

## A cross sectional study of awareness regarding sex determination techniques & gender preference among married women of reproductive age group in UHTC field practice area of government

### Medical College, Bhavnagar

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#### Abstract

**Background:** Skewed sex ratio - major issue due to patriarchal social framework along with sex selective abortions, strong son desire & neglect of girl child in India. Today, with technological advancement in medical diagnosis, discrimination begins even before her birth. Hence present study tries to evaluate knowledge of sex-determination techniques & reasons for gender preference among married women of reproductive age group in an urban area of Bhavnagar.

**Methodology:** A community based, cross sectional study was conducted during August-October 2014 in an urban field practice area of Urban Health Training Centre (UHTC) which is facilitated by Community Medicine Department, Government Medical College, Bhavnagar. Urban field practice area of UHTC is having total 1355 households, 10% of households (i.e. 135) were selected by systematic random sampling. One married woman of reproductive age group from selected household having at least one live child & willing to participate was selected randomly & interviewed using a semi-structured questionnaire. The information was collected regarding awareness of sex determination techniques & gender preference & analyzed using Epi Info Software 7.

**Results:** Awareness of sex determination practices among study subjects was good of which majority (73%) mentioned USG as method, majority (62.9%) knew place of sex determination as well as 98.9% women knew that sex determination is crime & 94.4% women were aware about penalty for the same. Very few women (31.1%) desired more children of which 50% women mentioned male child preference. Major reasons for male child were to carry forward family name, old age support & economic support.

**Conclusion:** Knowledge of sex determination techniques was good as well as strong male child preference were observed among study participants.

**Keywords:** gender preference, sex determination, urban area of Bhavnagar

#### Introduction

Sex ratio, an important social indicator measuring extent of prevailing equity between males and females in society, is defined as number of females per 1000 males. Changes in sex ratio reflect underlying socioeconomic, cultural patterns of a society. The number of female in age group of 0 to 6 years is termed as child sex ratio. As per Census 2011, total female sex ratio in India is 940 per 1000 males & female child sex ratio is 944 girl children per every 1000 boy children of the same age group <sup>[1]</sup>.

Desire for male child manifests so blatantly that parents have no qualms about repeated, closely spaced pregnancies, premature deaths and even terminating child before it is born. Birth of female child is perceived as a curse with economic and social liability <sup>[2]</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. Therefore the present study was conducted among married women of reproductive age group to assess awareness regarding sex determination and attitude towards gender.

#### Methodology

A community based, cross sectional study was conducted during August-October 2014 in an urban field practice area of UHTC which is facilitated by Community Medicine Department, Government Medical College, Bhavnagar. With assumption of 50% knowledge regarding sex determination techniques & 10% absolute error & applying it with 4pq/L<sup>2</sup>, sample size comes as 100. Urban field practice area of UHTC is having total 1350 households, so every 10th household was selected by systematic random sampling, hence 135 household were selected. One married woman of reproductive age group from selected household having at least one live child & willing to participate was selected randomly & after taking verbal consent, the respondent was interviewed using a semi-structured questionnaire. The respondents from the selected households, if not willing to give information, were counseled & if still not ready to participate, immediate next household was selected for the study. The information was collected regarding awareness of sex determination techniques & gender preference & analyzed using Epi Info Software 7.

**Results**

**Table 1:** Socio-demographic characteristics of study population (N=135)

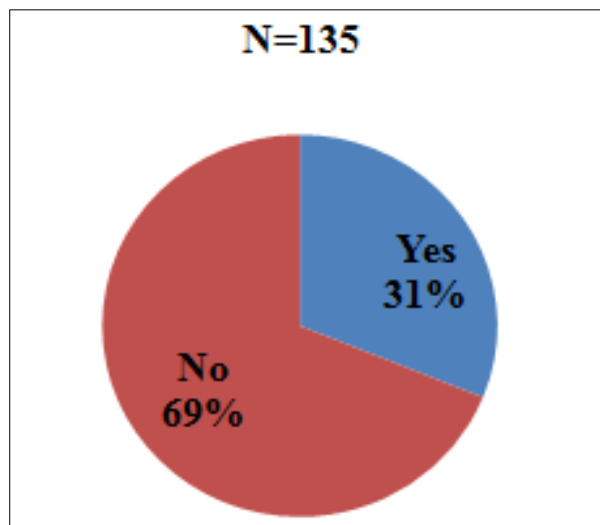
Variables		No. (%)
Age Group	≤20 yrs	06(04.4)
	21-30 yrs	86(63.7)
	>30 yrs	43(31.9)
Religion	Hindu	97(71.9)
	Muslim	38(28.2)
Education	Illiterate	11(8.2)
	Primary	46(34.1)
	Secondary	53(39.3)
	Higher Secondary and Above	25(18.5)
Occupation	Housewife	119(88.2)
	Other	16(11.9)
SE Class	I	05(03.7)
	II	22(16.3)
	III	49(36.3)
	IV	48(35.6)
	V	11(08.2)
Type of Family	Nuclear	57(42.2)
	Joint	78(57.8)

Table 1 shows that majority (63.7%) women from age group of 21-30 years, 71.9% women are belongs to Hindu families, very few (8.2%) women are illiterate, majority (88.2%) women are housewife, only 3.7% women belongs to socio-economic class I and 57.8% women belongs to joint family.

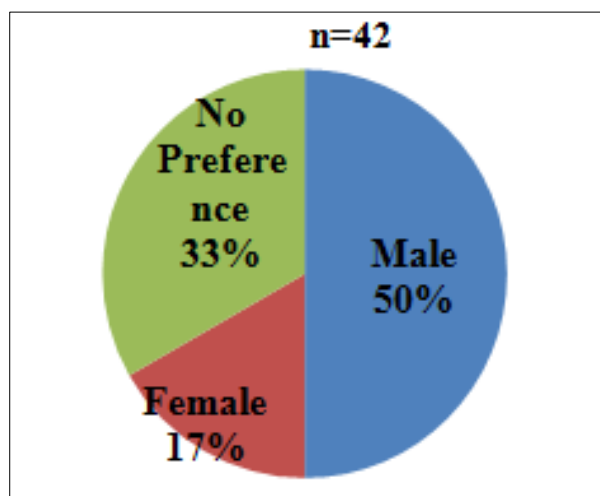
**Table 2:** Distribution of women according to knowledge about sex determination

Variables	No. (%)
<b>Knowledge about sex determination (N= 135)</b>	
Yes	89 (65.9)
No	46 (34.1)
<b>Methods by which sex determination can be done (n=89)</b>	
USG	65 (73.1)
Don't know	24 (26.9)
<b>Places where sex determination can be done (n=89)</b>	
Yes	56 (62.9)
Don't know	33 (37.1)
<b>Aware that Determining sex of child considered crime (n=89)</b>	
Yes	88 (98.9)
No	01 (1.12)
<b>Aware of Legal punishment for determining sex of child (n=89)</b>	
Yes	84 (94.4)
No	05 (5.6)
<b>Who is punishable for determining sex of child (n=84)</b>	
Patients	25 (29.8)
Doctors	08 (9.5)
Both(Patients + Doctors)	45 (53.6)
Both + Closure of nursing home	6 (7.1)

Table 2 shows that 65.9% women were having some knowledge about sex determination of which 73.1% knew about USG as a method of sex determination, 62.9% knew the place where sex determination can be done, 98.9% knew that sex determination is a crime and 94.4% of them knew about the punishment for the crime. Women who aware about place of sex determination, 78.6% women mentioned that it is a private hospital, 8.9% mentioned government hospital and 12.5% mentioned that government and private both hospitals.

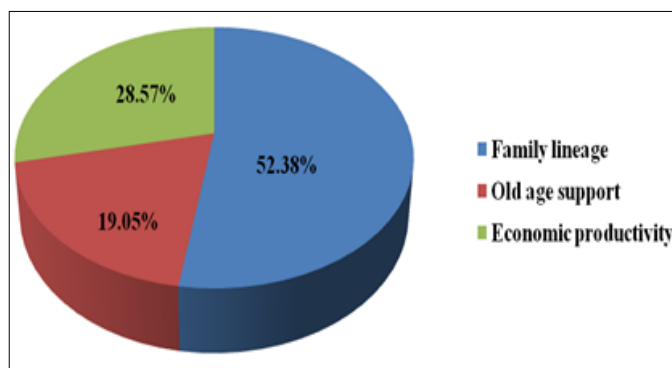


**Fig 1:** Desire more children (N=135)



**Fig 2:** Gender preference for those willing more children (n=42)

In our study, few women (31%) desired for more children. Among these women who desired more children, almost 50% women preferred son as the next child. (Fig 1 & 2).



**Fig 3:** Reasons for Preference among the women, preferring male child (n=21)

Fig 3 shows reasons for male child preference. Family lineage was the most common reason mentioned by most of the women (52.38%), followed by need for male child to provide old age support (19.05%) & economic productivity (28.57%).

**Table 3:** Association between Socio-demographic characteristics and Awareness regarding sex determination

Variables		Awareness about Sex determination		P-Value	Odds Ratio (95% CI)
		Yes	No		
Age group	≤20-30 years	61	31	0.892	1.054
	>30 years	28	15	NS	(0.492,2.257)
Religion	Hindu	65	32	0.671	1.184
	Muslim	24	14	NS	(0.541,2.593)
Education	Literate	88	36	< 0.001	24.44
	Illiterate	1	10	S*	(3.017,198.010)
Occupation	Housewife	80	39	0.384	1.595
	Other	9	7	NS	(0.553,4.601)
Socio Economic Class	Upper	60	16	0.002	3.879
	Lower	29	30	S	(1.829,2.8.224)

S= Significant NS=Not significant  
\* indicates P-value with Yate’s correction.

There is significant association between education and socio-economic class and awareness regarding sex determination. (Table 3)

**Table 4:** Gender preference of the women desiring more children according to gender of the living children

		Living Children						
		One female child (n=27)	Two female child (n=7)	Three or more female child (n=6)	One male child (n=39)	Two male child (n=18)	Three or more male child (n=2)	Other (n=36)
<b>Desire</b>		21	5	2	13	0	0	1
<b>Preference</b>	<b>Male child</b>	14 (66.67%)	5 (100%)	0	1 (7.69%)	0	0	1 (100%)
	<b>Female child-</b>	0	0	0	7 (53.85%)	0	0	0
	<b>No preference</b>	7 (33.33%)	0	2 (100%)	5 (38.46%)	0	0	0

Table 4 shows that as number of living female children increases preference for next child to male increases while women who have already two or more number of living male child there is no male child preference for next child.

**Discussion**

A sloka of Atharvaveda says “The birth of a girl, grant it elsewhere. Here, grant a son.” Thousands of years later, this thing stands very true in modern times as well. In the modern times, this thought is made possible with availability of sex determination techniques of which ultrasonography being cheap & easily available. In spite of Government’s efforts by implementation of PCPNDT Act, various programs to restore the rights and dignities of girl child, sex ratio is still declining and it is alarming female feticide.

In our study, knowledge of sex determination was good (65.9%). The findings obtained by Bedre R et al [3] in his study done in an urban slum of Maharashtra is almost similar to our study (58.8%) while study done by Khandelwal V et al in MP [4], it was more (79%).

Among the methods of sex determination techniques, USG is more popular method. In our study most of the women (73%) mentioned USG as a method of sex determination technique and similar findings were observed in a study by Metri SS in Hassan District, South India [5].

In the present study, there was good knowledge that sex determination is crime as 98.9% knew it and 94.4% knew about the punishment for the crime. Similar results were found in a study by Bedre R et al [3] as 92.4% knew that sex determination is a crime however very few (28.5%) knew about the punishment for the crime. Khandelwal V et al reported that 69.5% of women were aware of fact that foetal sex

determination is a crime and 66.5 % of women knew about the punishment for sex determination which is very less than our study [4].

This study reports that very few women (31.1%) desired more children of which 50% women mentioned male child preference. Similar results was obtained in a study by Bedre R et al in Maharashtra [3] wherein overall male child preference was seen in 49.6% among women and in a study by Khandelwal V et al [4], male child preference observed was 40%.

The present study shows that major reasons for male child were to carry forward family name, old age support & economic support. In a Study done by Bedre R et al in Maharashtra [3], Khandelwal V et al in MP [4] and study by Metri SS [5] in Hassan District almost similar reasons were found.

**Conclusion**

Awareness regarding sex determination techniques was good as well as strong male child preference were observed among study participants. Common reasons for the preference for the male child among the women were family lineage, old age support & economic productivity.

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