

Anthropometric and Physical Fitness Ability Profile of Elite and Non-Elite Boxers of Manipur

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Abstract : Background: Boxing is one of the oldest combat sports where different anthropological and fitness ability parameters determine performance. It is characterized by short duration, high intensity bursts of activity. The purpose of this research was to determine anthropometric and physical fitness profile of male elite and non-elite boxers of Manipur and to compare the two groups. Materials and Methods: Nineteen subjects were selected as elite boxers and twenty-four were non-elite boxers of Manipur. A cross-sectional study was conducted on anthropometric measurements and physical fitness ability tests on 33 subjects (elite and non-elite boxers). Statistical analysis was done using descriptive statistics, t-test and logistic regression with the help of SPSS version 15 software. Results: Results showed elite boxers have significantly reduced neck girth and calf girth as compare to non-elite boxers. Elite boxers have significantly lower sub scapular skin fold (SSF) and supra iliac skin fold (SISF) than their counterparts. Higher stature, larger BTB and lower percent fat are associated with higher performance in boxing. Sit ups (SU), standing Broad Jump (SBJ), Plat taping (PT), Sit and reach (SAR) and Harvard Step Test (HST) are predicted as most contributing factors enhancing performance level among the physical fitness components. Elite boxers are found to have more functional strength (sit ups), higher explosive strength (SBJ), more agility (PT), cardio-vascular endurance and flexibility (SAR) than non-elite boxers. Conclusion: In conclusion, lower fat, higher lean body mass, larger bi-trochantric breadth, high explosive strength, agility and flexibility are significantly associated with higher performance and chance of becoming elite boxers.

Keywords : anthropometry, elite and non-elite boxers, Manipur, physical fitness

Conference Title : ICAES 2017 : International Conference on Anthropological and Ethnological Sciences

Conference Location : Bangkok, Thailand

Conference Dates : August 30-31, 2017