

The Role of Technology in Female Foeticide

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Abstract: *The unfortunate male dominating society of India equate sons with financial security and daughters are equated to mountain of debt. For escalating their economic struggle many families have no option except to kill the female infant. Female infanticide and foeticide has become the most common way of solving the financial drain of giving birth to daughters. Mothers feel that by doing so they are sparing their daughters from a life of hardship and pray that their next pregnancy will yield a son. In the past many years documented methods of killing an infant included abandonment, poisonous saps, burning, shaking to snap the baby's neck and wrapping the baby in cold blankets to encourage disease. By the entry of ultrasound technology in India the long history of killing baby girls paved the way for Indian families to heartily embrace modern medicines' contribution to convenient sex determination. In a country like India without any Govt sponsored social security for most of the parents finding out their baby's gender is more than just a heartwarming moment which is made much easier by Technology.*

Keywords: Foeticide, Infanticide, Amniocentesis, Sonography, Preimplantation genetic diagnosis

1. Introduction

By the 1980, it was almost clear to the demographers that Govt's aggressive family planning campaign of 1960 and 1970 was beginning to backfire. People had started realizing the need to restrict their families but they also felt it very strongly that for a small family to be a happy family at least one of the child had to be a boy as this will optimize their chances of happiness but how could they make sure that the ongoing pregnancy is going to yield a son for that they would perform special rituals, visit specific temples, drink specific potions and pray hard for a son, sometimes they were lucky to have a son and sometimes not.

Now, with the help from technology they got lucky all the time since aspiring to have a son always had the blessing of both religion and society. The transition from using the traditional methods to scientific tools was smooth and untraumatic, there was an unholy alliance between tradition and technology the tradition was marked by son preference, when this was combined with technology it made sex determination easy but the combination proved quite lethal later on.

2. Literature Survey

The use of scientific technology for identifying the sex of the foetus was introduced in mid 1970. Indian medical researchers who pioneered Amniocentesis in 1975 said that it would assist those Indian women who keep on reproducing just to have a son, Sadly the Doctors from prestigious institute AIMS were also initially responsible for justifying the use of modern technology to identify male fetuses by claiming that the destruction of a few female fetuses would not affect CSR [child sex ratio] and would actually free women from having to go through multiple unwanted pregnancies [Indian journal of Paediatrics] How many girls went missing because of such medically encouraged sex determination, only educated guesses can tell.

For the technique Amniocentesis a small quantity of amniotic fluid is removed from the pregnant mother's uterus and analysed for any foetal abnormalities between 12th and

16th week of pregnancy and the procedure is completely painless. The test is performed only if the other tests point towards any abnormalities in the child, there is always a tiny risk of miscarriage after the test but the test reveals many important congenital abnormalities of the foetus including Down Syndrome, Spina bifida etc. But what excited several Indian Doctors the most was that they could tell the sex of the child by examining this fluid which was checked for the presence of stainable spot called Barr body present in the female foetus or the use of another dye named Quinacrine which can help to detect fluorescent bodies present only in the male fetuses. It was very soon that the Medical Profession Zeroed on this important characteristic of the Amniotic fluid as the most saleable technique

Similarly a research on the detection and diagnosis of Antenatal Thalassaemia through Amniotic fluid and chorionic villi sampling was going on at a lab in the John Radcliffe Hospital in Oxford. A no Of Indian Doctors went and worked in this Lab but back home used this Technology only for Sex Determination.

3. Problem Definition

Amniocentesis was flaunted as a latest technology for sex determination and first clinic for sex determination was opened in Amritsar in 1979. Women organizations across the country staged protests but were helpless as the new revolutionary test was permitted by Medical termination of pregnancy Act because it was also used for detecting foetal abnormalities. The test could have been banned rather Doctors kept on using it for sex determination of the foetus rather there was an Article by the Hospital that they are doing the nation a service by keeping a check on the increasing population as well as giving relief to the couples requiring a male child. Soon more and more clinics came up with a Slogan Pay Rs 500 now and save Rs 50000 later became even more popular than the Govt's Family planning slogan 'HUM DO HAMARE DO'. The logic behind it was that if you spend Rs 500 now to eliminate your female foetus can save Rs 50000 which you have to pay as her Dowry later on. Thus eliminating a female foetus was considered to be a Therapeutic Abortion, The deformity

obviously lay in the gender. The demand for the test went up from 1 per day to 5 per day and this led to the mushrooming of private clinics all over the country [After a ban on the use of this technology in Govt Hospitals]

Ultrasonography later on contributed a lot as diagnostic and therapeutic tool to maternal foetal medicine. Using the ultrasound machine it was possible to obtain high resolution images of the foetal anatomy and to observe the various foetal activities while it was still in the uterus in the other parts of the world but in India it was only seen as a miracle machine that could determine the sex of the foetus at an early stage and established itself as a major tool for determining the sex of the unborn child

4. Methodology/ Approach

Older scans had relatively low resolution monitors and sex could be determined only around 20th week. However scans with high resolution monitors and in all sizes were made available by the companies , they enabled the parents to find out the sex within 15 weeks which means abortion could be done earlier and hence would be safer.

3D colour scans and Doppler scans also came later on which further helped the Doctor to visualize the foetus better. [These scans were otherwise very useful tools for Paediatricians interested in foetal medicine]

Then came the mobile sonography machines which were so compact and sleek that they could be stowed away in the boot of a car, in case of a raid it was difficult to locate. The machines were easily available in India at a very low cost after the entry of multinational companies like Philips and GE as well as some local companies like WIPRO. It was a boon for the doctors interested in foetal medicine/ surgery and a short in the arm for those setting up Sex determination clinics. Since to operate it had gone very easy even the transporters jumped into this business, set up a shop inside their own vehicle, made advertisement and penetrated even those remote villages where even the safe drinking water was not available and did brisk business. Going scientific had become easy for the villagers as it had become easy for them to send off their female children without going through the messy procedure of killing them after they were born.

5. Result and Discussion

The result of this technology was that with the passage of time it became more and more high tech and hence easy. By 2000 there were more high tech gender determination tests which were initially designed to identify sex related genetic diseases but worked out only for the determination of the sex of the foetus eg Preimplantation genetic diagnosis takes place even before a pregnancy begins though Doctors called it acutting edge screening test which helped to ensure that gender related gentic problems were not passed on to the offsprings of the parents who carried faulty gene but again the test was used to produce the children of desired sex and to produce designer babies.

Indian Abroad'' a magazine meant for emigrants in US carried advertisements for such clinics the purpose of which

is quite clear that is it aimed at the son hungry Asian American Population and these clinics offer them the latest high tech scientific process to select the gender og their baby before birth. This is how once popular Amniocentesis was replaced by High Technology

Then came a new technique named Microsort under the umbrella of IVF [Invitro fertilization] which used a laboratory process to pass the sperm through a sticky protein liquid in which the slower moving x chromosomes will get struck and faster moving y chromosomes would get through. After getting a good conc. Of y chromosomes they are used to inseminate the egg in female uterus to make sure that the foetus developed is male. Then there were some pseudo scientific things attached to the gender selection in the form of gender specific nutriceutical supplement under the name Gen Select Kit.

After this another test entered the market under the name Baby Gender Mentor or Home DNA gender Test. In this test the pregnant woman's blood is taken just after ten weeks of conception and is traced for the amount of y chromosomal DNA to determine the gender of the foetus earlier, The kit was easily available in India later on under the name Jantar Mantar

6. Result and Discussion

The three chief pre natal diagnostic tests which were being used to determine the sex of foetus are Amniocentesis, chorionic villi biopsy and ultrasonography out of which Amniocentesis was meant to be used in high risk pregnancies in women above the age of 35 years ,chorionic villi biopsy was meant to diagnose inherited diseases like Thalassaemia ,cystic fibrosis and muscular dystrophy, Ultrasonography is the most commonly used nnnnon invasive technique and can identify 50% of the abnormalities related to the central nervous system of the foetus but to diagnose the sex of the foetus has become its preferred application.

In India the practice of sex selective abortion or female foeticide is the only manifestation of a long history of gender bias which is evident in historically low and declining population ratio of women to men. The involvement of medical fraternity in this field led to the commercialization of the technology, private clinics providing these tests for sex determination started mushrooming. These tests were made available even to those remote areas where even the potable water is not available. Marginal farmers willing to take loan at 25% interest to have the test done as the advertisements appear blatantly encouraging people to abort their female fetuses in order to save the future cost of dowry, House to house in towns and villages the portable ultrasound machine by skilled/ unskilled doctors made the things more worst as in a democracy it is difficult to restrict right to business and livelihood.

It is not only the poor, even the middle class people and rich class that are biased against the girl child and women took advantage of this technology which is evident in 2001 census that astonished the health department and govt,

the CSR [child sex ratio – the no of girls in the age group of 0 to 6 years per thousand boys of the same age group] has declined sharply from 945 females per 1000 males in 1991 to 927 after a decade . It is worst in Chandigarh 773: 1000, Delhi 821: 1000 and Punjab 874: 1000. It figured to be the lowest sex ratio in the world, The sudden fall in the no of girls in the youngest age group is a clear cut proof of sex selection abortions or female foeticide and most of these abortions are the result of misuse of sex determination technologies.

7. Conclusion

New reproductive technologies which entered the scene step after step were like magic wands as they could make wishes come true easier and easier and all societal groups could use them. Indians are very quick to adopt such new technologies specially when they have commercial value and booming sex selection industry is like an eager sponge just waiting to soak up the latest and quickest methods . With every new technology the elimination of women become easier.

Using these technologies is a double edged problem as a group of doctors including Gynaecologists, Paediatricians all were of the view that ultrasound has become almost as indispensable as stethoscope and its cost is friendly for poor patients and on the other hand multinational companies who were making and marketing these machines were actually marketing genocide by not keeping a check over the machines they sold, the aggressive marketing strategies resulted in selling these machines in a haphazard and uncontrolled manner to unqualified and unscrupulous persons, Moreover enlightened doctors while remembering their responsibility to the society can never be a conspirer of female foeticide rather should be the protector of the child from its formation, birth and growth . The misconception and unthinking misuse of technology by educated families and by the medical community must be checked by formulating suitable solutions.

8. Future Scope

India has a history of being deficient in women as compare to other countries but now there is a scientific and systematic elimination of the entire gender taking place right in front of our eyes . Until 1980 females [women and girls] were dying either because they used to be neglected by the family and society just for being females or they were killed soon after their birth [Infanticide] by using heart touching methods. Today these traditional methods of infanticide and foeticide are replaced by more sophisticated methods invented by Medical Technology where by extermination of the female foetus is possible while still in womb. Step by step as the advances were made in medical technology from Amniocentesis to sonography and then to various techniques known as pre implantation genetic diagnosis etc the elimination of female foetus became more more simple. Misuse of these technologies was made both by skilled [doctors] and unskilled persons who took it as a business. Multinational companies involved in this are enjoying it as a lucrative business without thinking about its disastrous effects. It all has resulted into female foeticide as an organized crime and medical technology has mutated into an

instrument of murder. It is now chillingly clear that if this practice of eliminating females is not checked it is bound to have disastrous impact on our future generations.

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