

Study of awareness and attitudes of our pregnant women regarding the pre conception and prenatal diagnostic techniques in a tertiary care teaching hospital

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Abstract

Background: Indian society has always been male-dominated and favoured their sons. Daughters have always been a vulnerable class and a social and economic burden on society. This social attitude has encouraged socially progressive practices are predominantly female foeticide. This is reflected in the female: male ratios in different states. One of the regulations curbing this menace is the introduction of the Prenatal Diagnostic techniques act in 1994 also called the Prenatal Diagnostic techniques (Regulations and Prevention of Misuse Act) 1994. With advances in technology for selection of sex before and after conception and also the problems faced in the implementation of the original act, it was amended, which came into effect from April 2003 and was renamed as PCPNDT Act (Preconception and Prenatal Diagnostic technique (Prohibition of sex selection) Act. This article studies the awareness and perception regards the PCPNDT act in 156 cases of pregnant women in a tertiary level teaching hospital. **Results:** In our study more than 90% of the mother's were aware about the presence of prenatal and preconception diagnostic techniques for sex determination. The major source of information were the relatives and friends. Other major source was Media. More than 30% women informed media in the form of television and internet were source. Majority of the women (more than 90%) were aware that ultrasound was the modality for prenatal diagnosis. More than half believed and were sure that sex determination can be done in private and government hospitals while nearly 24% thought it was done in private set up. Majority of women, >55%, were aware that prenatal sex determination is punishable offence. However, 23% were of the opinion that only doctors are punished while only 14% knew that the patients who seek to know the sex should be punished.

Key Word: awareness, attitude.

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INTRODUCTION

Indian society has always been male-dominated and favoured their sons. Daughters have always been a

vulnerable class and a social and economic burden on society. This social attitude has encouraged socially progressive practices predominantly, female foeticide. This is reflected in the female: male ratio of various states especially Haryana and Uttarakhand According to United Nations, sex ratio is defined as the number of males per 100 females. Current ratio in India is 107.48 i.e 107.48 males per 100 females in 2019. It means India has 930 females per 1000 males. India is 191th position out of 201 countries in terms of female to male ratio. Among Asian countries, India is at 43rd position out of 51.

Among states, Kerala has highest sex ratio of 1084 females to 1000 males and Haryana has lowest sex ratio of 879 females per 1000 males. Of the many events that have been committed against women, female foeticide

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stands very predominantly and is the most heinous of them all. (rape, Sati etc). Despite the vigorous punishment mechanism, the moral blameworthiness of female foeticide is much higher than that of offences like murder and culpable homicide because in the former the person is killed in the womb of the mother even before she is born i.e even before she acquires a full personality and body. Among the various legislations passed to curb this menace, the landmark regulation that provides for prohibition of sex selection after conception and for regulation of prenatal diagnostic techniques was laid down in 1994 called as the Prenatal Diagnostic Techniques Act (PNDT) which was further amended in 2003. The new act was amended in 2003 and was called the PCPNDT Act – Pre Conception and Prenatal Diagnostic Techniques Act.

OBJECTIVES

Primary aim of the study was to study the awareness and mental attitudes of all pregnant women regards to the PCPNDT Act in a tertiary care teaching hospital in Navi Mumbai.

MATERIALS AND METHODS

A cross sectional study was conducted in July 2019 among pregnant women between 15-45 years of age attending the antenatal clinic of a tertiary care teaching hospital, Dr D Y Patil Hospital, in Navi Mumbai. Informed consent was obtained after explaining the purpose of the study. Women unwilling to participate in the study were excluded. As this was a cross sectional study, all patients who gave consent were included. Data was collected in the form of a direct face to face interview on a questionnaire.

Analysis

Data collected and entered on excel sheet and presented in terms of percentages. Confidentiality was followed during data collection. Questionnaires collected from 156 pregnant patients.

RESULTS

Demographic variables

Age: Majority of the patients were in the age group 20-29 ie >80%

| Age | Number | Percentage |
|-------|--------|------------|
| 20-24 | 55 | 35.3% |
| 25-29 | 73 | 46.8% |
| 30-35 | 25 | 16% |
| >36 | 3 | 0.2% |

Education:

| | | |
|-----------|----|-------|
| Primary | 12 | 7.6% |
| Secondary | 61 | 39.1% |
| Graduate | 83 | 53.2% |

Majority of the women, >90% were primary school educated and among them , >50% had graduation degree.

Occupation:

| | | |
|-----------|----|-------|
| Housewife | 82 | 52.6% |
| Job | 74 | 47.4% |

More than 50% were housewives and others were in some form of job, clerical or housework.

Awareness that sex determination was possible

| | | |
|-----------|-----|-----|
| Aware | 142 | 91% |
| Not aware | 14 | 9% |

Majority were aware i.e >90% that sex determination is possible during pregnancy. Majority of the women educated upto primary level seemed to be unaware.

Main Sources of information about the preconception techniques

| | | |
|--------------------------|----|-------|
| Relatives and friends | 92 | 58.9% |
| Media | 49 | 31.4% |
| Healthcare professionals | 15 | 9.6% |

In all the groups, the major source of information were the relatives and friends. Other major source was Media. More than 30% women informed media in the form of television and internet were source.

Ultrasound as the method of sex determination.

| | | |
|-----------|-----|-------|
| Aware | 145 | 92.9% |
| Not aware | 11 | 7% |

Majority of the women were aware that ultrasound was the modality for prenatal diagnosis.

Where was sex determination done

| | | |
|---------------------------------|----|-------|
| Private and Government hospital | 95 | 60.8% |
| Private hospital only | 37 | 23.7% |

Thus more than half believed and were sure that sex determination can be done in private and government hospitals while nearly 24% thought it was done in private set up.

Awareness that sex determination is a punishable offence

| | | |
|-----------|-----|-------|
| Aware | 127 | 81.4% |
| Not aware | 29 | 18.5% |

Who will be punished?

| | | |
|-----------------|----|-------|
| Doctors | 37 | 23.7% |
| People who seek | 22 | 14% |
| Both | 92 | 58.9% |
| Don't know | 5 | 3.2% |

Majority of women, >55%, were aware that prenatal sex determination is punishable offence. However, 23% were of the opinion that only doctors are punished while only 14% knew that the patients who seek to know the sex should be punished

Punishment for Doctors (N=126)

| | | |
|--------------|----|-------|
| Imprisonment | 22 | 17.4% |
| Fine | 51 | 40.4% |
| Both | 40 | 31.7% |
| Don't know | 13 | 10.3% |

Among the women who knew doctors are punishable, around 40% thought it was mainly in the form of fine.

Punishment for Patients (N=114)

| | | |
|--------------|----|-------|
| Imprisonment | 12 | 10.5% |
| Fine | 70 | 61.4% |
| Both | 11 | 9.6% |
| Don't Know | 21 | 18% |

Among women who knew patients who seek sex determination are also punishable, more than 60% thought it is mainly in the form of fine.

Personal attitude towards determination of sex

| | Yes | No | Don't know |
|---|----------------|--------------|--------------|
| Would you prefer to know the sex of your child? | 70 (44%) | 86 (55%) | - |
| Would you terminate the pregnancy if you knew the sex of the child is female? | 2 (1.28%) | 150 (96%) | 4 (2.56%) |
| Would you educate other about this act? | 147 (94.2%) | 9 (5.76%) | - |

Though majority of the women in our study did not want to know about the sex of their baby, 44% wanted to know just for curiosity and planning. That did not have similar effect on the wish to terminate pregnancy having know if it was female. This was reflected by 96% women. However, 4 (2.5%) were not sure and 2 wanted to terminate mainly under the influence of their in laws and were less educated. This still reflects our ancient social framework and male dominated mentality and supplemented by illiteracy of the women.

DISCUSSION

Female foeticide has become a significant social phenomenon in contemporary India. Although this practice has been long-standing, in recent years preconception and prenatal diagnostic techniques such as amniocentesis and ultrasound have been misused to abort female foetus. In addition to the various methods

undertaken to get rid of baby girls, prenatal diagnostic techniques have contributed significantly to the declining female to male sex ratio. Diagnostic techniques include ultrasound, fetoscopy, sampling and analysis of amniotic fluid and blood. Various laws and rules were passed to curb female foeticide. The Indian Penal Code, 1860 laid down provisions for punishment for those causing miscarriage and other similar offences. There were many others like the Maharashtra Regulation of Prenatal Diagnostic Techniques Act in 1988. The landmark regulation that provides for prohibition of sex selection after conception and for regulation of prenatal diagnostic techniques was laid down in 1994 called as the Prenatal Diagnostic Techniques Act (PNDT) which was further amended in 2003. The new amended act was called the PCPNDT Act of 2003 which went a step further and put a ban on use of prenatal and preconception diagnostic techniques for sex selection even prior to conception. Thus this Act prevents misuse of prenatal and preconception diagnostic techniques for sex determination leading to female foeticide. It lays down guidelines for punishment for abusing preconception and prenatal diagnostic techniques. Thus it lays down provisions for regulation of diagnosis that applies to the tests and techniques, persons and the place. In our study more than 90% of the mother's were aware about the presence of prenatal and preconception diagnostic techniques for sex determination. This is higher than the findings of 75% in the Deshpande *et al* and Mitra *et al* (54%) The number of women who were aware about PCPNDT Act were significantly higher among those who were educated up to secondary school or above, those mothers who were working than the rest of them. Studies conducted in other parts of India to explore the same range from 43.7% to 92.4% This may be because of different geographic setting, rural and urban population, literacy rate and other factors. Main source of information in our study were relatives and friends (60%) followed by media (30%) in the form of television and internet. This was more or less comparable to the study performed by Nithin Kumar *et al* of 62.8% and 35.5% respectively. However we as part of the Healthcare team we have a mammoth responsibility to spread this awareness among the population. In our study more than 90% of the women were aware that ultrasound was the modality for sex determination in pregnancy. This is similar to the study conducted by Nithin Kumar *et al* and other study conducted in Mumbai. More than 90% of the pregnant women were aware of the places where this determination occurs, of which 60% knew it to happen in both private and government hospital while the remainder 23% believed it to be in private set up. These figures are more or less similar to figures in other studies. In our study

more than 80% were aware that prenatal sex determination is a punishable offence. This compared to the other studies has much improved. Sharma *et al.* in their study in Tamil Nadu observed slightly less numbers i.e 75% of the pregnant women knew that intrauterine sex determination is punishable under the law. This is in stark contrast of only 9.1% of the study participants observed by Shidhaye *et al.* aware about any legal punishment for determining the gender of the fetus. In terms of perception towards knowing the sex of the baby, 55% didnt want to know the sex while 44% expressed their willingness to know the sex of the baby and preferred to have a male child. These are more or less similar to the figures in Nithin Kumar *et al.* This finding is similar to the District Level Household Survey-3 where preference for boy was 33.2%, for girl 11%.

CONCLUSION

In conclusion, PCPNDT awareness has generally increased in the population and this is mainly related to the education and the socioeconomic background of the pregnant women. Most of them are aware it is a punishable offence however they still preferred to know the sex of the unborn child which means a desperate need for effective implementation of the Act. Healthcare still has a mammoth role to play to promote public awareness. This can be easily accomplished in day to day life using every contact with a female as an opportunity to spread awareness i.e in routine gynaecology clinics, PMB clinic, Colposcopy clinics or antenatal clinics, irrespective of the place. Big scale awareness in the form of monthly awareness camps and lectures by fun and knowledgeable means like small plays etc so that women of all strata of the societ are able to follow. Fulfilling our responsibility to our society by ensuring the implementation of the legislative measures. Training our junior doctors and nursing staff so that they are instrumental in propagation of the same. Last but not the least, ecouraging education of girl child as an one literate female in the family educates and enlightens the whole family.

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