

Odd–Even Split–Half Reliability

Test: Odd–Even Split–Half Reliability

Design: A fixed balanced split of the six transformed items into two three–item half scores.

Variables: half A: famrel, goout, Walc_R, half B: freetime, Dalc_R, health

Null hypothesis: The two fixed half scores are uncorrelated and have no full–length reliability.

Formula: $r_{\text{half}} = \text{cor}(H_A, H_B)$; $\rho_{\text{SB}} = 2r/(1+r)$; $\lambda_4 = 2[1 - (s_A^2 + s_B^2)/s_{\text{total}}^2]$.

Source rows: 649

Calculated metrics:

half_correlation: 0.236380191523515

spearman_brown_corrected: 0.38237460150868

guttman_lambda_4: 0.380732663549638

n_cases: 649

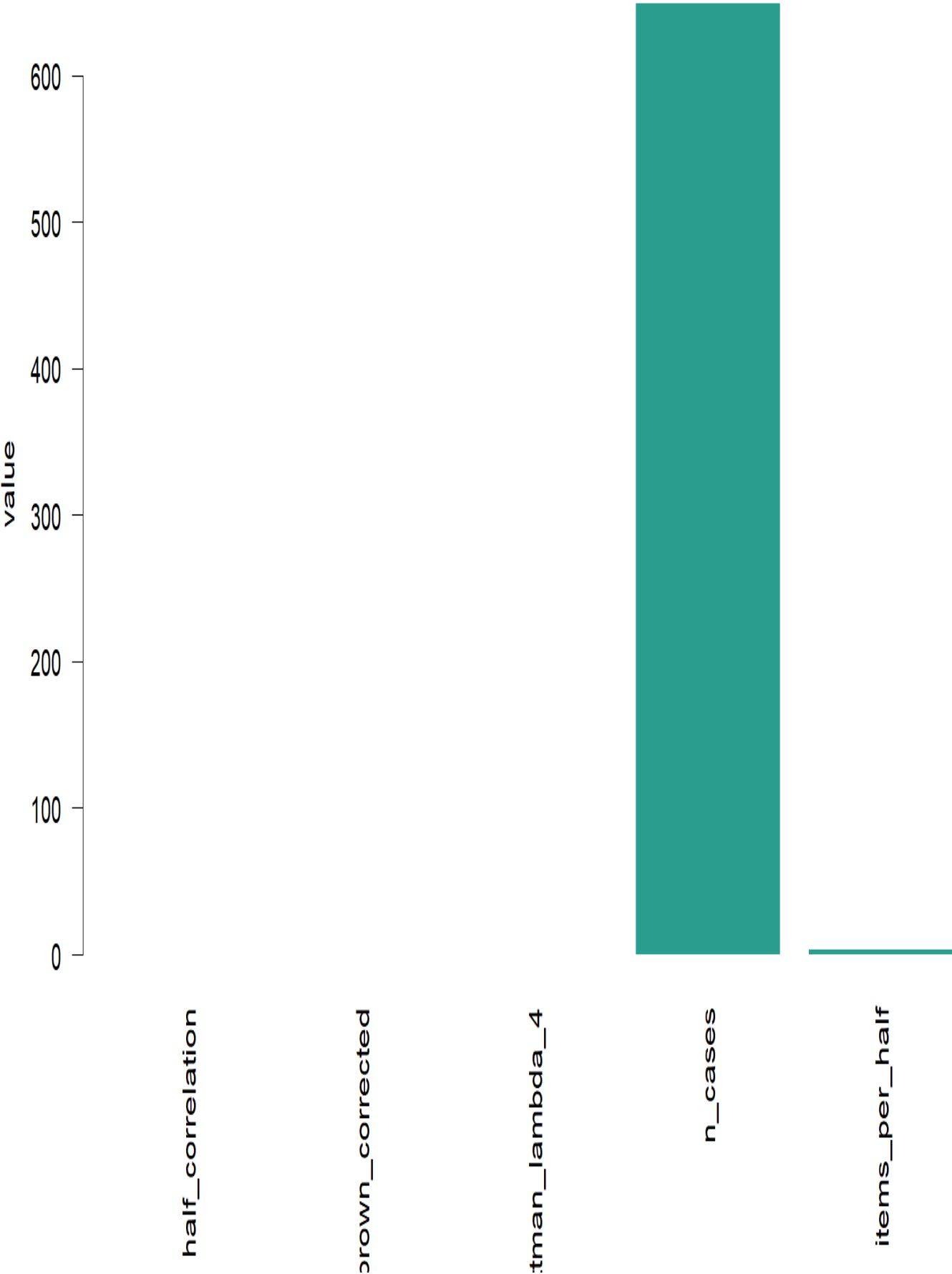
items_per_half: 3

Interpretation:

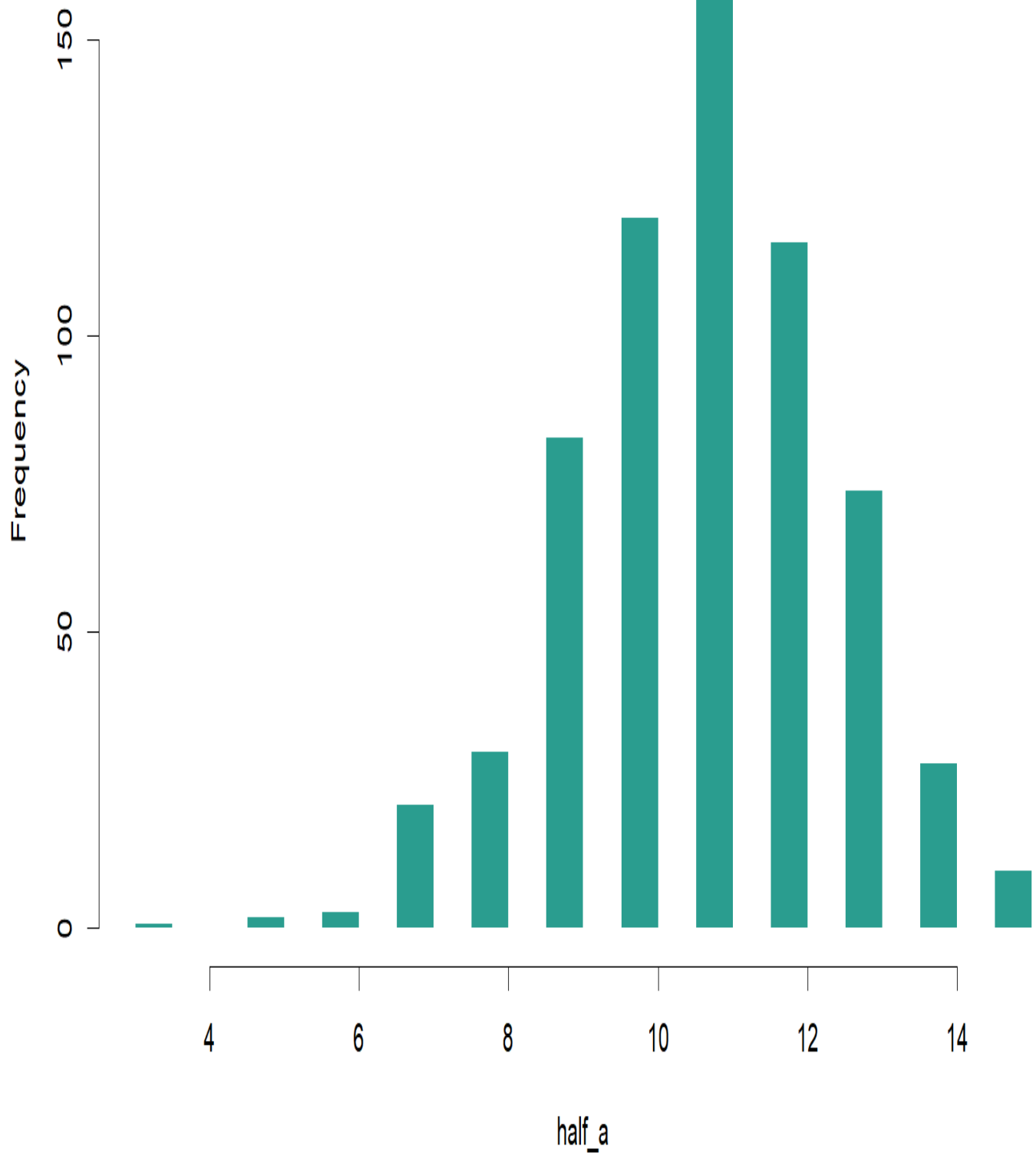
The two three–item halves are fixed before their scores are correlated.

Spearman–Brown corrected 0.38237460150868

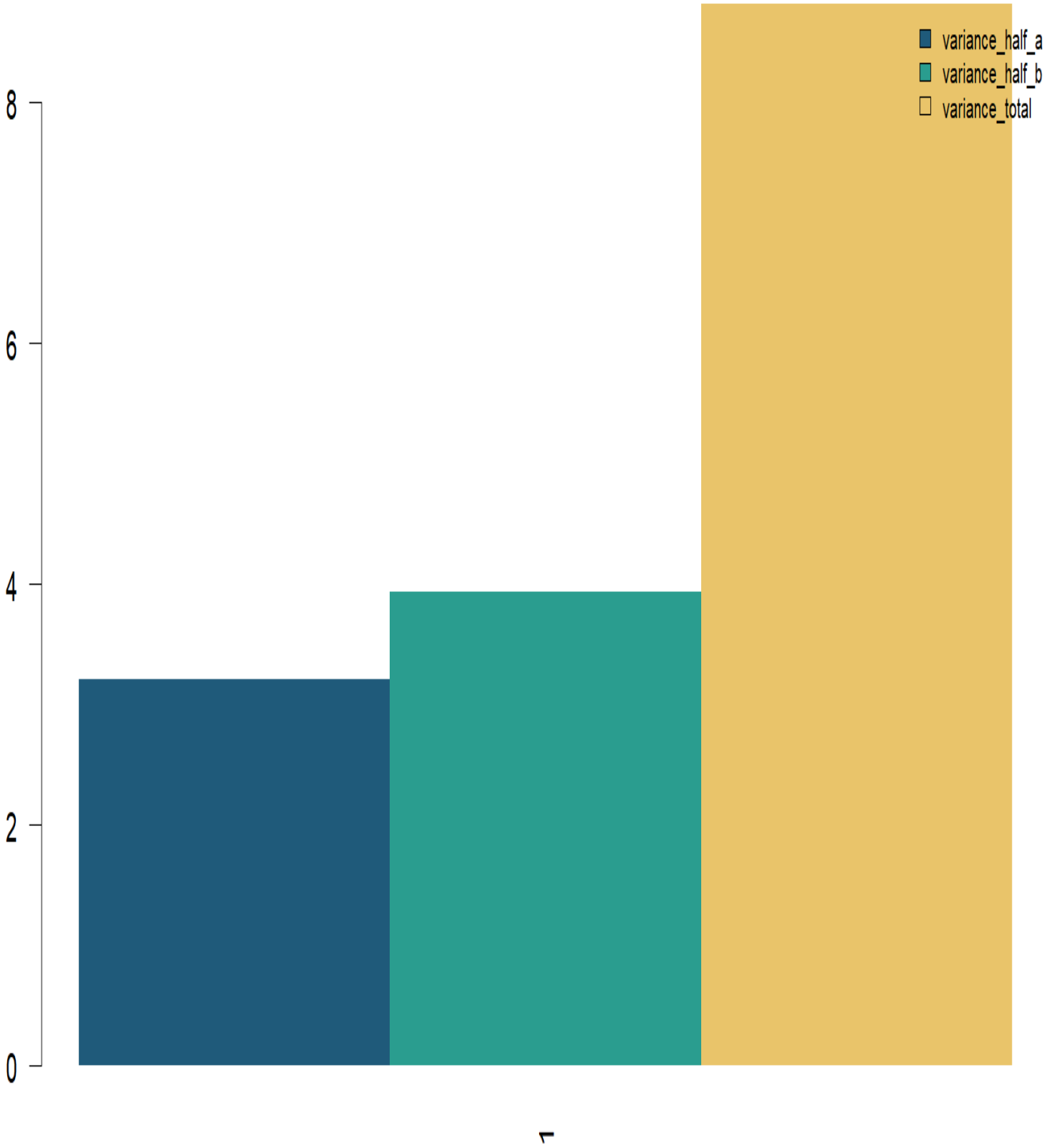
Odd-Even Split-Half Reliability - primary metrics



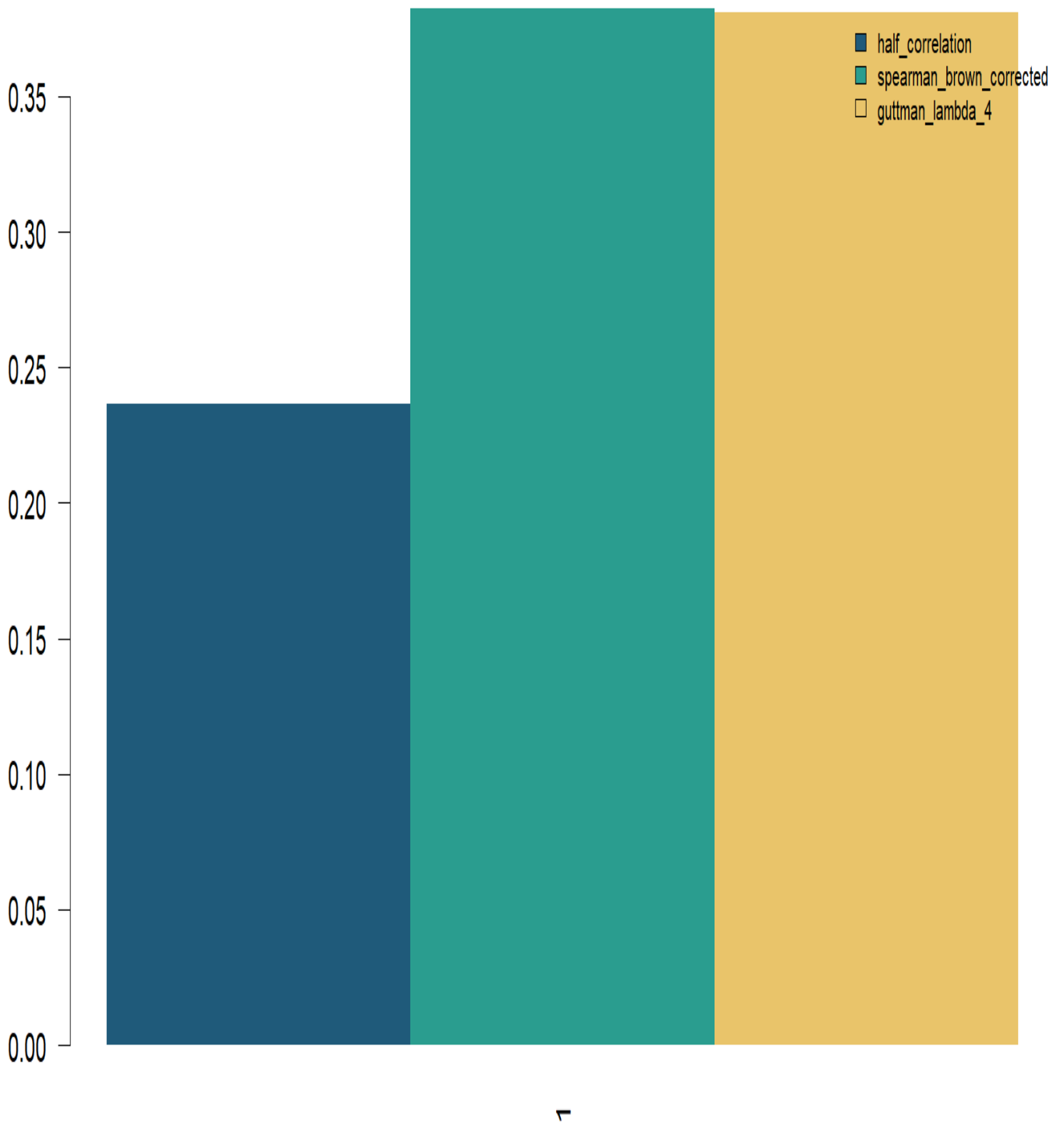
Odd-Even Split-Half Reliability - fixed half scores



Odd-Even Split-Half Reliability - split variance components



Odd-Even Split-Half Reliability - split half result



Odd-Even Split-Half Reliability verified results

