CHAPTER-2

REVIEW OF LITERATURE

1. Introduction

An overview of the research studies already conducted in any area helps the researcher in giving direction to further research on that related issue. Declining sex ratio is a burning problem in India, and also in other developing countries. Skewed sex ratio shows the neglect of female child and the lower status of women. These are only parts of the overall gender discrimination. Thus, the following reviews and abstract helped a lot for the present research.

2. Studies related to status of women and others related issues

The status of women in India has seen many ups and downs. In different periods and ages, the status of women faced ups and downs i.e. increase and decrease in status. For example, if we consider the Vedic age, women were worshipped as goddesses. In the Muslim period their status suffered a sharp decline. In the British period they were looked upon as the slaves of slaves. After Independence, women in India have made some progress in the fields of education, health, economics, etc. as a result of technological and other factors so as to raise their status in the Indian society in relation to their male counterparts. In spite of these achievements the fact is that ordinary women's condition and their status is beset with difficulties. These difficulties and declining status of women is highlighted in various studies by different researchers. Some of them are as follows:-

2.1 Legal Awareness

A primary based study of Nayar (1995) on *"Doomed before Birth: Study of Declining Sex Ratio in the Age Group 0-6 Years in Selected Districts of Punjab*

and Haryana" found that the level of awareness about various laws, under which violence against women and their harassment is punishable offence was very low among the women. Ministry of Health & Family Welfare (MOHFW) and Tinnari (2002) in their study found that awareness about laws was higher amongst female respondents, on the whole. Further, the study suggested the level of legal awareness rose with the rise in income levels. Female respondents in higher income groups appeared to be the most aware group.

2.2 Women's Autonomy

Women's autonomy is likely to have a major impact on the demographic and health-seeking behavior of couples by the change in women's relative control over fertility and use of contraceptive; and by influencing their attitudes and abilities. According to The National Family health Survey (NFHS 3) about 41% women reported that they make their own decision on how they should use the money they earn. About 30% reported that their husbands or other ladies of the family along with their husbands take decision. The proportion that takes their own decision was higher in urban (57%) than in rural areas (37%).

The survey also revealed that women who are employed and earn reported that either they alone (24%) or jointly with their husbands (57%); husband alone (15%) or others is the household (3%) decide as to how the money they earn will be used. Only one in six women does not participate in the decision of how their earnings are used. Just 28-31% of women mainly decide how their earning is to be used (IIPS, 2007).

2.3 Household Decision-Making

NFHS 3 (2005-06) revealed that just 27% of currently married women make their own decisions about their own health care. International Institute of Population Studies (IIPS) study (2007) revealed that only 9% of women take decisions mainly by themselves about major household purchases. Joint decision-making is

most common for visits to the respondent's family or relatives followed by decisions about major household purchase.

IIPS (2007) study revealed that women's participation in decision –making tends to be most common in several of the north-eastern states; men's approval of wife's participation in decision making is relatively high in only two northeastern states (Sikkim and Meghalaya) as well as in the northern states of Haryana, Punjab, Delhi, Himachal Pradesh and Uttarakhand.

2.4 Freedom of Movement

Freedom of movement outside the home is an important aspect of women's autonomy and empowerment. NFHS 3 (2005-06) found that only 33% of women were allowed to go alone to the market or to health facility or to places outside the village; and about 4% were not allowed to go out at all to any of them (IIPS, 2007).

2.5 Women and Personal Choices

One's own control over one's body and sexuality is perhaps the most basic element of personal freedom. Judging from the data on the number of married couples who actually use contraception, the majority of married in the country do not have the luxury of exercising the most basic choice of deciding whether and when, they will have a child (NIPCCD, 2008).

As regard to the number of children to be had, NFHS 3 (2005-2006) findings revealed that the decision about how many children to have, the majority of men (89%) feel that such decisions should be made jointly and the rest were of the opinion that the husband should have a greater say. Only a negligible percentage (2%) was of the opinion that the wife should be the main decision maker regarding the number of the children the couple should have. Also, most rural men

are of the opinion that the husband should have a greater say in this decision making than the wife.

2.6 Perceptions on Domestic Violence

With regard to domestic violence against women, NFHS 3 (2005-06) revealed that women agreed that (41%) husbands justified beating his wife if she showed disrespect to her in-laws, followed neglect of the house or children by the wife (35%). The reason least agreed with was her refusal to have sex with him (14%), followed by her inability to cook food properly (20%). Agreement with the other three reasons, namely, if she goes out without telling him, if she argues with him, or if he suspects her of being unfaithful ranged from 25-30%. One out of two women agreed with any specific reason justifying a husband beating his wife and more than one out of two (54%) agreed with at least one reason justifying wife beating (IIPS, 2007).

2.7 Views on Various issues related to sex ratio

Nayar (1995) in his study found that respondents were not particularly in favor of giving equal freedom to boys and girls. They were also not in favor of giving an equal share of ancestral property. MOHFW and TINNARI (2002) highlighted that equal education, equal food and equal health care for boys and girls are favored by most respondent's but equal time for play and equal freedom was there only to a limited extent. There was a growing acceptance that both sexes had equal intelligence and abilities, and that given a chance, both boys and girls can perform well. That both can enter the same occupations was somewhat less acceptable in some groups. While equal wages for equal work finds favor with most respondents, shared households roles, joint decision making and joint holding of property and assets have relatively lower acceptance. Equal rights find acceptance by the majority.

3. Studies related to declining sex ratio in India

3.1 Factors leading to decline in sex ratio

There are studies, which highlight some factors leading to decline in sex ratio. A study conducted on *"Awareness of Rural Couples about Sex Ratio"* by Ghosh, Goel and Balda (2005) revealed that female foeticide, higher female mortality, dowry, female infanticide, and male migration were cited as major reasons for the decline in sex ratio.

Mathur, Rajgopal and Bhargava (2004) in *"Childhood Poverty in Rajasthan: A Review of Literature"* analyzed the relationship between livelihoods and childhood poverty and well-being in the state of Rajasthan they found that the practice of female infanticide, female foeticide and strong "son preference" in most communities were the factors contributing to the imbalance in the sex ratio in Rajasthan, which is also indicative of the low value and secondary status of the girl child.

A secondary data based Article on "Little Girls and Deaths in India" by Bardhan (1982) highlighted regional discrimination of girl child in relation to social, cultural and economical factors covering north and north-western parts of India and the impact of Islamic rule another important factor which may have resulted in the lower status of women. Bardhan concluded that lower female work participation may lead to a larger degree of relative neglect of female which is expected to be more fatal among poorer sections of society.

3.2 Sex preference and sex ratio

Sex preferences are significant because of their behavioral expression. Parental sex bias may be manifested at family level as differential care or investment in sons and daughters, in sex selective abortion. Sex-biased behaviors are often detectable in populations with abnormal sex ratios or in differential survival rates

of children (Rajendran, 2009). In India, son preference is a universal first preference for many of the parents. It has been found that in India, parents prefer to have son child rather than a daughter. This sex preference varies from region to region in Indian context. It has been noticed that son preference is widespread in north –western regions in comparison to southern regions where girls are preferred.

Yadav and Badri (1997) in a study conducted in Bangalore on *"Gender Preference and Anxiety of Pregnant Women"* explained that the reason for wanting a son is to attain power, prestige, to continue the family lineage and performance of last rites. The study also revealed that the anxiety of 203 pregnant women related to the sex of the child found that only a negligible percent preferred daughter. The majority (96%) of women with two daughters, as also more than half the pregnant women with one daughter and one son, preferred a son only.

Anand (1998) in her study on *"Comparative Study of the Attitude of the People from Haryana, Delhi, Rajasthan and Punjab towards Female Foeticide and Female Infanticide"* (Doctoral Thesis) identified the following reasons for son preference as ensuring the family name through the male child; performance of last rites by son only; inability of girls to assume family responsibilities after marriage; expensive marriages of daughter; inability of girls to provide economic security to the parents; parents feeling of insecurity at the birth of a female child; son ensuring better fortunes for parents; difficulty in finding suitable matches for girls; increasing violence against women; and the birth of a female child lowering the status of the mother and the family in society. This shows the strong patriarchical family system which gradually gave rise to strong preference for son child.

A study conducted by Prasad and Nayar (2001 and 1995) revealed that most of the parents want son because they believed that only by having a son, they can attain moksha (salvation).

MOHFW and TINNARI (2002) study exposed that son preference is more because sons perpetuate family name; inherent property; sons provide old age security; and son performs the last rite.

Bhat and Zavier (2003) in their study on *"Fertility Decline and Gender bias in Northern India"* noticed that preference for sons was the highest in the northern plains and central uplands of India, where the proportion of women performing sons to daughters ranges from 50 percent to 64 percent. There are various utility reasons, which led to more son preferences in the Indian society. Many studies highlighted various functional reasons associated with son preference.

In a study that was carried out by Prasad (2001) on "*Female Foeticide: A Study of Varanasi"* it was revealed that parents do not want girl child because of dowry. Parents feel that finding a suitable match for a daughter is a difficult task; otherwise the life of a daughter would become hell. Another belief, which parents put forward against a girl child, was that the daughter would not support them in old age, as they will go to another house after marriage. The various reasons for not wanting a girl child were dowry, domestic violence, and long requirement of giving gifts and money to daughter, forbidding wedding expenses, ill treatment of women after they give birth to a girl child (MOHFW and TINNARI, 2002; and Nayar, 1995).

Srivastava, Dasgupta and Rai (2005) in their study on *"Attitude towards Girl Child and Declining Sex Ratio in Bhopal"* discovered that married men and women in Bhopal did not want a girl child because the cost involved in upbringing of girls was a wasted investment; and she would be subjected to harassment later.

3.3 Female foeticide, Sex selective Abortion and sex ratio

Sex selective foeticde is a result of parent's negative bias towards the girl child. This attitude of parents towards a girl child is due to socio-cultural factors. This leads to sex selective abortion. Sex selective abortion is a by product of advancement in sex determination technology like ammoniocentesis tests, ultrasound, and chronic villi biopsy etc. There are various studies, which highlight female foeticide as major factor contributing to the decline in sex ratio.

Kulkarni. S (1986) in his study *"Sex Determination Tests and Female Foeticide in the City of Bombay"* found that out of 42 doctors under study, 37 doctors (87%) had performed sex determination tests in the last five years or so. The study also revealed that 64% of doctors carried out sex determination tests exclusively. In the same study 73%, doctors opined that sex determination tests were a human service to women who did not want to have any more daughters.

S.K. Khanna (1995) in *"Prenatal Sex Determination: A New Family-building Strategy in New Delhi*" exposed that sex selective abortion, following ultrasound, is a common practice and most jat families prefer two sons and a daughter; and to achieve this birth order and ideal family composition, they go in for sex selective abortion. This study also reveals distorted sex ratio in the age group of 0-5, among Jat community.

Anand (1998) in her study on *"Comparative Study of the Attitude of the People from Haryana, Delhi, Rajasthan and Punjab towards Female Foeticide and Female Infanticide"* (Doctoral Thesis) noticed that 25% of the respondents felt strongly against these practices. Punjab (36%) had a higher percentage of respondents in favour of female foeticide and infanticide followed by Rajasthan (28%), Haryana (23.7%) and Delhi (4.5%). Anand also identified the following as some reasons for female foeticide: as ensuring the family name through the male child; performance of last rites by son only; in ability of girls to assume family responsibilities after marriage; expensive marriages of daughter; inability of girls to provide economic security to the parents; parents feeling of insecurity at the birth of a female child; son ensuring better fortunes for parents; difficulty in

finding suitable matches for girls; increasing violence against women; and birth of a female child lowering the status of the mother and family in society.

In *"Female Foeticide in Punjab: Exploring the Socioeconomic and Cultural Dimensions"* Walia (2005) observed that most of the respondents in his study felt that female foeticide was a good way to keep the girl population in check. They went to the extent of demanding easier and more accessible facilities for sex detection and consequent female foeticide. Only a few in his study accepted female foeticide to be a heinous act that should be punished by law.

UNFPA (2001) report on *"Sex Selective Abortions and Fertility Decline: The Case Study of Haryana and Punjab"* reveals that sex selective induced abortion appeared to be declining in rural areas and increasing in urban areas. The practice of sex selective abortion played an essential role in urban areas of Haryana and Punjab.

A paper presented by Unisa, Sayeed R.K.Sinha and C.P.Prakashan (2001) on *"Sex Selective Abortions in India: Evidence from two cultural settings"* discovered that the abortion rate increased from 1971 to 2001 in both states namely Haryana and Tamil Nadu. This study also highlights that around 60 to 80 percent of total abortions were induced and around 40 percent abortions could be due to sex selection i.e. sex selective abortions.

MOFHW and TINNARI (2002) estimated that nearly 10% respondents had undergone abortions. The incidence of abortion was much higher in the upper and middle income groups as compared to the lower income groups.

A study by Ravindra on *"Gender Gaps in Research on Abortion in India: A Critical Review of Selected Studies (1990-2000)"* analyzed various aspects of abortions on the basis of 79 studies conducted in India during 1990-99. The Three major reasons for terminating pregnancy found in almost all studies were: to avoid an additional birth after the desired family size had been reached, to ensure a reasonable birth interval after the previous birth, and to prevent the birth of female child. MOFHW and TINNARI (2002) concluded that 62%women had undergone

induced abortion because they did not want another child. The majority were in the higher income group. 25% women reported that they wanted only son.

Patel (2004) in her article on *"An Update on the Declining Sex Ratio in India"* explained that Indian women face covert violence before birth through sex pre-selection and overt violence after conception through sex selective abortions. While abortion is legal in India, sex-selective abortion is not. Amniocentesis, chronic villi biopsy (CVB), sonography, ultrasound and imaging techniques are used to determine sex of the foetus. Patel also highlighted that In-Vitro Fertilization (IVF) clinics for assisted reproduction are approached by infertile couples to produce sons. This had resulted in the decline in juvenile sex ratio and 60 lakh missing girls in the age group of 0-6 years, according to the census of India 2001.

If we see the facilities for sex determination tests we find that most couples go to private clinics for sex determination and sex selective abortion. There are some studies which highlight this phenomenon.

A survey conducted by Prasad (2001) on "*Female Foeticide: A Study of Varanasi"* found that almost 80% of the diagnostic centers conducted sex determination tests. Study revealed that on an average 15-20 tests were conducted every month at these centers. They were quite open about it. Most of the doctors replied that pressure from their clients compel them to perform sex determination tests. Most of the doctors in Prasad's study were of the opinion that parents have a right to have the child they want. They (doctors) believe that it is the parent's right to choose the sex of their child and one cannot stop them from exercising their right. A few others supported sex determination tests on the ground of the small family norm. Some doctors in the study felt that banning the tests would only force people to go in for clandestine. Regarding the sources of information about sex selection test, Prasad concluded that in a few cases doctors referred the patients to a clinic conducting these tests; but for some others, the sources of the information regarding the sex determination test and the clinic were relatives,

friends or neighbors. The study also focused on the decision making regarding sex determination test, and concluded that it was the family's decision to undergo sex determination tests; and the mothers mentioned that they were not forced, as they too wanted to give birth to a male child. Most of the respondents (83.5%) felt that the decision to undergo abortion should rest with prospective parents; some felt the prospective mother should take it; and only a negligible percentage (5%) believed that other members of the family should take this decision.

Another study of MOHFW and TINNARI (2002) and Nayar (1995) revealed that most of the respondents were reluctant to disclose the place of abortion. Of these, more than half of them admitted to using private clinics for the purpose and less than 40% used government facilities. Nayar, in his study revealed that in Punjab and Haryana "dais" also conducted abortions on a small scale. In both the studies, most of the respondents from all income groups were aware about sex selective abortions, mainly the ultrasound. But in the lower income groups the awareness was limited and they got this information from friends, the media, "dias", private practitioners, etc. Also advertisements, billboards and hoardings with catchy slogans about abortion and availability of such facilities, were the main sources of information. (MOHFW and TINNARI, (2002) and Nayar (1995)

A study conducted on *"Awareness of Rural Couples about Sex Ratio"* by Ghosh, Goel and Balda (2005) revealed that female foeticide, higher female mortality, dowry, female infanticide, and male migration were cited as major reasons for decline in sex ratio.

3.4 Fertility behavior, Family Planning, Family Composition and sex ratio

Decline in the fertility level and ideal family size is a crucial determinant of skewed sex ratio in India. It has been noticed that from 20th century onwards there has been shift from high fertility to low fertility levels in Asia. This is described as the greatest demographic change in the second half of 20th century (Caldwell, 1993). In India, fertility behavior and its level varies from one region to another.

We will find maximum decline in fertility level in northwestern regions in comparison to southern regions where fertility is not so low. A study by Sekhar et al (2001) reveals that India experienced variation in decline in fertility level in relation to the geographical division's i.e. North-South divides. Variations in fertility behavior and its level in a particular region is due to demographic diversity, heterogeneity, and socio-economic development among the states along with socio-cultural setup of the particular region which influences fertility behavior.

The secondary data based study on *" Fertility Decline and Increasing Gender Imbalance in Indi Including a Possible South Indian Turn Around"* by Basu (1999) highlighted role of family planning in reducing fertility along with cultural factors in shaping fertility trend. In India, preference for son is one of the most important socio-cultural factors that is affecting the fertility behavior and its level.

"The Indian Couples and Gender Preferences for Their Offspring" study of Nirbhawane (1996) reveals that among 200 couples under study in Mumbai, in study showed that women wanted to have at least one male child and they want ideal family size of not more than two children.

A study on *"Son Preference and Fertility Behavior in Developing countries*" by Repeto (1972) noticed the following consequences:

1) An intensive fertility survey in Lucknow reveals that women who had 3 or 2 sons and a daughter had just as many subsequent pregnancies as those who had 3 daughters.
2) A fertility survey in Delhi shows that success or failure in achieving the desired family composition had little influence on subsequent fertility in the studied population.
3) A fertility survey in East Pakistan reveals that couples who manage to ensure the survival of several sons go on to have relatively large number of additional children instead of limiting subsequent fertility

A reading of Arnold, Choe and Roy (1998) on *"Son Preference, the Family-Building Process and Child Mortality in India"* highlighted the investigating NFHS data, and it reveals that son preference and family composition affects fertility behavior in India. Anandalakshmy (1994) found that more families have two sons (38.5%) than two daughters (32%). Yadav and Badri (1997) in their study conducted in Bangalore on the anxiety level of 203 pregnant women related to the child's sex found that most of them considered an ideal family size to be three.

Srivastava, Dasgupta and Rai (2005) reported that 5% families desired one child, while a majority (68.5%) wanted two children and about 13.5% desired for three children. A very few were in the favor of larger families. There was a trend of limiting family size in respondents who were either graduates or postgraduates, so as to provide a higher standard of living to their children.

In a study by Lal (2003) *"Harbinger of Safe Motherhood and Child Development*" in the rural area of community development block in Haryana it was found that over 97% of sterilizations were adopted by females, while men's participation in sterilization was marginal. Son preference was an acknowledged fact as 99.36% of sterilizations were adopted after having given birth to at least one son. Nearly 27% of women accepted the sterilization operation after bearing two or three sons only and thus avoiding effectively the birth of a girl child.

3.5 Sex ratio at birth and sex ratio

Two rounds of NFHS (1992-93 and 1998-99) present information at state level regarding sex ratio at birth has shown increasing masculinity in sex ratio at birth. This increasing masculinity trend at birth is highlighted by Sudha (1999). However, there exists a regional pattern in sex ratio at birth where southern states have shown nearly ideal sex ratio in comparison to other northwestern regions. This phenomenon is highlighted in various studies.

A study on *"Factors Affecting Sex Selective Abortion in India and in 17 Major States"* by Rutherford and Roy (2003) noticed that there exists a regional pattern in sex ratio at birth with southern states exhibiting a near ideal sex ratio at birth of 105 while the states of Haryana and Punjab experience a sex ratio at birth of 114 and 120 during 1984-98.

Similarly, Patel (2002) in her study in Kerala on *"Adverse Juvenile Sex Ratio in Kerala"* observed that the overall sex ratio in Kerala has always been in favour of women, but not for females in age group 0-6. Such large difference in sex ratio at birth chains the claim for sex selective abortion in these later regions. It is also noticed and observed that the selective abortion is more prevalent among affluent women with urban and educated background. This trend is repeatedly noticed in various studies where lower sex ratio has been noticed among urban areas in comparison to rural areas where sex ratio is better. Rao and Prasad, 2002 noticed such occurrence. The regional variations in sex ratio at birth in facts or studies could perhaps be related to the differential fertility levels across the states. The urban share in alteration is much higher in sex ratio than in rural areas (Anil Kumar, 1999).

Arokiasamy (2005) in his study on *"Sex Ratio at Birth and Excess Female Child Mortality in India"* observes similar urban predominance in sex ratio distortion as well as the differential pattern of pre-natal and post-natal discrimination of female child.

Micro level state specific studies like of Agarwal (2005) on *"Discrimination from Conception to Childhood: A Study of Girl Child in Rural Haryana"* indicates that female child survival has been threatened at higher order of births and this is strongly associated with presence/absence of male siblings. It has been found that changes in sex ratio at birth between two periods by birth order indicates the probability of girl child in higher birth order. Over different periods, it is the second and higher birth order births which evident lower sex ratios, which could also be a result of declining fertility norms, which allows less room for daughters in the family.

Jayraj (1999) in his reading highlighted the situation of order specific variations in sex ratio at birth, it is found that the sex ratio of first order influence the sex ratio at birth to large extent and that its association with prevailing levels of foetal wastage (intentional and unintentional) is highly significant.

3.6 Female infanticide and sex ratio

It is well acknowledged that the practice of female infanticide in India was widespread among certain communities during the 19th century and early part of 20th century. The castes that practiced female infanticide in the 19th century included Rajputs, Jats, Ahirs, Gujjars, and khutris. The British first discovered the practice of female infanticide in 1978; since then this practice has remained specific to certain groups and regions in India. It is evident that female infanticide is not a universal phenomena or practice in India and not all communities were involved in its (Miller, 1997).In contemporary India this practice is disappearing by a new practice of female foeticide. There are various studies, which highlights practice of female infanticide in various parts of India. Female infanticide backed by socio-cultural factors, like son preference, carrying of family name by son, dowry etc are some of the factors which leads to female infanticide. A study by Srivastava (1998) in Bihar reveals that this heinous act of female infanticide in common is committed by dais (traditional birth attendants) in rural areas and compounders (pharmacist) and nurses with the acquaintance of surgeons in urban areas.

A secondary data based study of Alice Clark (1983) *"Limitations on Female Life Chances in Rural Central Gujarat"* reveals that in Gujarat, infanticide has been related to Hypergamy and indicated submission, fealty, or deference. It was also highlighted by the study that the practice of female infanticide helped the Patidars to regulate the distribution of their resources. Lastly, the study reveals that female infanticide in these (Charotor) regions of Gujarat played a major role in determining the demographic composition in these regions.

A study by Samuel and Hebbare (1998) exposed that, in Tamil Nadu, it was observed that the most commonly used methods for killing female infants include "poisoning by the latex of calotropis plant, organophosphate (pesticide), sedative overdose, strangulation, feeding the child paddy grain soaked in milk or juice extracted from tobacco

3.7 Dowry and sex ratio

'Dowry' has taken on a NEGATIVE connotation and is a corrupt form of social custom related to marriage. In Indian society marriage and dowry are closely inter related with each other in spite of the problem and negative consequences created by this dowry system in the past. It is continuing today also whether it is demanded or given willingly it continues to accompany the newlywed bride to her new home. To a large extent this practice is to most extent responsible for the declining number of females in Indian Hindu society. This has been proved by many research studies. For example,

Ghosh, Goel and Balda (2005) in their study on *"Awareness of Rural Couples about Sex Ratio"* revealed that female foeticide, higher female mortality, dowry, female infanticide, and male migration were cited as major reasons for decline in sex ratio.

In analyzing the important factors responsible for the decline in the number of female children, Walia(2005) in his study on "*Female Foeticide in Punjab: Exploring the Socioeconomic and Cultural Dimensions"* noticed and explored that a good number of respondents agreed with slogans by doctors – 'better to spend Rs. 1000 now and save Rs. 10 lakhs later. Girls take away dowry while sons bring in a substantial amount of dowry. Girls were an unnecessary investment; even if they earned, parents had no right to that earning.

3.8 Migration and sex ratio

Migration also directly or indirectly influences the sex ratio. There are few studies, which show relation between sex ratio and migration. Kundu (1996) in his study of *"Variations in sex ratio: Development Implications"* reveals that migration factors seems to be the single most important factor explaining the temporal and cross-sectional variations in sex ratio. Decline in sex ratio in backward states like Bihar, Orissa, M.P, Rajasthan, and U.P can be credited to slow down of outward migration and returning of out migrants for some reasons also contributed to gender discrimination.

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3.9 Poverty and sex ratio

Poverty may be considered as an important factor for the decline sex ratio in India. A study by Krishnaji (1987) on *"Poverty and Sex Ratio: Some Data and Speculations"* revealed that male outward migration and the bunching of families headed by widows contribute to specifically balanced sex ratios between the agricultural labor and small cultivator household. Study also reveals that deficits of females are observed in household with large landholding even in the southern states of India, where generally the sex ratios are more evenly balanced. The study concludes that there is less discrimination against females among the poor, for mortality differentials cannot be wholly attributed to discrimination.

A secondary data based Article on "Little Girls and Deaths in India" by Bardhan (1982) concluded that lower female work-participation may lead to larger degree of relative neglect of females which is expected to be more fatal among poorer sections of the society.

3.10 Trends in sex ratio

The sex ratio in India over the past 100 years has shown an alarming decline from 972 in 1901, to 946 in 1991 and 933 in 2001. At the same time child sex ratio has also shown a drastic decline. The girl child sex ratio has declined from1961 onwards. In 1961, girl child sex ratio was 976, which declined to 945 in 1991, and this further declined to 925 in 2001. A large number of states like Gujarat, Punjab, H.P, Delhi, and Haryana have shown a drastic decline of 50 or more points of decline in sex ratio since 1991 onwards. Some of the districts of India have showed a severe decline in sex ratio. These include Fathegarh Sahib district in Punjab (745), Krukshetra in Haryana (770), and Mahesana in Gujarat (798). They are some of the best examples of skewed sex ratio districts of India. On the other hand, child sex ratio has also shown an extreme decline. Sources revealed that the states, such as Punjab (-82), Haryana (-59), H.P (-54), Chandigarh (-54), Gujarat (-50) and Delhi (-50) have shown a sharp decline in CSR (Child Sex Ratio). There are various studies carried out as to highlight trends in sex ratio and CSR. P.N.Mari Bhat (2002) in her paper presented at the symposium on sex ratio in India, organized by IIPS on *"Vanishing Women: Demographic Perspectives on Falling Sex Ratio"* revealed that about 21 million females went missing between 1901 to 1991. The central region, comprising the states of Bihar, Orissa and M.P accounts for about half of the females who went missing between 1901 to 1991. Scheduled castes account for a majority of the females who went missing between 1961 and 1991.

Bose (2001) in his study on *"Fighting Female Foeticide"* noticed that although the decline in child sex ratio was observed throughout India, it was more pronounced in Punjab, H.P, and Gujarat. Out of 577 districts, 456 marked a decline of 100 points in the CSR in 2001 compared to 1991. Investigation also reveals that among the states pronounced decline sex ratio, Gujarat situation would worsen fast and it will become a DEMARU (Daughter Eliminating Male Aspiring Rage for Ultrasound) state.

In a study on *"The Dynamics of the Population Sex Ratio in India"* Gulliot (2002) tried to reconstruct the trend in the population sex ratio in India (1971-1996). He found that the sex ratio in 1971 was considerably lower than the sex ratio recorded for the 1971 census. The reconstructed population sex ratio appears to have marginally increased during 1971-81 period, instead of achieving the large decrease recorded in the census. The sex ratio remained practical constant at the 1981 value until 1991. Only after 1991, the relative improvement in female survivorship started to translate into a decrease in the overall sex ratio of the population.

"Sex Ratio in India: Reconstruction of Past Ratios and Future Projections" by Sulabha Parasuraman (2002) highlights that the reconstructed sex ratios indicate the end of the increasing trend in India's sex ratio and show a reversal in the trend. Future projection shows that when the gap between male and female life expectancy increases substantially, the overall sex ratio of the population becomes favorable to females. Sen (1981) in his study explored that moderate decline in sex ratio had been observed in central and peninsular India during the years 1901 – 1971. The heaviest decline can be seen in north central India (W.B, Bihar, U.P and M.P) during the same period. The most marked reversal of trend (i.e. where the sex ratio was earlier declining) had been observed in peninsular India between the years 1971 and 1981.

3.11 Under enumeration and sex ratio

Under enumeration of girl child is considered as one of the factors responsible for the decline sex ratio, but this factor is not so influential and effective to give out a clear picture of missing girls. There are few studies, which show under enumeration as one of the factor responsible for decline in sex ratio. K.Srinivasn (1994) in his study "Sex ratios: What they hide and what they reveal" depicted that projection of population with 1981 as base and taking the observed levels of fertility and mortality between 1981 and 1991 under different assumptions of sex ratios at birth revealed that the 1991 census has undercounted females. Similarly,

S.Irudaya Rajan, U.S.Mishra and K.Navaneetham (1991) in their study discovered that the decline in the sex ratio during the decade of 1980s is not due to any increase in sex discriminating features at birth; it is rather due to the double counting of males.

3.12 Gender discrimination and sex ratio

The sex ratio changes are commonly observed within an underlying framework that assigns (relatively) greater deprivation and discrimination of females as opposed to males in the south Asian cultural setting. There are many factors contributing for declining sex ratio; gender discrimination is one of them. Gender discrimination refers to the biased distinction between male and female sexes. These distinctions are created by socio-cultural setup of the society. Gender discrimination or daughter discrimination both are almost identical terms. Gender discrimination mainly includes the discrimination of female child or female sex. We find a negative bias for women (girl) in education, health care, nutrition, and other necessary developmental facilities. Son preference can be consider as one of the factors responsible for gender discrimination. Various studies have highlighted the problem of gender discrimination. A study by Arokiasamy (1999) shows that excessive of female child mortality was observed in Haryana (134%), followed by Punjab (81%) and UP (70%) respectively. The study also revealed that a very high level of neglect of female children was observed at the time of immunization. Rohini P.Pande (1992-93) in her study of "*Selective Gender Differences in Childhood Nutrition and Immunization in Rural India: The Role of Siblings"* reveals that girls with multiple surviving sisters are more neglected than other children. The study also highlights that both the sexes are disadvantaged in terms of care if they are born after multiple same sex siblings. Preference for sons persists, and boys who were born after multiple daughters have the best possible outcomes. Another study of Nayar (1995) exposed that home remedies were considered best for girls, whereas medical attention was sought immediately for boys. However, girls were breast feed for shorter period in comparison to boy

child. Mothers, on probing, stated that this was more because pressure was built up for the next conception to take place early in order to bring in a son.

4. Conclusion

An overview of the research reviewed clearly reveals that a good number of studies has been conducted on the problem of disturbing sex ratio in India. A good number of the above studies have covered different issues pertaining to the problem. Most of the above reviewed studies are based on secondary data sources (Census, NFHS etc.) and are more concentrated to the northern, central, and southern areas of India. The overview of the available studies on sex ratio provided a pattern or base to the researcher so as to undertake the present study in order to understand the problem of declining sex ratio in western region of India, especially Gujarat where the sex ratio is adversely worsening. The present study is based on primary data sources.