Pune-40.

education, number of children, sex of first child, concern undergone with respect to the sex of the child during second pregnancy and type of family. Responses were also sought regarding who should be responsible to take decision of having a child and also whether her opinion is sought in the family at various levels. Respondents were also given a hypothetical situation to identify the exact or ideal number of children preferred by them and the sex composition of the children. All those who had completed their family size were asked to imagine backwards in time and those who had no children to have forward imagination. Univariate analysis was carried out by considering each factor separately. Son Preference was analyzed using a Logistic Regression Model. Adequacy of fit of the model has also been tested.

Results

Out of 110 respondents interviewed 62.7% (95% confidence interval 53.41-71.38) felt that male child is necessary. Univariate analysis for association between the attributes was carried out using chi square test. It revealed that sex of first child, concern about sex of the child during second pregnancy, number of children and type of family were significant factors contributing to the preference of son ($p < 0.001$), the details of which are given in Table 1.

Concern about sex of the child during second pregnancy revealed that sex of first child is a significant factor ($p < 0.001$). The analysis under the logistic regression model revealed that sex of the first child and concern during second pregnancy with respect to the sex of the second child are the most dominating and significant factors in the causation of son preference ($p < 0.001$). The maximum likelihood estimates of the parameters, the standard errors and the odds ratio along with 95% confidence interval under the logistic regression model are shown in Table 2.

The goodness of fit test for the fitted model is carried out using the likelihood ratio test. The test statistic chi-square value was 5.09 with 8 degrees of freedom and $p = 0.75$ which is not significant at 5% level of significance ($p > 0.05$). Hence, it was concluded that the logistic model is appropriate for the above analyses. The model summarizes the R Square value of 0.814 which implies that more than 81% of the variation in the response (son preference) is explained by the model. Of the families who had first female child, 79% had family size of > 2 children whereas in families who had first male child, only 45% had > 2 children. This difference was significant ($p = 0.000$).

In the present study 66% of the respondents did not have any knowledge about the sex determination tests as against 34% who had some knowledge. 92% of these respondents who did not have knowledge regarding sex determination did not approve of abortion. More than 8% of the respondents were ready to take as many pregnancies as required to have a male child. 46% of women were ready to take more than two chances as against 28% of the respondents who were not ready to take even a single chance for male child. As for the number of pregnancies for a girl child, a significant number (36%) of the respondents were not ready to take any chance, for fear of girl child. There was no respondent to take more than two chances for a girl child as compared to 26% for a

Table 1

Univariate analysis of different factors along with odds ratio and 95% confidence interval

Attributes	Having son preference	Odds ratio alongwith significance value	95% confidence interval
Age (in years)			
≤ 20	6	(p=0.11)	
20-30	39		
30-40	23		
>40	5		
Education			
Illiterate	27	(p=0.94)	
Pre-school	14		
Secondary	20		
SSC	12		
Number of children**			
≤2	15	3.92 (p=0.000)	(1.52, 10.28)
>2	50		
Occupation			
Employed	30	(p=0.17)	
Farmer	24		
House wife	19		
Sex of first child**			
Male	9	65.36 (p=0.0000)	(15.52, 310.67)
Female	59		
Concern during second pregnancy regarding sex of child**			
Yes	57	25.83(p=0.0000)	(7.88, 89.80)
No	8		
Opinion asked in the family at all levels			
Yes	19	(p=0.18)	
No	54		
Type of family**			
Joint	32	(p=0.02)	(1.05, 7.80)
Nuclear	41		
Decision regarding child birth			
Both	25	(p=0.38)	
Husband	45		
In laws	3		

** $p < 0.05$ (significant at 5% level of significance)

male child. 90% of the respondents favored two children and more than 77% agreed for one male and one female child, as the ideal sex combination in a family. One method of investigating the impact of sex preferences is by examining data related to sex composition of living children of couples who are currently practicing contraception. If son preference is important then, within any parity, those with one or more son/s would be more likely to be currently using some method of family planning as compared to those who have no son. Conversely, if the desire for a balanced sex composition affects fertility behavior then within a given parity, couples that have had either all sons or daughters would be less likely to accept contraception, particularly sterilization, as compared to those who have had children of both sexes. In this study 54% respondents had knowledge of the different methods of contraception but only 24% used contraception. The source of knowledge regarding the contraceptive methods were doctors, health worker, TV and radio. 74% felt that birth control is good. Many of the respondent's agreed that permanent sterilization is good after completing the desired family size. Though the respondents agreed to spacing and restricting the family size, the contraceptive use was very less.

Table 2**Parameters estimated for the son preference by logistic regression**

Variables	Estimate	Standard error	Odds ratio = e^b	95% CI
Age	-6.22	5.68	2.82	(0.02, 2.00)
Education	2.85	1.64	1.57	(0.71, 33.85)
Type of family	0.03	0.92	1.03	(0.14, 5.02)
Number of children	1.36	0.97	0.16	(0.57, 25.55)
Sex of first child**	2.60	0.78	13.52**	(1.57, 63.23)
Concern **	2.59	0.77	13.39**	(2.95, 60.81)
Opinion	0.57	1.03	1.77	(0.76, 4.06)
Responsible of child birth	-2.27	4.75	0.10	(0.05, 258.2)

** (p<0.05) Significant at 5% level of significance

Discussion

It can be observed that the odds ratio computed using univariate analysis and logistic regression analysis differ. In case of univariate analysis number of children, sex of first child, concern during second pregnancy regarding sex of child and type of family were found to be significant, whereas in case of logistic regression analysis, sex of first child and concern during second pregnancy regarding sex of child were found significant. The above analyses lead us to the conclusion that sex of the first child plays an important role in sex preference. Conversely if the first child is a female child then the families have a bigger family size and the concern regarding sex of second child is very high, which is in agreement with other similar studies [5].

The decline in the female sex ratio of our country in the twentieth century is disturbing [6]. In India, considering the high level of female child mortality, a lower level of child sex ratio of 935 girls per 1000 boys is considered reasonable. Ratio below this should be viewed with concern [7]. The decline in juvenile sex ratio over the years in India has shifted the concern from overall sex ratio to the sex ratio of child population [8-10]. The National Population Policy aims at achieving a total fertility rate <2.1 which is equivalent to attaining approximately two child norm [11]. While achieving this target there also needs to emphasis on programmes and policies that actively improve the status of women and change of attitude towards the female child.

Conflicts of Interest

None identified

Intellectual Contribution of Authors

Study Concept : SR Patrikar, Col R Bhalwar*Drafting & Manuscript Revision* : SR Patrikar, Col R Bhalwar, Col A Datta, DR Basannar*Statistical Analysis* : SR Patrikar, DR Basannar*Study Supervision* : SR Patrikar, Col R Bhalwar, Col A Datta

References

- Office of the Registrar General, India. Census of India 2001.
- Agnihotri SB. Missing Females: Diagggregated Analysis. *Economic and Political Weekly* 1996; 31: 2074-84.
- Rajaretnam T, Deshpande RV. The effect of sex preferences on contraceptive use and fertility in rural South India. *International Family Planning Perspectives* 1994; 20 : 88-95.
- Nag M. Sex preferences in Bangladesh, India and Pakistan and its effect on fertility. *Demography* India 1992; 20: 163-85.
- Gangopadhyay BMS, Das DN. Transition of preferred sex combination of children and family size: An analysis of the behavioural mechanism. *Journal of Family Welfare* 1996; 40: 57-66.
- Visaria PM. The sex Ratio of the population of India and Pakistan and Regional Variations During 1901-61. In: Bose A, editor. *Patterns of Population Change in India 1951-61*. Bombay: Allied Publishers, 1967; 334-71.
- Gender Issues in Population Studies: Evidences from India. International Institute of Population Studies, Mumbai First edition November 2004; 68-9.
- Kishore J. *Vanishing Girl Child*. 1st ed. Century Publications: New Delhi, 2005.
- India National Family Health Survey 1992-3. International Institute for Population Studies, Mumbai 1995.
- Rangamuthia M, Cuoe MK, Arnold F, Roy TK. Son preference and its effect on fertility in India. *National Family Health Survey Subject Reports* Number 3; 1997.
- Ministry of Health and Family Welfare (MOHFW) 2000. *National Population Policy 2000 report*, New Delhi.