Gender preference among post-natal women for the next child: A study from coastal south India

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ABSTRACT

A balanced sex ratio is important for a stable society. However, son preference and discrimination towards the female gender has resulted in an adverse sex ratio. The objective of this cross sectional study was to assess the preference of women in post natal period, regarding gender of their next child. In this hospital based study 155 post-natal women from two tertiary care hospitals of Mangalore, in Karnataka State, India were interviewed using a semi-structured questionnaire. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 25.0. Of the study participants, 41.3% (n = 64) were in the age group between 23 and 27 years. Majority (n = 115, 72.9%) of the women preferred having two children. Among the 76 post-natal women with male newborn child, 52.6% (n = 40) wanted their next child to be a female. While among 79 post-natal women with a female newborn child, 69.6% (n = 55) wanted their next child to be a male. The overall son preference index in our study was 1.6 which showed strong tendency towards son preference. As son preference still prevails in our community, it is necessary to educate people regarding the adverse outcomes of an imbalanced society and its consequences.

1. Introduction

Sex ratio at birth, defined as ‘the number of females per thousand males’ is an important indicator to assess the balance for a stable society. It is one of the many indications of the extent of prenatal sex selection.¹ Indian census has shown a marked gap between the number of men and women. Low female counts are due to the difference in the mortality rate, migration, sex-ratio at birth and under-counting of women during Census.² High maternal mortality, female infanticide, sex-selective abortion and neglect of the girl child at a young age have also contributed to a skewed sex ratio. Differential treatment given to the women in our society has led to many sex-selective abortions.³

Preference of the male child has also distorted the natural scale of equal number of males and females in the society. Sons have been preferred since ancient times as they earn higher wages, continue the

family line and were generally the recipients of inheritance, whereas daughters have always been considered a financial burden because of the dowry system.⁴ For women who have little control over economic resources in a family, the only way to contribute to the family is assumed to be by giving birth to male children. Sex-ratio over the past 10 years in India has shown significant improvement. Though it has increased from 933 in 2001 to 940 in 2011, it is still low.

Right to equality is a fundamental right of every citizen of India irrespective of their gender. Thus, women deserve equal respect and opportunities in our society and the government has passed several laws in this regard. The Indian government plays a vital role in empowering the girl child by implementing various schemes and programs which aim at changing the negative attitude of the society and communities towards the girl child. These schemes and programs also help in increasing the enrolment and retention of girls in schools, raising the

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legal age of marriage among girls and creating more income opportunities. - Balika Samridhi Yojana, Sukanya Samridhi Yojana to name a few.^{5,6} Despite all these initiatives, the age-old mentality of considering females inferior or a burden still prevails in our society.

Mangalore city in Dakshina Kannada district, where the current study was conducted has a favorable sex-ratio of 1016 women per 1000 men. But the sex ratio at birth in this region has dropped from 960 in 2001 to 941 in 2011.⁷ Although Mangalore has a high female literacy rate with most of the communities following a matriarchal system of inheritance, the report of adverse sex ratio from this region is alarming.⁸

With this background the current study was conducted to assess the preference for the gender of their next child among the postnatal women admitted in health care centers.

2. Methodology

This hospital based cross sectional study was conducted in the city of Mangalore which is the chief port city and administrative headquarters of Dakshina Kannada district in the Indian State of Karnataka, with a population of 6,23,841 and a female literacy rate of 91.63%.⁷ It is one of the major healthcare centers in Karnataka with more than 10 tertiary care centers including centers purely catering to maternal and child health care such as Lady Goschen hospital which is a government referral center catering to a large population of all religious and socioeconomic background from both within and outside the district. This study was conducted among 155 postnatal women admitted in two teaching hospitals associated with Kasturba Medical College, Mangalore in the month of March 2017. It was a time bound study. Institution Ethics Committee clearance was obtained, and due permission was sought from the Medical Superintendents of both hospitals before the commencement of the study. A questionnaire was designed and translated to the local language (Kannada). The nature and purpose of the study was explained to the participants. After obtaining written informed consent, the women were interviewed by the investigators. Women who had conceived at least once irrespective of the outcome of the pregnancy were included in the study. The questionnaire was divided into two sections. Section A - socio-demographic characteristics, and section B - fertility profile and gender preference of children. The socio-economic status of the participants was assessed using the modified BG Prasad Scale.⁹ For further analysis, middle, upper middle and upper class were combined to form a category of high socio economic status, while lower and lower middle class were combined to form low socio-economic status.

Data was analyzed using Statistical Package for Social Sciences (SPSS) software version 25.0. Results are presented in terms of proportions, and mean (Standard Deviation). Univariate analysis was done using the Chi-square test. Son Preference Index was calculated using the following equation:^{10,11}

$$SPI = \frac{\text{Number of women who preferred the next child to be male}}{\text{Number of women who preferred next child to be female}}$$

3. Results

A total of 155 women in their postnatal period were included in our study. A higher proportion of the participants (n = 69, 44.5%) were aged 28 years or more, and belonged to middle socio-economic status (n = 63, 40.6%). Majority of our participants were Hindus, homemakers and had completed their secondary school education. Most i.e. 75 (48.4%) of the respondents belonged to a joint family.

Among the study participants, 56.8% had one child (n = 88), 34.2% had two children (n = 53) and 9.0% (n = 14) had more than two children. The socio-demographic profile of the respondents and son preference index is shown in Table 1. The overall son preference index (SPI) in our study was 1.6. Son preference index was higher among

Table 1
Socio-demographic characteristics of the study participants (N = 155).

Sociodemographic Characteristics	n (%)	Son Preference Index (SPI)
Age group (years)		
≤ 22	22(14.2)	2.50
23 to 27	64(41.3)	1.35
≥ 28	69(44.5)	1.69
Religion		
Hindu	137(88.4)	1.58
Muslim	014(09.0)	2.00
Christian	004(02.6)	1.00
Educational Status		
Illiterate	04(02.6)	3.00
Primary school	21(13.5)	1.14
Secondary school (SSLC)	86(55.5)	1.89
Pre-University College	23(14.8)	1.00
Graduation	19(12.3)	2.00
Post-Graduation	02(01.3)	0.00
Occupation		
Homemaker	107(69.0)	1.41
Unskilled worker	27(17.4)	2.17
Semi-skilled worker	14(09.0)	2.33
Professional worker	07(04.5)	1.50
Socioeconomic status		
Lower class	05(03.2)	1.50
Lower middle class	51(32.9)	1.77
Middle class	63(40.6)	1.71
Upper middle class	35(22.6)	1.40
Upper class	01(00.6)	0.00

younger women under the age of 22, Muslims and unskilled/semiskilled workers. Gender preference was present in almost every socio-economic group, but no consistent relationship could be established between economic status of women and their gender preference.

Perception regarding ideal family size and gender preference among the study participants is shown in Table 2. Majority (n = 113, 72.9%) respondents preferred to have two children. The women who wanted more than two children alluded economic stability of the family as the reason for their preference. Sixty percent (n = 93) of the participants preferred equal number of male and female children (1:1 ratio). Very few women (n = 10, 6.4%) preferred to have more number of female children compared to male children. Among the 76 post-natal women with male newborn child, 52.6% (n = 40) wanted their next child to be a female. While among 79 post-natal women with a female newborn

Table 2
Perception about Ideal Family Size and Gender Preference among the study participants. (N = 155).

Responses	n (%)
Ideal number of children in a family (N = 155)	
1	011(07.1)
2	113(72.9)
More than 2	031(20.0)
Ideal combination (N = 155)	
No. of Males = No. of Females	93(60.0)
Males > Females	19(12.3)
Females > Males	10(06.4)
Only Males	06(03.9)
Only Females	02(01.3)
No preference	25(16.1)
Gender preference of the next child if present child is a male (N = 76)	
Boy	12(15.8)
Girl	40(52.6)
No preference	19(25.0)
No second child	05(06.6)
Gender preference of the next child if present child is a female (N = 79)	
Boy	55(69.6)
Girl	02(02.5)
No preference	21(26.6)
No second child	01(01.3)

Table 3
Perception of study participants regarding their own gender (N = 155).

Perception About Their Gender	n (%)
Number of respondents who felt that they should not have been a girl child.	39(25.2)
Reasons for Preferring to be Born as Males (n = 39)	
Life as a woman is difficult	28(71.8)
Fear and insecurity	04(10.3)
Dowry and marriage expenses	02(05.1)
Increasing number of crimes against women	03(07.7)
Others	02(05.1)
Reasons for Preferring to be Born as Females(n = 116)	
Have equal rights as a woman	68(58.6)
Being a mother is an honor	44(37.9)
Females are portrayed and respected as gods in our society	04(03.4)

child, 69.6% (n = 55) wanted their next child to be a male (see Table 3).

When asked about their perception on belonging to a female gender, lower number (n = 39, 25.2%) of the respondents preferred not to have been born as a girl child. The reasons cited for this preference included difficult life of a woman, fear and insecurity, dowry and marriage expenses, increasing number of crimes against women etc. However on the contrary majority (n = 116, 74.8%) were happy about their gender status.

Among the study participants who were aware about female feticide (n = 135, 87.1%), a higher proportion (n = 57, 42.2%) of them perceived burden of having a girl child as the possible reason for female feticide. Of the 155 respondents, 66 (42.6%) were aware about the different methods for sex determination, the most common method being ultrasonography. Awareness of female feticide among the respondents is shown in Table 4.

Table 5 shows the factors affecting son preference among study participants. Son preference was higher among mothers ≤ 27 years of age (n = 19, 22.1%) belonging to urban area (n = 25, 21.4%), high socio-economic status (n = 21, 21.2%), non-nuclear families (n = 23, 21.5%) and among mothers who did not have a male child (n = 15, 22.7%). However, none of these factors were found to be statistically significant ($P > 0.05$).

4. Discussion

Most communities in India have been patriarchal since ancient times. Sons play a key role in most rites and rituals in our society. The male dominant society of India makes the women bear the brunt of this discrimination. It is ironic that in a country where women deities are worshipped reverently, the women are looked down upon by the society. Communities prefer males as it is assumed that sons will provide support in old age, continue the name of the family and usually inherit the property. Women on the other hand, are considered an economic burden because of the dowry system. Even when not disastrous, inclination towards having sons can result in gender-based inequality which manifests itself in the form of discrimination against daughters in providing education, healthcare and nutrition which in turn increases

Table 4
Awareness of female feticide among study respondents (N = 155).

Awareness about Female Feticide	n (%)
Aware	135 (87.1)
Unaware	20 (12.9)
Perceived Reasons for Feticide (n = 135)	
Burden of having a girl child	57(42.2)
Dowry	38(28.1)
Poverty	23(17.0)
Family pressure	17(12.6)

Table 5
Factors affecting son preference among study participants (N = 155).

Variables	Son Preference		Total	Chi Square P value
	Yes N = 32	No N = 123		
	N (%)	N (%)		
Age group (yrs)				
≤ 27	19 (22.1)	67 (77.9)	86	0.247
> 27	13 (18.8)	56 (81.2)	69	$P > 0.05$
Religion				
Hindu	27 (19.7)	110 (80.3)	137	2.183
Muslim	03 (21.4)	011 (78.6)	14	$P > 0.05$
Christian	02 (50.0)	002 (50.0)	04	
Place of Residence				
Rural	07(18.4)	31(81.6)	38	0.152
Urban	25(21.4)	92(78.6)	117	$P > 0.05$
Socio economic status				
Low	11 (19.6)	45 (80.4)	56	0.054
High	21 (21.2)	78 (78.8)	99	$P > 0.05$
Family Type				
Nuclear	09 (18.8)	39 (81.3)	48	0.152
Non- Nuclear ^a	23 (21.5)	84 (78.5)	107	$P > 0.05$
Total Number of children				
1	19 (21.8)	68 (78.2)	87	0.173
> 1	13 (19.1)	55 (80.9)	68	$P > 0.05$
Having a male children				
Yes	17 (19.1)	72 (80.9)	89	0.304
No	15 (22.7)	51 (77.3)	66	$P > 0.05$
Having a female child				
Yes	21 (20.6)	81 (79.4)	102	0.001
No	11 (20.8)	42 (79.2)	53	$P > 0.05$

^a Includes joint and three generation families.

the problems faced by the girl child. Even though few communities of Mangalore are known to be matriarchal, gender preference for a male child still exists. This is a matter of concern in our society.

Our study revealed that gender preference exists among women of all socioeconomic status to some extent. Most women wished for at least one son in the family. One can speculate that this son preference may lead to the neglect of the girl child in her infancy and childhood or may also lead to sex selective abortions and female infanticide.

Son preference of the next child in our study was reported among 43.2% respondents. Region-wise variation in son preference has been reported by various studies in India. In a study conducted by Dey Pal I and Chaudhuri RN in rural West Bengal, son preference was 39.2%¹² while a higher preference for sons (50.2%) was reported by Dudeja P et al., in 2013 in Pune.¹³ Another study done by Edmeades J et al. in Bangalore, Karnataka also revealed that 62.2% of the women wished for at least one son in the family.¹⁴ All these studies help us to establish our argument that son preference is still prevalent in India.

In our study the preference for a male child was not limited to women of lower economic status. This is in contrast to the review by Ahmed N¹⁵ and Pande RP and Astone NM done in India.¹⁶ The overall son preference index in our study was 1.6, which is higher than the son preference index (1.3) in a similar study done by Kumar Nithin et al.¹¹ in Mangalore among antenatal women. This higher son preference in our study could be attributed to the post natal women knowing the gender of the delivered child. Both studies showed that working women, especially unskilled and semi-skilled workers preferred male children as compared to housewives. This could possibly be due to the pay gap between the two genders.

Muslims had a higher SPI as compared to Hindus and Christians which was similar to the results obtained by Kanyadi S and Kulkarni R in their study in Belagavi¹⁷ and by Asghar M et al.¹⁸ who conducted a study among Manipuri Muslims. The probable reason could be their minority status and the overall lower education levels of the females among the Muslim population.¹⁹ The woman is given more respect by her husband and the family, and a higher status by the society if she

gives birth to a male child. This might also be a contributing factor to the son preference.

Majority of respondents in our study (72.9%) felt that two is the ideal number of children in a family which is in concurrence to the results obtained in studies by Dhande VS et al. in Maharashtra²⁰ and Puri et al. in Chandigarh.²¹ The Government of India promotes two child norm to reduce the population of the country.²² A Net Reproductive Rate of 1 is one of the targets the government has set to achieve this goal. The total fertility rate of India in 2015 was 2.3 and Net Reproductive Rate (NRR) was 1.1.²³ This preference for two children or less will be beneficial to the country with concerns of rapidly expanding population. An increase in the number of children will contribute to the ever rising population.

The preferred ideal gender combination of children of the respondents in our study was equal number of males and females (60%). It was followed by respondents who wanted a greater number of male children (12.3%) followed by 6.4% preferring more female children. Only 3.9% and 1.3% women preferred only males and only females respectively. These findings are similar to the study done by Bangal VB and Giri PA in central India.²⁴ Sons play an important role in the funeral rites among Hindus and are usually the recipients of property in most communities in India. The reason for son preference in our study was mostly economic, psychological and social as stated in the study done by A-H. El-Gilany and E. Shady in Mansoura, Egypt.¹⁰

Only 2.5% respondents preferred their next child to be female if their newborn was a female which is similar to the results obtained by Kalhan M et al. in Rohtak, Haryana²⁵ and a study done by Puri S et al. in Chandigarh.²¹ A study done in Bangladesh by Rahman M and DaVanzo J showed contradictory finding where many women preferred daughters.²⁶ The burden of expenses of marriage usually falls on the family of the bride. Practice of dowry is also very common. Hence this finding in our study is probably because females are considered an economic burden.

In our study, 42.6% of the respondents were aware of prenatal methods of sex determination which is similar to the findings obtained by Roy A and Biswas R in rural Darjeeling.²⁷ Another study conducted by Mahaur G et al. in coastal Karnataka²⁸ showed that 62% of their respondents were aware of the same. None of the respondents in our study were aware about the gender before the birth of the child. The Government of India passed the Pre-Conception and Pre-Natal Diagnostic Techniques Act (PCPNDT) in 1994 to ban and punish prenatal sex screening and female feticide.²⁹

The son preference index in our study was 1.6, which could indicate a possibility of a skewed sex ratio in the future. This skewed sex ratio can manifest in many ways. In a study conducted by Diamond-Smith N, Rudolph K they found that a skewed sex ratio increases risk for violence against women.³⁰

A number of socio cultural factors influence the preference of having a male child in different settings. In our study, son preference was found to be higher among the younger mothers, mothers belonging to urban areas, higher socio-economic status, non-nuclear families and who did not have a male child before. The higher son preference among the urban mothers in our study could be attributed to the fact that most of the study participants were from the urban area. In contrast, a higher son preference was seen among rural mothers in Studies conducted by Bhattacharjya H, Das S and Mog C in Agartala³¹ and by Chavada M and Bhagyalaxmi A in Ahmedabad.³² The mothers without sons had a higher son preference in our study. A higher son preference among the mothers with previous girl child has also been reported in other studies.^{10,17,27,31} A study conducted by Bhattacharjya H, Das S and Mog C in Agartala revealed son preference was to be more among the rural mothers, illiterate, women with no male child and those belonging to joint families.³¹ Chavada M and Bhagyalaxmi A in their study conducted in Ahmedabad found son preference to be more among the rural mothers and those from joint families.³² In a study conducted by El-Gilany AH and Shady E in Egypt, son preference was seen among

mothers with only girl child and those having illiterate husbands.¹⁰ Son preference was found to be more among mothers having a female child in a study done by Kanyadi S and Kulkarni R in Belgavi.¹⁷ In a study by Asghar M, Murry B et al. son preference was seen among mothers belonging to higher socio economic status.¹⁸ Roy A and Biswas R in a study conducted in West Bengal reported a higher son preference among younger mothers between 18 and 24 years of age, mothers belonging to lower socio economic status and mothers who did not have a male child.²⁷

5. Conclusions

Gender preference still prevails in our region. The ideal number of children according to most of the respondents was two, one being a male and the other a female. The overall son preference index was 1.6 which shows a strong son preference. Most common reason for son preference was that a male child would continue the family line and would provide with economic support. The Indian government has time and again tried to focus on preventing sex-selective abortions due to these reasons. No woman interviewed knew the gender of the child before its birth. It is important to create awareness, mostly among women in the society to restore the natural sex ratio.

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Details of ethical approval

Ethics Committee approval was obtained from the Institutional Ethics Committee of Kasturba Medical College, Mangalore, Manipal Academy of Higher Education, Manipal, India prior to the commencement of the study.

Declaration of competing interest

The authors have declared that no competing interests exist.

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