World Academy of Science, Engineering and Technology
International Journal of Sport and Health Sciences
Vol:10, No:06, 2016

Percentile Reference Values of Vertical Jumping Performances and Anthropometric Characteristics in Athletic Tunisian Children and Adolescents

Authors : Chirine Aouichaoui, Mohamed Tounsi, Ines Mrizak, Zouhair Tabka, Yassine Trabelsi

Abstract : The aim of this study was to provide percentile values for vertical jumping performances and anthropometric characteristics for athletic Tunisian children. One thousand and fifty-five athletic Tunisian children and adolescents (643 boys and 412 girls) aged 7-18 years were randomly selected to participate in our study. They were asked to perform squat jumps and countermovement jumps. For each measurement, a least square regression model with high order polynomials was fitted to predict mean and standard deviation of vertical jumping parameters and anthropometric variables. Smoothed percentile curves and percentile values for the 5th, 10th, 25th, 50th, 75th, 90th, and 95th percentiles are presented for boys and girls. In conclusion, percentiles values of vertical jumping performances and anthropometric characteristics are provided. The new Tunisian reference charts obtained can be used as a screening tool to determine growth disorders and to estimate the proportion of adolescents with high or low muscular strength levels. This study may help in verifying the effectiveness of a specific training program and detecting highly talented athletes.

Keywords : percentile values, jump height, leg muscle power, athletes, anthropometry
Conference Title : ICSMES 2016 : International Conference on Sport Medicine and Exercise Science
Conference Location : Venice, Italy
Conference Dates : June 13-14, 2016

Open Science Index, Sport and Health Sciences Vol:10, No:06, 2016 publications.waset.org/abstracts/52019/pdf