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# DETERMINANTS \& CONSEQUENCES OF DECLINING SEX RATIO: A REVIEW 

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#### Abstract

The skewing sex ratio in India has become an issue of concern, as it will lead to serious demographic disparity and adverse social consequences. Although the overall sex ratio for the entire population in India has shown an improvement, the last two decades have shown a deterioration of the Child Sex Ratio. A great number of studies have been devoted to analyze such declining sex ratio. An attempt has been made to review studies which have focused on socio-economic and other factors related to this complex phenomena and repercussions of imbalance sex ratio occurring in the country. This paper studies these aspects in three broad parts. The first part deals with the studies related to the estimation of missing women, the second part of the literature review showcases studies related to causes and determinants of declining sex ratio, and the third and last part deals with the studies on repercussions of Declining Sex Ratio.


KEY WORDS: Son preference, missing women, fertility, female literacy, work participation, religion, trafficking.

## INTRODUCTION

Gender Inequality is defined as 'the differences in the status, power and prestige that the women and men have in groups, collectivities or societies to which they belong' (Gidden, 2006).The Pattern of gender inequality has undergone a radical change as it shifted from mortality inequality (the female life expectancy at birth has now become higher than male life expectancy) to natality inequality (Sen,2001). In a significant article titled as 'More than 100 Million women are missing', $\operatorname{Sen}(1990)$ brought to attention the mounting gender inequity by evaluating the male-female ratio. Disparity in sex ratio uprooted largely from female- male inequality in survival rate, which consecutively, are linked
with various socio-economic, cultural and historical factors (Agnihotri, 2000). The declining Child sex ratio is the most distressing factor reflecting low premium accorded to a girl child in India (Patel, 2003).

The literature review has been divided under the following three broad groups:1.Concept of missing women, 2 . Causes and determinants of declining sex ratio, and 3. Repercussions of Declining Sex Ratio

## 1. Concept of missing women

The phenomenon of 'missing women' in the world was first noted by Sen (1990) that globally more than 100 million women are missing, especially in Asia. If equal proportions of the two sexes could be expected, the low ratio of 0.94
female to male in South Asia, West Asia and China would indicate a deficit amounting of 6 percent of women, but since, in countries where men and women receive similar care, the ratio is about 1.05, the real deficit is about 11 percent. He estimated 50 million 'missing women' for China alone, taking 1.05 as the yardstick ratio. Addition of figures from south and west Asia and North Africa results 'missing' of more than 100 million women. Coale (1991) and Klasen (1994) revised these estimates using alternative benchmarks. Coale (1991) used a sex ratio of 1.059 and arrived at an estimate of 60 million missing women (in which 29 million missing women in China and 23 million in India are estimated). To give a rough estimation of the numerical impact of excessive female mortality, he also calculated the ratio of men to women in selected populations that would be if there is no discriminatory treatment against females and thus the total number of 'missing' women. Klasen (1994) calculated the 'gap' of missing women in the contemporary third world by comparing the actual number of women with the expected number estimated from European demographic history. The estimated missing women were 80 million. Klasen and Wink (2003) conducted a study to update their estimates of missing women and found that the number of missing females has increased in absolute terms to over 100 million and at the same time, there appears to have been a relative progress in the share of "missing women,'" signifying that the trend has stabilized at a high level. It was found that the improving female education and employment opportunity has improved the ratio in most countries whereas the increasing sex-selective abortion has worsened it in India and China. In other paper Amartya Sen (2001) amended his original argument and used the sex ratio of 1.022 of Sub-Saharan Africa to avoid comparing advanced countries to developing ones. This yielded an estimate of 44 million missing women in China, 37 million missing women in India, and a total of more than 100 million missing women worldwide. Oster (2005) in her PhD thesis questioned Sen's explanation and argued that a large part of this 'missing' phenomenon can be accredited to excessively male sex ratios at birth resultant from mother infected with Hepatitis B Virus(HBV). She concluded in her study that there is about 45 percent of the 'missing women' worldwide and even up to 75 percent of the 'missing women' in China could be explained this way. Oster's findings were met with counter argument by several researchers. Das Gupta (2005) pointed out that China's missing women is largely determined by the current sex composition of the family into which they are conceived. If the first child was girl, the subsequent children had a much higher probability of being boy, indicating that conscious parental choice was taken while determining the sex of the foetus. Thus concluding that cultural
factors still provide the devastating explanation for the 'missing women'. Lin and $\operatorname{Luoh}(2008)$ found that Hepatitis B Virus has little impact on the missing women phenomenon; concluding that their facts was 'consistent with the son preference hypothesis'. Oster (2008) however together with three Chinese researchers chin, Yu and Lin found that Hepatitis B cannot explain male-biased sex ratios or the 'missing women' in China and as a result, she disproved the conclusion of her previous research work.

## 2. Causes and determinants of declining sex ratio

This part of the literature is further divided into three parts- a)son preference and declining fertility,b) Socio economic determinants of declining sex ratio, and c) availability and access to unregulated sex determination technology.

## a) Son preference and declining fertility

Jayachandran (2014) noted that fertility decline with a high societal preference for sons over daughters have worsened India's male-biased sex ratio. In other study by Acharya and Stevanto (2006) studied that the main factor behind the feminine population deficit in India was the preference for male children to guarantee the security of the parents in the old age and to give no dowry. Garg and Nath (2008) in their study revealed that the preference for a son continues to be a prevalent custom in the traditional Indian household. Myers (2012) discovered in his study that the motivations for son preference which has increased the use of sex-selective abortion are mostly associated with the patriarchal nature of Indian society. Dasgupta and Bhat (1997) recognized two opposing effects of fertility decline on sex ratios: a positive "parity" effect whereby fertility decline results in fewer births at higher parities where discrimination against girls is strongest, and a negative "intensification" effect, in which parity-specific discrimination against girls becomes more pronounced at lower levels of fertility. In India, at least during the recent past, the intensification effect has dominated the parity effect, with the sex ratio among children worsening as fertility has declined. The aim of population policies was to attain decline in its fertility level, but in north-western India, this decline was accompanied by strong son preference and gender discrimination. The government policy pursued the acceptance of small family norm but did not take any initiative to reduce a son preference, and this policy had an impact on the incidence of foeticide (Das Gupta, 1987).

## b) Socio Economic status of sex ratio

Portner (2010) found that better educated women with eight or more years of education in rural and urban areas have the lowest fertility and they are the main user of sex selective abortions.

The study by Chakraborty and Sinha (2006) revealed that sex ratio of children under age group of 0-6 years was inversely linked to economic growth, female education and female economic activity rate with relatively higher elasticity coefficients in urban areas of India, catalyze by the extensive use of sex determination tests and sex selective abortion. Retherford and Roy (2003) in their study concluded that women who are educated and exposed to mass media are more likely to use sex selective abortion than other women because they have more information and access to sex determination tests and sex selective abortion facilities. Subramanian and Selvaraj (2009) in their study concluded that improvements in socioeconomic circumstances are unlikely to normalise the sex disparity in India in the dearth of changes in societal norms and preferences. Dewan and Khan (2009) discussed that higher levels of education in India do not seem to be related with more balanced child sex ratios. In Punjab, district which has high literacy rates still have highly imbalanced child sex ratios. It is prosperity rather than improved access to medical technology that is the driving force behind strong son preference especially where the first child is a daughter. Sekher and Hatti (2010) in their study argued that it has been believed that the influence of son preference should decrease with enhancement in welfare and economic development. But most studies have repeatedly found the opposite, whereby strong son preference continues not only in poorer societies but also in residents where women have much achieved in the field of education and employment and attained significant social status. Chamarbagwala and Ranger (2010) recommended an urgent need for policies that effort to lower son preference. As economic growth and changes will bring about higher levels of education and wealth which are necessary to advance human development levels in India; but these changes can be unfavourable to the survival of females. Murthi et al (1995) showed that the variables directly related to women's agency (particularly, the female literacy rate and female labor force participation) have a statistically significant negative impact on female disadvantage in child survival and whereas male literacy had no effect on the relative survival chances of girls vis-àvis boys.

The extent of son preference varies among the Hindus, Muslim, Christians, Sikhs and other religious groups in India. Hindus and particularly, Sikhs (mostly concentrated in Northern India) display stronger son preference than Christians and Muslims ( Bhat and Zavier,2003). Bhat and Bhatt (2016) in their study found that the relationship between the Child sex ratio and female literacy rate among various religious communities seems to be inverse- the religion (like Jains, Christians) that have highest literacy rate have lowest Child sex
ratio. They also concluded that Female literacy makes women more aware about vulnerability of whole women folks and thus there is a strong preference for son among literate women. Basu (1993) noted that as compared to the general population, there appears to be a more even distribution of men and women among the Scheduled Tribes. Dewan and Khan(2009) in their study found that the menace of female foeticide is much more prevalent among upper caste landed households compared to the Scheduled castes and Tribes.

## 3.Availability and access to unregulated sex determination technology

A study by Nagarajan and Mulay (2008) in Maharashtra showed a clear positive relationship between the number of ultrasonography centres and decrease in child sex ratio. Booth et al. (1994) found that sex determination tests seem to be driven by a desire to have sons, in the company of socio economic status and education having small effect. Sudha and Rajan (1999) undertook a study which indicated that the legislation curbing prenatal sex determination and policy measures tackling societal female devaluation has had little impact. The decline in female births due to widespread awareness of new technology is greater than the increment in female births caused by weakening of son preference (Echavarri and Ezcurra, 2010). Kim (1997) found on the study that the extensive use of pre natal sex screening and sex-selective abortion depends on the availability and accessibility of medical technology in comparison with the strength of the eagerness, those who have easy access to the medical technology at low market and psychological costs are likely to practice son selective reproductive behaviours. George (2002) noted that the decline in child sex ratio in northern and western regions of India during 1991-2001 was caused by the relative easy accessibility of sex determination tests facilities which are mostly found in urban areas than in rural areas. Sangwan and Sangwan (2013) in their study also noted that the melace of female foeticide is more common because of easy access to sex determination technology.

## Repercussions of Declining Sex Ratio

Dube (1983) in her study observed that societies with unfavourable female sex ratio have indicated the prevalence of customs like polyandry and abduction and purchase of women. In contrast to raising the status of women, imbalance sex ratio would increase the incidence of rape, prostitution and violence against women. Sardana (2011) depicted shortage of bride as one of the obvious consequences of the continued skewed sex ratio resulting competition among males over scarce women. The shortage of women in society leads to
violence against women rather than improving their status. The study stated that couples do no not prefer girls as they fear of the continued threat of violence that girls may have to face. Therefore the society gets caught in a vicious cycle. Edlund et al (2007), used annual province-level data for the period 1988-2004 from China's 26 provinces found that 1 percent increase in the sex ratio of the 16-25 year age raised violent and property crime rates by about 3 percent, signifying that the increase in excess males may account for up to one-seventh of the overall increase in crime rate. Guilmoto (2012) expects that the cumulative number of additional men remaining single will be closer to 40 million during 2020-80, as Indian population cohorts will be relatively larger. Hudson and Den Boer (2004) estimate that there was a surplus of 35 million men in India in 2001, with the possibility that by 2020 the number will be between 28 and 32 million. A deficit of potential wives may also incentivize men to engage in crime in order to attract a spouse (Edlund et al, 2013). A scarcity of women may lead to increased competition for them and stricter control on married women with increased intimate partner violence in India (Bose et al, 2013). Prakash andVadlamannati (2014) found that in India, a 100 unit increase in Child Sex Ratio is related with 0.635 percent increase in girls trafficking. Walia (2005) has conducted a study wherein respondents of the study worried that that they would face trouble in finding match for their male children in future. They also predicted that the decline in sex ratio might lead to degradation in moral values in the society resulting in polyandry, violence and crime against women, red trafficking, prostitution etc.

## CONCLUSION

There is different equipment to measure gender equity in a population. Sex Ratio is a fundamental parameter that measures the extent of equity between males and females in a society. Decline in Sex Ratio is attributed to the convergence of three inter related factors namely son preference resulted from patriarchal societal practices, easy access to sex-selection technology and low fertility. Skewed sex ratio is a very serious problem with severe consequences such as trafficking of women Violence against women kidnapping, rape, shortage of brides etc. This discourages the couples from to be the parents of a girl child and thus society gets caught in a vicious cycle and to come out of this cycle will be very difficult for society once it is fully established. So there is a need for an urgent measure to end the rapid decline in sex ratios.

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