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IN A RURAL AREA OF PUNJAB*

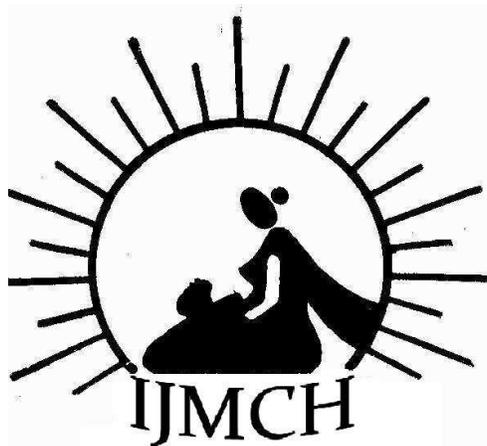
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## AN ANALYTICAL STUDY of SEX RATIOS AT BIRTH IN A RURAL AREA OF PUNJAB

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### ABSTRACT

#### Background:

In a gross misuse of the scientific tools, female fetuses are selectively aborted after such pre-natal sex determination, in spite of a massive influx of legal regulations banning the same. As per the latest government data available pertaining to births, the Child Sex Ratio in Punjab stood at a mere 876 females per 1000 males.

#### Methods & Settings:

In the present study Secondary Sex Ratios (SSR) at birth were analyzed from the records of Rural Field Practice Area of Department of Community Medicine, Dayanand Medical College Ludhiana, Punjab, from the year 1991 to 2008 (Nov.). The registration of pregnancies and their outcome is known in cent percent cases.

#### Analysis:

For purposes of comparison and analysis a SSR 106 males for 100 females was taken as normal.

#### Results:

For the total period there were 5794 births (3123 and 2671 females), giving a SSR of 116.9, which was highly skewed in favor of males ( $p=0.0000$ ). A further analysis, *parity wise*, revealed that for the first born the SSR were 106.2, which was very much normal. However for the second, third and four plus birth order the SSR was 120,131 and 118.5, respectively, which clearly indicates sex selective fertility control.

**Key words:** *Secondary sex ratio, parity, sex selection.*

## INTRODUCTION

In a gross misuse of the scientific tools, female fetuses are selectively aborted of such pre-natal sex determination, in spite of a massive influx of legal regulations banning the same. As per the latest government data available pertaining to births, the child sex ratio in Punjab stood at a mere 876 females per 1000 males. (1)

The misuse of the technology was blatant till the year 1994 with huge roadside hoardings advertising sex determination with the caption 'Pay Rupees 500/- now or spent Rupees. 50,000/- later on for dowry. The Govt. of India voicing its concern over declining sex ratio promulgated an act in the year 1994 banning prenatal sex determination. (2)

However it was not until the year 2003 that the implementation of the act was made very strict. (3)

There are 2 major ways which skew the sex ratio in favor of males. Firstly, less number of females are being born or more are dying. In the present scenario when all the mortality rates have declined considerably and with facilities for sex selection at birth being easily available albeit clandestinely and at a premium, it is obvious that less number of females are being born. Hence it was decided to study the sex ratio at birth.

## MATERIAL & METHODS:

In the present study secondary sex ratio (SSR) at birth were analyzed from the records of rural field practice area of Department of Community Medicine, Dayanand Medical College & Hospital, Ludhiana, Punjab from the year 1991-2008 (up to Nov.) who comprised of 15 villages in Dehlon block. The registration of pregnancies and their outcome is known in cent percent cases. For purpose of comparison and analysis a SSR of 106 males for 100 females were taken as normal.

A further analysis was carried out for the filtered data from the year 2003 onwards, the time from which the implementation of PNDT act was made more rigorous.(3)

## OBSERVATIONS:

From Table 1- it is seen that from the year 1991 onwards there were a total of 3123 males and 2671 female giving a secondary sex ratio of 116.9 which was highly skewed in favor of male ( $p=0.000$ )

The parity wise SSR revealed that for first born the SSR was 106.2 which were almost similar to normal SSR. However for the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> birth order the SSR was 120, 131 and 118.5 respectively, which clearly indicate the sex selective fertility control.

Further the analysis of sex ratio at birth both parity and caste wise. It was evident that for first born the SSR was 107.5 and 105.0 in Schedule caste (SC) and Non schedule caste (NSC), respectively which is again very much near normal .

For the second born in the NSC it was highly skewed in favor of males (SSR=142.0), while in SC it still remained near the normal value. However for higher birth order the SSRs were skewed in favor of males both in SC and NSC.

Tables 2 on the filtered data after 2003 shows that for the first born there was nearly natural selection.

It was normal in the SC even for the 2<sup>nd</sup> born. But for the 3<sup>rd</sup> born even in SC it was in favor of males.

However, interestingly in the data of 2003 onwards the sex ratios for fourth born were again near the normal value. (Table 2)

**Table 1: Parity wise Sex Ratio**

Parity	Male	Female	SSR
0	1027	967	106.2
1	947	784	1207
2	612	467	131.0
3	537	453	118.5
<b>Overall</b>	<b>3123</b>	<b>2671</b>	<b>116.92</b>

**Table 2: Parity wise Sex Ratio of Filtered Data**

Parity	Male	Female	SSR
0	354	336	105.3
1	326	250	130.4
2	181	144	125.7
3	111	105	105.4
<b>Overall</b>	<b>972</b>	<b>835</b>	<b>116.4</b>

## DISCUSSION:

In a society where marriage is universal and the desire for children is very strong the results of the present study show that couples are contented with female being pregnant for the first time and are very unlikely to indulge in sex selection and undergo abortion. It is a well-known fact the medical fraternity also does not advice termination of the first pregnancy.

However, in the NSC it is seen that there is definitely sex selection from the 2<sup>nd</sup> child onwards. The SCs because of their social and financial marginalization wait for another chance and that is why their sex ratio is normal even for the 2<sup>nd</sup> born but not for higher birth order.

The results of filtered data show that legislation or no legislation people will find ways and means of having a family formation pattern of their choice. The only saving grace in the present data is that for the higher birth orders (3+) the females are being allowed to be born, This may be due to the fact that all the players in the sex selective fertility control do not want to take unnecessary risk since the probability of having male child in the higher birth order is pretty high.

In conclusion the results of the present study sadly reflect that the outrage of sex selective fertility control in this part of Punjab continues unabated. (4).

#### References:

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*A presentation based on this data was made at the National seminar on Punjab organized jointly by IIPS Mumbai and CRRID Chandigarh held at Chandigarh on 3<sup>rd</sup> and 4<sup>th</sup> March 2009.*