CHAPTER 5

SUMMARY

The present study is based on cross-sectional data derived from genetically homogeneous 1080 Rajput children (540 males and 540 females), 1-18 years of age from Rajasthan desert. The study comprises evaluation of nutritional status, physical growth in terms of absolute body measurements, changes in body proportions with age and comparison of the growth of these children with all India standards and children from green belt of Rajasthan.

Following are the salient features of the present study:

1. The children are strictly vegetarian. Their diets are deficient in the intake of essential nutrients with respect to the Recommended Dietary Allowances for Indians (NIN, 1989), except for the intake of protein, fat and calcium during infancy and childhood. Examination of these children for deficiency diseases shows that they suffer from the deficiency of vitamin A, vitamin B, iron and calcium. Gasterointestinal infections are common during childhood.

2. Nutritional status as based on Gomez’s classification reveals that 31 percent of the children are normal, 58.5 percent fall in Grade I malnutrition, 10.5 percent come under Grade II malnutrition and none of the children fall in Grade III malnutrition.

3. Boys and girls show similar trend in the growth of stature, sitting height vertex, trunk length, arm length, lower limb length, upper arm circumference and biacromial
diameter, though the mean values for boys are higher than those for girls in most of the measurements. Boys experience growth spurt a year or two later than the girls. The growth of hip breadth, upper arm muscle circumference and upper arm circumference does not follow the same trend in boys and girls. Sex differences in the growth are well marked after the age of 14 years in almost all the measurements.

4. Deposition of fat in the skin folds is significantly different in boys and girls. In both the sexes the distance curves show steep rise till the age of 8 years after which the sex differences become prominent. The growth curves of the bone diameter show similar trend in both the sexes though the mean values for boys are higher than those of girls.

5. Boys and girls show marked differences in the growth of body proportions.

6. The overall picture of the growth of the desert population shows that these children are tall and heavy and have long lower limbs compared with all India standards and children from the green belt of Rajasthan. The sitting height vertex of the children of the present study is less compared to the children from the other two populations.

6. Since the nutritional survey shows that the consumption of the essential nutrients by the children of the present study is less than the recommended dietary allowances for Indians, it is, therefore, evident that their being tall and heavy and having long lower limbs when compared with children from all India standards and those from the green belt of Rajasthan.
belt of Rajasthan, cannot be attributed to their nutritional intake, instead, it could either be due to their genetic make-up or due to environmental stress or both.