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Spatial Patterns of Skewed Child Sex Ratio in Rural Haryana

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Abstract: *The low and declining juvenile sex ratio in the country is a matter of grave policy concern, not only because it violates the human rights of unborn and infant girls but also because it deprives the country of the potential economic and social contribution of these "missing women".As per provisional population figures of Census 2011, the developed states and union territories of India, particularly in its north-western part, such as Punjab, Haryana, Chandigarh and Delhi now have fewer than 900 girls per 1,000 boys. The child sex ratio in Haryana is 830 female children per 1000 male children, which is the lowest amongst all states of India, despite the fact that the state has experienced an increase of 10 points as against 820 in 2001. The present paper aims to study the trends and patterns of child sex ratio in rural Haryana and to examine the causes for deficiency of girl children in 0-6 age group resulting into imbalances in child sex ratio in the state.Haryana has witnessed a decline by 91 points in child sex ratio during the period from 1961 to 2001. The rate of decline has been even more conspicuous since 1981. Between 1981 and 2001, child sex ratio in the state has gone down from 902 to 819, a decline by 83 points. However, an increase of 11 points has been noticed in CSR during the decade 2001 to 2011. Despite this increase, Haryana is at the lowest rung of ladder amongst all states of India.Viewed in its regional perspective, the child sex ratio in Haryana varies greatly from one part of the state to another. Out of the total of 74 tehsils, 33 tehsils of the state are attributed with child sex ratio above the state's average (830 female children per 1000 male children). Amongst them, Punahana tehsil of Mewat district in southern Haryana has the highest child sex ratio of 917 female children per 1000 male children. It is followed by Ferozepur Jhirka (912) of the same district and Siwani tehsil (902) of Bhiwani district. At the other end of the scale, Kosli tehsil of southern Haryana has got the distinction of having lowest child sex ratio of 760 female children per 1000 male children not only in the state but also in the country as a whole. It is followed by the tehsils of Beri (768) in Jhajjar district, Mahendragarh (770) in the district of same name, Bahadurgarh (770) in Jhajjar district, and Naraingarh tehsil (770) of Ambala district in the north of Haryana. It shows that practice of female foeticide is more prevalent in these tehsils because of easy access to sex-selective technology found in various parts of the state.*

Kew Words*: Female Foeticide, Juvenile Sex Ratio, Missing Women, Sex-Selective Technology, Unborn Girls*

I. Introduction

A key and unusual demographic feature of India is an imbalance in the sex ratio. The ratio of females to males has been steadily declining for much of the last century. The juvenile sex ratio—the ratio of females to males aged 0–6 years (or the number of female children per 1000 male children in the age group of 0-6 years)—has been declining even more sharply. While most countries around the world have a small imbalance in their juvenile sex ratios for biological reasons (i.e., there is a biological tendency for more male than female babies to be born to compensate for the slightly higher risk of mortality among newborn boys), the imbalance in India is acute, and is indicative of prenatal selection and excess female infant and child mortality. Both in turn reflect a strong cultural preference for sons over daughters. Some estimates put the number of "missing females" (i.e.,

unborn girls) in India as high as 37 million (Sen, 2003). The low and declining juvenile sex ratio in the country is a matter of grave policy concern, not only because it violates the human rights of unborn and infant girls but also because it deprives the country of the potential economic and social contribution of these "missing women" (Deolalikar *et al.*, 2009).

As per provisional population figures of Census 2011, the developed states and union territories of India, particularly in its north-western part, such as Punjab, Haryana, Chandigarh and Delhi now have fewer than 900 girls per 1,000 boys.

Out of the total population (2,53,53,081) of Haryana, the population in 0-6 years age group is 32,97,724 and the sex ratio of this age group is 830 female children per 1000 male children, which is the lowest amongst all states of India, despite the fact that the state has experienced an increase of 10 points as against 820 in 2001.

II. Literature Cited

On global scale, a number of studies have been documented by various scholars on patterns, trends, and determinants of declining child sex ratio in India (Chakraborty and Sinha, 2006; Deolalikar *et al.*, 2009; Unisha, 2009, etc.). But on regional scale, especially in case of Haryana, only a few studies like Sangwan and Sangwan (2012) have focused their attention on declining child sex ratio and its aftereffects on the socio-cultural milieu of society. The present study has endeavoured, therefore, to examine the patterns, trends, and determinants of declining child sex ratio and its implications in the state.

III. Objective of the Study

The present paper aims to study the trends and patterns of child sex ratio in rural Haryana and to examine the causes for deficiency of girl children in 0-6 age group resulting into imbalances in child sex ratio in the state.

IV. Data Sources and Methodology

The study is mainly based on the secondary sources of data. Data, though provisional, have been obtained mainly from Paper-1 and Paper- 2 of 2011 published so far on Haryana by the Director of Census Operations, Haryana, Chandigarh along with the publications made by the Office of the Registrar General & Census Commissioner, India, New Delhi. Some relevant data meant for the purpose have also been obtained from previous years' publications of the Census of India. The reference year for the secondary data is 2011. The district has been chosen as the unit of analysis.

Both qualitative and quantitative methods have been applied for the data analysis. The most important among them are the choropleth method used for the preparation of maps. On calculating child sex ratio, the districts of Haryana have been classified into various categories (keeping in view the state average) and represented cartographically so as to present a regional perspective, showing spatial patterns of child sex ratio in Haryana. The census map of Haryana (2011) showing district boundaries has been adopted as the base map.

V. Trends of Child Sex Ratio

The child sex ratio has been on a continuous decline with certain ups and downs since the formation of Haryana as separate state in 1966. The study of trends in child sex ratio will reveal the intensity of changes in it over a period of time. Table 1 furnishes the data on the trends of child sex ratio with decadal change in Haryana.

Table 1: Haryana: Trend of Child Sex Ratio, 1961-2011

Year	Female Children per 1000 Male Children		Decadal Change	
	Haryana	India	Haryana	India
1951	-	983	-	-
1961	910	976	-	-7
1971	898	964	-12	-12
1981	902	962	+4	-2
1991	879	945	-23	-17
2001	819	927	-60	-18
2011	830	914	+11	-13

Sources: i) Census of India Publications, 1961, 1971, 1981, 1991, 2001.

ii) Census of India (2011), Provisional Population Totals, Rural-Urban Distribution, Paper 2, Vol. 1 of 2011, Haryana, Series 7, Director of Census Operations, Haryana, p. 20.

Table 1 reveals that Haryana has witnessed a decline by 91 points in child sex ratio during the period from 1961 to 2001. A comparison with the trend at all India level is quite revealing. During 1961 and 2011, India's population at the aggregate level has witnessed a decline in child sex ratio by 69 points. The rate of

decline in child sex ratio in Haryana has been even more conspicuous since 1981. Between 1981 and 2001, child sex ratio in the state has gone down from 902 to 819, a decline by 83 points. But during the decade of 1991-2001 alone, the decline in this ratio has been more rapid, i.e. of 60 points. However, an increase of 11 points has been noticed in CSR during the decade 2001 to 2011. Despite this increase, Haryana is at the lowest rung of ladder amongst all states of India (Table 2).

At district level, out of 21 districts of Haryana, 16 districts have recorded an increase in the child sex ratio during the last decade. Maximum increase has been witnessed in Kurukshetra district from 771 in 2001 to 817 in 2011 (46 points), followed by Sirsa from 817 to 852 (35 points), Kaithal from 791 to 821 (30 points), Ambala from 782 to 807 (25 points) and Panipat from 809 to 833 (24 points).

Table 2: India: Child Sex Ratio by States in Descending Order, 2011

Country/State	Female Children per '000 Male Children
INDIA	**914**
Mizoram	971
Meghalaya	970
Chhattisgarh	964
Arunachal Pradesh	960
Kerala	959
Assam	957
Tripura	953
West Bengal	950
Tamil Nadu	946
Sikkim	944
Nagaland	944
Jharkhand	943
Andhra Pradesh	943
Karnataka	943
Manipur	934
Orissa	934
Bihar	933
Goa	920
Madhya Pradesh	912
Himachal Pradesh	906
Uttar Pradesh	899
Uttarakhand	886
Gujarat	886
Rajasthan	883
Maharashtra	883
Jammu & Kashmir	859
Punjab	846
Haryana	**830**

Source: Computed from Census of India (2011), Provisional Population Totals: Rural Urban Distribution, Paper 2, Vol. 1 of 2011, India, and Series 1, p. 24.

On the other hand, there are five districts in which child sex ratio has decreased from 2001 to 2011. Maximum decrease has been observed in Mahendragarh from 818 in 2001 to 778 in 2011 (40 points), Jhajjar from 801 to 774 (27 points), Rewari from 811 to 784 (27 points), Bhiwani from 841 to 831 (10 points) and Faridabad from 847 to 842 (5 points).

VI. Regional Dimensions of Child Sex Ratio

Viewed in its regional perspective, the child sex ratio in Haryana varies greatly from one part of the state to another. Out of the total of 21 districts, 10 districts display sex ratio more than the state average of 830 female children per 1000 male children. In other words, about half of the total districts recorded child sex ratio above

the state's average, but all the districts are having sex ratio below the national average of 914 female children per 1000 male children. It means the whole of Haryana is characterized with excessive deficiency of females.

The patterns of child sex ratio present a wide difference between the highest and the lowest values of child sex ratio. Keeping in view the average child sex ratio of the state, the districts of Haryana can be classified into two categories ((Table 1 and Map 1) : -

1. Regions having Child Sex Ratio above the State's Average (Above 830 female children per 1000 male children)
2. Regions having Child Sex Ratio Below the State's Average (Below 830 female children per 1000 male children)

A. Regions having Child Sex Ratio above the State's Average (Above 830 female children per 1000 male children)

Out of the total of 21 districts, about half of the districts (10 districts) of the state are attributed with child sex ratio above the state's average (830 female children per 1000 male children). Amongst them, Mewat district of southern Haryana has the highest child sex ratio of 903 female children per 1000 male children. Lowest literacy rate has been reported in Mewat district not only in terms of overall literacy rate ((56.14 per cent)), but also in case of both male ((72.98 per cent)) and female literacy rates (37.58 per cent). The lowest literacy rates are the outcome of social conservation of Meo-Muslim society which dominate the scene in the district. Because of low literacy, it seems that people are more rigid in their religious attitude and they do not want to interfere in Allah's creations. Hence, they do not want to use family planning measures, despite the fact that these measures are being provided free of cost by the government through its anganwadi workers in each village of Haryana. The result is high child sex ratio Mewat district.

Table 3: Haryana: Child Sex Ratio by Descending Order of Districts, 2011

State/ District	Female Children Per 1000 Male Children
Haryana	**830**
Mewat	903
Palwal	862
Sirsa	852
Panchkula	850
Hisar	849
Fatehabad	845
Faridabad	842
Jind	835
Panipat	833
Bhiwani	**831**
Gurgaon	826
Yamunanagar	825
Kaithal	821
Karnal	820
Kurukshetra	817
Ambala	807
Rohtak	807
Sonipat	790
Rewari	784
Mahendragarh	778
Jhajjar	774

Source: *Census of India (2011), Provisional Population Totals, Rural-Urban Distribution, Paper 2, Vol. 1 of 2011, Haryana, Series 7, Director of Census Operations, Haryana, p. 20.*

In southern Haryana, Palwal with 862 female children per 1000 male children and Faridabad (842) are the adjoining districts of Mewat where child sex ratio is higher than the state's average. High child sex ratio in Palwal district is because of the dominance of Muslim population in Hathin tehsil and in Faridabad district because of the family migration to a large extent due to rapid industrial growth.

The other districts are Sirsa (852), Hisar (849), Fatehabad (845), and Bhiwani (831) of western Haryana; Jind (835) of central Haryana; Panipat (833) of eastern Haryana; Panchkula (850) of northern Haryana. All these districts, except Panchkula (69.10 per cent), Panipat (62.97 per cent), Faridabad (61.97 per cent), and Bhiwani (62.21 per cent), have experienced female literacy rate in rural areas lower than the state's average (60.97 per cent).

Low rural female literacy rate, low status given to women, high fertility rate because of early marriage of girls, poor say of female in family decision making with regard to number and sex of new-borne baby, consideration of children as asset for families to get more hands for earning especially in case of landless castes, requirement of more and more children as agricultural labourers in case of scheduled castes and poor families because of large size of land holdings are the factors responsible for comparatively higher child sex ratio especially in rural parts of western Haryana.

In Panchkula district, high child sex ratio in rural areas is the result of a large number of factors like strict compliance of PNDT Act either because of the impact of awareness programmes launched on the part of the state government, or because of the fear of punishment on the part of authorities concerned, increasing level of acceptance of son and daughter on equal footing, and more say of female in family decision making with regard to number and sex of new-borne baby because of high rural literacy rate (77.45 per cent) as well as overall literacy, especially among females. Female participation in workforce is also increasing which make her self-dependent and more confident to take decisions about her life and family. Changing mind-set of parents because of increasing incidences of crime by the sons against their own parents; and the incentives by the government to the families having only girls are the other causes for high child sex ratio in districts like Panchkula.

It is revealed from the analysis that in western and southern parts of the state the practice of female foeticide is less prevalent as compared to northern and eastern parts which are economically more developed, hence have easy access to sex-selective technologies resulting into skewed child sex ratio in favour of males.

It is disheartening to note that not even a single district of Haryana is having child sex ratio above the National average (914 female children per 1000 male children), which is also the lowest value experienced by the country ever since Independence (983 in 1951).

B. Regions having Child Sex Ratio Below the State's Average (Below 830 female children per 1000 male children)

Out of the total of 21 districts, about half of the districts (11 districts) of the state are having child sex ratio below the state's average (830 female children per 1000 male children). Amongst them, Jhajjar district of central Haryana has got the distinction of having lowest child sex ratio of 774 female children per 1000 male children not only in the state but also in the country as a whole. It shows that practice of female foeticide is more prevalent in this district because of easy access to sex-selective technology found in various parts of the district.

Jhajjar district is followed by the adjoining districts of Rewari (784), Mahendragarh (778), and Gurgaon (826) in southern Haryana; Sonipat (790) and Karnal (820) of eastern Haryana; Rohtak (807) and Kaithal (821) of central Haryana; Ambala (807), Kurukshetra (817) and Yamunanagar (825) of northern Haryana.

On the one hand, prevalence of the practice of female foeticide due to illegal use of sex-selective technology, better economic conditions of people for easy access to the use of sex-selective technology, pre-mature deliveries due to mal-nutrition, high infant mortality rate, high maternal mortality rate, impact of nearness to capital cities like New Delhi and Chandigarh are the factors responsible for low child sex ratio in these districts.

On the other hand, empowerment of women, because of the attainment of higher education and high work participation rate i.e. appointment against highly paid jobs, to take independent decision with regard to number and sex of new-borne baby is another possible cause for low sex ratio in the age group of 0-6 years. It is found that low child sex ratio is the result of our patriarchal society where a deep-seated mindset of son preference still exists for perpetuating the family name and performing the last rites and rituals (Sangwan and Sangwan, 2012). So, most of the families, even if they are educated, prefer to have a SON as their first child. If both the parents are working and have first child as boy, they do not try for second issue; if they have first baby as girl, only then they try for the second one. It has also been substantiated by a study made by Sangwan and Sangwan in 2012. The increasing age at marriage among literate females is the result of so many complications (i.e. complete bed rest, high blood pressure, excessive edema, etc.) faced by females during first pregnancy, particularly in the age group of 25-29 & above and majority of such females become the victim of fear-psychosis and avoid giving birth to second baby if the first child is a boy resulting into low child sex ratio.

VII. Concluding Remarks

As per provisional population figures of Census 2011, the child sex ratio in Haryana is 830 female children per 1000 male children, which is the lowest amongst all states of India, despite the fact that the state has experienced an increase of 10 points as against 820 in 2001.

Haryana has witnessed a decline by 91 points in child sex ratio during the period from 1961 to 2001. The rate of decline has been even more conspicuous since 1981. Between 1981 and 2001, child sex ratio in the state has gone down from 902 to 819, a decline by 83 points.

At district level, out of 21 districts of Haryana, 16 districts have recorded an increase in the child sex ratio during the last decade. Maximum increase has been witnessed in Kurukshetra district (46 points), followed by Sirsa (35 points). On the other hand, there are five districts in which child sex ratio has decreased from 2001 to 2011. Maximum decrease has been observed in Mahendragarh (40 points), followed by Jhajjar (27 points) district.

Viewed in its regional perspective, the child sex ratio in Haryana varies greatly from one part of the state to another. Out of the total of 21 districts, about half of the districts (10 districts) of the state are attributed with child sex ratio above the state's average (830 female children per 1000 male children). Amongst them, Mewat district of southern Haryana has the highest child sex ratio of 903 female children per 1000 male children.

Low rural female literacy rate, low status given to women, high fertility rate because of early marriage of girls, poor say of female in family decision making with regard to number and sex of new-borne baby, consideration of children as asset for families to get more hands for earning especially in case of landless castes, requirement of more and more children as agricultural labourers in case of scheduled castes and poor families because of large size of land holdings are the factors responsible for comparatively higher child sex ratio especially in rural parts of western Haryana.

At the other end of the scale, 11 districts of the state are having child sex ratio below the state's average. Jhajjar district of central Haryana has got the distinction of having lowest child sex ratio of 774 female children per 1000 male children not only in the state but also in the country as a whole. It shows that practice of female foeticide is more prevalent in this district because of easy access to sex-selective technology found in various parts of the district.

Prevalence of the practice of female foeticide due to illegal use of sex-selective technology, better economic conditions of people for easy access to the use of sex-selective technology, pre-mature deliveries due to mal-nutrition, high infant mortality rate, high maternal mortality rate, impact of nearness to capital cities like New Delhi and Chandigarh are the factors responsible for low child sex ratio in these districts.

In nut shell, in western and southern parts of the state, the practice of female foeticide is less prevalent as compared to northern and eastern parts which are economically more developed hence have easy access to sex-selective technologies resulting into skewed child sex ratio in favour of males.

It is disheartening to note that not even a single district of Haryana is having child sex ratio above the National average (914 female children per 1000 male children), which is also the lowest value experienced by the country ever since Independence (983 in 1951).

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