

Performance preschool fitness depending on height and arm muscle area [Desempeño de la condición física de pre-escolares en función de la estatura y el área muscular del brazo]

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Background: To analyze the physical performance of pre-school children according to chronological age and anthropometric variables. **Methods:** 217 pre-school children from a Commune (Maule) of Talca-Chile (106 boys and 114 girls) were studied. The age range ranges from 4.0 to 5.9 years. The anthropometric variables were evaluated: Weight, height, triceps fold and perimeter of the arm. The Body mass index (BMI), Arm muscular area (AMA) and Arm fat area (AFA) and motor performance variables were calculated: ball throw and horizontal jump. **Results:** In relation to the chronological age, children of both sexes of 5 years showed greater weight and stature and better performance in the ball throw and horizontal jump. There were no differences between sexes at 4 and 5 years ($p < 0.05$). It was verified significant positive correlations between ball throw with age, height and AMB in both sexes ($r = 0.13-0.37$), while in the horizontal jump, in addition to relating to age, height and AMB, the weight also showed correlation significant positive ($r = 0.11-0.41$). Children of both sexes with greater stature and AMB showed better physical performance, in addition there were marked differences between both sexes ($p < 0.05$). **Conclusion:** In addition to the chronological age, the somatic variables of the stature and the muscular area of the arm could serve as growth indicators to assess the physical performance of pre-school children of both sexes, although it is necessary to develop more studies covering a greater number of subjects, age ranges in other sociocultural contexts. © 2017 Sociedad Espanola de Nutricion Comunitaria. All rights reserved.

Growth

Physical fitness

Pre-school

age

anthropometric parameters

arm fat area

arm muscle

arm muscular area

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