Chapter I

Introduction
Chapter-1

Introduction

Discrimination against the female exists in every sphere of life and in all the strata of society. This discrimination, is of extreme, violent and blatant form when the female is killed before or after she is born, merely on account of the fact that she is a ‘female’. Female infanticide means intentional killing of baby girls due to preference for male babies and the low value associated with the birth of females. Female foeticide is the aborting of female foetuses in their mother’s womb. This practice involves prenatal determination of the sex of the foetus once that is known and in case it is female it is very likely to be aborted. The birth of female child is considered as terribly grave misfortune for the parents of the baby – a situation where the whole community needs to sympathize with them and support them in dealing with their misfortune. The deaths are attributed to natural causes’ and the truth about them is hardly discovered. These acts, among other things, have led to a great decline in the male-female ratio in India which has come down form 972 females per 1000 males in 1901 to 933 in 1981, 929 in 1991 and 867 in 2001.

Highlighted by sensational titles such as “The endangered sex” (Miller, 1981)\(^1\) or “More than 100 million women are missing” (Sen, 1992)\(^2\), the studies concerned have drawn attention for long to the unfavourable life chances of female versus males in various parts of East and South Asia. The disadvantages involved in having a female baby is rooted in long standing social patterns of preference for male children. Practices for regulating the numbers of female children in a family include female infanticide, abandonment of girls, under-reporting of female births, and selective neglect of girl children leading to higher death rates among them. Where fertility declines and preference for
male children remains strong, parents take steps to ensure birth and survival of sons. Pre-natal sex determination and selective abortion of females are apparently preferable to female infanticide or abandonment of baby girls. Pre-natal sex selection techniques appear to substitute for post-natal methods as shown by increasing masculinity of sex ratio at birth, coupled with more equitable sex ratios of infant and child mortality (Goodkind, 1996). That is, fewer girls are allowed to be born, but those who are born are more wanted and tend to survive. These issues are also significant in South Asia, which shares with East Asia along standing tradition of preference for sons. In India, the issue has mostly been examined by (Kundu and Sahu, 1991; Rajan, Mishra and Navaneetham, 1991, Raju and Premi, 1992; Srinivasan, 1997; Visaria, 1969).

Strong preference for sons over daughters exists in the Indian subcontinent, East Asia, North Africa and West Asia unlike the western countries (Muthurayappa 1997; Lancent, 1990; Okun, 1996). People materialize the smaller family size with relatively greater number of sons by abuse of medical technologies. Pregnancies are planned by resorting to differential contraception. Use of contraception is based on the number of surviving sons irrespective of family size (Okun, 1996). Following conception, foetal sex is determined by pre-natal diagnostic techniques after which female foetuses are aborted. The ‘one child family’ norm as it existed in 1977 and the phenomenon of millions of ‘missing girls’ were recognized by early 1990s (Coale and Banister, 1994). Female foeticide was a major cause of this imbalance. As fertility declined rapidly in East Asian countries (South Korea, Taiwan, Hong Kong) selective abortion of female foetuses increased, leading to the rising imbalance in the sex ratios at birth (SRB) (male/female) over the years (Park and Cho, 1995). India woke up from deep slumber when the 2001 Census revealed a sharp decline in the sex ratio of children. It declined from 945 in 1991 to 927 in 2001 per 1000 male. After the previous
decade had witnessed an overall improvement in the skewed ratio of females to
males, the sudden drop was a proof of the increased incidence of sex selective
abortion or female foeticide. India has the dubious distinction of having one of
the lowest child sex ratio (number of girls between the ages of zero and six for
1,000 boys in the same age group) in the world. Though the child sex ratio has
been falling in India for the last many years, yet the declines have sharpened in
the decade 1991-2001. The drop from 945 to 927 clearly points to a systematic
discrimination against the girl child. In Indian population, sex ratio which was
1.03 in 1901 Census rose to 1.08 in 1991 (National Commission for Women,
1994).\textsuperscript{15} 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, although this may not be acceptable to persons in the west” (Verma et
al., 1975).\textsuperscript{16} Since then, the contribution of sex determination tests (SDT) to the
rising sex ratio has been vigorously debated (Lancet, 1983,\textsuperscript{17} Chhachhi and
Satyamala, 1983,\textsuperscript{18} Kumar, 1994)\textsuperscript{19} While feminist demanded legislation
against SDT, several social scientists felt that SDT had little impact on sex ratio
(Forum against Sex Determination and Sex Prediction, 1993, Rajan et al.,
1992).\textsuperscript{20} According to the 1991 Census, 15 of 20 districts with the adverse sex
ratios were found in the states of Haryana and Punjab in Northwest India (in 0-
6 years age group). A well known demographer suggested that the distortions
in child sex ratios in the north-western region for the last 100 years could be
due to biological peculiarity of these women to have a highly distorted sex ratio
at birth in favour of boys (Premi, 1994).\textsuperscript{21} However, UNICEF argued that
‘Female foeticide is reported to be a cause for adverse sex ratios in some Indian
districts in the 1991 Census ‘(UNICEF, 1994).\textsuperscript{22} All these states that is (Punjab,
Haryana, Himachal Pradesh, Gujarat and Maharashtra) had advanced
ultrasound and genetic facilities and this fact indicators that the medical
technology was misused there. The statistics were a stark reminder that if
things were not set right immediately and girls were given their due place in
society, the country would definitely face a crisis. Over the years, the sex ratio
has shown a disconcerting decline and the malaise of discrimination against the
girl child, which had its roots in North India. It has visibly spread towards the
more educated and liberal south as well. Also, owing to advanced techniques
female foeticide had upstaged female infanticide and in place of amniocentesis,
which involved taking of foetal samples, ultrasound scanning had emerged as a
simpler and more popular method of sex-determination.

As per Census figures, between 1901 and 1991 only Himachal Pradesh,
Punjab, Kerala and Rajasthan had registered an increase in the number of
females per 1,000 males with Orissa, Bihar, Madhya Pradesh and Uttar Pradesh
showing the maximum decline. It is common knowledge that in many societies
a girl child is looked down upon because of the socio-economic factors. The
fact that this discrimination is more prevalent in the intermediate classes and
castes with substantial resources in land and money than in the poor and lower
caste families indicates that the brand trend is influenced by the practice of
dowry and inheritance laws relating to property. In Census, 1991, Haryana had
the lowest sex ratio of 875/1000 with Punjab closely behind at 882. A study by
the State Resource Centre of Literacy Mission, Haryana, showed that the
transfer of reproductive technology to India had an average effect and resulted
in the abuse of pre-natal diagnostic techniques (The Hindu, 2002). In 2001,
four states – Himachal Pradesh, Punjab, Haryana and Gujarat fell in the below
900 category and this made, the situation grave as the child sex ratio has
dramatically declined to less than 800 girls for every 1000 boys. The worst
performing districts include Fatehagarh Sahib in Punjab - 754, Kurukshtra in
Haryana - 770, Mahasena in Gujarat - 798. Posh localities of a metropolitan
like Delhi and south-west regions has a sex ratio of 845. In several districts, the
decline is more than 1000 points. Regardless of quality of Census enumeration
in the Census as of 1991 and 2001, one can safely conclude that the decline in
the child sex ratio is a real phenomenon and not a statistical aberration. The
Census Commissioner observes: “The decline in child sex ratio in certain
districts of Punjab, Haryana, Himachal Pradesh and the decline in majority of
the districts in other states and union territories' across the country (Uttar
Pradesh, Madhya Pradesh, Chhatisgarh, Orissa, Karnataka, Assam, Delhi etc.)
is rather intriguing. The socio-cultural bias against the girl child might have
been possibly aggravated by recent medical report in terms of sex
determination tests and requires further field investigation. Before arriving at
any definite conclusion we have to wait for single year age wise disaggregated

Table 1.1: Distribution of Districts by Ranges of Child Sex Ratio in Age
Group of 0-6 Yrs India: 1991 and 2001

<table>
<thead>
<tr>
<th>Sex Ratio (0-6 yrs.)</th>
<th>1991</th>
<th>2001</th>
<th>2001</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Population</td>
<td>Per cent</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td>of districts</td>
<td>(Million)</td>
<td></td>
<td>of districts</td>
</tr>
<tr>
<td>1,000-1,049</td>
<td>21</td>
<td>8.67</td>
<td>1.04</td>
<td>8</td>
</tr>
<tr>
<td>950-999</td>
<td>306</td>
<td>454.01</td>
<td>54.27</td>
<td>242</td>
</tr>
<tr>
<td>900-949</td>
<td>181</td>
<td>287.91</td>
<td>34.41</td>
<td>2083</td>
</tr>
<tr>
<td>850-899</td>
<td>68</td>
<td>83.49</td>
<td>9.98</td>
<td>71</td>
</tr>
<tr>
<td>800-849</td>
<td>1</td>
<td>2.57</td>
<td>0.31</td>
<td>32</td>
</tr>
<tr>
<td>Less than 800</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>577</td>
<td>836.65</td>
<td>100.00</td>
<td>577</td>
</tr>
</tbody>
</table>

Source: Census of India 2001, Paper 1 of 2001, Supplement

Literacy ratio is calculated in the Indian Census since 1991 for the age
group of seven plus. Therefore, the 0-6 age group population is subtracted from
the total population. For a proper study of the child sex ratio, one needs data on
sex ratio at birth and at ages one, two, three, four and five but single year age
data are not very reliable since the SRS data present figures for the 0-4 years
and 5-9 years age groups. These data have to be analysed both for 1991 and
2001 (Bose, 2001).25

Sex Ratio and Female Infanticide:

Imbalanced sex ratio is one of the major consequences of female
infanticide/foeticide. It has already been observed in most of the Asian
countries and it may deteriorate further due to female infanticide. Female infanticide is the intentional killing of baby girl due to the preference for male babies and the low value associated with the birth of females. Female foeticide is the aborting of female foetuses in the mother’s womb. This practice involves the prenatal determination of the sex of the foetus. Female foeticide is however a relatively new practice developed after the introduction of prenatal diagnostic tests that help determine the sex of the child before it is born. The predominance of males over females in the population of India has been a subject of concern and controversy, ever since the late eighteenth century when the cruel practice of female infanticide in India was discovered by the Britishers. The Britishers first assumed that this paucity of females compared to male, especially, in northern region of India was due to the unavailability of females. However, since then, female infanticide has been widely recorded among upper caste (especially Rajput) groups in northern and north-western India (Miller, 1987). Historically, seen, the main reasons for this practice in India included the system of hypergamy, whereby women must marry into a social group above their own. Among the upper-most castes, this was impossible. Equally unthinkable were notions that the rules of hypergamy could be transgressed or that girls would remain unmarried. Therefore girls in these groups were killed, and boys married females from other castes slightly lower than their own. Nineteenth century records indicate large groups of villages in Rajasthan and Gujarat, comprising several hundred upper caste households, where no female child had been allowed to survive for many generations (Vishwanath, 1996). In that era female infanticide was also a part of household strategies, among these same land owing upper caste groups, to acquire further holdings to improve and consolidate their household socio-economic status. This was achieved by manipulating the marriage of sons and acquiring dowry from daughter-in-laws. Evidently, daughters were a liability in this scheme of things (Clark, 1983).
Some reasons have been suggested to explain the resurgence of female infanticide in modern India. Female infanticide has been recently noted among some castes in remote village clusters in rural south India. In the state of Tamil Nadu, a region where this practice was historically unknown, have started practicing female infanticide. Increasing landlessness and poverty, accompanied by an escalating custom of dowry, high gender differentials in wages, low education among women and few economic opportunities for them are shown as reasons for the rise of female infanticide here (George et al., 1992; Chunkath and Athreya, 1997).

In rural north India, the practice apparently never died out. Jeffery et al. (1984) state that upto the 1900’s, female infanticide was practised among Rajput castes in Bijnor of Uttar Pradesh state. Their study in the 1980’s in villages around Bijnor town, noted that part of a traditional birth attendant’s duties continued to be the disposal of the unwanted (i.e. girl) children at birth. They also reported that the practice is spreading among the caste groups among whom it had never been practised earlier. Female infanticide, though illegal, continues to be practised by certain communities in India, as shown by few studies. Von Katramani (1986) and Krishnaswami (1988) have reported the rampant practice of female infanticide among the Kallar community of Usilampatti – taluk in Madurai district of Tamil Nadu. Likewise, a survey of 1,250 families in five blocks of Salem by two voluntary bodies, viz. community services guild, Madras and Aditi of Patna, pointed out the prevalence of female infanticide among the Vanniyar and Gander communities (The Week, 1992).

The practice of female infanticide among the Bhati community in Jaisalmer, Rajasthan has resulted in a sex ratio of approximately 550 (India Today, 1988). Another study conducted by Aditi (1994) in Bihar pointed to the prevalence of female infanticide in Sitamarhi, Purnea, Bhagalpur and Katihar districts of Bihar. There are also certain superstitious beliefs which
have credence to the prevalence of female infanticide. A common belief was that if you kill a female child, the next one is sure to be a male. Another belief was that female children bring ill-luck to the family.

Table 1.2 Infant Mortality Ratio for Males and Females in Certain Districts of Tamil Nadu

<table>
<thead>
<tr>
<th>Name of District</th>
<th>I.M.R.</th>
<th>Neo-Natal Mortality Rate (0-6 ) days</th>
<th>Late Neo-natal Mortality Rate (7-27) days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Dharmapuri</td>
<td>45.0</td>
<td>100.1</td>
<td>26.4</td>
</tr>
<tr>
<td>Madurai</td>
<td>39.7</td>
<td>70.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Salem</td>
<td>43.7</td>
<td>84.4</td>
<td>25.0</td>
</tr>
</tbody>
</table>


The state-wise mortality rate may not, however, be an accurate indicator and studies should be conducted at district level. In the case of Tamil Nadu, for example, such a study was conducted and which revealed that although the average mortality rate may not be alarming, yet the statistics of certain districts are definitely a cause for concern.

The large-scale practice of female infanticide attracted the attention of the British rulers and forced them to act. A notable feature of all the measures was the introduction of an Act for suppression of Female Infanticide. The Britishers also organized conferences on the evils of infanticide, established a record of dowry deaths, helped fathers for the marriages of their daughters, fixed a norm for the amount of dowry to be paid (Miller, 1981). The measures taken by the British Government thus, helped in causing noticeable decline in this practice in most areas of India.

The Act of 1870: The Female Infanticide

Panigrahi (1963) reported that a beginning was made to stamp out this practice completely. The Act came into operation after years of deliberation...
and experience. It was culmination of earnest efforts by various government officers who had taken the initiative towards the suppression of infanticide.

**Working of the Act:** A family record about half a million people was kept with a view to check whether the girl born in that family had been preserved in that family brought up and later happily married. Panigrahi reported that it looked as if the state had taken upon itself the responsibility of not only protecting the lives of new born females in Hindu society but also of ensuring that they were properly looked after and maintained. The Act did not aim at revolutionising the Hindu society nor did it completely shake it to its roots. However, it envisaged a programme of social regeneration and incidentally helped in laying the foundation of a newer and healthier Hindu society in some parts of the north-western provinces.

The objectives of the Act were the eventual suppression of the practice. Also, the government was aware that this could not necessarily be attained by the imposition of severe judicial penalties alone. It seems that the Government believed in the personal, social and domestic influence arising from the steady pressure of these rules more than on judicial penalties or to absolute physical prevention for eradication of the crime of girl murder. Parkash (1970)\(^{40}\) in her book “Female Infanticide in India” brought into notice the classical work of Malthus about population. She reported that Malthus is found to have remarked that positive checks to population were extremely necessary.

According to the available empirical evidence, it is evident that there is widespread practice of female infanticide among the Kullars of Madurai district and Gounders (Kongu Vellalas) of Salem district of Tamil Nadu. In the absence of major empirical evidences of female infanticide in south India, it is difficult to give the historical basis of female infanticide in Tamil Nadu. However, the studies and reports of Mahadevan (1979)^{41}\, Venkataramani (1986)^{42}\, Krishnaswamy (1988)^{43}\, Gurusamy and Kubendran (1990)^{44}\, Rajaratnam (1992)^{45}\ etc. have given an insight
into this dangerous practice perpetrated in Tamil Nadu. These studies have led to a wide coverage by periodicals and dailies of such incidence of female infanticide.

In a recent news item from "The Hindu" reports that “Female infanticide, that ghastly inhuman practice is not dead as others think, but is thriving and spreading swiftly in south India particularly in Salem and Madurai districts of Tamil Nadu” (Usha Rai, 1992).

In Madurai district, the Usilampathy Taluqa is notorious for this pernicious custom. It appears that this practice is of recent origin and is prevalent among the Kallar community. However, the incidence of infanticide among the Kallors in the present day is comparable to that of the Rajputs of nineteenth century who practised the same custom (Krishnaswamy, 1988). ‘Pride and Purse’ are the major motivational factors among these communities. According to British anthropologist, Thurstone (1975), these two races (Rajputs and Kallars) have similarities in their occupational traditions as warriors. They believe that if they kill their daughter, they could avoid subsequent birth of female and ensure a male baby. The only difference is that among the Rajputs money is not a problem, but among the Kallars, poverty coupled with unemployment, due to drought and other natural calamities and dowry are the major motives attributed to female infanticide.

The gounders (Kongu Vellalas) who inhabit the districts of Coimbatore, Salem, Dharampuri, Peryar etc. in Tamil Nadu resort to large scale induced abortion and also female infanticide, when they already have one or two children. Infact, they had the lowest Crude Birth Rate (CBR) next only to Parsis in India. As early as in the 1970’s when the CBR of National level was 36 and above, they had CBR of 24.5 without resorting to modern family planning methods. The principal method they adopted for fertility control was induced abortion and female infanticide. In two major studies conducted by Mahadeven and Namboodiri (1979) and Mahadevan (1979) it was found
that low fertility of gounders is next to the Parsis of Maharashtra. Another notified tribe in the Madurai district viz., Pramalaskallar which is similar to backward class Kallar, also has been practising female infanticide for the last one decade. According to Rajaretnam (1992) every fourth female infant death in this community is due to the aforesaid evil practice.

Table 1.3: Total Infant Deaths, Female Infanticide Deaths and ‘Female Infanticide Rates’ – Sample Survey for 1995

<table>
<thead>
<tr>
<th>District</th>
<th>Total Infant Deaths</th>
<th>Female Infanticide Deaths</th>
<th>Female Infanticide Rate = Female Infanticide death as per cent to female infants deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Dharampuri</td>
<td>182</td>
<td>308</td>
<td>183</td>
</tr>
<tr>
<td>Madurai</td>
<td>149</td>
<td>208</td>
<td>112</td>
</tr>
<tr>
<td>Salem</td>
<td>146</td>
<td>174</td>
<td>58</td>
</tr>
<tr>
<td>Pramalaskallar Sambuvarayar</td>
<td>89</td>
<td>99</td>
<td>9</td>
</tr>
<tr>
<td>Dharampuri</td>
<td>128</td>
<td>135</td>
<td>28</td>
</tr>
<tr>
<td>Villuppuram Ramasamy</td>
<td>118</td>
<td>134</td>
<td>1</td>
</tr>
<tr>
<td>North Arcot Ambedkar</td>
<td>99</td>
<td>111</td>
<td>-</td>
</tr>
<tr>
<td>Perambalur Thiruvatru</td>
<td>108</td>
<td>110</td>
<td>1</td>
</tr>
<tr>
<td>South Arcot Vallalar</td>
<td>129</td>
<td>135</td>
<td>1</td>
</tr>
<tr>
<td>Pudukkottai</td>
<td>114</td>
<td>109</td>
<td>-</td>
</tr>
<tr>
<td>Periyar</td>
<td>101</td>
<td>88</td>
<td>-</td>
</tr>
<tr>
<td>Coimbatore</td>
<td>74</td>
<td>65</td>
<td>-</td>
</tr>
<tr>
<td>Chidambaram</td>
<td>84</td>
<td>80</td>
<td>-</td>
</tr>
<tr>
<td>Kanyakumari</td>
<td>33</td>
<td>27</td>
<td>-</td>
</tr>
<tr>
<td>Karurthiruvanchinnamai</td>
<td>96</td>
<td>91</td>
<td>9</td>
</tr>
<tr>
<td>Nilgiris</td>
<td>45</td>
<td>38</td>
<td>-</td>
</tr>
<tr>
<td>Thanjavur</td>
<td>94</td>
<td>76</td>
<td>-</td>
</tr>
<tr>
<td>Tiruchirapalli</td>
<td>136</td>
<td>120</td>
<td>1</td>
</tr>
<tr>
<td>Kamarajar</td>
<td>111</td>
<td>91</td>
<td>-</td>
</tr>
<tr>
<td>Chennai MGR</td>
<td>96</td>
<td>81</td>
<td>-</td>
</tr>
<tr>
<td>Nagai Quituaid-e-Melleth</td>
<td>102</td>
<td>77</td>
<td>-</td>
</tr>
<tr>
<td>Tirunveli Kattabomman</td>
<td>130</td>
<td>95</td>
<td>-</td>
</tr>
<tr>
<td>Pasumpon Muttamalinga Thevar</td>
<td>86</td>
<td>63</td>
<td>-</td>
</tr>
<tr>
<td>Ramanathapuram</td>
<td>135</td>
<td>96</td>
<td>-</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>2585</td>
<td>2613</td>
<td>403</td>
</tr>
</tbody>
</table>

Source: Directorate of Public Health (DPH Survey), 1996.
Table 1.3 presents data on total infant deaths and deaths due to female infanticide. Data provide strong confirmation of the survey finding that the practice of female infanticide is very widespread in Dharampuri, Salem and Madurai districts.

Venkatachalam and Shrinivas (1992)\textsuperscript{54} investigated the incidence of female infanticide in five development blocks in Salem district of Tamil Nadu. They interviewed about 250 women belonging to Hindu community. The major objectives of the study were to know the cause for female infanticide and measure to eradicate it. The study also aimed to know the extent of female infanticide in the blocks covered.

Though female infanticide was initially a practice common to the upper classes, yet it has now taken root even among the lower castes. This is a significant change because women in the lower castes have traditionally enjoyed more freedom and equality with men than those in the higher castes. Again, since the value systems of the dominant caste become the prevailing norm, it should not seem surprising to find that the practice is spreading among the poorer and socially disadvantaged groups. Interestingly, only the study conducted in Madhya Pradesh brought forth the result that female infanticide in the area is very ‘caste specific’ and is practised only among the higher castes – and more so in areas which are predominantly populated by members of these castes.

Though, poverty and dowry are often cited as reasons for female infanticide, yet statistics disprove that such discrimination exists only among the poorer sections of society which find it hard be bear the cost of bringing up a girl child. Wealthy states such as Punjab and Haryana have very low sex ratio, as certain upper caste communities like the Rajputs (Rajasthan, Bihar and U.P.), and the Chettars in Tamil Nadu have low sex ratio.
Khurana (1994)\textsuperscript{55} observed that “for most families the first daughter is bad luck, the second one is viewed as a disaster and the third one is an utter catastrophe as if the whole world has fallen apart”. Studies show that the birth order of the girl child seems to have a considerable bearing on female infanticide. The study conducted in K.V. Kuppan block in the North Arcot district of Tamil Nadu showed that out of the total cases of female infanticide discovered, only one involved a first born daughter. The pattern seems to correspond to ‘the parity-specific female child neglect’ common in north India (ibid., 23). Thus, most of the victims are daughters who have a birth order greater than one and a surviving elder sister.

Table 1.4: Female Infanticide Deaths pertinent to Birth Order in Selected Health Unit Districts in Tamil Nadu, 1995.

<table>
<thead>
<tr>
<th>Health Unit Districts</th>
<th>Female Infanticide of Babies with Birth Order of I</th>
<th>Female Infanticide of Babies with Birth Order II</th>
<th>Female Infanticide of Babies with Birth Order III or higher</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dharampuri</td>
<td>27</td>
<td>326</td>
<td>695</td>
<td>1048</td>
</tr>
<tr>
<td>Madurai</td>
<td>1</td>
<td>121</td>
<td>44</td>
<td>56</td>
</tr>
<tr>
<td>Periyakulam</td>
<td>22</td>
<td>232</td>
<td>853</td>
<td>507</td>
</tr>
</tbody>
</table>

Source: Chunkath, et al. (1988)\textsuperscript{56}

The methods followed in committing female infanticide are:

- giving the milk of yellow oleander shrub or the paste of oleander barrier to the new born female child, death occurs within an hour.
- giving milk of another plant calotropis (Erakkanpal)
- giving the new born child boiled water with a few grains of paddy, death occurs within an hour followed by vomiting and avulsions. Some people give paddy grains with hot milk.
- feeding the child with tobacco paste
- feeding the child with pesticides
- killing the child by pressing her nose and mouth. The child dies of suffocation in a few seconds.
- closing the face of the child with a thick wet towel so as to make the child suffocate to death.
- during the winter season leaving the new born child in open space behind the house without any cover. The child dies of the severe cold weather.

They further reported that whatever testing (amniocentesis) facility is available, people turn to misuse it to identify the sex and undertaking abortion if it is a female. Those who cannot afford these tests await the child's birth to do away with it, if the baby is a girl.

Though, India has a legacy of female infanticide in the name of tradition and culture, it was limited only to certain castes. Female foeticide is another extreme manifestation of violence against women. Female foetuses are selectively aborted after prenatal sex determination, thus avoiding the birth of girls. In India, where female infanticide has existed for centuries, now female foeticide has become the order to the day with fast ascendancy.

The reasons for this evil include the introduction and proliferation of prenatal diagnostic tests, sex determination clinics and cheaper ultrasound machine facilities that help determine the sex of the child before it is born. Dramatic redundancy birth rates in most of the states in India has contributed to intensification of son preference in the existing patriarchal society. For instance, in Tamil Nadu, the establishment of numerous ultrasound clinics in semi-urban areas, since the mid-nineties, is not a widely known fact; that even rural families in the state have begun to commit female foeticide to satisfy their preference for sons. In Haryana, residents of upper-caste openly admit to the widespread practice of female foeticide. Parents tend to be calculative in choosing the sex of the next child and the decision is based on the birth order,
sex sequences of previous children and number of sons. Transfer of reproductive technology to India is resulting in reinforcement of patriarchal values as professional medical organizations seem to be indifferent to ethical misconduct (Health Action, 2000).57 One of the major contributions in the masculinization of the sex ratio has been the availability and affordability of the medical technology of sex determination.

**Prenatal sex determination and sex selective abortion in India:**

Abortion was legalized in India in 1971, after a 1967 UN mission to India recommended this step to strengthen the population policy and Shantilal Shah Committee Report of 1966 also advocated it to reduce the number of illegal and unsafe abortions that were prevalent. Although the stated reasons for passing the medical Termination of Pregnancy (M.T.P.) Act was humanitarian (to ‘help’ victims of sexual assault), health related (to provide an alternative to those whose contraceptive measure failed) and eugenic (to reduce the numbers of ‘abnormal’ children born), there was a strong population control motivation underlying the passage of the Act (Menon, 1996).58

In 1975, amniocentesis techniques for detecting foetal abnormalities began to be developed in India, at the All India Institute of Medical Sciences, New Delhi. It was soon known that these tests could detect the sex of the foetus also, and doctors at the Institute rated that most of the 11,000 couples who volunteered for the test wanted to know the sex of the child and were not interested in the possibility of genetic abnormalities. Most women who already had two or more daughters and who learnt that their expected child was a female, went on to have an abortion (Chhachhi and Sathyamala, 1982).59 The first private sex determination clinic was established in Amritsar in 1979 and the practice soon spread to other parts of Punjab and Haryana. The facilities for sex determination tests were openly advertised at a massive level through billboards, T.V., radio and newspaper advertisements. Supplementing the process
to elaborate system of collecting amniotic fluid samples was developed in the towns to be tested in the amniotic centres in the cities and then dispatching the results to the various towns. Realising the need to regulate the gross misuse of medical technology for sex determination, the demand for the regulation of amniocentesis, medical technology for sex determination grew. Between 1977 and 1985, in an effort to curb this misuse of the technique, three circulars were sent to the Central and State government departments making the use of prenatal sex determination for the purpose of abortion, a penal offence (Kulkarni, 1986). A campaign against prenatal sex determination and female foeticide (termed “femicide”) was also launched by women’s group, civil liberties groups and health movements. In 1984, a broad-based condition, the “Forum Against Sex Determination and Sex Pre-Selection” (FASDSP) was formed with its headquarters in Bombay that monitors all aspects of the situation, documents the spread of the technique, its growing use, and legal and policy steps taken against it.

As a result of these efforts, the state government of Maharashtra passed the Maharashtra Regulation of the Use of Prenatal Diagnostic Techniques Act in 1988. The state of Punjab, Gujarat, and Haryana followed suit and the Central government passed the Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act in 1994. The Act states that determining and communicating the sex of a foetus is illegal, that genetic tests can be carried out only in registered facilities, and only offered to those women who meet “Certain medical criteria,” such as being over age 35, having a family history of genetic disorders, etc. Thus, a bill was brought in the parliament for enactment. However, the practice of sex determination followed by the selective abortion of the (female) foetuses - continued unabated as it means only a shift from one technology, i.e. from amniocentesis to ultrasonography, a comparatively easier and cheaper option. Moreover, these regulations cover ultrasonography facilities to a much lesser extent, and this technique is also
being widely used for sex determination. The possibility that newer technologies will be developed to determine the sex of the foetus has not been allowed for (Arora, 1992; Menon, 1996; Sengupta, 1992). The net result of such a partial regulation is that sex determination and selection facilities have privatized, commercialized, and mushroomed. Doctors indicated that despite bans, they would continue to communicate the sex of the foetus to parents who wanted to know, verbally rather than in writing and would hike the fees of the test to compensate for the legal risk involved. The ban in Maharashtra did not have much impact as sex determination facilities have continued to increase (Kishwar, 1995).

Fertility decline has taken place in all economic and social groups in most parts of the country, especially in Tamil Nadu. The sharp fall in birth rates from the eighties is one contributory factor for intensification of son preference. Consequent on declining fertility rates similar developments have been earlier observed in other societies including South Korea, Taiwan, Belgium etc..

Table 1.5: Sex Selection Technologies, Son Preference and Estimated Sex Ratio.

<table>
<thead>
<tr>
<th>Country / Year</th>
<th>Mean Ideal Number of Children</th>
<th>Mean Ideal Number of Sons</th>
<th>Predicted Sex Ratio Male/Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium, 1966</td>
<td>2.82</td>
<td>1.16</td>
<td>1.24</td>
</tr>
<tr>
<td>USA, 1970</td>
<td>2.86</td>
<td>1.46</td>
<td>1.40</td>
</tr>
<tr>
<td>Korea, 1971</td>
<td>3.65</td>
<td>2.20</td>
<td>1.68</td>
</tr>
<tr>
<td>India, 1970</td>
<td>3.58</td>
<td>2.15</td>
<td>1.86</td>
</tr>
</tbody>
</table>

Source: Mason and Bennett, 1977.

Table 1.5 clearly shows that unregulated access, the biased prenatal selection can vitiate the sex ratio even in societies without a gender bias. Further, this model assumed that the son preference may remain static.
According to a study by the Morrison Institute for Population and Research Studies at Stanford University, the Secondary Sex Ratio (SSR) for India was 10.87 males per 100 females (Ravindra, 1995). A sample study conducted in rural Haryana, illustrates the point that female foeticide distorts the male-female ratio. It was found that though there exists a growing disparity between the number of boys and the number of girls with the boys significantly outnumbering the girls. Yet, if the number of aborted female foetuses is added to the number of female infants, the ratio is in favour of the females. Thus, there are several ‘missing’ women in India.

Table 1.6: Age, Sex Profile of the Child Population (0-5 years) in Rural Haryana

<table>
<thead>
<tr>
<th>Sex</th>
<th>0-1 Age Category</th>
<th>0-5 Age Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>15</td>
<td>94</td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>65</td>
</tr>
<tr>
<td>Female male Ratio</td>
<td>667</td>
<td>69</td>
</tr>
</tbody>
</table>

Source: Ravindra (1995)

The table 1.6 shows a distorted sex profile which the researcher believed was the result of abortion of female foetuses in rural Haryana.

It is a well-documented fact that the Indian population is predominantly male i.e. there is a adverse sex ratio which registered a decline from 1901 to 1981. Census data indicated that there were 972 women per 1,000 men in 1901, which declined to 933 women per 1,000 men in 1981. In other words, in 1901, there were a million more men than women and, by 1981, there were 22 million more men than women (Kishwar, 1985). Though the child sex ratio has been falling in India over the last 50 years, the decline has been sharpened in decade 1991 to 2001.
Table 1.7 Comparative Statistics to Show the Decline in the Child Sex Ratio over the Last Decade

<table>
<thead>
<tr>
<th>State</th>
<th>District</th>
<th>1991</th>
<th>2001</th>
<th>%age Decline in Sex Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punjab</td>
<td>Mansa</td>
<td>873</td>
<td>779</td>
<td>9.4</td>
</tr>
<tr>
<td></td>
<td>Sangrur</td>
<td>873</td>
<td>784</td>
<td>8.9</td>
</tr>
<tr>
<td></td>
<td>Fatehgarh Sahib</td>
<td>874</td>
<td>754</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Jalandhar</td>
<td>886</td>
<td>797</td>
<td>8.9</td>
</tr>
<tr>
<td></td>
<td>Bhatinda</td>
<td>860</td>
<td>779</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>Kapurthala</td>
<td>879</td>
<td>775</td>
<td>10.4</td>
</tr>
<tr>
<td></td>
<td>Patiala</td>
<td>871</td>
<td>770</td>
<td>10.1</td>
</tr>
<tr>
<td></td>
<td>Amritsar</td>
<td>861</td>
<td>783</td>
<td>7.8</td>
</tr>
<tr>
<td></td>
<td>Rupnagar</td>
<td>884</td>
<td>783</td>
<td>7.8</td>
</tr>
<tr>
<td>Haryana</td>
<td>Ambala</td>
<td>888</td>
<td>784</td>
<td>10.4</td>
</tr>
<tr>
<td></td>
<td>Kurukshetra</td>
<td>868</td>
<td>770</td>
<td>9.8</td>
</tr>
<tr>
<td></td>
<td>Kaithal</td>
<td>854</td>
<td>789</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>Sonipat</td>
<td>878</td>
<td>783</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td>Rohtak</td>
<td>868</td>
<td>796</td>
<td>7.2</td>
</tr>
<tr>
<td></td>
<td>Fatehabad</td>
<td>873</td>
<td>830</td>
<td>4.3</td>
</tr>
<tr>
<td></td>
<td>Sirsa</td>
<td>883</td>
<td>818</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>Hisar</td>
<td>864</td>
<td>830</td>
<td>3.4</td>
</tr>
<tr>
<td></td>
<td>Hissar</td>
<td>864</td>
<td>830</td>
<td>3.4</td>
</tr>
<tr>
<td></td>
<td>Jind</td>
<td>858</td>
<td>818</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Panipat</td>
<td>889</td>
<td>807</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td>Bhiwani</td>
<td>885</td>
<td>838</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>Jhajjar</td>
<td>886</td>
<td>805</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>Gurgaon</td>
<td>895</td>
<td>863</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>Faridabad</td>
<td>885</td>
<td>838</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Rewari</td>
<td>894</td>
<td>814</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>Mahendergarh</td>
<td>892</td>
<td>814</td>
<td>7.8</td>
</tr>
<tr>
<td></td>
<td>Karnal</td>
<td>871</td>
<td>808</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>Yamuna Nagar</td>
<td>888</td>
<td>807</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>Panchkula</td>
<td>890</td>
<td>837</td>
<td>5.3</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>Dharmapuri</td>
<td>905</td>
<td>-878</td>
<td>-2.7</td>
</tr>
<tr>
<td></td>
<td>Salem</td>
<td>830</td>
<td>826</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>Theni</td>
<td>896</td>
<td>893</td>
<td>0.3</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>Kangra</td>
<td>939</td>
<td>836</td>
<td>10.3</td>
</tr>
<tr>
<td></td>
<td>Hamirpur</td>
<td>938</td>
<td>864</td>
<td>7.6</td>
</tr>
<tr>
<td></td>
<td>Una</td>
<td>923</td>
<td>839</td>
<td>8.4</td>
</tr>
<tr>
<td></td>
<td>Bilaspur</td>
<td>923</td>
<td>884</td>
<td>3.9</td>
</tr>
</tbody>
</table>


According to the data available, there has been a sharp fall in the female population in India since 1901. The sex ratio in India has always been in favour
of male. In 1901, there were about 972 females per 1000 males and during the 1991 Census, the sex ratio scenario has shown no signs of improvement and has rather declined to 927 females per 1000 males. However, whatever these statistics portray the real picture is still very blurred. The major factors to be considered in this regard are as follows:

- Punjab and Haryana, two of the most economically advanced states in the country have sex ratio of 882 and 865 respectively as per 2001 Census.

- There are 32.48 million missing females in India as of 1991.

- In Tamil Nadu female infanticide accounts for eight percent of all female deaths and 16 per cent of female infant deaths. At least 3500 to 4000 females infants are killed every year.

Arora (1996) suggested that between 1978-82 nearly 78,000 female foetuses were aborted after sex determination tests. He also cites a statistic purporting to come from the Registrar General of India that based on hospital records along 3.6 lakh female foetuses were aborted between 1993-94. It was clearly pointed out that the distribution of such facilities in India was greater in areas where females were more devalued, i.e. the North- North – West (Patel, 1988). During the time period in question in this study (1981-1991) we can assume that such techniques would have been more widely available in urban areas though there is every indication that their awareness and use spread into the rural hinterlands too.

In the light of the evidence, the issue of amniocentesis and its implications for the sex ratio was a major point of debate. The argument of supporters of sex detection tests is based on the theory of demand and supply on excess of male over females, achieved with the reduction of unwanted and
hence, neglected women, would actually raise the status of women (Kumar, 1982).72

The entire foregoing discussion presents a simplistic understanding of complex social issues. If less female numbers is linked to improvement of the women status then, in several states of India adverse sex ratio exists, and, therefore, the status of woman should have been high. Based on anthropological evidence, Dube (1983)73 observed that societies with adverse female sex ratio have indicated the presence of customs like polyandry, abduction and purchase of women. It is strongly felt that, contrary to raising the status of woman, adverse sex ratios increase the incidence of rape, prostitution and violence against women.

A look at the district wise figures indicates that in the face of general trend towards an increase in the overall sex ratio, there is a trend towards decline in the child sex ratio all over India. There is also quite some evidence that this trend is visible all across the board and cuts across religion, caste, income level, urbanization level, geographical location and so on. In short, the rejection of the girl child is an all India phenomenon and is a symptom of the insidious collapse of civilizational and cultural values in India.

Several demographers have made comments on the declining child sex ratio (0-6 age group) revealed in the 2001 Census. For example, Ashish Bose has coined the term, DEMARU to denote 'Daughter Eliminating Male Aspiring Rage for Ultrasound'. Ashish Bose and Mahendra Premi have drawn attention to what seems obvious, namely, that since migration is minimal in this age group, the adverse female sex ratio points to endemic female foeticide and infanticide in these state. The statistics provided by Premi on age specific death rates in the 0-4 and 5-9 age group sex, for the years 1986-1994 for India and the states, show that except Himachal Pradesh, the three states mentioned namely, Punjab, Haryana, Gujarat and also Uttar Pradesh and Rajasthan, have
for the period, covered a much higher mortality of female compared to males (Vishwanath, 2000).^

**Misuse of Medical Technology**

In modern India, where globalization and information technology are being propped up as the creeds of the millennium, liberalization is happening at neck break speed when women get the Booker and are on the threshold of political reservation. But there are villages and towns where girls are killed even before their cries leave their throats; some are killed even in their mother’s womb, unseen and unheard. According to a survey, mobile clinics have sprung up numbers in the state of Uttar Pradesh, Punjab and Haryana to conduct sex determination tests despite their being illegal under the Prenatal Diagnosis Technique (Regulation and Prevention of Misuse) Act, 1994, which became effective from Jan. 1, 1996 and which bans all sex determination tests such as amniocentesis, ultrasonography etc. except for detecting genetic disorders. Despite all this, tests are being carried out blatantly followed by abortions that are equally banned under the Medical Termination of Pregnancy Act 1971. Surprisingly enough, not only the illiterates but even educated and urban people still misuse this act with the help of doctors (The Pioneer, 2002).^5

Modern science and technology provide ways to find the sex of the unborn child, and this medical feat is used in India to discover female foetuses so that they can be eliminated. Widespread use of sex determination tests will adversely affect the sex ratio which is even now tilted against females. Sex determination tests do not guarantee the birth of a male child. They merely ensure multiple abortions (i.e., abortion of every second foetus tested for its sex), which can cause immense harm to women’s health. One of the major contributions in the masculinization of the sex ratio has been the availability and affordability of the medical technology for sex-determination 1982 was a
watershed year for the women’s health movement when two major campaigns were launched. One was against the use of high dose of estrogen progesterone combination and second against the misuse of medical technology and amniocentesis.

The first private sex determination clinic was established in Amritsar in 1979 and soon the practice spread to other parts of Punjab and Haryana. The facilities for sex determination tests were openly advertised at a massive level through bill board, T.V., Radio and newspapers advertisements. Supplementing the process, an elaborate system of collecting amniotic fluid sample developed in the towns to be then tested in the amniotic centres in the cities and then further dispatching the results to the various towns. Realising the need to regulate the gross misuse of medical technology for sex determination, the demand for the regulation of amniocentesis, medical technology for sex determination grew. Thus a bill was brought in the parliament for enactment. But the practice of sex determination continued unabated. As there was only a shift from one technology, i.e. form amniocentesis to ultrasonography, a comparatively easier and cheaper option. Since ultrasonography had its legitimate use in the diagnosis of numerous pathological conditions including many during pregnancy, it will not be wrong to accept that with the advent of ultrasonography, SDFF (Sex Determinant leading to female foeticide) practice continued in an unchallenged manner (Patel, V. 1984).76

This issue was however, strongly taken up by health and women activists and various groups in Mumbai, Gujarat and Maharashtra that showed showing maximum decline in the female male ratio. By way of a push for regulation in Maharashtra, a Forum against Sex Determination and Sex Pre-Selection was formed, campaigning further by linking up with women health activists, campaigners in different parts of the country for legislation at the state level. As a result of such continued strenuous efforts, in 1988, Maharashtra Legislation against Sex Determination was passed. As
ultrasonography for sex determination spread naturally followed by female foeticide, usage of amniocenteses for sex determination became almost non-existent, and so did Chronic Villi Biopsy which was an invasive procedure and thus could be associated with complications that is, injury to the foetus as well as placenta.

**Technologies for Sex Determination During Pregnancy**

A. **Invasive Technologies**

(i) **Amniocentesis**

This technology which is used mainly for detecting genetic deformities, was first used for diagnostic purpose in 1937 and for sex determination in 1951. This test is conducted after completion of sixteen weeks of pregnancy by taking amniotic fluid from the expectant mother, in order to gain information about the foetus. This test has become very popular in India for detection of the sex of the foetus. After separating the foetus cells from the ammonic fluid, a chromosomal analysis is conducted on it. Being invasive the needle can hit the placenta, a blood vessel causing bleeding, or some part of unborn foetus causing damage and scar spontaneous abortion may also occur within 1-2 weeks. The risk of false positive and false negative also exists (Abraham and Shukla, 1994). In some cases, a sex determination test is required to identify sex specific deformities such as hemophilia and retarded muscular growth, which mainly affects male children.

**Limitations of Amniocentesis**

The test gives 95-97 per cent accurate results but still it is not totally reliable. It has been admitted by the doctors that the tests do affect the foetus adversely in one per cent of the total number of cases. Thus, the tests may lead to spontaneous abortions, or premature delivery, dislocation of hips, respiratory complications and needle puncture marks on the baby.
As mentioned earlier, the tests are conducted after completion of 16 weeks of pregnancy and within a week the findings are available. In India since the facility of amniocentesis is available only in cities and towns, patients from villages and small towns get the results by post which take longer time and abortion at such a late stage is quite harmful for the mother.

2. **Chronic Villi Biopsy**:

This technology came to be developed in China for sex determination. In practices elongated cells of the choricon (tissue surrounding the foetus) are removed and tested. It can be done as early as 6-13 weeks of pregnancy. As the technique is invasive it can cause bleeding complications if the foetus is injured. The advantage seen is that it can detect problems early during gestation, pregnancy (10-13 weeks) and results are obtained within one or two weeks of the testing. This advantage, like many other technologies was again misuse for sex determination. The fact, however, remain that this technology is used very rarely for sex determination because of the cost and complication involved.

**Non-Invasive Technologies**

**Ultrasonography:**

With the help of sound waves, a visual image of the foetus can be obtained on a screen. It is normally done around 10th week of pregnancy in order to detect foetal abnormalities. This is the most common method that is being used for the detection of sex of the unborn child. On the basis of the foetal image and appropriateness of its size, heart movements, size of the organs can be assessed. Sex of the foetus can be determined by looking at the external genitalia. If male organ is seen, it is a boy and in its absence is a girl. Ultrasonography is done using diagnostic equipment which is affordable to the radiologists, nursing homes and doctors and therefore it is widely available and
the cost of the tests affordable to the clients. Determining the sex of the unborn foetus thus becomes easy and inconspicuous. External genitalia can be seen only after the foetus period. This is reasonably possible from 12-14 weeks onwards.

Ultrasound is otherwise used routinely 3-4 times during antenatal care in maternity homes monitoring foetal growth and to provide reassurance. Misuse of medical technology also includes certain corrupt practices whereby the sex of the foetus is mainly given as girl, which is followed by conduction of abortion i.e., double earning — one from sex determination and second from sex-selective abortion. Many of these foetuses can also be of a boy child, since accurate assessment at 10 weeks is not possible and thus often a deliberate erroneous result of girl is given.

The cost for an ultrasonography test varies between Rs. 500 – Rs. 5000. per test. The enactment of PNDT Act has pushed the test underground and therefore, its cost has increased several fold.

According to the PNDT Cell, there are about 1.5 lakhs ultrasound machines and 206000 registered bodies in India. There are ethical aspects of the misuse of ultrasound machines. To quote M.C. Kapilashrami, Director of the National Institute of Health and Family Welfare “As foetal sex determination by ultrasound is not possible in the first trimester, thus, it is essential that as part of the IEC activities connected with the PNDT Act, an awareness generation campaign is taken up informing the public that it is not possible to determine the foetal sex by ultrasonography in the first three months of pregnancy” (NIHFW Newsletter, October – December, 2001).
11. **Sex Pre-Selection**

1. **Ericsson's Method:**

   This method involves centrifuging of the male semen. This centrifuging process results in heavier XX chromosomes carrying sperms to sink lower and lighter XY chromosomes carrying male sperms to rise in the upper per sperms from this upper layer are drawn through a pipette and artificially inseminated in the female works. This is done around the ovulation period to ensure fertilisation. The technology was initially used for animal husbandry where female calves were greatly desired for daily farming. These techniques for sex pre-selection is being increasingly used in some states, e.g., in Punjab and the cost for sex-pre-selection was Rs. 4000 per insemination in the year 2000. (Andrew, 1993).^79^

2. **In Vitro Fertilization (IVF)**

   It is a highly specialised technique and is possible only in specialised clinics. It is an expensive technique, costing between Rs. 1-2 lakhs. To increase the chances of fertilization drugs like 'Clomiphene' are given, as this results in the production of multiple ova, which are collected by washing / flushing the womb and fallopian tubes. Attempted fertilisation with multiple ova has more than 50% chances of success. The fertilization is done outside the womb and therefore IVF babies are also called test tube babies. After the fertilisation the fertilized egg multiplies and forms 'Zygote' (i.e. early stage in development). It is then introduced and implanted in the uterus. To increase the chances of pregnancy, multiple embryos are implanted so that at least 1 or 2 survive.

   Some of the doctors running IVF clinics strongly feel that since the in view of couples incur so much expenditure to have a male child, they must be given the freedom to choose the sex of the child. It is virtually their reproductive right. In point of fact, amendment to the PNDT Act including the
PGD technique under its purview has been challenged by Dr. Anirudha Malpani, an infertility specialist running an NF clinic in Mumbai. Sex pre-selection has been included in the PNDT Amendment.

As long as the ‘male fixation’ and the ‘patriarchal mindset’ remain, different technologies will continue to be used and misused for sex determination and sex selective abortion or sex-pre-selection. Owing to legal measures i.e. forced implementation of PNDT Act, it will be heartening if female foeticide is curtailed to some extent but it is unlikely to happen. The deep concern centres around the moot question, whether the mother of the female baby get her due and will the baby girl, entering the world get her quota of love, opportunity, education, health care and her rights as an individual.

According to the Registrar General and Census Commissioner of India, Banthia (2001), the drastic drop in Juvenile sex ratio was a serious and growing problem while in 1991, there was just one district – Salem in Tamil Nadu which had less than 849 sex ratio, the 2001 Census showed 32 districts in the “black zones”. Besides, 16 districts, including six in Punjab, threw up a sex ratio of less than 800, while the “normal” sex ratio was 105 males for every 1000 females, whereas as many as 208 districts showed a negative trend (below 950). The state governments should “go beyond” ensuring that the scan centre were registered and initiate action against the erring medical professionals.

Presenting the Haryana experience of cracking down on the “erring” medical professionals, the state’s Chief Medical Officer, B.S. Dahiya said, “nexus was quite deep” with the officials receiving threat calls from some members of Parliament for raiding nursing homes and scan centres. For every “illegal scan carried out, the doctors got a “commission” of Rs. 250 to 500 from the centres. And the cost of abortions ranged between Rs. 2,500 and 5,000.
In India, at least fifty lakh scan tests are being done every year, but only twenty per cent of the patients belong to the high risk pregnancy cases (Hindu, 2002). The social evil of female infanticides and foeticide is still very much an integral part of the Indian rural society. However, one has to make a sincere attempt to explore the diverse causes that have led to the perpetuation of these practices within certain communities. Unless the entire society begins to fight the nefarious practice female infanticide and foeticide, will continue to be part of our culture.
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