

RELIABILITY AND VALIDITY

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I have no known conflict of interest to disclose.

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Reliability and Validity.

The Values and Motives Questionnaire is a tool that is used to help create reliability and validity in a test assessment. The Values and Motives Questionnaire also known as the VMQ is used in many different aspects. It is used to assess a handwriting test for preschoolers in China (Hong,2019), and is also used in screening patients with cognitive impairments and dementia (Afshar, et, al. 2021). The possibilities are almost endless if used correctly. The VMQ specifically uses one type of reliability and one type of validity in its test. The VMQ starts its approach with internal consistency. Internal consistency is often referred to as *scale homogeneity*. It is a scale that measures constructs or traits. The scale shows internal consistency if all the items on a test produce a positive score that correlates back to the scale being used. The VMQ uses criterion validity. Criterion validity is the process of translating a score on a test into a future prediction. This prediction is the hope of what would happen if different changes were observed. Criterion validity is established when a score on a test relates positively to the future prediction that was given it comes in two forms, predictive and concurrent. Predictive when a test predicts what may happen shortly. An example would be a prediction of an employee completing his training. Concurrent validity is used when a test helps to predict something in a current time frame. An example would be a test predicting a current employee's job performance.

Reliability: Cronbach Alpha Coefficients.

The “What Makes a Good Test” handout provides two tools that help explain how to read reliability and validity coefficients. Reliability is shown with numbers ranging from 0 to 1.00. 0= not reliable and 1.00= perfect reliability. The scale given is as followed: .90+ = excellent. .80-.89= good. .70-79= adequate and below 70 is limited applications. The guidelines for validity use

a different scale. Validity is based on the criterion-related scale. “What Makes a Good Test” states that the larger the validity coefficient, the more positive the predictions on the test score will be. Coefficients rarely exceed over 40. The scale is as follows: .35+ = very beneficial. .21-35= likely to be useful. .11-20= depends on the circumstances and below .11 not likely to be used. Cronbach’s first chart uses reliability. It maps out 11 different values of male and female students. Their internal consistency alpha values averaged 70%. This means that according to the guidelines for reliability, the test is adequate. The second test given by Cronbach is validity. This test used 159 psychology and MBA students. The two scales given showed that these students received an average score of 35%. This shows that this test is very reliable in its validity.

Sample Size and Nature of the Population.

- A. **Validity:** The population used for the VMQ, and the population used for the tests used to evaluate the VMQ’s validity are that of males and females. They used 68 male and 87 female students from a school population in one test and psychology and MBA students in another. I do believe that populations of the test are comparable seeing as they are all students, but I do question have a minor issue with the validity. For better validity, the tests would need to include the ages and degree levels of all the students taking the tests.
- B. **VMQ Norming Population:** This is not representative of the population I would want to use. There is a definite lack of gender, race, ethnicity, and culture in the representation. I believe there is not enough demographic information to draw sufficient conclusions. I also believe the people sampled by the VMQ were not enough to fully capture the traits of the population.

My Opinion of the VMQ.

Overall, I believe the VMQ did a decent job in its presentation. The psychometric properties of the VMI did a great job regarding gender differences, reliability, and validity. They proved that their assessments provided high-quality tests in both validity and reliability. Based on my findings I believe that the authors of the VMQ did adequate work. However, I do have a few concerns. I believe the authors need to do a better job of representing and researching gender, race, ethnicity, and culture in their representation. I also believe they need to expand on their sample size. A few hundred students are a good start, but I believe they need to increase that number to get a better size and makeup of the population.

Reference:

Afshar, P. F., Wiig, E. H., Malakouti, S. K., Shariati, B., & Nejati, S. (2021). Reliability and validity of a quick test of cognitive speed (AQT) in screening for mild cognitive impairment and dementia. BMC geriatrics, 21(1), 693. <https://doi.org/10.1186/s12877-021-02621-z>

Hong, Q., Jiang, B., Xu, Q., Zhang, L., Ou, J., Zhang, Q., Li, N., Wang, J., Xie, Y., Hua, J., Guo, X., Tong, M., & Chi, X. (2020). Reliability and validity of handwriting test for preschool children (HT-PRE): A new tool to assess the handwriting ability of preschool children aged 5-6 years old in mainland china. PloS One, 15(3), e0229786-e0229786. <https://doi.org/10.1371/journal.pone.0229786>

The Values and Motives Questionnaire in Social Studies." June 4, 2023.

<https://psytech.com/Content/TechnicalManuals/EN/VMIMan.pdf>