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Effect of gender on nutritional status of pre school children

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Abstract
Two hundred preschool children of 2-6 years of age group of Nanded city were assessed with the help of anthropometry. Anthropometry is one of the techniques to assess nutritional status. The sample was selected by stratified random sampling method. About 100 boys and 100 girls were assessed. Significant differences were found in children when compared with ICMR & NCHS standard. It could be stated that gender discrimination by parents affect the nutritional status of girls which is matter of concern.

Keywords: Anthropometry, gender

1. Introduction
The status of children in any country shows the development of country and future of the country. Today's children are citizens of tomorrow. Development of nation depends on how much attention paid for children.

Even though after the sixty years of independence, although the Indian constitution, the five year plans, strategies and programmes of social development have been focusing attention on children and recently on women development. Yet the concept of girl child who is victim of gender bias is of recent origin. The present neglectful situation of the girl child arises out of lower social status of women and the traditional bias. (Choudhary, 1990) [2].

The status of girl child is although distinctive but can not be differentiated from the status of mother because both are embedded with same socio cultural, socio religious and historical forces. (Khan, 1990) [6].

Even today in millions of homes the birth of girl child produces a bleak atmosphere while the birth of boy is an occasion for exuberence of joy. (Gangarde, 1986) [3].

Born in indifference and reared on neglect the Indian girl child grown up looking upon herself as inferior and subservient. This negative self image shapes her personality and moulds her into the stereotype of submissive and self sacrificing daughter, wife and mother. In India girl is neglected as she is an economic burden on family. (Hati, 1992) [4].

Objectives of the study are
1) To study the effect of gender on anthropometric measurements of preschool children.
2) To assess the effect of gender on occurrence of deficiency signs and symptoms among preschool children.

2. Methodology
Two hundred children between age group 2-6 years were randomly selected from different areas of Nanded city. Anthropometric measurements like height, weight, head chest and mid-arm circumference of selected children were taken as per standard procedure. The survey was implemented with the help of questionnaire.

3. Result and Discussion
3.1 Effect of gender on anthropometric measurements of selected preschool children
Table I and Fig. 1 and 2 depicts the data on effect of gender on anthropometric measurements of selected preschool children. Gender had great effect on anthropometric measurements of an individual. The mean height observed for male preschool children was 101.55 cm and for female preschool children it was 98.60cm.

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Male children were taller than that of female children of the same age group. The observed mean height values of respondents were superior to the ICMR (Male 94.98 cm, Female 94.00 cm) values and inferior to the NCHS values (Male 102.76cm, Female101.4cm). The significant difference was noted in the mean height of male and female children.

The mean weight noted 14.92 kg and 14.48 kg for male and female children respectively. These values were also higher than the ICMR values (Male 13.42 kg, Female 12.7 kg). These values were below the NCHS standards (Male 16.68 kg, Female 15.84 kg). The statistical analysis revealed that there was significant difference in weight of male and female preschool children.

The mean head circumference in male children was noted as 48.28 cm and in female children 47.27 cm. Thus anthropometric parameter values were more than the ICMR (Male 47.86 cm, Female 46.8 cm) values for corresponding gender. When these values were compared with NCHS standard (Male 48.66 cm, Female 44.58cm) then it was found that, boys were nearer to standard but girls were crossing the NCHS standard. There was no significant difference observed among both genders for head circumference.

The means chest circumference was 51.27 cm and 51.30cm for boys and girls respectively. Values of male and female chest circumference were superior to the ICMR standard (Male 49.76 cm, Female 48.58 cm) but inferior to the NCHS standard (Male 53.31 cm, Female 52.95cm). When statistically analyzed there was no significant difference in both the genders.

The mean mid arm circumference was noted as 15.44 cm and 15.50 cm for male and female respectively. These values were reaching to the ICMR standards (Male 15.6cm, Female15.08 cm). Observed values were far behind the NCHS standard values. There was no significant difference observed for mean mid arm circumference among gender.

It can be concluded that there was significant difference in height and weight of preschool children. Other anthropometric measurements were not significant. All the anthropometric measurements were below the NCHS standards.
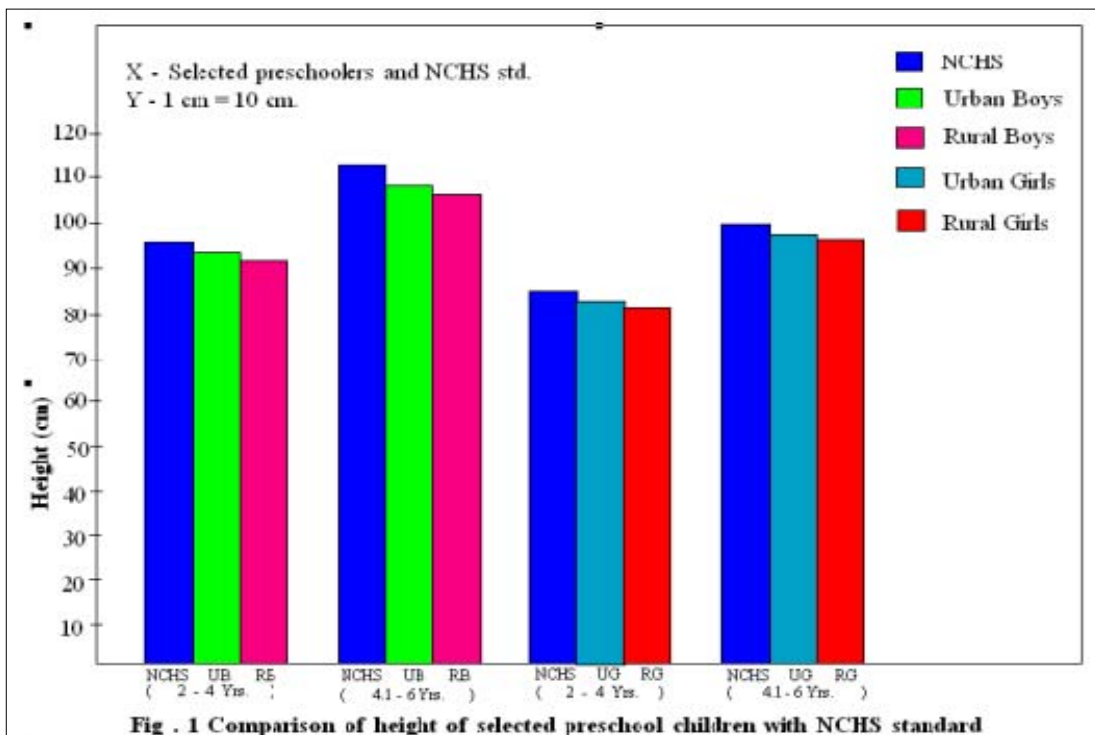
These findings are similar to the findings of Mishra and Gupta (1978); they compared the data on the physical measurements of boys and girls with the parallel studies reported in Indian literature. The mean values for all physical measurements were higher in boys than for girls in all age groups. They found that boys were closer to the international standards for anthropometric measurements.
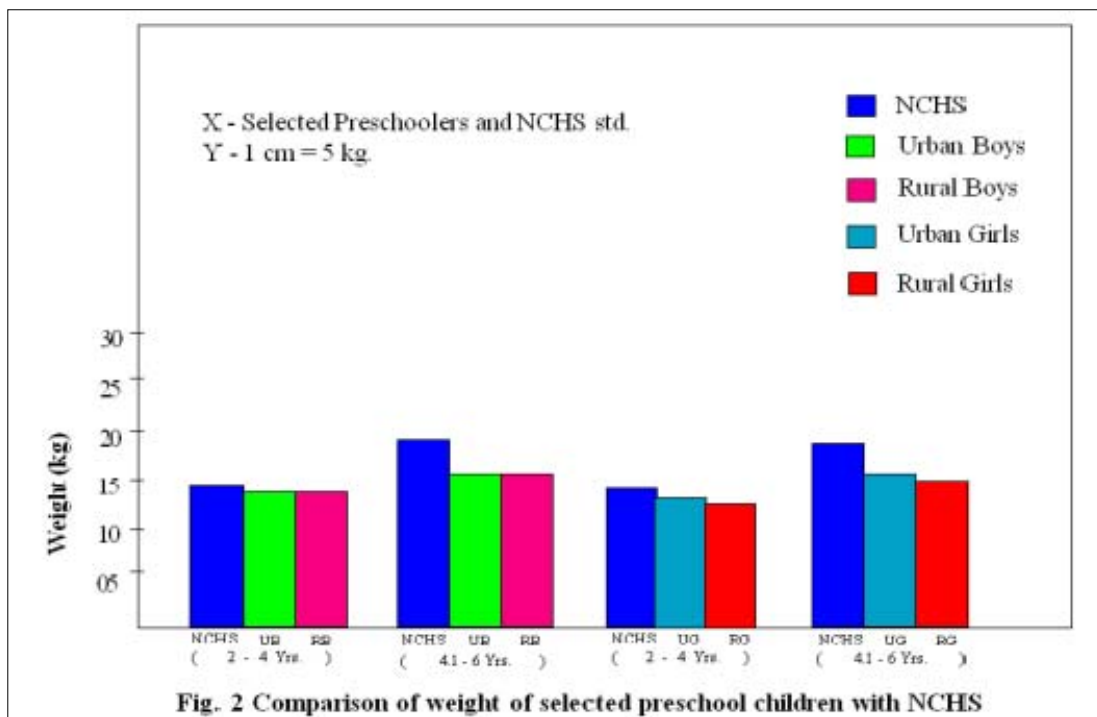
Table 1: Effect of gender on anthropometric measurements of selected preschool children

Sr. No.	Particulars	ICMR Standard		Gender		'T' value	NCHS Standard	
		M	F	Male (100)	Female (100)		M	F
1	Height (cm)	94.98	94.00	101.55+ 8.92	98.60+ 9.85	3.25 **	102.76	101.4
2	Weight (kg)	13.42	12.07	14.92+ 2.33	14.48+ 2.25	2.00 *	16.68	15.84
3	Head Cir. (cm)	47.86	46.08	48.28+ 2.83	47.27+ 2.60	0.06 NS	48.86	44.58
4	Chest Cir. (cm)	49.76	48.58	51.27+ 2.07	51.30+ 2.30	0.22 NI	53.31	52.95
5	M.A.C. (cm)	15.6	15.08	15.44+ 1.03	15.50+ 1.06	0.59NS	16.67	16.52

Measurement of weight, height, head chest and mid-arm circumference are reliable means by which the progress of normal child is evaluated and gross abnormalities detected even when no other clinical signs of illness are manifested Even genetically boys are superior to the girls for body builds but several other factors affect the body build such as nutrition, food intake, health condition and hygienic aspects of the children. In the present study except height and weight, other anthropometric measurements were not affected by the gender of the selected sample.

Fig . 1 Comparison of height of selected preschool children with NCHS standard

Fig. 2 Comparison of weight of selected preschool children with NCHS

4. Conclusion

It can be concluded that gender had great effect on anthropometric measurements of preschool children. Male children were taller and weights more than their female counterparts. When effect of gender on occurrence of deficiency signs and symptoms were studied, it was clear that, girls had more deficiency signs than boys. These differences might be due to special care of boys from birth.

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