SUMMARY

The present study entitled 'Age changes as seen in some body measures, subcutaneous fat, and physiological variables among Rajput females in Rajasthan', has been conducted with a view to describe the trends in physical growth of Rajput females.

The cross sectional data consists of 636 Rajput females, ranging in age from 3 to 21 years, residing in various cities of Rajasthan. The subjects included in the present study are homogenous as to sex, geographic location, ethnic stock and socio-economic status. In all 43 measurements, including various anthropometric measurements, skinfolds and physiological measurements have been taken on each individual. Information regarding puberal status has also been included. Statistical methods were employed to interpret the data in numerical terms. Age changes in various body proportions have been observed by calculating 43 morphological ratios.

Rajput females are found to be considerably taller and heavier at all stages of growth from 3 to 21 years, when compared with KSMR norms. They show marked similarities with Panjabi girls regarding body size. In general Rajput girls are tall and well build.

(1) Body dimensions in general increase with increase in age. In almost all the dimensions, growth ceases beyond 19 years of age.
(ii) Head dimensions—head length, head breadth and circumference show markedly slower growth during the growth period under study (from 3 to 21 years).

(iii) Growth curves for stature, sitting height upper extremity length, lower extremity length, hip circumference and chest circumference indicate relatively slow growth up to 7 years then rise gradually and mark a period of rapid growth between 11 to 13 years. Growth between 14 to 19 years is very slow. Curves for biacromial breadth, bicristal breadth and hip breadth indicate a marked increase up to 14 years of age, followed by a post-puberal period of slow increment which continues till 18 years.

(iv) Relative body dimensions of Rajput females depict that considerable changes occur in body form during growth from childhood to adulthood. In general, their body becomes narrower in relation to body breadths, both upper and lower extremities become larger in relation to stature and sitting height and head becomes smaller in relation to body height.

(v) The curves for log transformed skinfolds show a decline in values in the years before puberty, the increase becomes rapid during puberty and continues throughout the adolescent phase.

(vi) Physiological variables—vital capacity, hand grip strength, blood pressure and body surface area have been observed to increase with increase in age, the increase being
more marked during puberty.

(vii) In general the Rajput girls with puberty signs have larger body dimensions than the girls of the corresponding age groups without puberty signs.

Comparison of the mean height and weight growth curves of Rajput females has also been done with American, British, Chinese, Japanese and Jamaican girls of African origin. Rajput girls have been found much lighter and shorter than American and British girls at all growth stages.