

Spearman–Brown Prophecy Formula

Test: Spearman–Brown Prophecy Formula

Design: Reliability predicted after changing test length from the observed G1–G2 correlation.

Variables: G1, G2, length multiplier

Null hypothesis: Changing test length does not alter predicted reliability beyond the observed parallel–form correlation.

Formula: $\rho_{\text{new}} = m \rho_{\text{old}} / [1 + (m-1)\rho_{\text{old}}]$.

Source rows: 649

Calculated metrics:

observed_reliability: 0.864981630308582

predicted_reliability_double_length: 0.927603378233234

required_multiplier_for_0_90: 1.40484524138305

target_reliability: 0.9

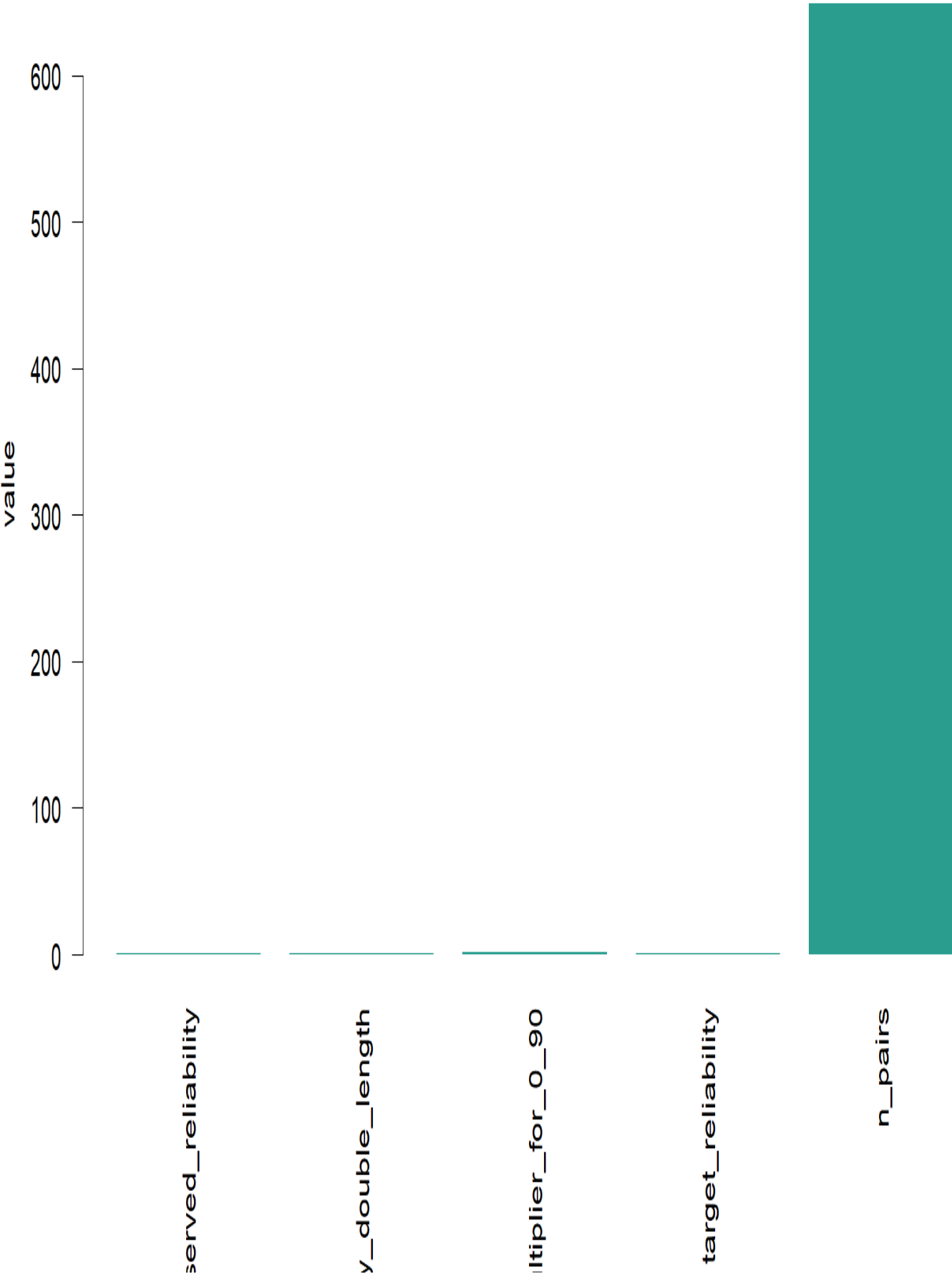
n_pairs: 649

Interpretation:

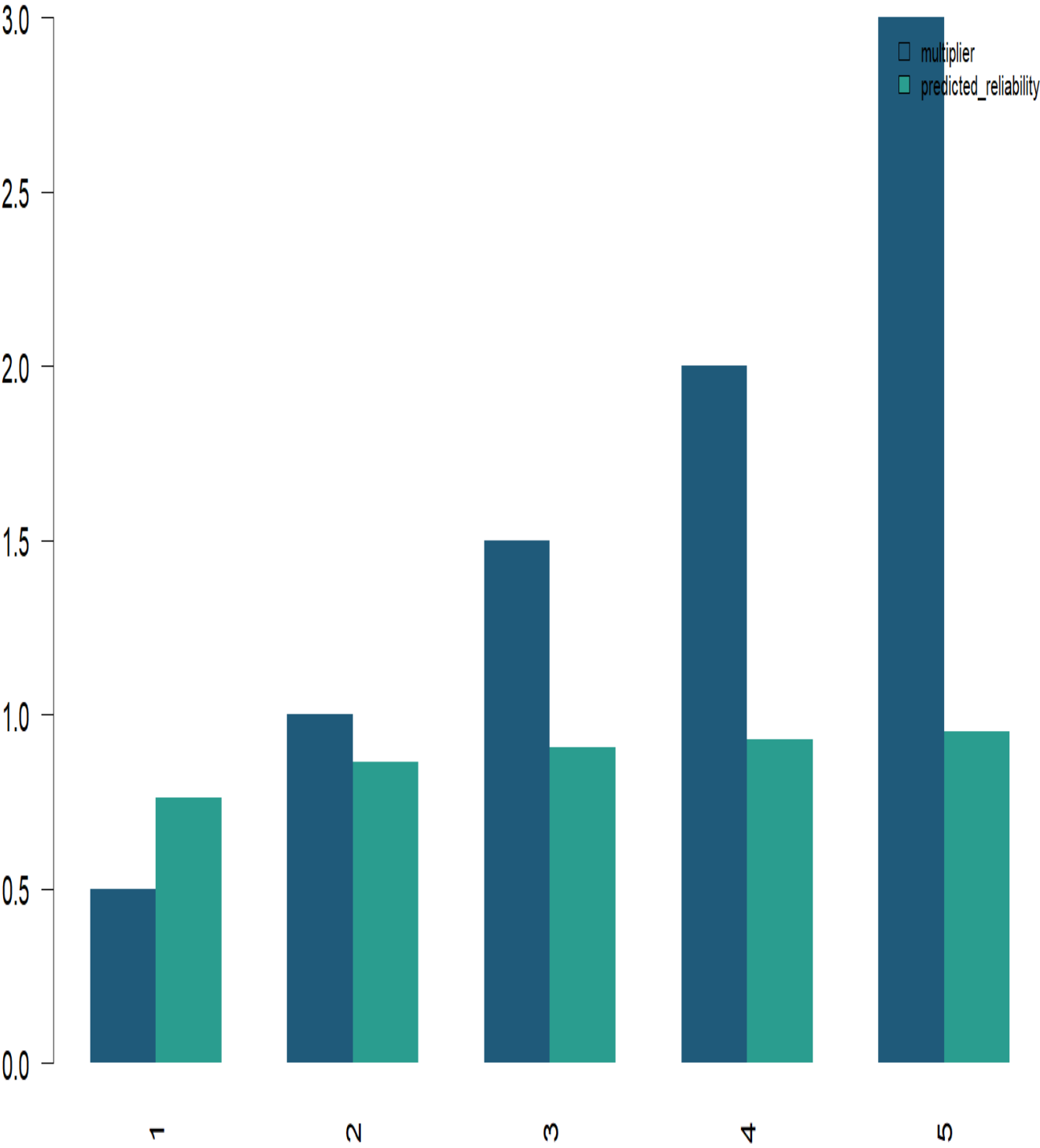
The prophecy formula predicts reliability after a declared change in length.

Double–length reliability 0.927603378233234

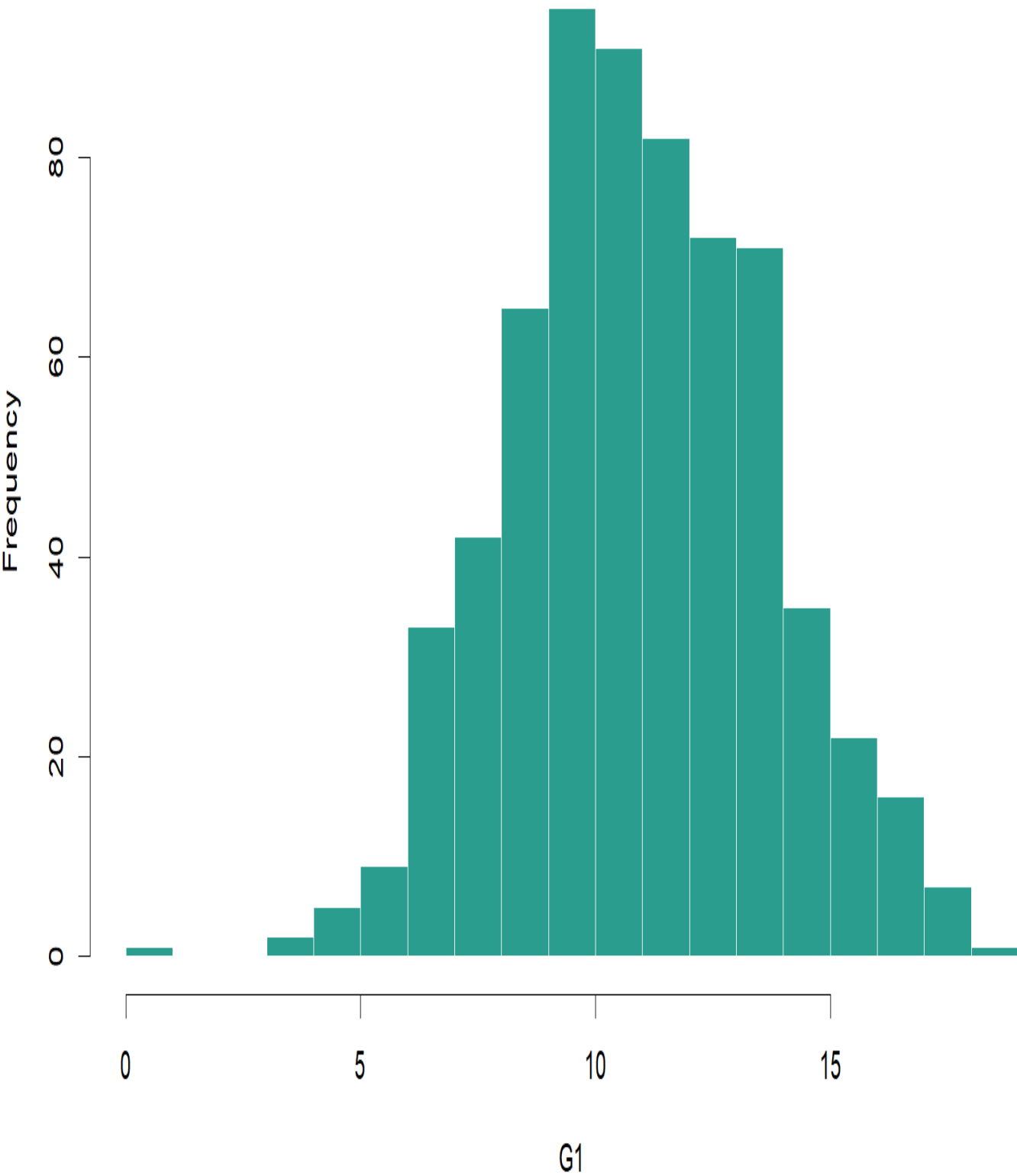
Spearman-Brown Prophecy Formula - primary metrics



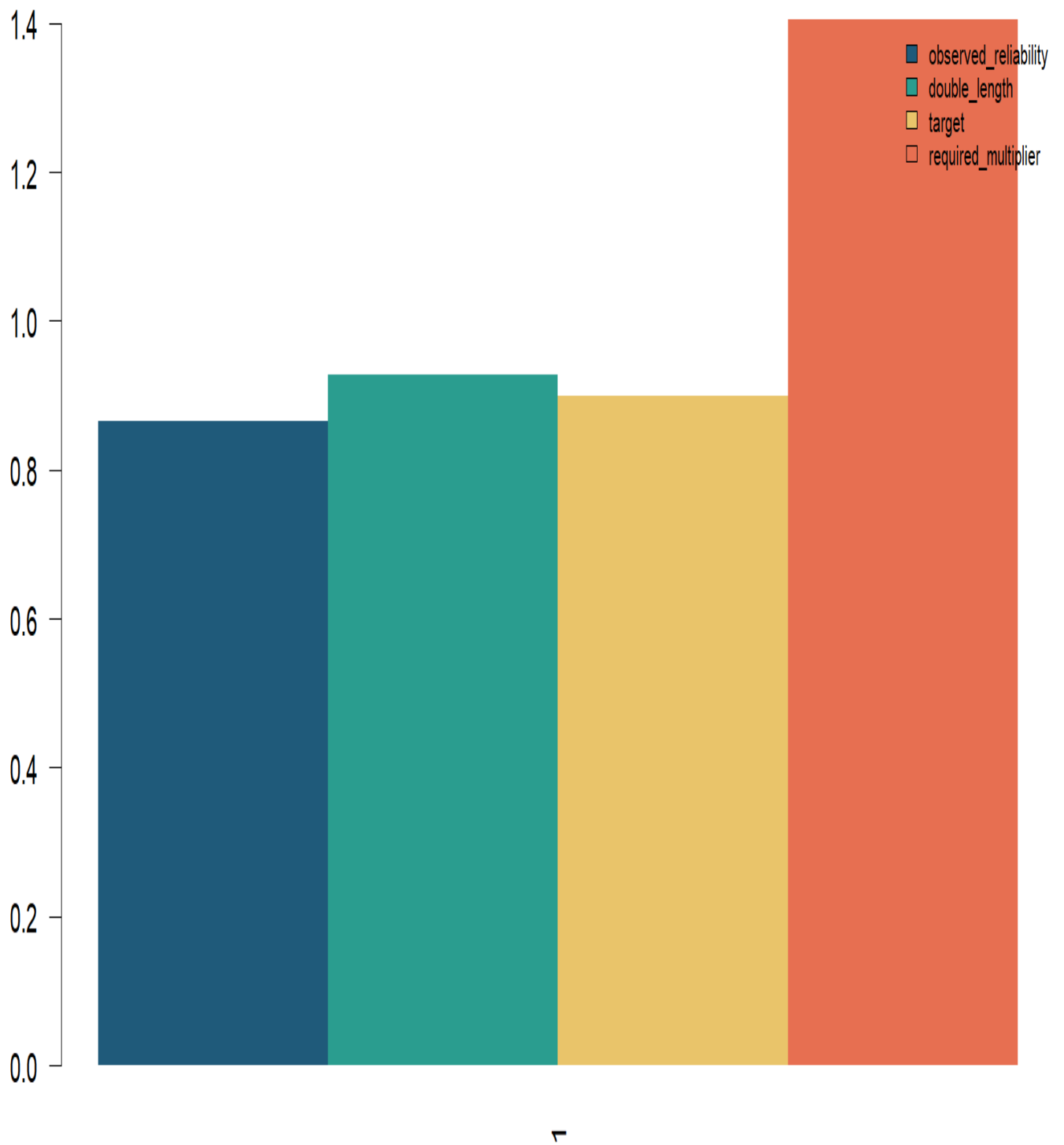
Spearman-Brown Prophecy Formula - prophecy scenarios



Spearman-Brown Prophecy Formula - parallel form scores



Spearman-Brown Prophecy Formula - prophecy components



Spearman-Brown Prophecy Formula verified results

n_pairs



target_reliability



required_multiplier_for_0_90



icted_reliability_double_length



observed_reliability



0

100

200

300

400

500

600