

Assessment About Awareness And Attitude Of Antenatal Women Regarding Pre-Natal Diagnostic Techniques Act And Pre-Conception And Pre-Natal Diagnostic Techniques Act

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DOI:10.47750/pnr.2023.14.S01.164

Abstract

Aims: Assessment about awareness and attitude of antenatal women regarding Pre-Natal Diagnostic Techniques Act and Pre-Conception and Pre-Natal Diagnostic Techniques Act attending tertiary care Hospital.

Material and Methods: Cross-sectional study conducted at the ANC OPD. The study was conducted for 2 years and 150 patients. Data was collected using Pre-tested and validated Questionnaire meeting the objectives of the study. Participants were selected for study who satisfied all inclusion and exclusion criteria.

Results: There was significant correlation between education and socio-economic status and awareness and knowledge about Pre-Natal Diagnostic Techniques Act and Pre-Conception and Pre-Natal Diagnostic Techniques Act and Pre-Conceptional and Pre-natal sex determination. Majority of the women, (97%) women do not want routine sex determination.

Conclusion: Pregnant women must receive education regarding the legal repercussions of breaking the Act as well as the moral concerns associated with female sex discrimination in abortion and feticide. The decreasing child sex ratio necessitates considerably stronger political will and the assistance of influential organizations. Health professionals must actively participate in information distribution. Education and awareness of not only the present scenario of sex ratio but also about future consequences of it in terms of social, economic as well as behavioural aspect of society is a must for maintenance of balanced ecosystem.

Key words – Awareness, Pre-Natal Diagnostic Techniques Act and Pre-Conception and Pre-Natal Diagnostic Techniques Act.

INTRODUCTION

The goal of obstetrics is to guarantee the mother's health during pregnancy and puerperium so that every pregnancy can result in a healthy mother and baby ^[1]. Our topic is social obstetrics, it is the study of how social and environmental variables interact with human reproduction beginning with the pre-conceptional phase ^[1].

Awareness is a state wherein a subject is aware of some information and that information is directly available to affect a wide range of behavioural actions ^[2].

In India, the term "sex ratio" refers to the number of females to every 1000 males ^[3,4]. Of various social indicators that are available to assess the equity between males and females in the society, sex ratio remains the important indicator. Sex ratio can be affected by socio economic and cultural patterns of the society ^[5].

The sex ratio in India in 2021 was 1020 females for every 1000 males ^[4]. More concerning is the fact that Maharashtra now has a lower child sex ratio (920/1000) than India did in 2001^[4], when it was 927 girls/1000 males. But has shown improvement as compared to Child sex ratio of Maharashtra in 2011 which was 894 females per 1000 males.

Increased female foeticide and sex-selective abortions are to blame for this. Sex selective abortions have been linked to the availability of advanced diagnostic techniques for sex determination and pre-conceptional sex selection, which may be a significant factor in the lowering sex ratio ^[7].

There may be long-term social and demographic repercussions of low sex ratio ^[5].

The Pre-Natal Diagnostic Techniques Act (Regulation and Prevention of Misuse), 1994 (PNDT) was passed by the Indian government with the goal of preventing the misuse of diagnostic techniques and sex selection. It was later amended in 2003 to become the Pre-Conception and Pre-Natal Diagnostic Techniques Act (Prohibition of Sex Selection) (PCPNDT Act) ^[9]. Aborting a female foetus without using legal channels is known as female foeticide (bhrun-hatya), and it is preventable. Reduced sex selection of the foetus during pregnancy is made possible by the PC & PNDT laws. ^[7].

Although strict actions are taken against authorities and personnel's deviating from the act, sex selective abortions are still occurring. Almost 16 unsafe abortions per 1000 women are done in age group of 15-44 years in developing countries ^[10]. 33 percent of the 50 million abortions that are carried out each year are illegal, and almost half are done outside of the medical system ^[10].

Many women are not aware of the legal and safe abortion practices and go for unsafe abortions. In India, every year the proportion of abortions ranges from 9 to 15 % of the total pregnancies and 9 % maternal deaths are due to septic abortion or unsafe abortion ^[11].

Lack of awareness about the legalisation of abortion services according to MTP Act 1971 and also because of the PCPNDT Acts, the need for documentation and formalities can lead to preference of unsafe abortions by the public ^[13].

Patients who visit a consultant following sex determination and sex selection unquestionably have a higher percentage of unsafe abortions. This is due to the vicious cycle of abortion based on the sex selection/ sex determination.

The MTP Act was amended in 1971 for the purpose of preventing unsafe abortions ^[14]. When patient goes to the consultant on the basis of foetal sex, the qualified doctor will not do it because he is aware of what is described in the act. So, patient goes to unqualified doctors and quacks who are aware of the act but do the abortions for the purpose of money. The method by which they do is unscientific, the place they conduct is not recognised by the Government and aseptic precautions are not followed. All of these lead to consequences of unsafe abortions and maternal mortality.

In this chain, there are criminals starting from the pregnant women, her relatives who are forcing for sex determination, agent who takes to specialist declaring about sex, then finally the specialist who does sex determination, unqualified doctors and quacks doing abortions.

Appropriate knowledge regarding PC-PNDT and MTP Act is necessary to combat the declining sex ratio and increasing sex selective abortions.

The most effective method for influencing society's perception of gender preference and disseminating information is awareness about MTP Act and safe abortion procedures.

Sex ratio can be affected by many factors like literacy, socio economic status, cultural and religious backgrounds etc. Amongst different factors which have got effect on sex ratio, lack of awareness is the major reason. It is important to know the factors affecting awareness of PC-PNDT and MTP act so that we can plan strategies to increase awareness regarding safe abortion methods and status of our current sex ratio, its implications on delicate balance of ecosystem. To conclude, awareness is the one which has lot of impact in present scenario.

MATERIAL & METHODS

Type of Study: Cross-sectional study.

Place of study: Conducted at the ANC OPD of a tertiary care hospital.

Period of study: November 2020 to May 2022.

Ethics and consent: Before beginning the study, the institute's ethical committee approval was taken. All patients, written and informed consent was taken.

Inclusion Criteria:

All expectant women visiting the ANC Clinic between the age group of 18 to 40 who were pregnant up to 40 weeks were included.

Exclusion Criteria:

1. Women those who have completed their family.
2. Sterilized female.
3. Unmarried female
4. Non pregnant women

Statistical Analysis: -

The data was extracted and recorded in MS Excel 2016 and analysed using GraphPad Prism 8.0.2.

All data was tabulated and, when necessary, graphically represented using pie or bar charts. Categorical variables were assessed using the chi square test, and the difference between the two groups was tested for statistical significance using parametric tests like the t-test. Statistical significance was determined by a P-value of less than 0.05.

Method of study:

Data was collected using Pre-tested and validated Questionnaire meeting the objectives of the study.

The participant was asked for their informed consent after being told of the survey's purposes, methods, and policies and having been reassured that the data will be kept private and used solely for research.

RESULTS

Table 1: Correlation between education and awareness of PC and PNDT act

The table depicts correlation between education and awareness of PC and PNDT act among antenatal women. Total of 113 (75.3%) women out of 150 know about PC and PNDT act, of which 17 women were uneducated; 88 women had their primary education; 8 women were highly educated. 37 (24.6%) women did not know about PC and PNDT act, of which 31(83.7%) were uneducated.

Correlation between education and awareness of PC and PNDT act					P-Value
	High	Primary	Uneducated	Total	
Yes	8	88	17	113	<0.0001
No	0	6	31	37	
Total	8	94	48	150	

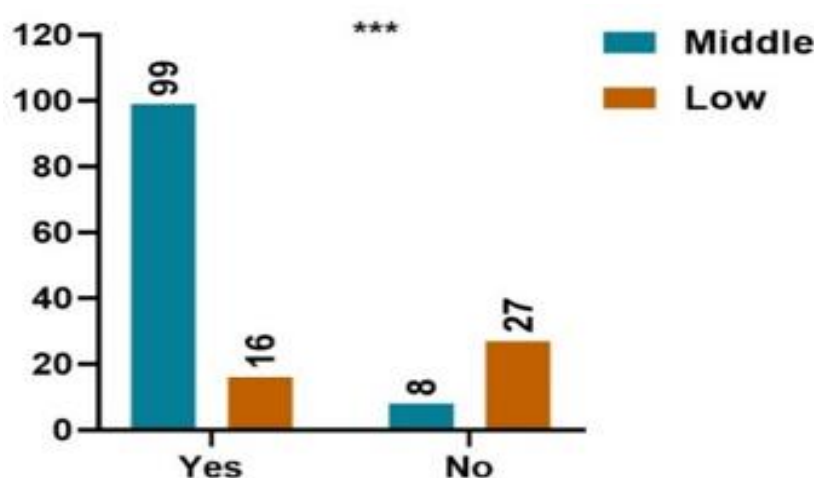
Observation: There was a significant correlation between education and the PC and PNDT Act awareness in the population. (P<0.0001)

Table 2: Correlation between socio-economic status and awareness of PC and PNDT act

Correlation between socio-economic status and awareness of PC and PNDT act				
	Middle	Low	Total	P-Value
Yes	99	16	115	<0.0001
No	8	27	35	
Total	107	43	150	

The above table depicts the correlation between socio-economic status and awareness of PC and PNDT act. 115 (76.6%) out of 150 ANC women knew about the act, of which 99 women belonged to middle socio-economic status and 16 belonged to lower socio-economic status. 35 women did not know about the act, of which 27 (62.7%) women belonged to low socio-economic status.

Bar diagram showing correlation between socio-economic status and awareness of PC and PNDT act



Observation: There was a significant correlation between socio-economic status and awareness of PC and PNDT act. (P<0.0001)

Table 3: Correlation between education and knowledge of Pre- Conceptional and Pre-natal sex determination awareness

Correlation between education and knowledge of PC/Pre-natal sex determination awareness					
	High	primary	Uneducated	Total	P-Value
Yes	8	94	34	136	<0.0001
No	0	0	14	14	
Total	8	94	48	150	

The above table depicts the correlation between education and knowledge of Pre- Conceptional and Pre-natal sex determination awareness.

136 (90.6%) women out of 150 women had awareness about Pre- Conceptional and Pre-natal sex determination, of which 34 women were uneducated; 94(majority) women had their primary education; 8 women were highly educated. 14 (9.3%) women were uneducated and were not aware of the same.

Observation: There was a significant correlation between education and knowledge of PC/Pre-natal sex determination awareness. (P<0.0001)

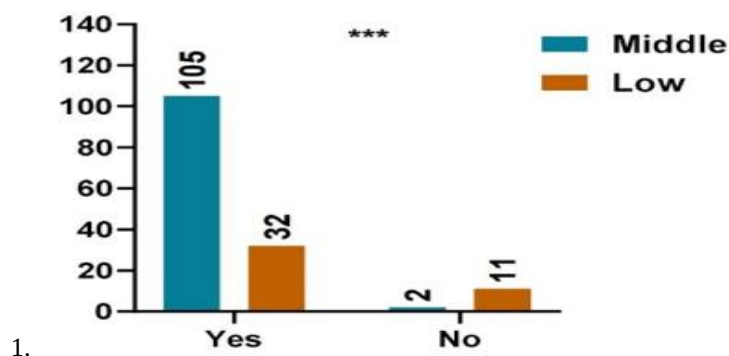
Table 4: Correlation between socio-economic status and knowledge of PC/Pre-natal sex determination awareness

Correlation between socio-economic status and knowledge of PC/Pre-natal sex determination awareness				
	Middle	Low	Total	P-value
Yes	105	32	137	<0.0001
No	2	11	13	
Total	107	43	150	

The above table depicts the correlation between socio-economic status and knowledge of PC/Pre-natal sex determination awareness.

137 (91.3%) women out of 150 ANC women had a knowledge of PC/Pre-natal sex determination awareness, of which 105 women belonged to middle socio-economic status and 32 women belonged to lower socio-economic status. 13 (8.6%) women were not aware of the same, of which 11 belonged to low socio-economic status.

Correlation between socio-economic status and knowledge of PC/Pre-natal sex determination awareness



Observation: There was a significant correlation between socio-economic status and knowledge of PC/Pre-natal sex determination awareness. (P<0.0001)

Table 5: Correlation between education and interest in knowing the sex of the unborn child

Correlation between education and interest in knowing the sex of the unborn child					
	High	primary	Uneducated	Total	P-value
Yes	2	23	28	53	0.0003
No	6	71	20	97	
Total	8	94	48	150	

The above table depicts the Correlation between education and interest in knowing the sex of the unborn child.

53 (35.3%) women out of 150 women were interested in knowing the sex of the unborn child, of which 28 (majority) women were uneducated; 23 women had their primary education; 2 women were highly educated. Most of them, 97 (64.6%) women did not want to know the sex of the unborn child.

Table 6: Distribution of responses in favour of routine sex determination.

In favour of routine sex determination		
	Number	Percentage
Yes	5	3
No	145	97
Total	150	100

The above table depicts the distribution of responses in favour of routine sex determination. Majority of the women, 145 (97%) women of 150 women does not want routine sex determination.

DISCUSSION

- In India, the term "sex ratio" refers to the number of females to every 1000 males ^[3,4]. It is the most significant social indicator for evaluating the equality between men and women in society.
- The gender ratio in India is 1020 girls for every 1000 males, according to the Census of 2021 ^[4]. But more concerning is the fact that Maharashtra's child sex ratio (female – male ratio of children below 6 years) is lower (920/1000) than it was in India in 2001, 927 females/1000 boys. ^[4]. But has shown improvement as compared to Child sex ratio of Maharashtra 2011 which was 894 females per 1000 males.
- Our Primary outcome of the study is assessment about awareness and attitude of antenatal women regarding Pre-Natal Diagnostic Techniques Act and Pre-Conception and Pre-Natal Diagnostic Techniques Act attending ANC OPD in Dr D Y Patil Hospital.
- The study was conducted among 150 expectant mothers who visited the ANC Clinic and were in the reproductive age range of 18 to 40 years up to 40 weeks of pregnancy. Data was collected using pre-tested and validated Questionnaire meeting the objectives of the study.
- The most frequent age group was between 20-25Years of age. 71% belonged to middle socio-economic class. 63% of them had primary education.
- 113 (75.3%) women knew about PC and PNDT act, 88 had their primary education. 136 (90.6%) women were aware of Pre- Conceptional and Pre-natal sex determination, 94 (majority) had their primary education. There was a significant correlation between education and the PC and PNDT Act and of Pre- Conceptional and Pre-natal sex determination awareness in the population. ($P<0.0001$)
- 115 (76.6%) women knew about the act, of which 99 belonged to middle socio-economic status. 137 (91.3%) women had a knowledge of PC/Pre-natal sex determination awareness, of which 105 women belonged to middle socio-economic status. The socioeconomic position of a person and their knowledge of the PC and PNDT Acts were significantly correlated. ($P<0.0001$)
- Majority of the women, 145 (97%) women of 150 women did not want routine sex determination. 83(55.4%) participants were not interested in knowing the sex of the child. But 67(44.6%) women were interested in learning the sex of the child, of which 18 women had previous one female; 7 women had previous one male and one female; 4 women had more than two females. There was a significant correlation between previous outcomes and interest in knowing the sex of child ($P=0.0311$)

CONCLUSION

- Even though a larger percentage of study participants were aware of prenatal sex determination, they were not fully informed of the penalties associated with it.
- Pregnant women must receive education regarding the legal repercussions of breaking the Act as well as the moral concerns associated with female sex discrimination in abortion and feticide.
- The situation necessitates a strategy that includes community-based information campaigns, women's education, and empowerment, as well as effective implementation of the PNDT Act by the government, in order to stop families from conducting sex determination. People must be taught about gender equality and the skewed sex ratio in addition to legislative efforts.
- The decreasing child sex ratio necessitates considerably stronger political will and the assistance of influential organizations.
- Health professionals must actively participate in information distribution.
- To conclude, education and awareness of not only the present scenario of sex ratio but also about future consequences of it in terms of social, economic as well as behavioural aspect of society is a must for maintenance of balanced ecosystem.

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