International Journal of Community Medicine and Public Health
Pavithra MB et al. Int J Community Med Public Health. 2015 Aug;2(3):282-287
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20150483

Research Article

A study of gender preference, knowledge and attitude regarding prenatal diagnostic techniques act among pregnant women in an urban slum of Bengaluru

Pavithra M.B.[1]*, Sudeepa Dhanpal[2], Hamsa Lokanath[3]

[1]Department of Community Medicine, MVJ Medical College & Research Hospital, Bangalore, Karnataka, India
[2]Department of Community Medicine, The Oxford Medical College Hospital & Research Center, Bangalore, Karnataka, India
[3]Department of Community Medicine, Bangalore Medical College Bangalore, Karnataka, India

Received: 06 June 2015
Accepted: 07 July 2015

***Correspondence:**
Dr. Pavithra M.B.,
E-mail: pavi_mb@yahoo.co.in

ABSTRACT

Background: Preference for a son continues to be a prevalent norm even in modern India which is evident from the recent census report. The most alarming aspect is a further fall in child sex ratio (0-6 years) from 927 in 2001 to 914 in 2011. Sex selective abortion is the major factor responsible for this unfavorable trend. The objective was to assess the knowledge, attitude and practice of pregnant women regarding Prenatal Diagnostic Techniques (PNDT) Act and gender preference.
Methods: A cross-sectional study was carried out in100 pregnant women attending the antenatal clinics of Sulthanpalaya Urban health center, Bangalore. A pre-designed and pre-tested questionnaire was used to get information. Data was analyzed by using Statistical Package of Social Sciences (SPSS) 16.0.
Results: In this study 53% showed preference for a male child. Only 37% were aware about the decline in sex ratio and 59% knew that PNDT act existed and sex determination was legally wrong. Over all 41% had poor knowledge. Whereas 43% had average and 16% had good knowledge and 74% had the right attitude in this study. Good knowledge about PNDT act had significant influence on the attitude of the people ($p< 0.05$).
Conclusion: The falling ratio of girl child is a matter of grave concern. Effective implementation of the PNDT Act in addition to spreading awareness about this act among people is the need of the hour. Moreover, it is necessary to gear efforts against the cultural, economic and religious roots of this social malady by woman empowerment.

Keywords: Sex Ratio, PNDT act, Female Feticide, Gender preference

INTRODUCTION

"The birth of a girl, grant it elsewhere. Here grant a son"

A prayer of every parent in India.

'Preference for a son', a tradition of ancient India still continuous to be a prevalent norm in modern India. With the prevailing son mania in the country it is not surprising that right from the first census of 1871, India has consistently shown an abnormal sex ratio (940 women for every 1000 men).But the most alarming and disturbing aspect of 2011 census is that the child sex ratio which is a measure of female/ male children below 6 years is even lower (914 /1000) and has fallen from 927 girls/1000 boys in 2001 and it is the lowest since 1947.[1]

Female infanticide is a well-known practice for centuries in India. With the availability of new technology of sex determination, the bias suffered by Indian females from

birth to the grave is extended now from womb to tomb. A steep decline in the sex ratio in recent years has coincided with an increased availability of ultrasound machines. These methods have rendered early sex determination inexpensive, feasible and easily accessible.[2] Major number of the abortions is being performed to terminate female fetus. More than 10 million female fetus have been aborted over the last two decades.

Lesser the number of women in the society, violence against them in all possible forms would increase to a greater extent. Such an atmosphere of insecurity would again lead to a situation where women will be confined within the four walls for security. Female literacy would fall further and women empowerment would become a farfetched dream. This will lead to a time when woman would be married to several men, a trend which is already in practice in some districts of northern India. Thus the issue of female feticide needs to be addressed urgently.

To prevent this practice of sex selective abortion using the prenatal diagnostic techniques, Government of India enacted the PNDT (Regulation and Prevention of Misuse) Act on 20.9.1994. Subsequently this Act has been amended in 2002 and 2003 to Pre-conception and Pre-natal Diagnostic Techniques (PC & PNDT), Prohibition of Sex Selection Rules. Increasing the awareness and knowledge of the people regarding the PC & PNDT, is a very important step in bringing down this malady of female feticide.

Hence this study was taken up to assess the awareness and attitude regarding PC & PNDT act among the pregnant womenand to study their gender preference and the socio cultural factors influencing them.

METHODS

This was a cross sectional study conducted in Sulthanpalya, urban health training center attached to Dr. B.R. Ambedkar medical college, Bangalore.

The study subjects were pregnant women attending the antenatal clinics of this center. The study was conducted from January 2012 to March 2012. During this period, pregnant women coming for antenatal check up were explained regarding the study and the first 100 pregnant women who gave consent to participate in the study were interviewed using a pre tested and pre structured questionnaire, it also included few open ended questions.

The variables that were included in the questionnaire to evaluate knowledge regarding PNDT were, awareness of declining sex ratio in India, various methods of intra uterine sex determination, knowledge regarding the availability and extent of punishment associated with misuse of PNDT act. A score of one to each right answer was given to quantify knowledge and then the scores of one, two and three were graded as poor, average and good knowledge respectively. We tried to assess the attitude of pregnant women with questions on willingness to determine the sex of the fetus in the current pregnancy, and on their action if sex of the fetus were opposite of what they want. Would they encourage a relative or a friend to do in- utero sex determination. The answer to the question "whether intra-uterine sex determination right?" was taken as a proxy variable for the attitude, 'Yes' being the wrong and 'No' being the right attitude.

IEC sessions regarding PC & PNDT act, decline in sex ratio and its consequences were organized in the UHC at the end of this study for all the pregnant women who attended antenatal clinic.

RESULTS

About 100 pregnant over a period of three months (Jan to March) women attending the antenatal clinic of Sulthanpalya urban health center were interviewed after taking their consent.

Majority of the women (98%) belonged to low socioeconomic status according to kuppuswamy classification and were house wives (97%), two women in this study group were coolie workers and one was working in a garment factory.

Most of the pregnant women were in the age group of 21-25 years (65%).There were 12 women in the age group of 18-20 years and 19 in the 26-30 years group, whereas 4 women were above 30 years of age. Only 10 % of the women were illiterate in this study group. Majority had high school education (49%) and only 7 were graduates.

Muslims constituted 51% of the study population whereas Hindus and Christians were 42% and 7% respectively. There were 39 primigravida and 61 multi gravida in this study group. Among these antenatal women 67% felt that two is the ideal number of children they wanted whereas 24% were in favor of 3 children. Only 7% desired one child and 2% wanted to have 4 children.

Our study showed that preference for a son was given by 58% of the antenatal women studied. Majority (64.3%) of the primigravida wanted their first child to be a son and only 20.5% wanted a daughter first. All (100%) women wanted to have their third baby as son after two daughters. Whereas 73.9% of women with first child as a daughter keenly wanted a son as their second child [Table 1].

The major reasons for this being for propagation of family name (52%), sons take care of parents in old age (23%), for lighting the pyre and performing cremation (6%), dowry (21%) and females are economic liability (9%). Pressure from other family members were given as a reason by 19% of women.

Table 1: Preference for son by different sex composition of previous children in the family.

No & sex of living children (n=100)	Preference for son (%)
None (n=39)	22(56.4)
One son(n=16)	7(43.7)
One daughter (n=23)	17(65.2)
Two sons(n=6)	0(0)
Two daughters(n=3)	3(100)
1 son 1 daughter(n=7)	4(57.1)
1 son 2 daughter (n=2)	2(100)
2 son 1 daughter(n=1)	0(0)
3 daughters (n=3)	3(100)

*figures in the brackets represents percentages

Preference to male child was higher among women in age group 18-20 years (64.3%) compared to the women of age group 21-25 years (43.3 %). Preference to male child was seen more in illiterate (100%) than literate (58%) and higher in women who had not had a son previously (77.5 %) than those who already had a son (22.4 %). These differences were statistically significant (p<0.05). Whereas preference to a son was not significantly associated with religion in this study (p = 0.17).

Among the pregnant women who participated in this study only 37% were aware about the decline in sex ratio. Majority (93%) of them were aware that sex determination of the fetus could be done through ultrasound. Only 59% knew that PNDT act existed and sex determination was legally wrong. Whereas the knowledge that sex determination is punishable (42%) and the extent of the punishment (16%) was known to very few women in this study group. Over all 41% had poor knowledge. Whereas 43% had average and 16% had good knowledge about the PNDT act.

Statistically highly significant relationship between the literacy status and knowledge regarding PC & PNDT Act was found [Table 2]. The present study also shows that there is a relationship between knowledge regarding PC & PNDT Act with Parity and age which is highly significant. But the relationship between religion and knowledge was not significant.

During assessment of attitude [Table 3] it was found that 74% of the women had right attitude and 26% of the women had wrong attitude in this study. The only variable which was significantly associated with attitude was knowledge regarding PC & PNDT Act (p=0.0001).

Table 2: Knowledge of PNDT.

Characteristics	Knowledge			Total	P value
Age in years	Poor(n=41)	Average(n=43)	Good(n=16)	(n=100)	
18- 20	10(83.4)	1(8.3)	1(8.3)	12	
21-25	30(46.1)	32(49.2)	3 (4.6)	65	P<0.01
26-30	1 (5.2)	8(42.2)	10 (52.6)	19	
>30	0(0)	2(50)	2(50)	4	
Education	Poor(n=41)	Average(n=43)	Good(n=16)	(n=100)	
Illiterate	9(90)	1(10)	0(0)	10	
Primary school	9(37.5)	8(33.3)	7(29.2)	24	
High school	21(42.8)	23(47)	5(10.2)	49	P<0.001
Secondary school	2(20)	7(70)	1(10)	10	
Graduate	0(0)	4(57.2)	3(42.8)	7	
Parity	Poor(n=41)	Average(n=43)	Good(n=16)	(n=100)	
Primi	24(61.6)	11(28.2)	4(10.2)	39	P<0.001
Multi	17(27.9)	32(52.5)	12(19.6)	61	
Religion	Poor(n=41)	Average(n=43)	Good(n=16)	(n=100)	
Hindu	15(35.8)	20(47.6)	7(16.6)	42	
Muslim	22(43.2)	20(39.2)	9(17.6)	51	P>0.05
Christian	4(57.2)	3(42.8)	0(0)	7	

*figures in the brackets represents percentages

Table 3: Attitude on sex determination.

Characteristics	Attitude		Total	P value
Age in years	Right(n=74)	Wrong(n=26)	(n=100)	
18-20	8(66.6)	4(33.4)	12	
21-25	45(69.2)	20(30.8)	65	p>0.05
26-30	17(89.5)	2(10.5)	19	
>30	4(100)	0(0)	4	
Education	Right(n=74)	Wrong(n=26)	Total (n=100)	
Illiterate	5(50)	5(50)	10	
Primary school	18(75)	6(25)	24	
High school	35(71.4)	14(28.5)	49	P<0.05
Secondary school	9(90)	1(10)	10	
Graduate	7(100)	0(0)	7	
Parity	Right(n=74)	Wrong(n=26)	Total (n=100)	
Primi	25(64.2)	14(35.8)	39	p>0.05
Multi	49(80.3)	12(19.70	61	
Religion	Right(n=74)	Wrong(n=26)	Total (n=100)	
Hindu	31(73.8)	11(26.2)	42	
Muslim	39(76.4)	12(23.6)	51	p>0.05
Christian	4(57.2)	3(42.8)	7	
Knowledge	Right(n=74)	Wrong(n=26)	Total (n=100)	
Poor	20(48.8)	21(51.2)	41	
Average	38(88.4)	5(11.6)	43	P<0.001
Good	16(100)	0(0)	16	

*figures in the brackets represents percentages

In our study 23% of women expressed that this PNDT act should be removed as they were very eager to know the sex of the child and then decide to continue the pregnancy and 18% admitted that they will go for female feticide. The inclination to female feticide was higher in women who had two girl children earlier.

In our study 59% were aware about consequences of female feticide. Consequences of female feticide expressed by these women were: 'men won't find bride', 'families can't be run', lead to an all-male family and increase in violence against women. The awareness of consequences of female feticide grew with literacy status (p< 0.001).

DISCUSSION

During the study period over 256 pregnant women visited for ANC in Antenatal OPD and out of these first 100 antenatal women were interviewed who were between the age group of 18-49 years and gave the consent for interview.

Our study showed that preference for a son was expressed by 58% of the antenatal women studied very similar to studies conducted by Puri et al[3] where 56% women and by Vaderaet al[4] where 58.5% of the women expressed preference for a son. Similar kind of preference has been observed in different parts of the country evident from studies of Mumbai, rural Bangalore and other states.[5-8] The preference for bearing sons - not eroded despite of the tremendous economic strides India has taken through liberalization and globalization as evident from these studies.

When asked about ideal number of children they desire in the family majority (67%) felt two is the ideal number of children compared to only 7% who preferred only one child. Which is similar to the observations made by Puri et al in their study. Where About two-third intended to have two child norm as compared to 3.2% who opted for one child and 13.2% for more than three children.[3] In our study 26% of the women expressed desire to have three or more children if there are no sons in the family. In an effort to have sons, many couples still continue to have children after achieving their desired family size and parents have no qualms about repeated, closely spaced pregnancies and even terminating child before it is born for their desire to have a son.

The important reasons the women in our study gave for their son preference were similar to those found in many other studies.[3,4,8] Major factor is the economic utility of sons. Sons are more likely than daughters to provide family with working hand and earn income, and support their parents during old age. Another important advantage of having sons is their socio-cultural utility means having a son is essential for the propagation of the family line. According to Hindu custom, sons are needed to light the funeral pyre of their parents and to perform other rituals. Daughters are considered as an economic liability to the parents mainly because of the heavy dowry demanded

during her marriage and they become a member of their husband's family after marriage.

The preference to male child was higher in women with no previous male child similar to the observations made by Puri et al.[3] and Vadera et al (65%)[4] who found that preference to son was higher among women having no male child than those already having a male child. The difference was seen to be statistically significant

While assessing the knowledge about decline in sex ratio in our country we observed that only 37% were aware about declining sex ratio similar to observations made in a study by S. Ghose et al.[9] Ironically a large number 93% were quiet updated about the facility of prenatal sex determination and also they knew that it is determined by USG technique similar to the observations made by Srivastav et al[10] and also in a study conducted in Pondicherry[9]

However in spite of tremendous efforts by government to implement legal rules and regulations regarding female feticide and prenatal sex determination only 59% pregnant women in our study had ever heard of PNDT Act. Similar to study in Bikaner where 52.4% of the antenatal women were aware of PNDT act.[11] The awareness regarding the act was higher in our study compared to Srivastav et al in UP where only 32% were aware of PNDT act.[10] The reason for higher awareness in our study may be that the Srivastava study was done one decade earlier in 2001 and at that time the literacy status was comparatively much lesser and also in the last decade (2001-2010) mass media has played a significant role for increasing awareness.

In our study the knowledge that sex determination is punishable (42%) and extent of punishment (16%) was known to very few women. In a similar study from Chandigarh, 65% of the pregnant women considered determining sex of an unborn child as a crime, but only 16% were aware that it is punishable under the law.[3]

Over all knowledge regarding PNDT act was less in our study compared to knowledge of women in Pondicherry. High literacy status of women in Pondicherry (74.13% for females) may have played a role[9]. Our study clearly shows that unawareness regarding PNDT Act and preference for male child was significantly associated with the literacy status of females similar to results observed by Srivastav et al in UP.[10]

While studying the attitude of pregnant women towards the PC & PNDT Act S Ghose et al[9] observed that a greater proportion (74.3%) of the multipara, who is older in age had the Positive attitude as compared to the primipara (67.2%) which though not significant was an important observation. Similarly in present study an increasing trends of right Attitude was seen with increase in parity and age though the difference of right Attitude about PC & PNDT Act with Parity, age and religion was not statistically significant in our study.

Analyzing education and attitude S. Ghose et al[9] and Khatri M, et al[11] in their study showed that up to graduation level, increase in education is accompanied with an improvement in the attitude in these ante-natal women. In our study we observed that there is increasing trends of right attitude about PC & PNDT Act is seen with increasing Literacy status. The difference of right attitude about PC & PNDT Act with Literacy varies between 50% among illiterate to 100% among literates. These observations are statistically significant. The reason for this right Attitude among the more literate women may be that educated women are in the favour of gender equality and are against sex selection.

The only variable which showed highly significant association with right attitude in our study was knowledge regarding PC & PNDT act (p=0.0001). Increase in knowledge of PNDT Act, had influenced the attitude of the antenatal women in the positive direction in our study similar to the findings of S. Ghose et al[9].These findings revels that an increase in the awareness regarding the PC & PNDT act among people can significantly change their attitude and bring down sex selective abortions.

Among the pregnant women who participated in the study, 17% expressed their willingness to go for feticide if the sex of the child was a girl. This disturbing trend was also observed by B N Vadera et al,[4] in their study 20.51% admitted that they will go for female feticide while in Bikaner study 11.4% women confessed that they will go for female feticide either due to family pressure or because they already had female child[9] and 7.4% women agreed they will go for female feticide in a study conducted by Khansal et al[12]. Inclination for female feticide was more in women with previous girl child in all these studies. It is surprising that in spite of so much development and improvement in literacy status still the dislike for female child and women is groped in the society that is evident from our and many other studies.

Our study has shown a clear picture of current scenario of the female feticide and a strong desire for son among the women from urban slums. This calls for a need to educate women about gender equality and recommendations under PC& PNDT act in order to improve declining sex ratio in our country.

CONCLUSION

An artificially skewed sex ratio has major implications on the development and welfare of the country. It is a gross violation of basic human rights. Infanticides, feticides, and sex selective abortions deprive millions of unborn girl child their right to live.To prevent the malady of sex selective abortions in our society two things needs to be done, one to take steps to improve the status of women in the society and the other is to spread awareness about PC & PNDT ACT among people and ensure effective implementation of the Prenatal Diagnostic Techniques

(PNDT) Act. A combined effort to put an end to this shameful practice of female feticide by the Medical fraternity, Political leaders, Media, The law, Teachers and most importantly the community itself is the need of the hour.

ACKNOWLEDGEMENTS

I sincerely acknowledge the Management and the Principal of MVJ Medical College, Bengaluru and the Principal and Head of the Department of Community Medicine of Dr. B.R. Ambedkar Medical college, Bengaluru for their support for this work.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Office of the Registrar General and Census Commissioner, India. Census of India, Govt of India; 2011. Available from: http://www.censusindia.gov.in/ [Last accessed on 2015 may 23]
2. Bardia A, Paul E, Kapoor SK, Anand K. Declining sex ratio: Role of society, technology and government regulation in Faridabad district, Haryana. Natl Med J India. 2004;17:207-11.
3. Puri S, Bhatia V, Swami HM. Gender preference and awareness regarding sex determination among married women in slums of Chandigarh. Indian J Community Med. 2007;1:60-2.
4. Vadera BN, Joshi UK, Unadakat SV, Yadav BS, Yadav S. Study on Knowledge, attitude and practices regarding gender preference and female feticide among pregnant women. Indian J Community Med. 2007;32:300-1.
5. Mutharayappa R, Arnold F, Roy TK. Son preference and its impact on fertility in India, National family health subject reports no. 3, Mumbai: International Institute for population sciences.
6. Malhi P, Raina G, Malhotra D. Preference for the sex of children and its implications for reproductive behaviour in Urban Himachal Pradesh 1999;23-9.
7. Malhi P. Influence of gender preference for children on fertility behaviour: A comparative study of men and women in Haryana 1995;53-7.
8. Suwarna M, Vaishali G, Sudeepa D. Study about awareness regarding pre-natal sex determination and gender preference among antenatal women in rural Bangalore. Indian Journal of Public Health Research and Development. 2013;4:222-6.
9. 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.
10. 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. Nat J Commun Med. 2011;2:273–6.
11. Khatri M, Acharya R, Sharma G. Knowledge, Attitude and Practices (KAP) Related to Pre-Conception & Pre-Natal Diagnostic Techniques (PC & PNDT) Act Among the Antenatal Women in Bikaner. 2011;1:121.
12. Kansal R, Khan AM, Bansal R, Parashar P. A hospital based study on knowledge, attitude and practice of pregnant women on gender preference, prenatal sex determination and female foeticide. Indian J Public Health. 2010;54:209–12.

Cite this article as: Pavithra MB, Dhanpal S, Lokanath H. A study of gender preference, knowledge and attitude regarding prenatal diagnostic techniques act among pregnant women in an urban slum of Bengaluru. Int J Community Med Public Health 2015;2:282-7.