

## Original Research Article

# A community based cross sectional study on gender preference, awareness and attitude regarding sex determination among married women in rural field practice areas of North Karnataka, India

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**Received:** 28 September 2016

**Accepted:** 03 October 2016

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### ABSTRACT

**Background:** Female infanticide has been practiced in India since 1789. The child sex ratio in India is declining from 947 to 927 girls for 1000 boys within a span of ten years. This decline can be attributed to arrival of affordable and widespread adoption of Ultrasound in the early 1990s in India. Like other countries around the world, India is patriarchal. A set hierarchy prevails in all tiers of its social order, and a fanatic preference for male children is especially common in India. Still in India value system based son mania prevails. In this view our study regarding awareness and attitude towards gender preferences was relevant. Objective of the study was to evaluate gender preference, awareness and attitude regarding sex determination among married women in rural field practice Areas of North Karnataka, India.

**Methods:** Community based cross-sectional study conducted by interviewing married women of reproductive age group attending general OPD and antenatal clinics in rural field practice areas. Statistical analysis was done by tables and charts in percentage.

**Results:** In this study when asked about gender preferences most (49.4%) of the study subjects showed interest towards male child. Majorities (91%) of study participants were unaware about the pre natal sex determination, 4.5% were aware and 3.8% knew that sex determination was done in both private and government hospitals. When enquired about the method of sex determination majority (84%) were unaware, 15% knew that it is done by Ultrasonography. Among the study participants 75% were unaware about the fact that sex determination is considered as a crime in India and in the remaining, only 13% knew that there is a strict punishment or penalty exists in India for sex determination.

**Conclusions:** In present study we found that son preference is still more in rural areas. Government should impose High fines and should take strict judicial action against parents who try to kill their unborn baby girl. More IEC activities to create awareness about ill effects of female feticide among rural women.

**Keywords:** Antenatal clinic, Cross-sectional study, Gender preferences, PCNDT act, Sex determination

### INTRODUCTION

In India, female infanticide has been practiced for centuries with the earliest evidence being provided by Sir Jonathan Duncan in 1789.<sup>1</sup> With the availability of new

technology, the bias suffered by females from birth to grave is being extended to womb to tomb.<sup>2</sup> Skewed sex ratio is an issue of major concern and has long-term social and demographic consequences. At the heart of the problem is the low status of women in society, a

patriarchal social framework and value system based on son mania.<sup>3</sup> According to the Census of India, 2011, the sex ratio is low i.e. 940 females per 1000 males. But the more worrying fact is the juvenile sex ratio (female – male ratio of children below 6 years) is even lower (914/1000) and has fallen from 927 girls/1000 boys in 2001.<sup>5</sup> Despite the existence of preconception and prenatal diagnostic technique (PNPCDT) Act, there is dire need to strengthen their law since the number of conviction is despairingly low as compared to burden posed by this crime.<sup>2</sup>

Many incidents have shown that still in rural India value system based son mania prevails. In this view we conducted our study to evaluate Gender Preference, Awareness and attitude regarding sex determination among married women residing in rural field practice areas of North Karnataka, India.

## METHODS

The Study was conducted from August to September 2013 and is a community based descriptive Cross sectional study. All married women of reproductive age group (18-45 years) attending general OPD and antenatal clinics of our three rural field practice area were included in the study. With the confidence interval of 95% and taking into account of population of three primary health centres the sample size using “survey system” software comes out to be 488. [Available at <http://www.surveysystem.com/sscalc.htm> (developed by Creative Research Systems)].

A pre-designed pretested proforma was used to elicit information on socio-demographic and Socio Economic Status of study subjects and also to evaluate their knowledge regarding gender preference and to assessing their attitude and practice regarding sex determination. Modified Kuppaswamy classification was used to assess socio-economic class. Consent was taken from every patient and strict confidentiality of the data was maintained. Data were entered in Microsoft Excel and Statistical analysis was done by using tables and charts in percentage.

## RESULTS

This is a community based descriptive cross sectional study where 488 women from rural areas were studied. Most (68.6%) of the study participants attending ANC clinic belong to the age group of 18-25 years and 26.6% women belong to the age group of 26-32 years, 3.7% were in the age group of 33-39 years. Among the study participants 72.1% women attending ANC clinic were Hindus and 26.6% women were Muslims. Majority (90.6%) of women attending ANC clinic were from lower middle socio-economic class and remaining 9.4% women were from upper lower class (Table 1).

In this study when asked about gender preference in the rural area study participants showed more interest towards male child (49.4%). When asked about participant's interest about fetal sex determination majority (95.5%) showed interest in sex determination during antenatal period only (Table 2). When interviewed about preferred combination of children most (59%) women preferred equal number of boys and girls, 19.4% had no preference and 17.6% women preferred only boys (Table 3).

**Tables 1: Sociodemographic characteristics of study participants attending ANC clinics.**

Age group	Number of women	Percentage
18-25	335	68.6
26-32	130	26.6
33-39	18	3.7
40-45	5	1.1
<b>Religion</b>		
Hindu	352	72.1
Muslim	132	27.1
Christian	0	0
Others	4	0.8
<b>Socio-economic class</b>		
Upper	0	0
Upper Middle	0	0
Lower Middle	442	90.6
Upper Lower	46	9.4
Lower	0	0

**Table 2: Women showing interest in fetal sex determination by their natal status (N=488).**

Natal status interest	Study participants	
	Number	Percentages
Antenatal	471	96.5
Postnatal	14	2.9
Others	3	0.6
Total	488	100

In this study among the study participants majority (91%) were not aware about the pre natal sex determination, 4.5% were aware about the sex determination and 3.8% were of the opinion that sex determination was done in both private and government hospitals.

**Table 3: Preferred combinations of children by study subjects (N=488).**

Combination of children preferred	Study participants	
	Number	Percentages
Only boys	86	17.6
Only girls	40	8.19
More boys than girls	39	7.99
Equal no. of boys to girl	228	46.7
No preference	95	19.4

When asked about the method of sex determination majority (84%) were not aware, 15% knew that it is done by Ultrasonography. In our study 75% were not aware that fetal sex determination is considered as a crime and in the remaining, only 13% knew that there is a Punishment or penalty for fetal sex determination.

**Table 4: Awareness of women regarding place of sex determination (N=488).**

Place of sex determination	Study participants	
	Number	Percentage
Aware	22	4.5
Pvt	0	0
Govt	7	1.4
Both	19	3.8
Not aware	440	91
<b>Know the method of sex determination</b>		
Knows	6	1.2
Ultrasonography	72	15
With needle	0	0
Others	0	0
Not known	410	84
<b>Fetal sex determination is considered as a crime</b>		
Aware as crime	95	25
Not aware	365	75
<b>Punishment or penalty for fetal sex determination</b>		
Know about Punishment/Penalty	65	13
Not known	374	76
<b>Type of punishment given for fetal sex determination</b>		
Fine in the form of rupees.	34	6.9
Jail	3	0.6
Jail and fine	27	5.5
Not known about the fine/Punishment	424	86
<b>Punishment to the doctor for the crime</b>		
Aware	51	10.4
Not aware	437	89.5
<b>Type of punishment to the doctor for the crime</b>		
Cancellation of doctors registration	4	0.08
Fine	10	0.2
Jail and fine	20	4.1
Not known	454	94

**Table 5: Reason for desiring for next child by gender of the child.**

No. reasons	Earning hand for family	For family growth	Old age dependency
Boy	334	334	378
Girl	154	154	110
Either	167	167	268
No preference	170	170	134

Among the study participants majority (89.5%) did not know that there is a punishment to the doctor for the crime (Table 4). In this study, majority (69%) of the study participants are of the opinion that boys are source of income for the family, helpful for the family growth and also helpful during old age dependency (Table 5).

## DISCUSSION

This is a community based descriptive cross sectional study done to evaluate the knowledge of women residing in rural areas regarding gender preference and for assessing their attitude and practice regarding sex determination. In our study we found that gender preference was more (49.4%) for a male child which was similar to a study conducted by Vadera B et al at Jamnagar, Gujarat which also showed preference to male child was more (70.68%) among rural women. When asked about participant's interest about fetal sex determination majority (95.5%) showed interest in sex determination during antenatal period only.<sup>3</sup>

In this study among the study participants majority (91%) were not aware about the pre natal sex determination, 4.5% were aware about the sex determination and 3.8% were of the opinion that sex determination was done in both private and government hospitals. When asked about the method of sex determination majority (84%) were not aware, 15% knew that it is done by Ultrasonography.

In our study 75% were unaware that fetal sex determination is considered as a crime and in the remaining, only 13% knew that there is a Punishment or penalty for fetal sex determination which was in contrast to that reported by Khandelwal Vidit et al conducted at Ujjain where 79% of the study participants were aware about the place for sex determination out of which 78% study participants mentioned that private hospital is a place for fetal sex determination and 77.5% study participants were also aware about the technique which is used for fetal sex determination.<sup>2</sup> In a study conducted by Shrivastav et al at Bareilly showed that majority (80%) of study participants were aware about the prenatal sex determination but 67% of participants were unaware about PNDT act.<sup>5</sup> In contrast to this a study conducted by Ghose S et al found that 95% of the study participants were aware about the availability of a method for sex determination.<sup>6</sup> When asked about the preference for male child majority (69%) are of the opinion that boys are earning hand for the family, helpful for the family growth and also helpful during old age dependency. In NFHS 2 survey also similar results were noted where they told that the male are required for family growth followed by old age dependency were the causes for desiring the boy as a next child.<sup>7</sup>

## CONCLUSION

This study explores still son preference is prevalent in rural areas. The PCNDT Act must be well-enacted in

order to bring the skewed sex ratio to normal, besides it is elementary to emphasize on educating women, empowering them with inheritance rights through organizing campaigns to interact and furnish the required comprehensive information. Promotion of Media should be executed to achieve mass awareness on sex selective acts and their legal implication especially in rural areas.

#### ACKNOWLEDGEMENTS

Authors would like to thank Dr. S. M. Katti, Professor and Head, Department of Community Medicine, Jawaharlal Nehru Medical College, Belagavi, Medical Officers and the staff of the Primary Health Centers for their co-operation and support in data collection. The authors are also grateful to authors/editors/publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

#### REFERENCES

1. Pakrasi KB, Haldar A. Sex ratios and sex sequences of births in India. J Biosoc Sci. 1971;3:327-37.
2. Vidit K, Swarupa CV, Harshal G, Mehta S. Gender Preference, Attitude And Awareness Regarding Sex Determination Among Married Women Attending General Opd & Antenatal Clinic Of Rdgmc Ujjain, Mp, India. Nat J Comm Medi. 2012;3(2):269-73.
3. Vadera BN, Joshi UK, Unadakat SV, Yadav BS, Yadav S. Study on Knowledge, attitude and practices regarding gender preference and female foeticide among pregnant women. Indian J Community Med. 2007;32(4):300-1.
4. Sharma D, Ahmed M, Ashok B. Knowledge and attitude of prenatal diagnostic techniques act among the antenatal women-a hospital based study. Inter J Rec Scie Res. 2015;6(11):7553-5.
5. Shrivastava S, Kariwal P, Kapilasrami MC. A community based study on awareness and perception on gender discrimination and sex preference among married women (in reproductive age group) in a rural population of district Bareilly, Uttar Pradesh. National J Community Med. 2011;2:273-6.
6. Ghose S, Sarkar S. Knowledge and attitude of Prenatal Diagnostics techniques Act among the antenatal women- a hospital based study. J Community Med. 2009;5:1-6.
7. International Institute of Population Sciences. National Family Health Survey 2, 1998-99. Mumbai: 1999:111-20.

**Cite this article as:** Kulkarni RR, Bandireddy M, Bayyapu Reddy NS. A community based cross sectional study on gender preference, awareness and attitude regarding sex determination among married women in rural field practice areas of North Karnataka, India. Int J Community Med Public Health 2016;3:2973-6.