

## FACTOR STRUCTURE OF BOXER'S MORPHOLOGICAL CHARACTERISTICS

### **Abstract**

*On the sample of 92 boxers from Croatian boxer clubs, different weight categories we applied 12 morphological variables in order to determine their factor structure that will help forming more rational procedures for optimal modelling, planning, programming and control of training process. Applying factor analysis (direct oblimin) and Kaiser Criteria ( $\lambda \geq 1.00$ ) in order to obtain mutual characteristic roots and interpreted parts of mutual variance, two latent variables were isolated. The first variable was interpreted as dimensionality and body voluminous and their structure consists of dimensionality variables (body height, leg length, arm length, biacromial width, bicristal width and wrist diameter), body voluminous (body weight, upper leg volume, upper arm in flexion). Second latent variable was interpreted as subcutaneous fat tissue since it is defined by all applied variables of fat tissue (upper arm skin fold, back skin fold and abdomen skin fold). Since between manifest variables ( $r = .60-.99$ ) and isolated latent variables ( $r = .70$ ) we obtained statistically significant correlation on the level .00 ( $p = .00$ ), the conclusion is in forming top results in boxing the entire morphological structure is included but with slightly increased advantage in skeleton dimensionality and body voluminous.*

**Key words:** *boxers, morphology, factor analysis, latent dimensions*

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