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Original Research Article

Knowledge and attitude of men towards sex determination and PCPNDT act in the field practice area of a medical college in coastal Karnataka

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ABSTRACT

Background: Usage of modern sophisticated diagnostic techniques for sex determination and preconception sex selection has been attributed to sex selective abortions and thus, may be a major contributor in decline of sex ratio.
Methods: A cross-sectional study was conducted amongst married male patients attending OPDs of Rural Health Centres of K S Hegde Medical Academy over a period of 3 months (July 2016–September 2016) using a semi-structured and validated questionnaire which contained information on demographic characteristics, knowledge and attitude of married men towards sex determination and PCPNDT act. Sample size: 200. Data was analysed using SPSS 21.
Results: Among 200 married men, about 62% of the illiterate knew about sex determination, whereas awareness among college passed out and graduates were 95% and 85% respectively. Awareness about PCPNDT act was 42% in graduates whereas none of the illiterates were aware and 60% of the subject thought sex determination should be punishable. 45% of them did not have any gender preference.
Conclusions: This study shows that the knowledge and attitude of participants was better with a higher educational status. Thus, the illiterate part of society needs more awareness about the sex determination and PCPNDT act.

Keywords: Sex determination, PCPNDT act, Sex ratio, Men

INTRODUCTION

Desire for a male child manifests so blatantly that parents have no qualms about repeated, closely spaced pregnancies, premature deaths and even terminating a child before it is born. Birth of female child is perceived as a curse with economic and social liability. Advances in technology and diagnostic facilities have opened up avenues that lead to increased mortality for the girl child and serious disturbances in sex ratio. Sex determination is now within the reach of people because of ultrasounds, being cheap and easily accessible.[1]

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. Sex ratio has been declining in India since 1901. It has been estimated at 933 in India as per the census conducted in 2011.[2]

In 1994, the Government of India passed the Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act with the aim of preventing female feticide. The implementation of this Act was slow and it was later amended and replaced in 2002 by the Pre-conception and Pre-natal Diagnostic Techniques (Prohibition of Sex

Selection) act without strict and proper implementation. Contravening the provisions of the act can lead to a fine of Rs 10,000 and up to three years imprisonment for a first offence, with greater fines and longer terms of imprisonment for repeat offenders.[3] Very few studies have been conducted regarding men and PC and PNDT act. Thus this study was conducted in men in the rural community to find out their knowledge and attitude regarding the Act and sex determination with the following objectives: a) to assess the knowledge and attitude of men towards sex determination in the field practice area of tertiary care hospital. b) to assess the knowledge and attitude of men towards PCPNDT act in the field practice area of a tertiary care hospital.

METHODS

The present cross-sectional study was conducted in the field practice area of a Medical college in coastal Karnataka. The study population included married men attending the outpatient departments of the rural health centers. The participants were selected using convenient method of sampling based on the inclusion and exclusion criteria. The study participants were briefed about the nature and the purpose of the study, and were included in the study after taking written informed consent. Out of the 18 rural health centres attached to the medical college, 2 were randomly selected. A questionnaire was made specifically for this study based on similar studies.[4,5] The details obtained were entered into an excel sheet and analyzed using Statistical Package for Social Sciences (SPSS) version 22 and the collected information was summarized using descriptive statistics. Pictorial diagrams were used as required. Ethical clearance was obtained from the Institutional Ethical Committee.

All the eligible participants were interviewed personally after explaining to them about the procedure in detail. A total of 200 patients were interviewed. The Data was collected using a semi structured validated questionnaire which consisted of:

Section A

Socio-demographic characteristics including name, age, sex , education, religion, marital status, education, occupation and socio-economic status (using modified BG Prasad classification.), number and sex of living children and address.

Section B

Knowledge about pre-natal sex determination and PCPNDT act. It included questions regarding whether participants were aware of sex determination and the places where it's done, knowledge about various methods used to detect it, whether they know about the legal punishment for sex determination and also questions regarding knowledge about the sex ratio, its consequences and PCPNDT act.

Section C

Attitude towards prenatal sex determination and PCPNDT act. It included questions like if they think doing sex determination is right or not, whether it should be punishable, law should be strictly enforced or not, whether the family and the doctor performing it should be punished or not, what their gender preference is, will they prefer to know the sex of their unborn child and why, and if they would terminate it if they found it to be a female child or not.

In addition to quantitative methods using cross sectional designs, we used qualitative research methods to discover key domains of attitude towards sex determination and PCPNDT Act among participants. Focus groups discussions were used to capture the qualitative data related to knowledge and attitude of married men. This study helped to identify salient domains of gender preference from the narratives of the study participants and analysis of these helped to link them together to understand their attitude towards sex determination and PCPNDT act.

Focus group discussion (FGD) participants were recruited from male population visiting rural health center of tertiary care hospital for routine checkups. The inclusion criteria were married men willing to participate in the study with informed written consent. After meeting eligibility criteria they were invited to sign one more consent form to join FGDs. Two FGDs were conducted among 20 men, tape recorded and themes analyzed to identify domains knowledge and attitude. A trained moderator conducted the FGDs.

The recorded discussions were translated to English and core statements were identified which indirectly indicate the key words representing the attitude and perception of study subjects.

RESULTS

About 200 married men over a period of 3 months (July 2016 to September 2016) attending the OPD at rural health centres of KSHEMA were interviewed after taking their written consent. The study subjects were interviewed separately, away from other patients, to maintain their privacy and comfort level in answering the questions. Majority of the men belonged to low socio-economic status according to modify B.G Prasad classification (May 2016) and most of them were working (96%).

Most of the men (65%) were in the age group of 31-40 years followed by men in the age group of 41 years and above (30%) and 18-30 years (5%). Also 26 (13%) were illiterate, 60 (30%) went to primary school and 52 (26%) studied till senior secondary school and 48 (24%) went to college and only 14 (7%) had completed their graduation. 56% were Hindus, Muslims were 30% and Christians

constituted 14% of the study population. Our study shows that out of the total subjects (Figure.1), 45% of the men did not have any preference, whereas preference to male child was given by 11%, 16% wanted female child and 28% did not want any children. The main reason for male child was propagation of family name (60%), 'Son takes care of parents in old age' (14%), dowry (6%), 'females are economic liability' (20%), 4% said it was because of pressure from other family members. Figure 2 shows that preference for male child was more in class IV socio economic status, this is an observatory finding we need a bigger sample size to see the association between the two. Among the men who participated in this study (Figure 3).

Only 27% were aware of decline in sex ratio, only 24% knew that the sex determination could be done by USG. Out of the 200, 158(79%) were aware of sex determination but only 18(9%) were aware of PCPNDT act.

Knowledge that sex determination is a punishable offence (44%), and the extent of punishment (6%) was known to very few men.

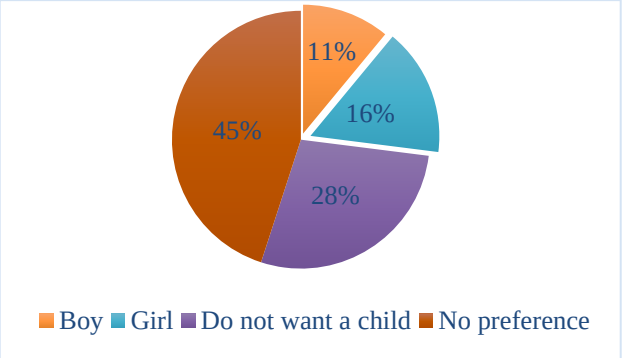

Figure 1: Gender preference among study subjects (N=200).

Table 1: Education and awareness regarding sex determination among study subjects (N=200).

Education	Aware		Not aware		Total
	Frequency	Percentage (%)	Frequency	Percentage (%)	
Illiterate	16	62	10	38	26
Primary school	42	70	18	30	60
Senior sec school	42	80	10	20	52
college	46	95	2	5	48
Graduate	12	85	2	15	14

Table 2: Education and PCPNDT act awareness among study subjects (N=200).

Education	Aware		Not aware		Total
	Frequency	Percentage (%)	Frequency	Percentage (%)	
Illiterate	0	0	26	100	26
Primary school	4	6	56	94	60
Senior sec school	6	12	46	88	52
college	20	42	28	58	48
Graduate	6	42	8	52	14

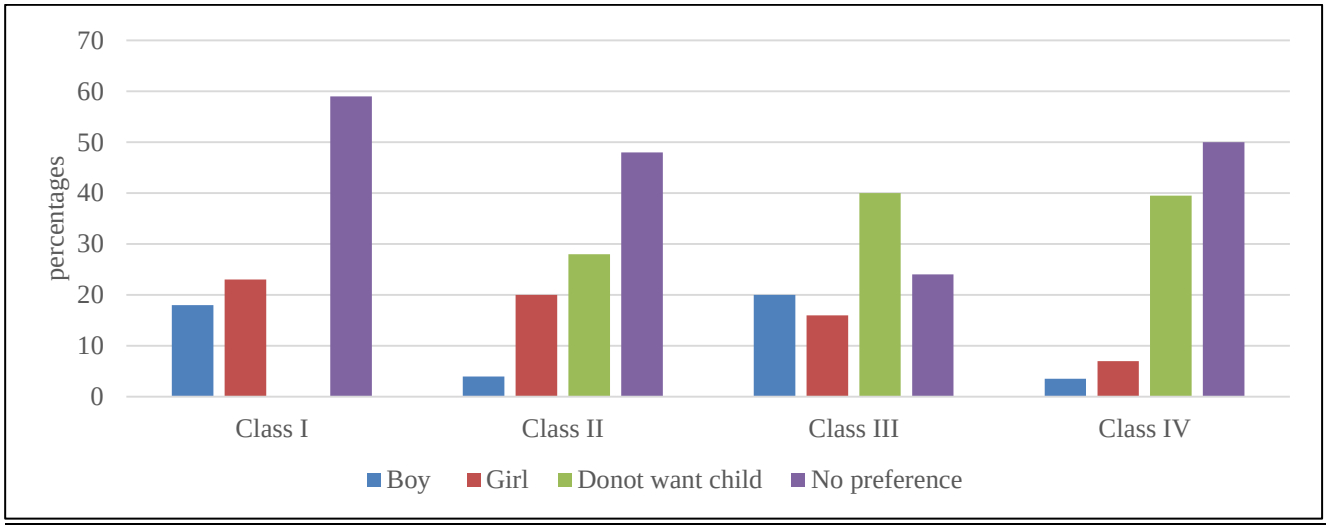

Figure 2: Socio economic status and gender preference among study subjects (N=200).

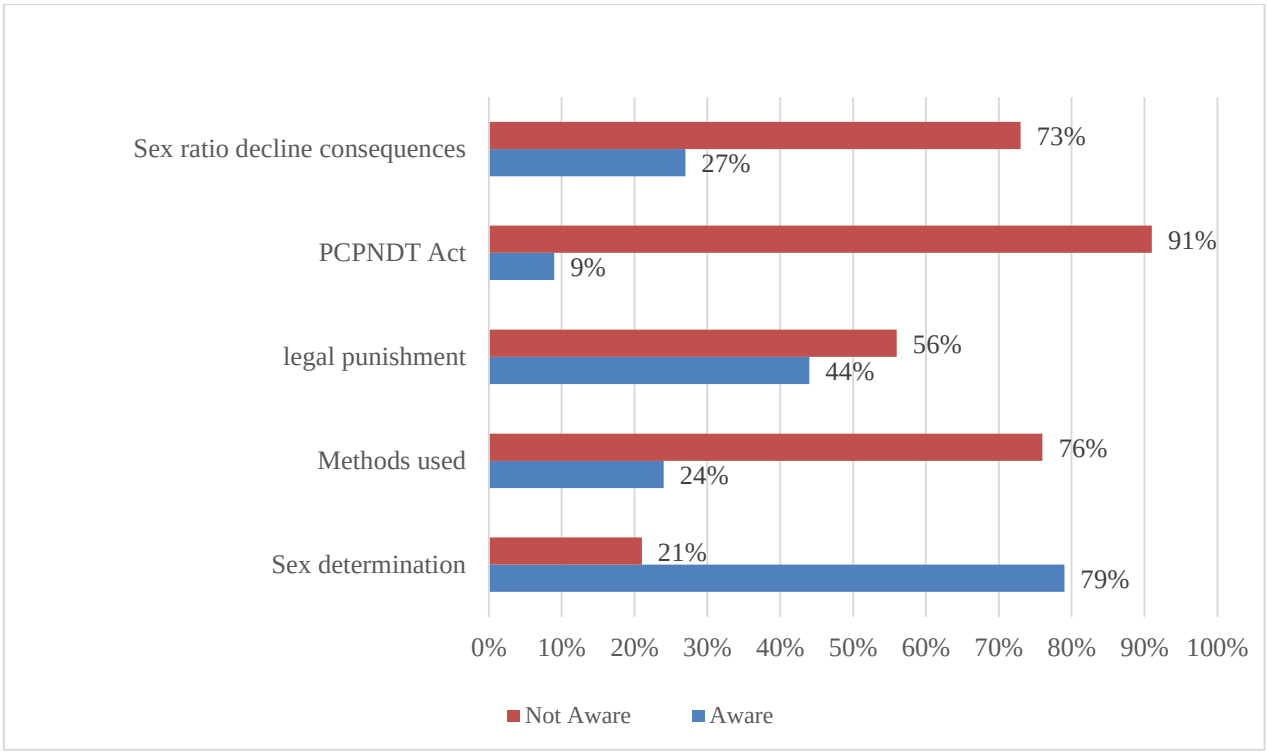

Figure 3: Knowledge regarding sex determination and PCPNDT act among study subjects (N=200).

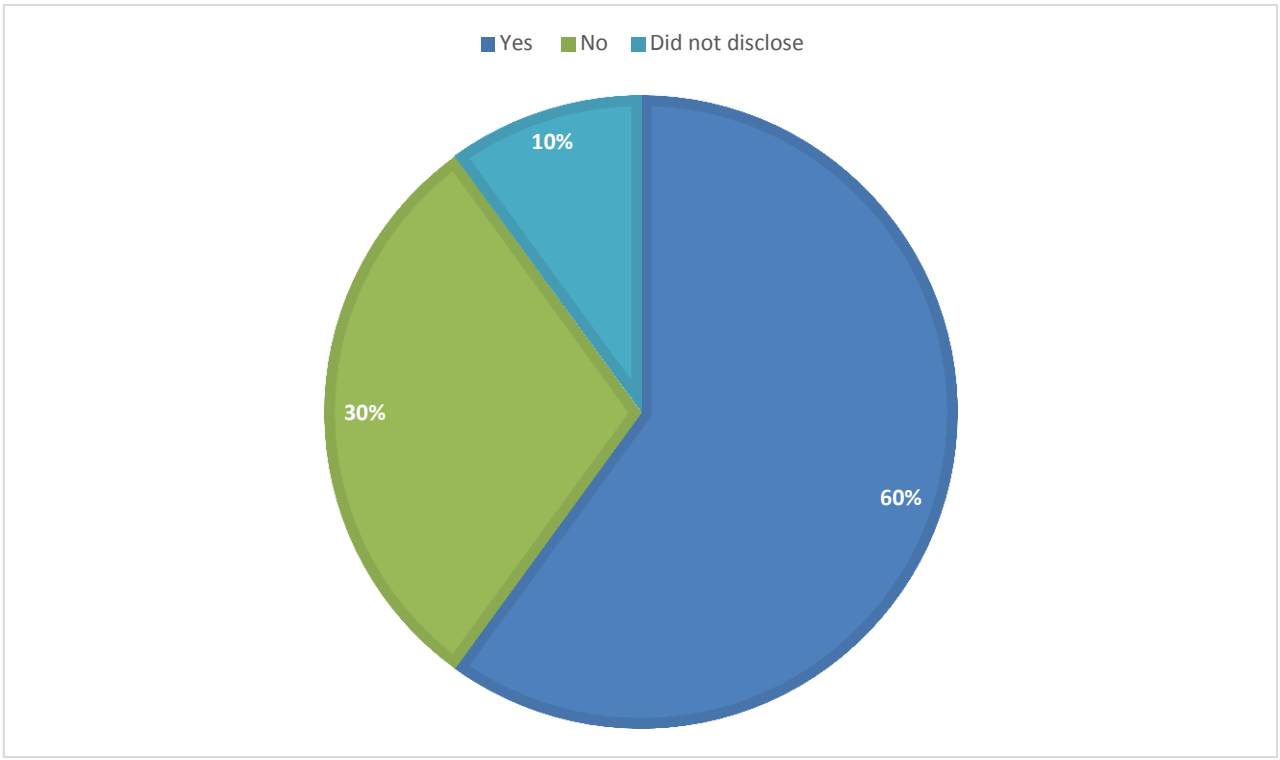

Figure 4: Attitude towards sex determination among study subjects (N=200).

Among 200 men, about 62% of the illiterate knew about sex determination (Table 1) whereas awareness among college pass out and graduates was 95% and 85% respectively. Awareness about PCPNDT Act was 42% in graduates whereas none of the Illiterates were aware (Table 2). This was found to be statistically significant by Chi square test (p value =0.011). Relationship between religion and knowledge was not found to be statistically significant.

During attitude assessment (Figure 4) 60% of the subjects thinks sex determination should be punished whereas 10% did not disclose their opinion. Figure 5 shows that majority of the study participants i.e. 158 (79%) thought that sex determination is not right, whereas 10% did not disclose their opinion, 130 (65%) thought that laws should be strictly enforced, 27% didn't think it should be enforced and 8% did not disclose their opinion. 46% of the subjects thought doctors performing and families undergoing sex determination should be punished. Only 1% admitted that they will opt for foeticide if sex of the unborn child is found to be female.

During focus group discussion participants shared their experiences and views which indirectly showed their attitude towards PCPNDT act and sex determination.

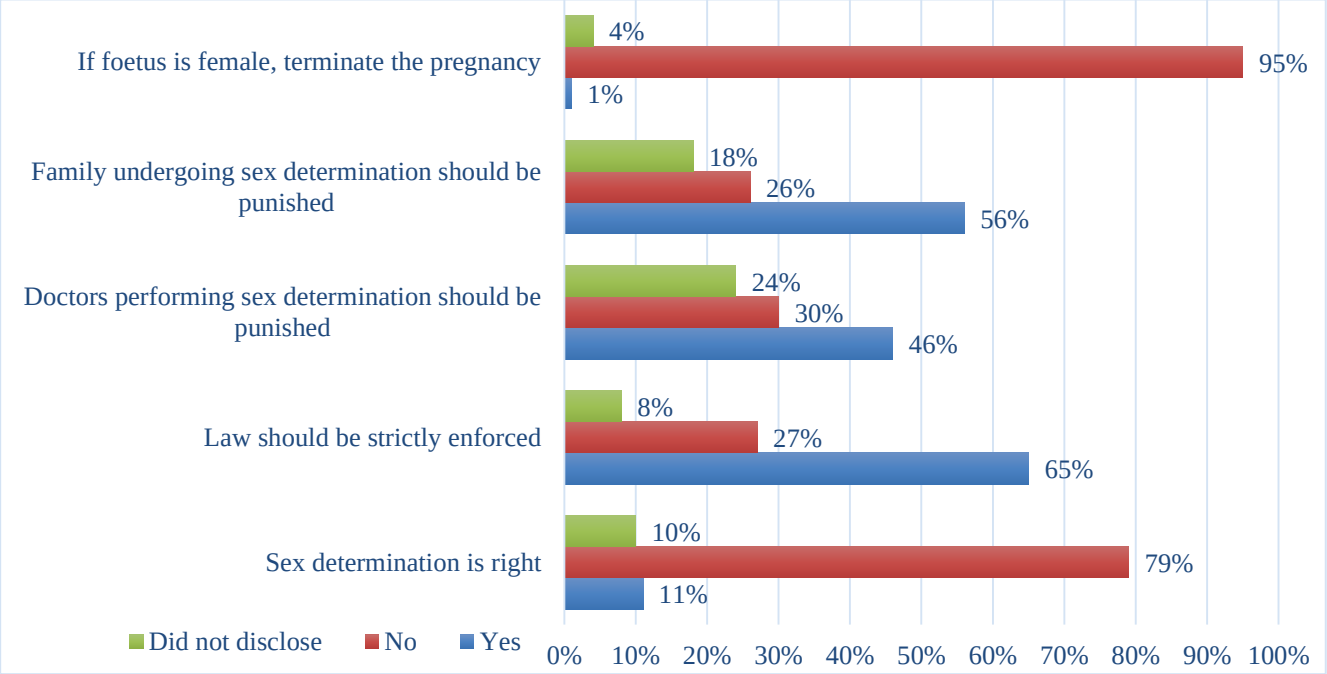

Figure 5: Attitude regarding sex determination and PCPNDT act (N=200).

Attitude of the participants towards PCPNDT and sex determination

Most of the participants in our study reported reason for prenatal sex determination is because preference to male child. When asked about why they want male child the reason they give is that they were already having female children before and now to balance the family they desire a male child, few of them did not mentioned the reason for their male preference. Among the others reasons were that "boys carried out the social responsibility", "propagate the family name and they can depend on son in old age". Few of the participants mentioned that "boys propagate the family name", and "son takes care of parents in old age", sons are needed to do the rituals after parent's death", "females are economic liability" indicates deep rooted cultural and social believes in the community despite of many awareness programs for gender equality.

Experiences at health care facilities

During the discussion one of the participants shared his experience "I wanted to do prenatal sex termination for my second child but doctors refused it saying that it's a crime and I could go to jail for that". This shows fear in people against strict laws of PCPNDT act. These results help us in better understanding of knowledge and attitude of study participants at deeper level. Some of the participants did not disclose their preference over gender of unborn child and their opinion regarding PCPNDT act, indicating the sensitiveness of the topic and fear among people to share their views.

DISCUSSION

There are very few studies that have been done on this topic, and all the available studies were done in women as study subjects. There were no studies found with male study subjects. We have taken men as study subjects because in India, mostly in rural areas, they are the decision makers in the family and their opinion and attitude affects all the major decisions in the house whether it is the matter of buying a house or aborting a child. So we have focused to find out the level of knowledge and attitude they have about prenatal sex determination and PCPNDT act. In this article we have compared our results with similar studies done in women because of lack of studies available on men.

In this study 24% of the subjects were aware regarding knowledge about sex determination methods. A study

done in pregnant women by Vinod et al in 2013 shows that 74% of the subjects knew about sex determination methods.[6] It was 11.66% in a study done by Puri et al in Chandigarh.[1]

We have also found that about 79% of the men were aware about prenatal sex determination whereas it was 73.5% in a study done by Pallavi et al and 91.7% in a study done by Kumar on pregnant women in Mangalore (2014).[2] The reason given was high literacy rate and educational level in Mangalore. A study done by Kansal et al in Meerut shows 84.7% awareness.[7]

However, in spite of tremendous efforts by the government to implement legal rules and regulations regarding female feticide and prenatal sex determination, knowledge about PCPNDT act was found to be only 9% in the study subjects. Great difference was found in a study done by Pavithra et al which was 59%. This wide difference may be due to different study settings (urban and rural) and different population.[8] One more study by Mishra et al in Andhra Pradesh (2015) shows it to be 43%.[9] Present study shows an association between education and awareness about PCPNDT act which was statistically significant (p=0.011).

Around 44% of the men in the present study knew that prenatal sex determination is a punishable offence. This was found to be 74.4% in a study done by Kumar, which may again be due to difference in urban and rural population.[2] It was 51% in study done by Vinod.[6]

While assessing the knowledge about decline in sex ratio in our country, we have found about 27% were aware of decline in sex ratio. A study done in Bangalore by Pavithra showed 37% knowledge.[8] Similar findings were found in a study done by Ghose et al.[10] In the present study, subjects were also aware about the long term consequences of decline in sex ratio like 'not getting a bride to get marry to a man', 'to run families', and 'an increase in violence against women'. Similar findings were given by Vinod et al.[6]

Change in attitude may lead to change in the behaviour and practice of society. Knowledge may or may not lead to change in attitude. While assessing the attitude in the study population, we found that 79% of the subjects think prenatal sex determination is right. Majority of them (45%) did not have any preference for the gender of their unborn child, only 11% of men wanted a male child but we got different findings from other studies. A study done in Maharashtra by Vinod et al showed 35% male child preference.[6] Also Kansal et al reported son preference in only 22.27% women from Meerut.[7] This difference is due to high education and job opportunities with time.

Study done by Vadera et al in Gujarat showed male preference more in rural women (70%) than urban and it was statistically significant.[4]

The main reason given for male preference in our study was 'propagation of family name (60%) and similar reasons were given by Vadera study.[4] No association was found between Socio-economic status and preference to male child.

In our study 1% of the Men admitted that they will go for foeticide if the sex of the unborn child was found to be female and Kumar (2014) was 0.8% whereas it was found to be much higher in other studies. [2] A study done by Vadera shows 20.51%, the difference may be due to the fact that at that time the literacy status was comparatively much lesser and also mass media played a significant role for increasing awareness over a period of time (from 2007 to 2014).[4]

Our FGD findings found to be similar to that of study conducted in Gujrat where male preference was one of the reason for prenatal sex determination.[11] The similar findings are also observed in the study conducted at Mahesana district. The cultural and social reason for male child was found to be similar in both the studies.

CONCLUSION

Infanticides, feticides, and sex selective abortions deprive millions of unborn girl children their right to live. To prevent this sex selective abortions in our society, people should realize that nowadays girls doing excellent in every field of life. Awareness about PC and PNDT ACT among people should increase and effective implementation of the Prenatal Diagnostic Techniques (PNDT) act should be ensured. Government as well as the community needs to work in collaboration to put an end to this shameful practice of female feticide. This study shows that the knowledge and attitude of participants was better with a higher educational status. Thus, health education and BCC is required in a continuous manner to help prevent female foeticide and improvement of sex ratio.

Limitations of the study

As this study was done in a rural health centre of a tertiary care hospital in South India, it cannot be generalised to the entire population. The limited sample size may have caused discrepancies in the result. And since the topic is controversial, study subjects might not have expressed their true opinions.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Nitte university ethical committee

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