



## Gender Preference and Awareness Regarding Fetal Sex Determination among Antenatal women attending a Tertiary Care Hospital in Rural Gurgaon

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### Abstract

**Introduction:** Gender preferences are a well known feature of the society. Huge differences in gender preference is seen in the developed and developing countries. People in India exhibit a strong gender preference for male child. The preference for sons has been associated with preferential abortion of female fetuses. It has been estimated at 933 in India during the census of 2011. One of the most important preventable factor is the prevention of sex selective female abortions.

**Aims & Objectives:** To explore the gender preference and its associated factors among antenatal women and to assess their awareness and perception regarding prenatal sex determination.

**Materials and Methods:** Interviews were done among 109 antenatal women attending SGT tertiary care hospital, Gurgaon using predesigned pretested proforma. The data were analysed by Epi Info 7.0

**Results and Discussion:** The mean age of marriage among study participants was found to be 20.24+2.05 years. 39.45% antenatal mothers had preference for male child in their current pregnancy, 27.52% antenatal mothers had preference for female child and 33.03% had no gender preference. The main reason for male preference cited by subjects were socio ritual factors (47.50%) followed by to carry their family name (37.50%). 59.63% were of view that even if family is complete with female child then also they would prefer to go for male child. Reasons cited for the preference of female child, 51.35% felt that girls and boys should be given equal rights, 18.92% felt that female child is better care taker. Preference for male child was significantly associated with educational status, occupation and parity of the antenatal females. ( $p < 0.05$ ).

**Conclusion:** Gender empowerment, women education and stringent implementation of PCPNDT Act can curb the social issue of female feticide.

### Introduction

The sex ratio is calculated as the number of males per one hundred females in a population globally, whereas in India it is defined as number of females per 1000 males<sup>[1,2]</sup>. In recent decades, there has been drastic decline in sex ratio across

India which is a grave concern and needs to be addressed. Various factors that can be attributed to the decline in sex-ratio include increased sex selective female abortions, and female foeticide. One of the most important preventable factors among these is the prevention of sex selective

female abortions<sup>[3]</sup>. With this technological advancement and its commercialisation, this discrimination begins even before birth. To address this issue, the Government of India introduced the Pre Conception and Pre-Natal Diagnostic Techniques Act (PCPNDT)<sup>[4]</sup>. But still prenatal sex detection technologies have been misused, allowing the selective abortions of female offspring to proliferate. In this light, the present study was conducted with the following objectives.

1. To explore the gender preference and its associated factors among antenatal women.
2. To assess their awareness and perception regarding prenatal sex determination.

### Materials and Method

The present study was a hospital based cross sectional study conducted among the antenatal mothers attending OBG department of SGT Medical College, Gurgaon, Haryana. Antenatal women, irrespective of parity and gestational age and those giving consent to participate were recruited during the study duration i.e from Nov 2017- Jan 2018. Thus a total of 109 antenatal women were taken for the study. A predesigned pre-tested proforma was used to elicit information on socio-demographic information, gender preferences & its reasons, knowledge regarding sex determination techniques and perceptions regarding gender discrimination. Data was entered in Microsoft Excel Sheet and analysis was done using Epi Info 7 software. The Chi-square test for proportion was used as test of significance. Univariate analysis was done and p value of < 0.05 was considered to be significant.

### Results

A total of 109 antenatal women attending the OBG department were interviewed after taking their consent. The mean age of the participants was 25.19 + 3.55 years. The majority of the participants (47.70%) were in the age group of 23-27 years. Among them, 96 (88.07%) antenatal women were Hindu by religion and 13 (11.93%)

were Muslims. Majority of them belonged to joint family (52.29%) and the rest (47.71%) belonged to nuclear family. The socioeconomic status was determined by the Modified B.G Prasad classification. It was found that 21% of the antenatal women belonged to lower class, 45% belonged to middle class and 34% to the upper class. [Table-1]

Only 10.09% of the women were illiterate, 33.94 % had completed their primary level of education and majority i.e. 55.96 % had secondary level of education or above. Majority of the women 76.15% were unemployed while the rest 23.85% were employed. Out of 109 antenatal mothers 36.70% were primi and 63.70% were multipara.

The mean age of marriage among study participants was found to be 20.24+2.05years.

[Table-2] shows the current gender composition of children among study participants. Majority (42.20%) of antenatal women included in the study had no children. 23.85% had only one son, 2.75% had two sons, 2.75% had one son and one daughter, 18.35% had only one daughter, 9.17% had two daughters and 0.92% had only three daughters.

[Fig-1] shows that 39.45% antenatal mothers had preference for male child in their current pregnancy, 27.52% antenatal mothers had preference for female child and 33.03% had no gender preference. The main reason for male preference cited by subjects were socio ritual factors (47.50%) followed by to carry their family name (37.50%), less expensive to raise the male child (12.50%) and economic reasons (2.50%). [Fig-2].

Regarding the reasons for the preference of female child it was found that 51.35% felt that girls and boys should be given equal rights, 18.92% felt that female child is better care taker, 16.22% of them wanted girl child due to divine reasons and 13.51% of them want because of government incentives. [Fig-3]. 66.97% women didn't have the preference for the first male child but 29.36% still wanted the first child to be a male child.

Univariate analysis was done to find association between various socio demographic variables and preference of male child as majority of our participants showed a male child preference. The present study clearly shows that the preference for male child was significantly associated with educational status, occupation and parity of the antenatal females. ( $p < 0.05$ ) [Table-3]

On assessing knowledge regarding prenatal sex determination, it was found that majority of the participants i.e 87.16% were aware about the legal age of marriage. 92.6% knew that pre natal sex determination can be done and 70.64% also knew that it is an outpatient service done by USG technique. The main source of information regarding the possibility of pre natal sex determination is media i.e 56.44% followed by relatives/ family members (32.67%), health care personals (8.91%) and friends (1.98%). About half of the study participants opined that sex determination can be done in private set up (49.26%) while 29.44% believed that it can be done in both private and government set up. However only 25.69% study participants were aware about the PCPNDT Act and all the study participants (100%) said that prenatal sex determination is a punishable offence. [Table-4] [Table-5] shows the perceptions of study participants regarding pre-natal sex determination. Regarding perceptions 31.19% were in view that females should enjoy equal rights as males.

59.63% of females expressed views that they would prefer to go for son even if the family gets completed with girl child and 3.53% were willing to go for pre natal sex determination. 11.01% accepted that they would prefer to go for feticide if female foetus is conceived.

**Table-1:** Socio demographic profile of study participants

Sociodemographic Profile	Frequency (%)
<b>AGE</b>	
18-22	25.69%
23-27	47.70%
28-32	23.85%
33-37	2.76%
<b>RELIGION</b>	
Hindu	88.07%
Muslim	11.93%
<b>TYPE OF FAMILY</b>	
Joint	52.29%
Nuclear	47.71%
<b>SOCIO ECONOMIC STATUS</b>	
Lower class	21%
Middle class	45%
Upper class	34%
Total	100%

**Table-2:** Current gender composition

Current gender composition	Frequency (%)
No children	42.20%
1 Son 0 Daughters	23.85%
1 Son 1 Daughter	2.75%
2 Sons 0 Daughter	2.75%
0 Sons 1 Daughter	18.35%
0 Son 2 Daughters	9.17%
0 Son 3 Daughters	0.92%
Total	100%

**Table-3:** Association of socio-demographic and obstetric profile with the preference of male child

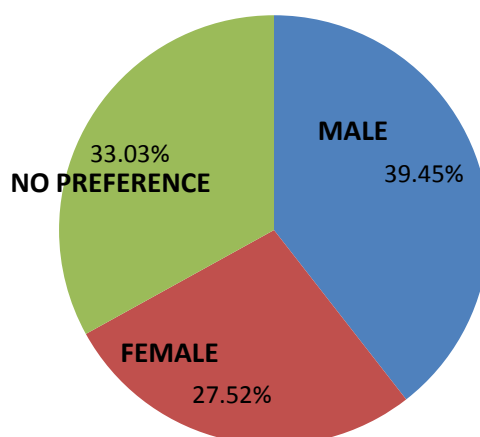
Socio demographic & obstetric characteristics	Preference of male child		$\chi^2$ value p value
	Yes (%)	No (%)	
1.) Educational status			
Illiterate	8 (72.72%)	3 (27.27%)	$\chi^2 = 9.89$ $p = 0.007$
Primary	31 (41.33%)	44 (58.66%)	
Secondary and above	4 (17.39%)	19 (82.60%)	
2.) Occupation			
Employed	5 (3.84%)	21 (80.76%)	$\chi^2 = 5.84$ $p = 0.015$
Unemployed	38 (45.78%)	45 (54.21%)	
3.) Gravida			
Primi	9 (22.5%)	31 (77.5%)	$\chi^2 = 7.59$ $p = 0.005$
Multi	34 (49.27%)	35 (50.72%)	

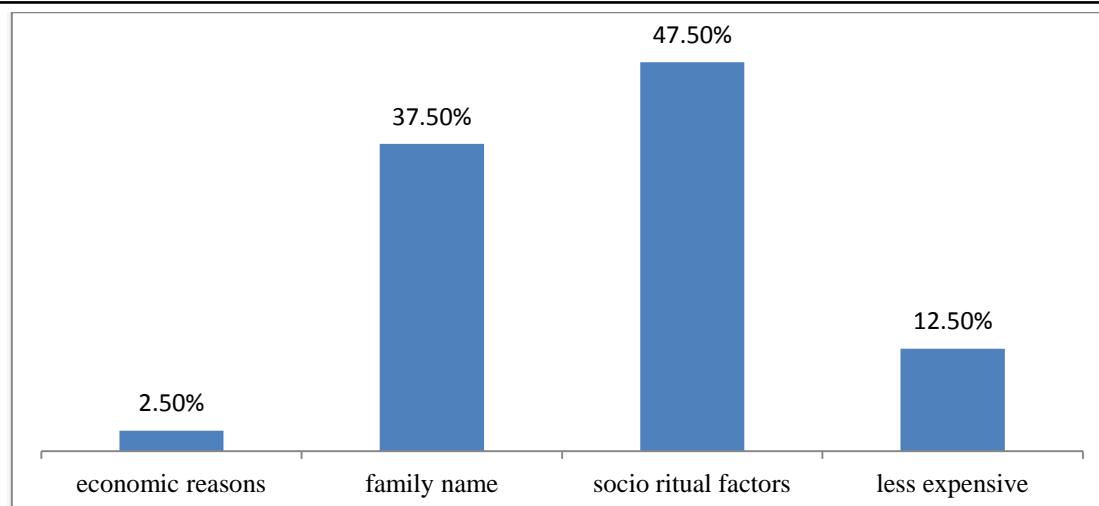
**Table-4:** Awareness of antenatal mothers regarding issues of Sex determination

Awareness	Frequency (%)
Legal age of marriage	
Aware	87.16%
Not Aware	12.84%
Pre natal sex determination can be done	
Aware	92.60%
Not Aware	7.40%
USG technique used for sex determination	
Aware	70.64%
Not Aware	29.36%
Knowledge regarding PCPNDT Act	
Aware	25.69%
Not Aware	74.31%
Pre natal sex determination is punishable offence	
Aware	100%
Not Aware	0%

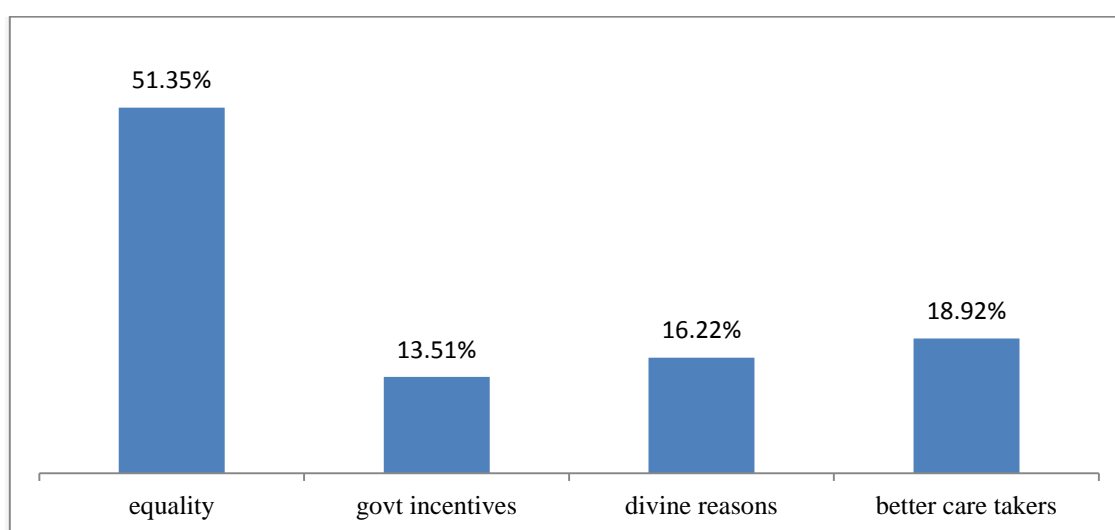
**Table-5:** Perceptions of study participants regarding pre-natal sex determination

Perceptions	Frequency (%)
Females should enjoy equal rights as males	
Yes	31.19%
No	68.81%
Pre natal sex determination is justified	
Yes	12.84%
No	87.16%
Family is incomplete without a male child	
Yes	59.63%
No	40.37%
If yes, will go for sex determination	
Yes	3.53%
No	96.47%
In case female fetus is conceived, will go for feticide	
Yes	11.01%
No	88.99%

**Fig-1** Gender preference in current pregnancy



**Fig-2:** Reasons for preference of male child over female (N=43)



**Fig-3:** Reasons for preference of female child (N=30)

## Discussion

Skewed sex ratio can have serious consequences in socio demographic profile of a country. India is facing a demographic nightmare in terms of gender imbalance where skewed sex ratio is an issue of major concern and has long term social and demographic consequences<sup>[5]</sup>. The situation regarding male child preference in India is alarming<sup>[6]</sup>. Hence creating an awareness regarding consequences of female foeticide among women is very crucial. This hospital based, cross-sectional study was undertaken in the OBG dept of SGT Medical College Budhera, Gurgaon among 109 antenatal women. In the present study, gender preference for male child was found to be 39.45%, for female child it was 27.52% and no preference in 33.03% cases.

Similar studies conducted by Puri et al<sup>[7]</sup> where 56% women and by Vadera et al<sup>[8]</sup> where 58.5% of the women expressed preference for a son. This varied in the study done in Kolkata where only 25.71% preferred male, 5.71% preferred female and the majority (68.57%) had no preference.<sup>[9]</sup> A study in Meerut, shows that about two thirds (66.0%) of the pregnant women did not show any gender preference, followed by male preference (22.2%) and female preference (11.8%)<sup>[10]</sup>. But in a study in Chandigarh it was found that male preference was present in 56% women and similarly shown in study in Jamnagar where 58.5% women gave preference to male child.<sup>[7,8]</sup> But the preference towards male child was found to be the highest in Ahmedabad in which a study showed a male preference of 87.53%<sup>[11]</sup>.

In present study, perceptions of females regarding gender discrimination were also taken. 59.63% were of view that even if family is complete with female child then also they would prefer to go for male child. A study carried out by Puri.et.al also concluded that 56 % females had preference to male child. The preference to male child was significantly associated with literacy status of women which was also similar to our study<sup>[7]</sup>.

Awareness regarding the fact that pre natal sex determination can be done, was present in 92.6% of the antenatal mothers which is different from a study done in Darjeeling district which shows that 44.82% of the women knew about sex determination<sup>[5]</sup>. A study by Nithin Kumar et al in southern India found 91.7% subjects knew about prenatal sex determination.<sup>[12]</sup> In the present study the majority of the participants (70.64%) knew that ultrasonography was the technique used for sex determination. This observation was similar to that reported in a study conducted in Mumbai, Maharashtra<sup>[13]</sup>. In contrast, a study conducted at Chandigarh in North India observed that only 11.6% of the married women residing in slums had awareness regarding sex determination techniques.<sup>[7]</sup>

However in spite of tremendous efforts by government to implement strict rules and regulations against female feticide and prenatal sex determination, awareness regarding the PCPNDT Act was present in only 25.69% of the mothers. Similar study in Darjeeling district had similar findings in this aspect where 18.10% knew about the PCPNDT Act.<sup>[5]</sup> The awareness regarding the act was lower in our study. Srivastav et al., in U.P. conducted a study on awareness and gender discrimination found 80% of the women knowing about prenatal sex determination and 67% were unaware about the Act.<sup>[14]</sup>

In our study the knowledge that sex determination is punishable (100%) was known to every antenatal women. In a similar study from Chandigarh, only 65% of the pregnant women considered determining sex of an unborn child as a crime<sup>[7]</sup>.

In our study we observed that there is increasing trend of right attitude about PC & PNDT Act is with increase in literacy status. Similarly S. Ghose et al<sup>[15]</sup> in their study showed that increase in education is accompanied with an improvement in the attitude in these ante-natal women.

Among the pregnant women who participated in the study, 11.01% expressed their willingness to go for feticide if the sex of the child was a girl. This disturbing trend was also observed by B N Vadera et al<sup>[8]</sup> in their study 20.51% admitted that they will go for female feticide .This study was an attempt to focus on current scenario of the female feticide and a strong desire for son among the antenatal women. This calls for a need to educate women about gender equality and recommendations under PC& PNDT act in order to improve declining sex ratio in our country.

### Conclusion

The present study has thrown light into the recent scenario of gender preference and awareness regarding prenatal sex determination and a strong desire for male child among antenatal women from rural Gurgaon. It is necessary to extend unprecedented efforts against this social malady by intensive IEC campaigns for raising awareness about rules forbidding pre-natal sex determination to curb female feticide.

The present study also found the awareness regarding PCPNDT act to be less but the son preference is more so there should be some community based awareness programmes to bring about change in the behaviour among women and their spouses.

### Limitation

The present study was conducted in a small population in hospital so the findings cannot be generalized in community. As the study deals with a sensitive issue, it might not reflect the original scenario.



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