

Rasch Analysis Highly Cited Articles

1- Rasch Analysis for Instrument Development: Why, When, and How?

By:

Boone, WJ (Boone, William J.) [1] CBE-Life Sciences Education

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Abstract

This essay describes Rasch analysis psychometric techniques and how such techniques can be used by life sciences education researchers to guide the development and use of surveys and tests. Specifically, Rasch techniques can be used to document and evaluate the measurement functioning of such instruments. Rasch techniques also allow researchers to construct "Wright maps" to explain the meaning of a test score or survey score and develop alternative forms of tests and surveys. Rasch techniques provide a mechanism by which the quality of life sciences-related tests and surveys can be optimized and the techniques can be used to provide a context (e.g., what topics a student has mastered) when explaining test and survey results.



Rasch Analysis Highly Cited Articles

2- Psychometric Validation of the Bangla Fear of COVID-19 Scale: Confirmatory Factor Analysis and Rasch Analysis

By:

Sakib, N (Sakib, Najmuj) [1], [2]; Bhuiyan, AKMI (Bhuiyan, A. K. M. Israfil) [1]; Hossain, S (Hossain, Sahadat) [3]; Al Mamun, F (Al Mamun, Firoj) [1], [3]; Hosen, I (Hosen, Ismail) [1], [3]; Abdullah, Abu Hasnat) [1], [3]; Sarker, A (Sarker, Abedin) [1], [3]; Mohiuddin, MS (Mohiuddin, Mohammad Sarif) [4]; Rayhan, I (Rayhan, Istihak) [5]; Hossain, M (Hossain, Moazzem) [6]; ...More View Web of Science ResearcherID and ORCID

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Abstract

The recently developed Fear of COVID-19 Scale (FCV-19S) is a seven-item uni-dimensional scale that assesses the severity of fears of COVID-19. Given the rapid increase of COVID-19 cases in Bangladesh, we aimed to translate and validate the FCV-19S in Bangla. The forward-backward translation method was used to translate the English version of the questionnaire into Bangla. The reliability and validity properties of the Bangla FCV-19S were rigorously psychometrically evaluated (utilizing both confirmatory factor analysis and Rasch analysis) in relation to socio-demographic variables, national lockdown variables, and response to the Bangla Health Patient Questionnaire. The sample comprised 8550 Bangladeshi participants. The Cronbach alpha value for the Bangla FCV-19S was 0.871 indicating very good internal reliability. The results of the confirmatory factor analysis showed that the uni-dimensional factor structure of the FCV-19S fitted well with the data. The FCV-19S was significantly correlated with the nineitem Bangla Patient Health Questionnaire (PHQ-90) (r = 0.406, p < 0.001). FCV-19S scores were significantly associated with higher worries concerning lockdown. Measurement invariance of the FCV-19S showed no differences with respect to age or gender. The Bangla version of FCV-19S is a valid and reliable tool with robust psychometric properties which will be useful for researchers carrying out studies among the Bangla speaking population in assessing the psychological impact of fear from COVID-19 infection during this pandemic.

Keywords Author Keywords



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