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Original Research Article

Factors influencing gender preference and awareness against sex determination in antenatal women in rural tertiary hospital in South India

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ABSTRACT

Background: Discrimination begins in the womb even before a baby is born. Sex ratio is an important social indicator that measures extent of prevailing equity between males and females in society and a balanced sex ratio is essential for a stable society. The main objective of this study is to find out the awareness of sex determination and to study the factors influencing gender preference among antenatal women.
Methods: A cross-sectional, hospital-based study was done among antenatal women at Adichunchanagiri institute of medical sciences, B.G. Nagara, Mandya. Information regarding the type of family, number of family members, socioeconomic status, gender preference, factors influencing gender preference and obstetric details was collected after taking consent from the antenatal women attending the outpatient department in Adichunchanagiri institute of medical sciences as well as inpatient antenatal women. Details of about the awareness of sex determination and the perception of women regarding sex determination were also collected.
Results: Total 114 pregnant women were included in this study. Among multigravidas 31.4% of them had male preference based on the sex of 1st baby being female, 44.7% (51) participants had son preference and 36% (41) had daughter preference and 19.3% (22) participants had no gender preference. Among study participants 95 (83.3%) of them were aware of punishment regarding sex determination and 19 (16.7%) of them were unaware of legal punishment.
Conclusions: Awareness regarding sex determination facilities was found to be increased and pregnant women were also aware of the punishable act regarding sex determination. Factors influencing gender preference mainly included the gender of the first baby in multigravidas and the socioeconomic status.

Keywords: Gender preference, Sex determination, Antenatal women

INTRODUCTION

Sex ratio is an important indicator that measures the equity between males and females. It is defined as the number of females per one thousand males. A balanced sex ratio is important for a stable society.[1] A deficit in female population has been observed since decades in India.[2] Mainly due to sex selective abortions that are still happening unfortunately.[3] The activities like sex determination in antenatal period and abortions result in disturbance in sex ratio, further it manifests itself as discrimination against females in providing them proper food, education and health care.[4] The bias against females roots back to cultural beliefs, religious and economic background of the family. The birth of a female child is considered a burden in many families which result in killing a child even before it is born.[5] Female feticide resulting in a decline of the child sex ratio has led to

enforcement of preconception and prenatal diagnostic techniques act since February 2003.[1] Sex ratio in India in 2023 is 1020 females per 1000 males and it was 943 females per 1000 males in 2011 census.[2] The child sex ratio (0-6 years of age) has been in decreasing trends since 1961 census. Sex ratio in Karnataka is 973 which is below national average of 940 as per latest census.[6]

METHODS

A cross-sectional, hospital based, descriptive study was done among pregnant women who attended ANC clinic of Adichunchanagiri institute of medical sciences, B.G. Nagara, Mandya District Karnataka. Study was conducted during the period of September 2023 to November 2023. Total 114 pregnant women were included in this study. Informed consent was obtained from the participants willing to participate and those who did not give consent were excluded from the study. A pre-structured questionnaire was used to collect information regarding factors responsible for gender preference and awareness against sex determination in tertiary hospital. Descriptive and inferential statistical analysis has been carried out in the present study.

Significance is assessed at 5% level of significance. Chi-square/Fisher exact test has been used to find significance of study parameters on categorical scale between 2 or more groups, non-parametric setting for qualitative data analysis. Fisher exact test used when cell samples are very small. Statistical software namely SPSS 22.0 and R environment ver.3.2.2 were used for analysis of data and Microsoft word and excel have been used to generate graphs, tables etc., $p<0.05$ is considered significant.

RESULTS

Total 114 pregnant women were interviewed during the study period. Table 1 shows the mean age of study participant was 24.99 years with SD ±3.78, 55 (48.2%) were between 19-24 years of age and majority of this age group had male preference i.e. 58.2% (32).

Among study participants 95 (83.3%) of them were aware of punishment regarding sex determination and 19 (16.7%) of them unaware of legal punishment (Table 2).

Among 114 participants 58 of them were primigravida and 56 were multigravida. Among multigravidas 31.4% of them had male preference based on the sex of the first baby being female, 44.7% (51) participants had son preference and 36% (41) had daughter preference and 19.3% (22) participants had no gender preference.

Table 3 shows no. of participants that support antenatal sex determination, among 114 pregnant women 103 (90.3%) of them said they would not support antenatal sex determination and 11 (9.6%) of them supported sex determination, majority of them gave curiosity as reason on being asked why would they support sex determination.

Table 4 shows factors that influenced the gender preference. Among those factors, personal choice of the pregnant woman, family pressure and sex of the first baby gave significant values. Among participants 13.7% of them had male preference based on their personal choice and 43.9% of them had female preference. The 31.4% of them had son preference with first baby sex being female with a significant $p<0.001$. The 13.7% chose son because of family pressure with $p=0.010$.

Table 5 shows that the socioeconomic status of women has importance in having son preference especially lower socioeconomic status. The 43.1% of women belonging to lower middle-class families had son preference with a significant $p<0.001$. Education status and the occupation of the pregnant women had no role unfortunately in our study.

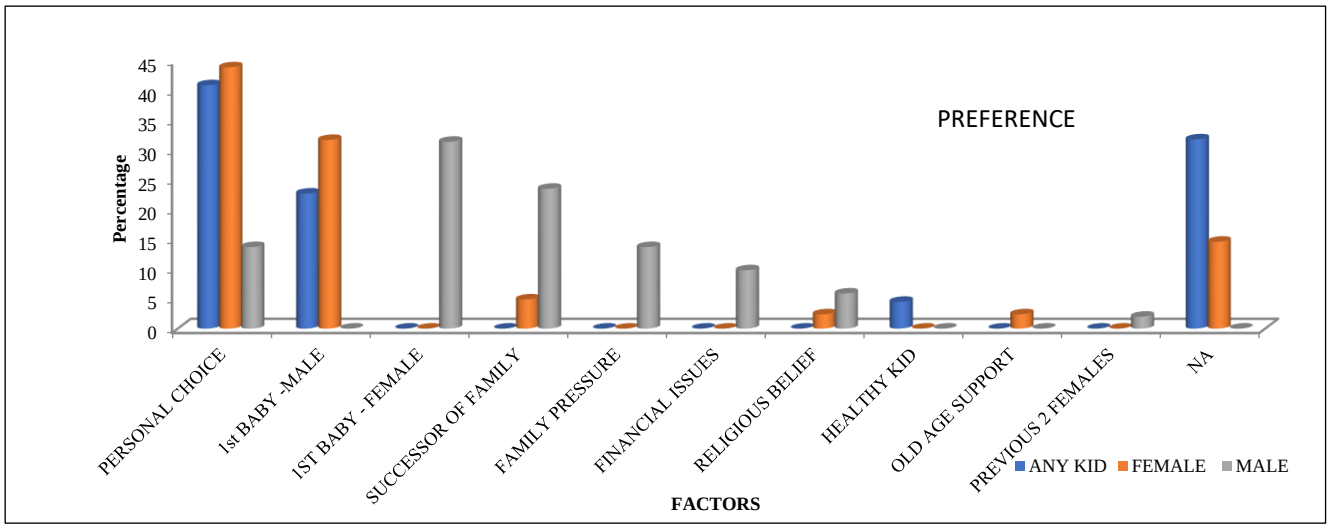

Figure 1: Factors-association with preference of pregnant women.

Table 1: Distribution of pregnant women.

Age (in years)	No. of pregnant women	Percentages (%)
19-24	55	48.2
25-29	41	36.0
30-34	18	15.8
Total	114	100.0

mean ± SD, 24.99±3.78.

Table 2: Awareness of legal punishment-frequency distribution of pregnant women studied.

Awareness	No. of pregnant women	Percentages (%)
No	19	16.7
Yes	95	83.3
Total	114	100.0

Table 3: Support antenatal sex determination.

Support antenatal sex determination	No. of pregnant women	Percentages (%)
No	103	90.4
Yes	11	9.6
Curiosity	5	4.4
For enthusiasm	1	0.9
To relieve anxiety	2	1.8
Total	114	100.0

Table 4: Factors-association with preference of pregnant women studied.

Factors	Preference			Total	P value
	Any kid	Female	Male		
Personal choice	9 (40.9%)	18 (43.9%)	7 (13.7%)	34 (29.8%)	0.002**
1st baby-male	5 (22.7%)	13 (31.7%)	0 (0%)	18 (15.8%)	<0.001**
1st baby-female	0 (0%)	0 (0%)	16 (31.4%)	16 (14%)	<0.001**
Successor of family	0 (0%)	2 (4.9%)	12 (23.5%)	14 (12.3%)	0.004**
Family pressure	0 (0%)	0 (0%)	7 (13.7%)	7 (6.1%)	0.010*
Financial issues	0 (0%)	0 (0%)	5 (9.8%)	5 (4.4%)	0.063
Religious belief	0 (0%)	1 (2.4%)	3 (5.9%)	4 (3.5%)	0.533
Healthy kid	1 (4.5%)	0 (0%)	0 (0%)	1 (0.9%)	0.184
Old age support	0 (0%)	1 (2.4%)	0 (0%)	1 (0.9%)	0.552
Previous 2 females	0 (0%)	0 (0%)	1 (2%)	1 (0.9%)	1.000
NA	7 (31.8%)	6 (14.6%)	0 (0%)	13 (11.4%)	<0.001**
Total	22 (100%)	41 (100%)	51 (100%)	114 (100%)	-

*Significant and **Chi-Square test/Fisher exact test.

Table 5: Baseline variables-association with preference of pregnant women studied.

Variables	Preference			Total	P value
	Any kid	Female	Male		
Age (in years)					
19-24	8 (36.4%)	15 (36.6%)	32 (62.7%)	55 (48.2%)	
25-29	12 (54.5%)	17 (41.5%)	12 (23.5%)	41 (36%)	0.036*
30-34	2 (9.1%)	9 (22%)	7 (13.7%)	18 (15.8%)	
Education					
Below 10	1 (4.5%)	1 (2.4%)	2 (3.9%)	4 (3.5%)	
10-12	11 (50%)	18 (43.9%)	29 (56.9%)	58 (50.9%)	0.680
Graduate and above	10 (45.5%)	22 (53.7%)	20 (39.2%)	52 (45.6%)	
Occupation					
Unskilled	1 (4.5%)	2 (4.9%)	5 (9.8%)	8 (7%)	0.666
Skilled	7 (31.8%)	9 (22%)	9 (17.6%)	25 (21.9%)	

Continued.

Variables	Preference			Total	P value
	Any kid	Female	Male		
Home maker	14 (63.6%)	30 (73.2%)	37 (72.5%)	81 (71.1%)	
SES					
Lower class	1 (4.5%)	5 (12.2%)	7 (13.7%)	13 (11.4%)	<0.001**
Lower middle class	8 (36.4%)	12 (29.3%)	22 (43.1%)	42 (36.8%)	
Middle	12 (54.5%)	4 (9.8%)	6 (11.8%)	22 (19.3%)	
Upper middle and upper class	1 (4.5%)	20 (48.8%)	16 (31.4%)	37 (32.5%)	
Total	22 (100%)	41 (100%)	51 (100%)	114 (100%)	

*Significant and **Chi-Square test/Fisher exact test.

DISCUSSION

In our study, 44.7% (51) participants had son preference. Similarly, Dey et al also found the son preference to be 39.2%.[7] In multigravidas, the gender preference mostly was because of the sex of the first baby i.e. first baby being male, they preferred having a female child and those who had son preference had first female child. Similarly, Vadera et al, also found it be 65.28%.[8] The male preference is the outcome of the religious beliefs and socioeconomic status of the family. Sons have always been considered as fit to be the successor of the family and as someone who brings economic stability to the family.[9]

Factors that influenced gender preference mainly included personal choice of the pregnant lady, family pressure especially from in-laws, male child being the successor of family.[10] Unfortunately, education and occupation of the pregnant had no significance for gender preference in our study. About 43.1% of participants belonging to lower middle-class families had son preference, whereas upper middle-class and upper-class families preferred having a daughter 48.8%.

In India practice of dowry system has been followed since time immemorial. Dowry was considered as one of the factor for son preference among lower socio-economic status mothers.[14] Another factor for son preference was family pressure. In our study 13.7% of women wanted to have a son because of pressure from in-laws.

Regarding awareness of the legal punishment against sex determination, about 83.3% of them were aware. Similar findings were seen in Ghosh et al and Puri et al.[11,12] About 16.7% of the participants were not aware of consequences of sex determination. Son have been considered to be the one who carry the family name along with him and this makes in-laws put immense pressure on the couple to have a son and the pressure to terminate if it's a female fetus by any means.[13]

The main factors which influenced the gender preference was lower socio-economic status and sex of the first baby in multigravidas.[15] Although there has been increase in awareness regarding the consequences of gender imbalance and sex ratio, it is not reflected in their attitude. Strict and effective implementation of PCPNDT act makes it difficult for people to determine the sex and also prevent selective sex abortions.[10]

Limitations of the study are that it is conducted on a small group of pregnant women. Another limitation is that the participant may be biased about the gender of the baby herself and sometimes she comes under influence of in-laws and other family members which might affect results.

CONCLUSION

Gender preference still prevails in our region, though there had been efforts by the government of India to provide a female, all the rights which makes her equal to a man in society in all fields. The age-old mindset of viewing a female less than a man exists unfortunately. Though 83.3% of the pregnant women were aware of the legal punishment against sex determination, there was high preference for a son.

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