Researchers Assessment Battery

Validity description of CogniFit assessments

Validity

As previously mentioned, the battery of tasks for each assessment is made up of various tasks that can measure up to 23 cognitive skills. This set of cognitive abilities has been subjected to a standardized measurement control to check validity by using several statistical measurements.

1.1 Cronbach's Alpha

To consider the internal consistence and check the compatibility of CogniFit's tool, the Alfa Cronbach coefficient was used. Said statistic was calculated by using the data from a sample group of over 500 participants. The data were gathered by using the general cognitive assessment tasks and the set of training programs available at CogniFit (www.cognifit.com). The Alfa Cronbach aimed to measure reliability and correlation in each of the cognitive skills.

Results

As you can see in the table of the following page, the data gathered reached over .7, indicating that the Alfa score had a high/good internal consistence, according to the criteria specified by George and Mallery (2003, p. 231). These results show that the correlation between the variables is high, and thus good reliability.

1.2 Test-Retest

In order to check the reliability of the CogniFit tool as a system, the Test-retest reliability was applied. This test was chosen to prove the stability of the measured data at two specific points in time. This statistic was calculated using the data gathered by other 500 sample users using CogniFit.

Results

As you can see below, the data are above .8 in more than 50% of the cases, and the rest are between .6 and .7. This result shows that the CogniFit system is accurate and reliable, as the scores are near 1, and therefore there are no discrepancies among the data.

Cognitive Skill	Internal Consistency	Test-Retest Reliability
Shifting	0,726	0,842
Divided Attention	0,866	0,85
Width Field of View	0,806	0,998
Hand-Eye Coordination	0,779	0,876
Naming	0,687	0,782
Focus	1	0,905
Visual Scanning	0,862	0,922
Estimation	0,761	0,986
Inhibition	0,661	0,697
Auditory Short-Term Memory	0,915	0,698
Contextual Memory	0,884	0,775
Visual Short-Term Memory	0,866	0,743
Short-Term Memory	0,853	0,721
Working Memory	0,85	0,696
Non-Verbal Memory	0,787	0,73
Spatial Perception	0,611	0,907
Visual Perception	0,751	0,882
Auditory Perception	0,652	0,904
Planning	0,765	0,826
Reaction To Change	0,571	0,88
Recognition	0,864	0,771
Response Time	0,873	0,821
Processing Speed	0,888	0,764

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