

Original Research Article

Knowledge and attitude of pre-conception and pre-natal diagnostic technique act (PCPNDT) in pregnant women of Indore at tertiary referral center

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ABSTRACT

Background: This study was conducted to know the knowledge and attitude pregnant females have about pre-conception and pre-natal diagnostic technique act.

Methods: Study was conducted in Sri Aurobindo Institute of Medical Sciences, Indore, a tertiary referral centre, with a pre-structured questionnaire, consisted of 130 patients. Data collected was reviewed and statistically analysed.

Results: Mean age was 27-28 years, with large number 70(53.8%) of females weren't aware about the act but were willing to impose a strict law 124(95.4%), want to motivate others 112 (86.2%) and didn't want sex determination 114 (87.7%).

Conclusions: However, majority of females weren't aware of the act but did show positive attitude towards the law. Further a comprehensive publicised campaign is warranted to spread the awareness.

Keywords: Attitude, Pre-natal diagnostic technique act (PCPNDT), Pregnant women

INTRODUCTION

The sex ratio is calculated as the number of men for every one hundred women in a global population, while in India it is defined as the number of women per 1,000 men.^{1,2} The use of modern diagnostic techniques for sexing and sexual selection before conception has been attributed to selective abortion and, therefore, may be an important factor in decreasing sex ratio. The main reason for the female foeticide is the common perception that the girl represents an economic burden for the family due to dowry problems and their susceptibility to sexual harassment, while men attend to family and social problems and support parents at a later date. The Government of India introduced the law on prenatal diagnostic techniques (PNDT), which was later changed to PCPNDT to avoid misuse of diagnostic techniques and

sex selection.³ Institutions that used prenatal diagnoses had to register and a strict criminal law was introduced. The media was used to increase public awareness of the problem. Although the gender ratio is very low at the national level, Dakshina Kannada, a coastal district in southern India, has shown a favorable gender ratio of 1014 women per 1,000 men.⁴ Due to portability of technology, sex selective abortions have reached even the remote places of India contributing to increase in female foeticide.⁵ Female infanticide was made illegal for the first time by the British in India, with the passing of the female infanticide prevention act, 1870.⁶

Madhya Pradesh is one of the severely affected states by declining female sex ratio by 20 in number from 1981-2001. Consensus till 2014 show sex ratio of 914 and that too in Indore district in which this study is directed had

5102 male live birth compared to 4789 females in urban. A similar large gender gap is observed in rural as well. Since there is an obvious gender gap present, a study like this can show us the grass root scenario regarding people’s knowledge and attitude of PCPNDT.

METHODS

This cross-sectional study was carried out in Sri Aurobindo Institute of Medical Sciences, Indore which is a tertiary referral center. All patients in the outpatient department of obstetrics and patients referred to the radiology department for routine obstetrics examination were included in the study. The study was carried out from June 2017 to October 2017. Total of 130 patients of the various ethnic population and various socioeconomic strata were included. A predesigned questionnaire on basis of a pilot study was prepared to keep in mind the possibilities of biased reviews and relevance to the aim of the study. It comprised of 19 questions with some options directly stating ‘yes’ or ‘no’ and some multiple choice as study demanded. Patients were asked questions regarding awareness and knowledge about PCPNDT act and the source from where they got to know.

Questions concerning to the action to be taken to enforce the law and should it be punishable were configured. On basis of this information a negative or positive attitude towards the act of respective strata was studied by dividing the questions about promoting and strictly enforcing the law as positive attitude, and, being unaware about the law and wanting a sex determination counting as a negative attitude towards the law respectively. Questions were asked in patient’s own language to avoid un-meaningful conveyance of information. Data was recorded in excel worksheet and analyzed statically. The p-value of <.05 was considered significant. ANOVA test was used wherever necessary.

RESULTS

The mean age of our study population was 27.92±5.627, the majority of age comprising of 21-30 age group (66.2%) (Table 1) followed by >30 (26.2%) age group and least by <20 (7.7%) age group respectively. A large number, 76 (58.5%) of study participants were educated up to high school or above followed by population studied till 5-10th standard, i.e. 34 (26.2%). 86 (66.2%) females were housewife compared to employed 44

(33.8%) and 84 (64.6%) out of total were urban compared to 46 (35.4%) which were rural residents respectively. 50 (38.4%) participants were of upper-middle socioeconomic status compared to other strata.

Sixty-eight (79%) out of 86 participants of age group 21-30yr knew about the act. 62(81.5%) out of 76 high school or above literacy status group knew about PCPNDT. Thirty-four (39.5%) out of 86 housewives and 38 (45.2%) out of 84 urban females had awareness about PCPNDT act respectively. In socioeconomic strata, 40 (80%) out of 50 upper-middle population had knowledge about the PCPNDT act. The study population, knowing PCPNDT act, had a significant association in following demographics as age, literacy status, working profile, residence and socioeconomic status respectively, with residence, only demographic variable showing no significant association.

Table 1: Demographic details according to knowledge about pc and PNDT act.

Characteristics	N (%)	Knowledge of PC and PNDT act		p value
		Yes	No	
Age in years				
<20	10 (7.7%)	4	6	0.027
21-30	86(66.2%)	68	18	
>31	34(26.2%)	28	6	
Literacy status				
Illiterates	8(6.2%)	6	2	0.006
Primary 1-4	12(9.2%)	6	6	
5-10 classes	34(26.2%)	26	8	
Up to high school and intermediate	76(58.5%)	62	14	
Working profile				
Employed	44(33.8%)	26	18	0.034
Housewife	86(66.2%)	34	52	
Epidemiology				
Rural	46(35.4%)	22	24	0.776
Urban	84(64.6%)	38	46	
Income				
Lower	34(26.2%)	2	32	0.0001
Lower Middle	46(35.4%)	18	28	
Upper Middle	50(38.4%)	40	10	

Table 2: Distribution of study subjects as per their awareness on PCPNDT act and legal consequences of sex selection.

	Aware	Unaware	P value
Awareness about PCPNDT act	60 (46.2%)	70 (53.8%)	0.0001
Sex selection is punishable	116 (89.2%)	14 (10.18%)	0.0001
Know about sex determination technique	122 (93.8%)	8 (6.2%)	0.0001

The demographic profile which resulted in major numbers of participants in having no knowledge about the act compared to having knowledge were 6 (50%) out of 12 primary educated females, 52 (60.4%) out of 86 housewives, 24 (52.1%) out of 46 rural and 46 (54.7%) out of 84 urban resider respectively. Lower middle strata socioeconomic population i.e. 28 (60.8%) out of 46 didn't know about the act.

Of all study population (Table 2) only 60 (46.2%) showed awareness about the act compared to 70 (53.8%) which were unaware. 116 (89.2%) out of all knew sex determination is punishable under the act. 122 (93.8%) out of 130 participants told us that sex determination is

done on ultrasonography and that they are aware of sex determination technique. These values were significantly associated.

Regarding attitude of participants towards the act (Table 3), 100 (76.9%) had knowledge about the act, 118 (90.8%) considered sex determination is a criminal activity, 86 (66.2%) told us that a legal punishment must be there and 124 (95.4%) wanted a strict law against it. 112 (86.2%) were ready to motivate people around them about the act. The 114 (87.7%) didn't want sex determination to be done. 118 (90.7%) didn't know altogether that where the sex determination is done.

Table 3: Attitude of the participants towards the PCPNDT act.

Question	Yes N (%)	No N (%)	Don't know N (%)
Know about sex determination	100 (76.9%)	30 (23.1%)	-
Fetal sex determination is crime	118 (90.8%)	12 (9.3%)	-
Is legal punishment present	86 (66.2%)	22 (16.9%)	22 (16.9%)
Will to motivate	112 (86.2%)	18 (13.8%)	-
Want strict law	124 (95.4%)	6 (4.6%)	-
Sex determination should be done	16 (12.3%)	114 (87.7%)	-
If, yes done where?	Government	Privet	Don't know
	4 (3.0%)	8 (6.1%)	4 (3.0%)

DISCUSSION

As seen by above results majority of females in our study population were of 21-30 years of age, more than half of all had an education higher than or up to high school. Although 66.2% of the study population were housewives, they belonged to middle-class families and resided in urbanized setup. Since our study is obviously based in a tertiary referral center may be the reason that we got to study these demographic females more.

Similarly, lower-middle-class females 60.8 % didn't have knowledge about the act, giving us some insight to target the population in need to publicize about PCPNDT. Same magnitude of unawareness in 70 (53.8%) of participants as is shown in Table 2.

Our results were similar to a study conducted in Mumbai, Maharashtra, which showed respondents are willing to motivate others.⁷ In these demographic strata, almost 60-70 % of women knew about the PCPNDT act as studies conducted at Mumbai, Maharashtra and Bareilly, Uttar Pradesh except the urban housewives group which showed that 54.7% and 60.4% of them didn't know about PCPNDT of which the housewives' data was significant compared to urban strata.^{7,8} Thus, showing that housewives need to be more educated about the act compared to employed which showed almost 60% know about the act.

The point to consider by this study would be the unaware population which should be made aware. Mode of knowledge was mass media in our study which is by far the best mode of communication as was shown in a study conducted at Meerut and Hassan.^{9,10}

The study population showed a positive attitude towards the act as majority knew sex determination is a crime, want a strict law enforcement against it, want a punishment in regard to it, and didn't want sex determination to be done as shown in Table 3.

The majority know the technique to sex determination as ultrasound similarly reported in a study conducted in Mumbai, Maharashtra and know it is punishable, which is in contradiction to studies conducted at Hassan and Mumbai in which only half of the participants knew that prenatal sex determination was a punishable offense.^{7,10,11}

Similar to our study, a study conducted in Chandigarh showed a majority of women didn't know where the sex determination is done.¹¹

Limitations of our study was a small sample size which could have resulted in deeper grass root level information about targeted population and we didn't get to know the extent of knowledge about PCPNDT in studied population as the question was directed towards the basic awareness and not the fine details of its which could have

given us the info of technical awareness. Only one participant of the study told us the valid reason for sex determination as to rule out genetic abnormalities.

CONCLUSION

Sex determination is rooted deep in our society whether it be an upper class or lower irrespective of socioeconomic status, with such declining gender sex ratio in our region and female child proving nowadays to be next to or even better than male in many fields, we as citizen have to be proactive in understanding the situation and finding respective solution. This study, however preliminary, is an effort, an initial step towards changing the mindset of our diverse demography and confounding culture practice of foeticide. Our study showed there is needing to still spread the awareness of the act and although people don't want sex determination or they portray as so, they must be aware of the legalities and health hazards in attempting foeticide at the least.

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