NORMATIVE ANTHROPOMETRIC AND PHYSICAL CHARACTERISTICS OF 11-14 YEAR OLD MIDDLE EASTERN CHILDREN: AN INTERNATIONAL COMPARISON

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PURPOSE: Many studies around the world have presented data on children's physical abilities, however less is known about Middle Eastern children (MEC). The primary aim of this project was to establish normative data on anthropometric and physical characteristics for MEC in the State of Qatar. A secondary aim was to compare these MEC to similarly aged children.

METHODS: Measurements were collected during ASPIRE's National Talent Identification Program in 2005 and 2006 (7634 males, age 12.04 ± 0.97 yr; 4477 females, age 11.52 ± 0.62 yr). All children were assessed on standing height, sitting height, body mass, arm span, seated shot throw, over-arm throw, 40 m sprint, counter movement jump and 20 m shuttle run. The students were tested annually by skilled PE teachers.

RESULTS: Normative tables of MEC will be presented for 11-14 year old males and females. Although male and female MEC children increased in height from 11 to 14 yr (142.4 to 155.9 cm and 144.5 to 153.1 cm, respectively) they were 3.3% to 6.5% shorter and 0.3% to 3.3% shorter than Australian and Malaysian children, respectively. Weight variables were similar between the MEC, Australian and Malaysian children. It was found that male MEC 40 m sprint time improved from 8.00 to 7.30 s between the ages of 11 and 14 yr. No change was found for female MEC. However, when comparing MEC to Australian children, 11 year olds were 9.6% and 9.4% lower and 14 year olds were 14.5% and 17.1% lower for males and females, respectively. When MEC were compared to Malaysian children, 11 years olds were 6.7% and 2.4% lower and 14 year olds were 4.3% and 3.9% lower for males and females, respectively. The CMJ improved in MEC from 21.4 to 25.3 cm and 20.0 to 21.7 cm between 11 and 14 yr in males and females, respectively. When MEC were compared to Australian children, 11 year olds were 17.7% and 23.1% lower and 14 year olds were 27.7% and 25.2% lower for males and females, respectively. When MEC were compared to Malaysian children, 11 years olds were 37.1% and 33.1% lower and 14 year olds were 23.1% and 26.2% lower for males and females, respectively. The 20 m shuttle run improved in MEC from 10.5 to 11.2 km.h⁻¹ in males whereas females showed no improvement (9.5 km.h⁻¹).

CONCLUSIONS: These results suggest that male and female MEC were slightly lower in regard to height. It was thought that the primary cause for this discrepancy could have been genetics and nutrition. Physically, MEC were found to be lower in regard to all the characteristics available for comparison. This discrepancy was thought to be due to a lower emphasis on physical activity in the schools.

Keywords: Children, Fitness, Physical Activity

12th Annual Congress of the ECSS, 11–14 July 2007, Jyväskylä, Finland