



THURSDAY 4 JULY

Session 7.9

Topic: Validity and fairness in cross-cultural testing, psychological assessment and survey research/ Validity theory in testing, psychological assessment and survey research

Comparison of two methods to obtain the dimensionality of an instrument: factorial analysis Vs. Rasch analysis

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In the Rasch model, the dimensionality is established through Principal Component Analysis (PCA), which is different and more parsimonious than the one performed on TCT with Factorial Analysis. The aim is to compare these two methods using the dimensionality analysis of a test. The instrument Procrastination Assessment Scale-Students (Solomon & Rothblum, 1984) is the most used in academic procrastination research with children and teenagers. We analyzed the second part of the PASS (25 items), which inquiries about the cognitive-behavioral reasons to procrastinate. For this, different factorial solutions are reported by cultures and countries, which generates confusion and difficulties for transcultural comparison. Sample: 451 students from a public school in Bogotá (Colombia). Two hundred two males (44.8%) and 249 females (55.2%), and ages from 10 to 18 ($M = 13.99$; $SD = 1.91$). Method: PCA and Varimax factorial rotation were used for the Exploratory Factor Analysis (EFA). Three factors that explain 44.3% of the variance and exclude four items from the test were obtained. The internal consistency for the three factors is between .71 and .82. For the Rasch analysis, PCA is performed, considering that the first residual does not surpass 3 own values. Only one factor was obtained, which explains 59% of the variance, and all items are preserved. The item's reliability is .99, and the persons' have a separation index of 2-79 (.89). Conclusions: The results indicate that compared to the Rasch analysis, EFA is a method that tends to multiply a test's factors. Likewise, in this case, by means of the Rasch analysis, all items could be preserved, and a good person's reliability indicator was obtained, which cannot be estimated using classical test theory (CTT). Implications: The Rasch analysis may be a promising method for adapting multidimensional CTT tests. Limitations and reach are discussed. Funding: Effect of the Degree of Regulation (personal and contextual) on Competence for Psychological Well-being, Emotional Health, and Flourishing, in Different Psychological Contexts. The project led by Jesús de la Fuente Arias (PR), with file number PID2022-136466NB-I00 (Universidad de Navarra), has been financed by the 2022 call for "Proof of Concept" Projects of The Spanish State Research Agency (AEI). It is co-financed by the European Regional Development Fund (FEDER).