



Psychometrics of OMNIA

The OMNIA assessment was evaluated for internal consistency using measures of Split-half reliability and Cronbach's Alpha. These two measures evaluate consistency of measurement of the underlying construct within an assessment in different ways.

Split-half reliability evaluates whether different portions of an assessment measure the same underlying construct by dividing the full set of items into two halves in many possible combinations. The relationship between those halves is then examined to determine how strongly they correlate with one another. If the two halves of the test produce highly similar results, it indicates that the assessment items are functioning together cohesively rather than operating as unrelated questions. This approach provides a direct empirical test of whether the measure behaves as a unified scale. OMNIA demonstrated exceptionally strong split-half reliability across all indices measured. The maximum split-half coefficient (Guttman's lambda 4) was 0.99, the average split-half reliability was 0.98, and the minimum split-half coefficient remained high at 0.94. These values indicate remarkable consistency across item groupings and suggest that the assessment maintains its structure regardless of how items are partitioned. Additional Guttman coefficients (lambda 2 and lambda 3) were both 0.98, further supporting scale stability. In practical terms, this measure provides clinicians reassurance that OMNIA is functioning as a cohesive instrument rather than as loosely related sections. The consistency remained strong across multiple reliability estimates, supporting the structural stability of the measure. These findings indicate that OMNIA maintains integrity across item groupings and provides dependable measurement.

Cronbach's alpha is one of the most widely used indicators of internal consistency in psychological and educational assessment. It estimates the degree to which items on a scale measure the same underlying construct by examining the average correlation among items and the total variance of the scale. Alpha coefficients range from 0 to 1. Values above 0.70 are generally considered acceptable, values above 0.80 are strong, and values above 0.90 are considered excellent. When alpha approaches 1.00, it indicates a very high level of cohesion among items and strong measurement precision. OMNIA demonstrated outstanding internal consistency reliability using this measure. The raw Cronbach's alpha was 0.97, and the standardized alpha was 0.98, placing the scale well within the "excellent" range. Guttman's lambda 6 was 0.998, further confirming the strength of the internal structure. The signal-to-noise ratio was 50.06, suggesting that true score variance substantially outweighs measurement error. On both the Split-half reliability and Cronbach's alpha, the average inter-item correlation was 0.21 (median = 0.19), indicating that items are meaningfully related while still capturing unique variance. Missing ACT values were treated as zero in accordance with normative scoring procedures, ensuring that the reliability



estimates reflect real-world scoring practices. Overall, these results indicate that OMNIA provides stable, precise, and dependable measurement for clinical use.

These statistics are provided by Jennifer Posey as part of a larger research project ongoing with OMNIA.