Abstract

Background: The Battery of Reasoning Tests 5 (BPR-5) aims to assess the reasoning ability of individuals, using sub-tests with different formats and contents that require basic processes of inductive and deductive reasoning for their resolution. The BPR has three sequential forms: BPR-5i (for children from first to fifth grade), BPR-5 – Form A (for children from sixth to eighth grade) and BPR-5 – form B (for high school and undergraduate students). Method: The present study analysed 412 questionnaires concerning BPR-5i, 603 questionnaires concerning BPR-5 – Form A and 1748 questionnaires concerning BPR-5 – Form B. The main goal was to test the uni-dimensionality of the battery and its tests in relation to items using the bi-factor model. Results: Results suggest that the g factor loadings (extracted by the uni-dimensional model) do not change when the data is adjusted for a more flexible multi-factor model (bi-factor model). Conclusions: A general reasoning factor underlying different contents items is supported.

Keywords

Battery of reasoning tests, factorial validity, item response theory, bi-factor model.