

ABSTRACT

The thesis is focused on creating a test battery for the sense of rhythm assessment for university students in the field of Physical Education and sport. Music-sports practice lacks such tests and so far it is forced to use only tests designed for the music field. The structure of the new tests corresponds to the characteristics of the sense of rhythm from the point of view of music psychology. The tests are divided into three sections, which are Perceptual Skills and Activities (items 1 to 18), Reproductive Skills and Activities (items 19 to 27) and Production Skills and Activities (item 28).

The Classical test theory (factor analysis) and Item response theory (two-parametric model) were used for the statistical processing of results. The methods also included the calculation of the reliability and validity of the test.

The expected refusal of the proposed hypothesis was confirmed in both the classical test theory and item response theory. The exception was model 4, whose fit indexes, especially $TLI = 0.537$, showed a lack of evidence for the refusal of the hypothesis rather than for a perfect fit of the model with the data. The aim of the research was to compile and test models whose conformity with the data would be the best. The most favorable conformity was for model No. 1 and No. 5. Model 1 [$CFI = 0.927$, $TLI=0.916$, $SRMR = 0.09$, $RMSEA (5 \%) = 0.03$, $RMSEA (95 \%) = 0.059$], whose structure corresponded to the designed test battery, showed relatively good conformity of the model with the data, although the IRT revealed some problematic items. Model 5 [$CFI = 0.956$, $TLI=0.942$, $SRMR = 0.073$, $RMSEA (5 \%) = 0.03$, $RMSEA (95 \%) = 0.111$] was unidimensional (the reproduction factor saturated items 19 to 27) and its fit indexes showed an even better conformity of the model with data. Based on these models, it is necessary to design an optimized test battery and again use statistical analysis to verify this test battery.

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Keywords: rhythm, music-movement education, sense of rhythm, factor analysis, item response theory.