Research Article

Biasness in Gender Preference among the Antenatal Mothers: An Institute Based Mixed Method Study in Eastern India

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A B S T R A C T

Background: Preferential attitudes towards either sex is being followed for generations and it affects the social harmony. Although the constitution of India has granted gender equity, disparity still remains. Present study was conducted to reveal the gender preferences of antenatal mothers.

Materials and Methods: This cross-sectional descriptive epidemiological mixed method study (quantitative and qualitative methods) was conducted among 422 antenatal mothers admitted in the antenatal ward of Bankura Sammilani Medical College, within first quarter of 2015 (January to March). Data were collected by in depth interview of mothers maintaining anonymity and confidentiality. Multinomial logistic regression was performed to find out the most predicted variables.

Results: Among 422 mothers, about 75% preferred male child for their current pregnancy. Mother who had only female child or female child predominance in previous issues, were preferred male child more significantly for current pregnancy. Similarly, opposite statement was found statistically significant. Lower socioeconomic classed mothers more significantly preferred female child and Upper lower classed mothers expected male child more in this pregnancy. Secondary educated mother mostly preferred female child and primary educated fathers more expected male child in current pregnancy.

Conclusion: Education and economic condition of the mothers were not found as the sole reasons for their choices. It means that the problem was in their thinking, not in the situation and it can be modified by appropriate policy making.

Keywords: Antenatal, Biasness, Gender, Mother

Introduction

Biasness about the preference of gender in different field has a big social impact. In context to India, preferential attitudes towards either sex are being followed for generations and it affects the social harmony. Although the constitution of India has granted gender equity, disparity still remains.

However, women of India are in disadvantageous stage at several fields and it has great impact on sex ratio, women's health over their lifetimes, their educational attainment, and economic conditions. And all these things collectively effect on the country's GDP, health status, productivity etc.

According to 2011 census sex ratio in India is 933 females

Saha R
Int. J. Preven. Curat. Comm. Med. 2019; 5(1)

16

per 1000 males and child sex ratio (0-6 years) is 927 females per 1000 males.[1, 2] Though in the West Bengal sex ratio is better than overall sex ratio of India (950 females per 1000 males), still it is far away from equality.[3] Child sex ratio (0-6 years) in West Bengal is also improving (960 females per 1000 males) and much better than India.[2]

The preference for male child since antenatal period causes gender-based inequality within family and in future it manifested as negligence and discrimination toward daughters in providing nutrition, education and health care services. Thus, a vulnerable women society is formed within a country. When the daughters of our society are being deprived by physically, economically and educationally, health and education of future generation will be in stake automatically.[4]

Most factors behind favoring male children are social, economic and religious in origin. In some community, female child birth is considered as a curse to the family. Dowry problem with girls, concerns with family race, preferring a son as bread winner etc. act behind lowering the social status of women. So, many people with the aid of modern technology tend to know the gender of their upcoming child and female feticide occurs in this aspect.

High desire for male child also results repeated, closely spaced pregnancies, premature deaths, and even terminating child before its birth. Female feticide resulting in a decline of the child sex ratio led the Government of India to pass the Pre-Natal Diagnostic Techniques Act (PNDT) in 1994. This law was further amended into the Pre-Conception and Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) (PCPNDT) Act in 2004 to deter and punish prenatal sex screening and female feticide.

So, gender preferences during antenatal period have so many consequences in future and have great impact on country's health and wealth status.

In this background, present study was conducted to reveal the situation of rural Bengal where such type of study is very scarce.

Materials and Methods

This cross-sectional descriptive epidemiological study was conducted among antenatal mothers admitted in the antenatal ward of Bankura Sammilani Medical College, within first quarter of 2015 (January to March) to find out the gender preferences regarding their offspring. It was a mixed method study where both quantitative and qualitative methods were used for the analysis of the study result. This tertiary care hospital of West Bengal is situated in a rural belt where a good proportion of people are belonging to tribal community also. Daily with overburden patients referred from different villages of Bankura, Purulia and Midnapore districts are dealt here. Mothers, who were admitted in the antenatal ward of Obstetrics and

Gynecology department of Bankura Sammilani Medical College within first quarter of the 2015, were considered as study population. Seriously ill, uncooperative and unwilling mothers were excluded from the study.

According to 2014 hospital record, in the first quarter about 70-80 patients are usually admitted daily in the antenatal ward of this hospital. In every week 3 alternate days were selected for data collection. Days of data collection were rotated in consecutive weeks to reduce the biasness for day specific admission rate variation. Mothers, who were admitted in the previous day of data collection, were considered as sampling frame. Average 11 mother's data were collected in each day from this sampling frame using simple random technique.

Inclusion Criteria: Mothers, who were admitted in the antenatal ward of Obstetrics and Gynecology department of Bankura Sammilani Medical College within first quarter of the 2015, were considered as study population.

Exclusion Criteria: Seriously ill, uncooperative and unwilling mothers were excluded from the study.

Data were collected by in depth interview of mothers using interviewer administered both close and open ended, predesigned pretested questionnaire. Before the starting of interview, purpose of the study was explained to them and informed consents were opted. All the participants were also assured about the anonymity and confidentiality of individual record. Every interview was conducted in a separate room by one to one approach. Every response of open-ended questions was noted meticulously and also recorded for future analysis.

Data were entered in Microsoft Excel worksheet and subsequently analyzed using Microsoft Excel functions and IBM SPSS software (version 19.0). Multinomial logistic regression was performed to find out the most predicted variables. Ethical permissions were opted from appropriate authority before conducting the study.

Results

Among 422 mothers, 316 (75%) preferred male child for their current pregnancy. Their partner's preferences towards male child were also more or less same (325 or 77%). Most of the mothers were belonging to Hindu family (339 or 80.3%), joint family (365 or 86.5%) and were residing in rural areas (280 or 66.4%). In this study a good proportion of population were belong to scheduled caste and scheduled tribe (186 or 44.1%). About 380 or 90% mothers were belonging to lower socio-economic status (according to modified B. G. Prasad scale, 2015) and 95 or 22.5% mothers were illiterate. 226 or 53.6% mothers had history of multi parity. Though prenatal sex determination is illegal, in spite of that 224 or 53% mothers were interested for prenatal sex determination. About 13 or 3% were tried to know the gender but failed to find out the suitable centre (Table 1).

17

Saha R
Int. J. Preven. Curat. Comm. Med. 2019; 5(1)

Table 1.Gender preferences of antenatal mothers according to their socio-demographic and obstetric variables

(N=422)

Gender Preference Variable		Prefer Male child	Prefer Female child	No Preference	Test of significance
Parent's choice for current pregnancy N=844	Father's preference	325 (77%)	75 (17.8%)	22 (5.2%)	Chi square test, χ^2=0.74, df=2, p=0.691
	Mother's Preference	316 (74.9%)	79 (18.7%)	27 (6.4%)	
Age of the mother		Mean rank 202.7	Mean rank 247	Mean rank 210.2	Kruskal Wallis test χ^2=8.504, df=2, p=0.14
Religion	Hindu	259 (76.4%)	57 (16.8%)	23 (6.8%)	Chi square test, χ^2=4.280, df=2, p=0.114
	Muslim	57 (68.7%)	22 (26.5%)	4 (4.8%)	
Caste	General	126 (72%)	37 (21.1%)	12 (6.9%)	Chi square test, χ^2=7.669, df=6, p=0.263
	OBC	44 (72.1%)	15 (24.6%)	2 (3.3%)	
	SC	107 (77.5%)	23 (16.7%)	8 (5.8%)	
	ST	39 (81.3%)	4 (8.3%)	5 (10.4%)	
Address	Rural	204 (72.9%)	59 (21.1%)	17 (6%)	Chi square test, χ^2=3.051, df=2, p=0.218
	Urban	112 (78.9%)	20 (14.1%)	10 (7%)	
Mother's educational qualification	Illiterate	68 (71.6%)	17 (17.9%)	10 (10.5%)	Chi square test, χ^2=17.072, df=6, p=0.009*
	Primary	114 (75%)	34 (22.4%)	4 (2.6%)	
	Secondary	77 (74.8%)	22 (21.4%)	4 (3.8%)	
	H.S. & Graduate	57 (79.2%)	6 (8.3%)	9 (12.5%)	
Father's educational qualification	Illiterate	19 (61.2%)	6 (19.4%)	6 (19.4%)	Chi square test, χ^2=16.636, df=6, p=0.011*
	Primary	97 (76.4%)	26 (20.5%)	4 (3.1%)	
	Secondary	87 (74.4%)	26 (22.2%)	4 (3.4%)	
	H.S. & Graduate	113 (76.9%)	21 (14.3%)	13 (8.8%)	
Occupation of mother	Home maker	276 (73.8%)	71 (19%)	27 (7.2%)	Chi square test, χ^2=4.104, df=2, p=0.128
	Working mother	40 (83.3%)	8 (16.7%)	0 (0%)	
Socio economic status	I, II & III	30 (71.4%)	2 (4.8%)	10 (23.8%)	Chi square test, χ^2=29.483, df=4, p<0.001*
	IV	98 (80.3%)	20 (16.4%)	4 (3.3%)	
	V	188 (72.9%)	57 (22.1%)	13 (5%)	
Family type	Joint	277 (75.9%)	67 (18.4%)	21 (5.7%)	Chi square test, χ^2=2.314, df=2, p=0.314
	Nuclear	39 (68.4%)	12 (21.1%)	6 (10.5%)	
Parity	Primipara	157 (80.1%)	24 (12.2%)	15 (7.7%)	Chi square test, χ^2=11.605, df=4, p=0.021*
	2nd	107 (72.3%)	33 (22.3%)	8 (5.4%)	
	3rd or more	52 (66.7%)	22 (28.2%)	4 (5.1%)	
Age of marriage		Mean rank 215.1	Mean rank 194.7	Mean rank 218.2	Kruskal wallis test χ^2=1.925, df=2, p=0.382
Gender pattern among living issues	Only male or male Predominant	31 (39.7%)	47 (60.3%)	0 (0%)	Chi square test, χ^2=118.477, df=4, p<0.001*
	Only female or female Predominant	102 (92.7%)	2 (1.8%)	6 (5.5%)	
	Either equal pattern of gender or no living issue	183 (78.2%)	30 (12.8%)	21 (9%)	

Saha R
Int. J. Preven. Curat. Comm. Med. 2019; 5(1)

18

Table 2. Coding of dummy variables

Variables	0	1	2	3
Mother's educational qualification	H.S. & Graduate	Secondary	Primary	Illiterate
Father's educational qualification	H.S. & Graduate	Secondary	Primary	Illiterate
Socio economic status (SES)	V	IV	I, II & III	
Parity	Primipara	2nd	3rd or more	
Gender pattern among living issues	Only male or male Predominant	Only female or female Predominant	Either equal pattern of gender or no living issue	
Gender preference for current issue	No preference	Prefer female child	Prefer male child	

Table 3. Multinomial logistic regression analysis

Preference[a]	B	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
				Lower Bound	Upper Bound
1.00 [Prefer female child] Intercept [Living issue=0.00]	-3.801	0.009			
	19.550	0.000	3.093	1.105	8.657
[SES=0.00]	3.236	0.002	25.435	3.192	202.663
[SES=1.00]	3.168	0.004	23.767	2.777	203.388
[Mother's education=1.00]	2.732	0.030	15.358	1.305	180.700
2.00 [Prefer male child] intercept	-2.083	0.056			
[Living issue =1.00]	1.907	0.014	6.732	1.472	30.784
[SES=0.00]	1.966	0.007	7.142	1.705	29.918
[SES=1.00]	2.139	0.005	8.491	1.896	38.018
[Father's education=2.00]	1.689	0.033	5.413	1.148	25.518

a. The reference category is: .00. [No gender preference].

Table 4. Themes and subthemes explaining the reasons behind mother's gender preferences

Themes for male child preference	Sub-themes for male child preference
Supporting family economy	Future earning member Supporting family's traditional business or occupation
Family's name will be carried in future	Perform male dependent important rituals of life Surname will be carried over to future generation through male child
Old age support	Physical, mental and monetary support More capable to perform the responsibilities
Presence of female child	Only female child considers as overburden Familial harmony will be maintained
Dowry problem with girl	Huge load of expenses for dowry In male dominant society females are vulnerable
Themes for female child preference	**Sub-themes for female child preference**
Presence of Male child	Familial harmony will be maintained
Good emotional support	Female are more responsible towards parents More emotionally attached with parents

In this study dependent variable was gender preference of mothers for current pregnancy which was qualitative

19

Saha R
Int. J. Preven. Curat. Comm. Med. 2019; 5(1)

data. The preferences were either male or female or no gender preference for child. Chi square test w as performed to check the association between independent variables (qualitative data) and dependent variable where both were categorical data. For quantitative data like age of mother or age of marriage, Kruskal Wallis test was performed, because the distribution of continuous data (age) in respect to gender preferences were different in shape and were not normal distribution. In bivariate analysis it was found that educated parents preferred male child more than illiterate parents. Middle and higher socio-economic class mothers had less preference towards male or female child in compare to lower socio-economic status mothers. Primipara mothers preferred mostly male child. Mothers, who had no previous living issue or equal gender pattern in previous issues, mostly expected male child for current issue. If male or female predominance pattern were observed in case of previous issues, then most of the mothers preferred opposite gendered child in current pregnancy (Table 1).

Multinomial logistic regression analysis was done to identify the most predicted variables. In this analysis no gender preference for current issue kept as reference category. This regression model was statistically significant as shown in chi square test [χ^2=150.365, p<0.001]. Cox and Snell and Nagelkerke values indicated that in this model above mentioned independent variables predicted 30% to 39.6% variations of gender preferences. There was no overall statistical significance value for male child preference, but had for female child preference. Mother who had only female child or female child predominance in previous issues, were preferred male child more significantly for current pregnancy. Similarly, opposite statement was found statistically significant. Lower socioeconomic classed mothers more significantly preferred female child and Upper lower classed mothers expected male child more in this pregnancy. Secondary educated mother mostly preferred female child and primary educated fathers more expected male child in current pregnancy. These independent subvariables were found statistically significant individually. Exponential (B) value indicated the prediction ability (Table 3).

Qualitative Analysis (Table 4)

The thematic analysis was used to identify the reasons behind their gender preferences. Recorder interview were transcribed verbatim. Read and re-read all transcripts and constructed themes were coded. Newer data were compared to previous data constantly and refined the label of themes accordingly. Ultimately developed themes were analyzed.

Theme 1

Supporting Family Economy

Mothers who were belong to lower socio-economic class, most of them expected male child in their current pregnancy.

'It is difficult to bear the expenses of the family single handedly. Only male child can support the family income in future'.

'Nobody presents to carry forward the traditional family business in future, only male child can carry over the trend'.

Theme 2

Family's Name will be Carried in Future

It is the traditional cultural believe of the Indian society that only male child can carry forward the family's existence.

According to Hindu culture only male child are allowed to put fire into the mouth of a corpse during the funeral ritual.

'If have no male child within the family who will perform the funeral ritual'.

Theme 3

Old Age Support

Though Indian culture is being modernized by day by day and family types are changing from joint to nuclear, still Indians are believed that their offspring will take the responsibilities of parents in their old age.

'After marriage female child usually involve with the responsibilities of in law house. So for the physical, mental and monetary support in old age, male child is better option.'

Theme 4

Presence of Female Child

If the previous issue(s) is/ are female, maximum parents try for another issue to fulfill the wish of male child.

'We have only female child within the family, so everybody expects male child in this pregnancy to balance the ratio'.

Theme 5

Dowry Problem with Girl

Female child does not get preference in our society mostly for excessive expenses during marriage as dowry, though it is illegal in the society.

'We are so poor; can't bear the expenses of our food; How we can manage the money for dowry if female child take birth.'

Theme 6

Presence of Male Child

A mother said an impressive explanation:

'Already have male child within the family; We expect female child this time. Then our child can experience a sweet relationship of brother and sister in life'.

Saha R
Int. J. Preven. Curat. Comm. Med. 2019; 5(1)

20

Theme 7

Good Emotional Support

Few mothers stated that:

'We prefer female child, because female is more responsible to their parents. They can provide better emotional support and care in old age than male child'.

Discussion

In the census report of 2011, it was reported that gender inequality present in West Bengal state (950 females per 1000 males).[3] Though the state was in better stage than overall India's sex ratio, still it was far away from the equality. In the year 2015, the situation of rural Bengal regarding gender preferences remained same. In this study, it was found that about 75% mothers preferred male child in their current pregnancy. Instead of male child preference if girl child born within the family then her rearing would be hampered. These issues are indirectly influencing female child death in future within the society and causes gender disparity. Within this state the gender preference varied widely as reported in Roy et al study (52.6% for male) and Basu et al study (26.4% for male). But male were preferred over female child in all the above studies.[5, 6] But in a coastal south Indian study 22% mother preferred male child for current pregnancy.[7] Their study result also reflected in their state's sex ratio which was quite better (973 females per 1000 males) than West Bengal.[3] Another study conducted by Supraja TA et al. in urban India, found that 47.9% mothers or their family members had gender preferences and among them mostly preferred male child (57.4%).[8]

In this study most of the (53%) mothers were interested to know the gender of upcoming child by prenatal sex determination process. In comparison, Basu et al study found that one third mothers were interested in it.

Here we found that female child significantly preferred among lower socioeconomic classed mothers and upper lower classed mothers expected male child more in this pregnancy. Yasmin S et al. study conducted in eastern India, found that gender preferences were more among lower socio-economic class mothers.[9] Though Yasmin et al study observed higher gender preferences among lower level educated parents and Bhattacharjya H et al. study revealed higher male child preference among illiterate women, but we found mixed type of responses.[9, 10] Here secondary educated mother mostly preferred female child and primary educated fathers more expected male child in current pregnancy significantly. Mothers significantly preferred opposite gendered child in accordance to previous issue's gender and this study result was also supported by Bhattacharjya H et al. and Wadgave HV et al. study.[10, 11]

HV Wadgave et al. study revealed that propagation of family name; support in old age and family member's choice were common reasons behind the male child preference and similar information was also highlighted in this study through in-depth interview.[11]

Conclusion

Though India is developing in all sectors, but still the gender preferences present within the society. This study also concluded that male child is preferred over female. Situations and choices are changing among mothers but in slow pace. This study reflects the current situation of rural Bengal and it will provide baseline data for the policy makers. It also showed that education and economic condition of the mothers were not the sole reasons for their choices. It means that the problem was in their thinking, not in the situation. So, it can be modified and problem can be solved if appropriate policies are implemented to alleviate it.

Conflict of Interest: None

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21

Saha R
Int. J. Preven. Curat. Comm. Med. 2019; 5(1)

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