

## VALIDITY OF A FOUR-FACTOR MODEL UNDERLYING THE PHYSICAL FITNESS IN ADULTS WITH INTELLECTUAL DISABILITIES A CONFIRMATORY FACTOR ANALYSIS

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**Purpose:** To use confirmatory factor analysis to test whether a four factor might explain the clustering of the components of the physical fitness in adults with intellectual disabilities (FID).

**Relevance:** Individuals with intellectual disabilities (ID) are significantly weaker than individuals without ID at all stages of life. These subjects might be particularly susceptible to loss of basic function because of poor physical fitness.

**Participants:** We studied 267 adults with intellectual disability of the Spanish Special Olympics Games.

**Methods:** The four-factor model included: the flexibility, the strength, the balance and the cardiorespiratory endurance with 9 variables of the fitness assessment.

**Analysis:** The construct validity of the model was assessed through the factor loadings, interpreted as the correlation between the variables in the model and their underlying factor, which is the FID construct.

**Results:** Factor loading were 0,55 for the passive knee extension, 0,52 for Functional shoulder rotation, -0.71 for the timed-stand test, 0.58 for the grip test, 0.75 the single leg stance with eyes open, 0.69 single leg stance with eyes closed, 0.72 for the resting heart rate, 0.56 for the two-minute step test (2MST) 0,97 for 2 minutes after finish 2MST. The four-factor model also showed a good fit to the data, as indicated by a high comparative fit index (CFI=0,93) and a low standardized root mean square residual (SRMR=0,072)

**Conclusions:** A four underlying factor has shown acceptable validity to represent FID

**Implications:** The new model of FID can offer understanding better these construct in this special population