Estimation of Back Strength and Its Association with Selected Anthropometric Variables in School Going Children of Amritsar, Punjab

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ABSTRACT The purpose of this study was of two-fold: first, to estimate the back strength of Indian school going children and, second, to search the correlation of it with selected anthropometric characteristics studied. To serve this purpose, a total of fifteen anthropometric characteristics, viz. height, weight, BMI, four skinfolds measurements, viz. biceps, triceps, subscapular, suprailiac, knee height, length of femur, humerus and femur biepicondylar diameters, chest and hip circumferences, percent body fat and back strength were measured on purposely selected 360 Indian school going children (180 boys and 180 girls) aged 13–18 years collected from two schools of Amritsar, Punjab, India. The results indicate that in all the age groups, boys have higher mean values for back strength than their girl counterparts, showing highly significant (p<.000) gender differences for this trait. In Indian school-going children, significant positive correlations (p≤ .05-.01) were found between back strength and all the anthropometric variables studied, except triceps, subscapular and suprailiac skinfolds (both in boys and girls), percent body fat (only in boys), humerus and femur biepicondylar diameters, hip circumference, knee height and length of femur (only in girls). In conclusion it may be stated that a trend of gradual increment for back strength was found in Indian school going boys age ranging from 13-18 years, showing the peak back strength the age group 18 years, but no such trend of gradual increment was found in case of girl students for this trait.