

Siegel–Tukey Scale Test

Test: Siegel–Tukey Scale Test

Design: Median–adjusted two–sample scale comparison of final grades between female and male students.

Variables: median–centered G3, sex

Null hypothesis: The two groups have equal dispersion.

Formula: Alternating extreme ranks are assigned 1,2,3,...; the group score sum is standardized by its permutation variance.

Source rows: 649

Calculated metrics:

female_score_sum: 121481.971070876

expected_score_sum: 124475

variance: 5271279.28271198

z_statistic: -1.30362566268522

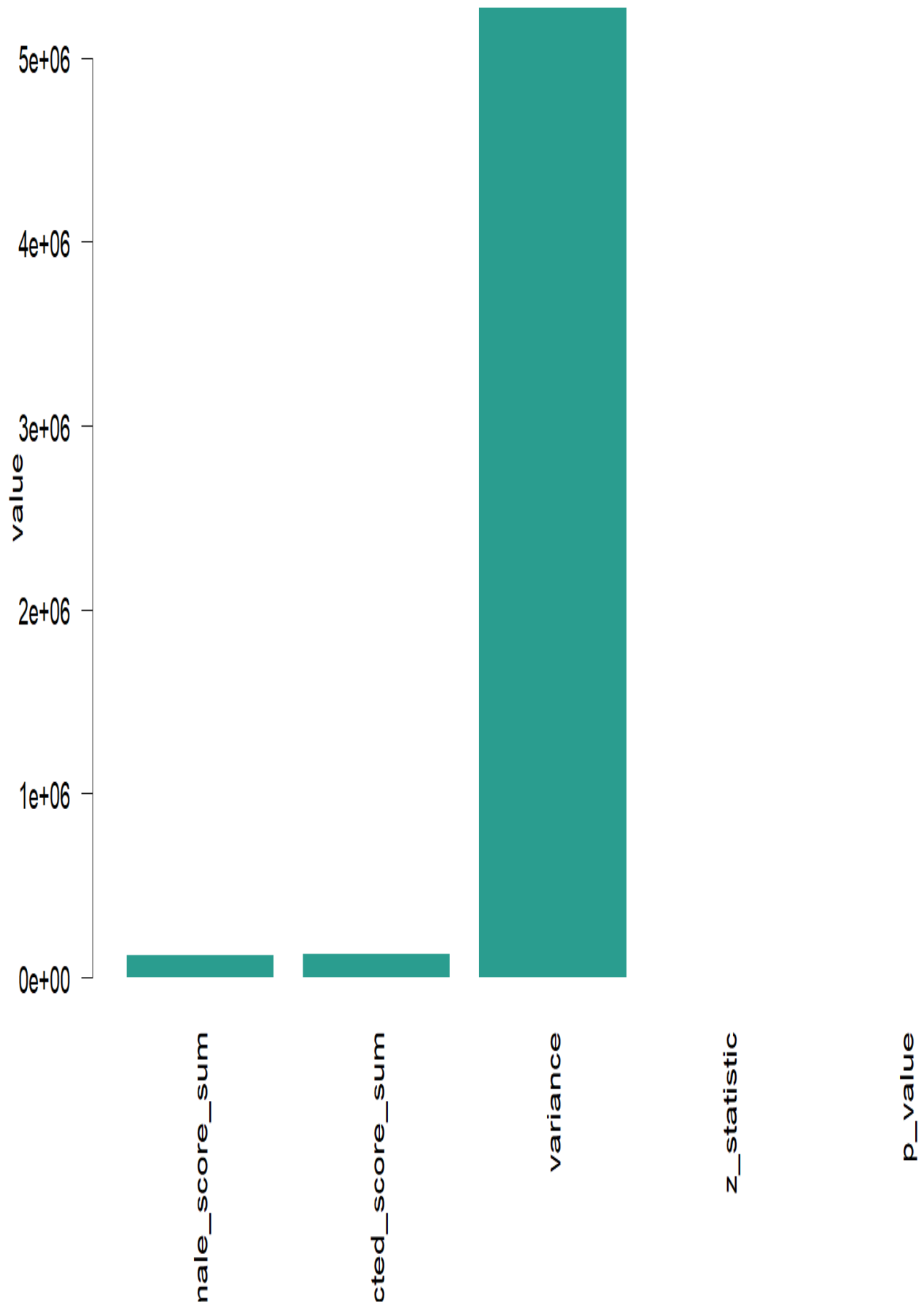
p_value: 0.192361246397231

Interpretation:

Median adjustment isolates scale before alternating extreme ranks.

p = 0.192361246397231

Siegel-Tukey Scale Test - primary metrics



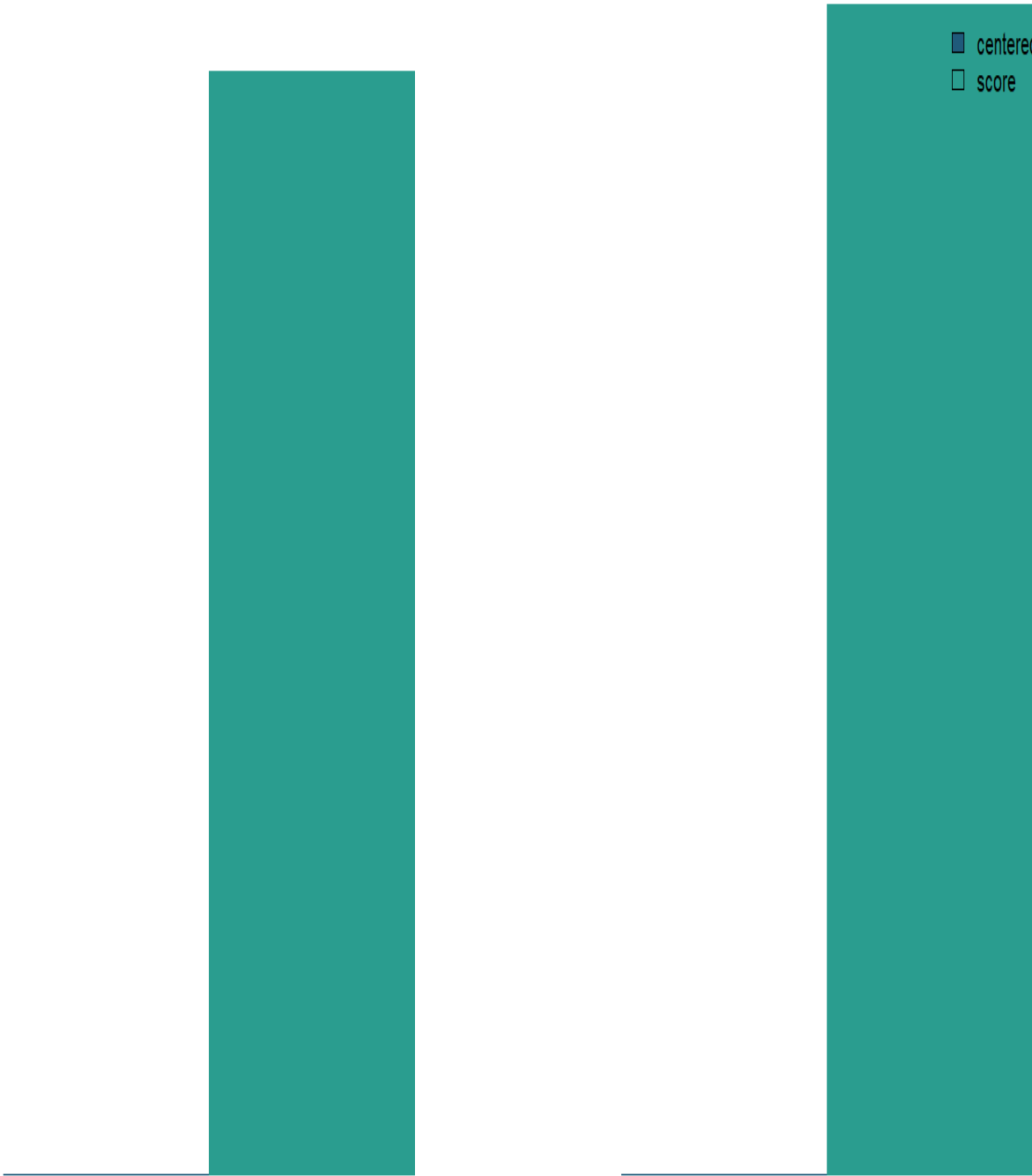
Siegel-Tukey Scale Test - sex scale summary

centered_G3
score

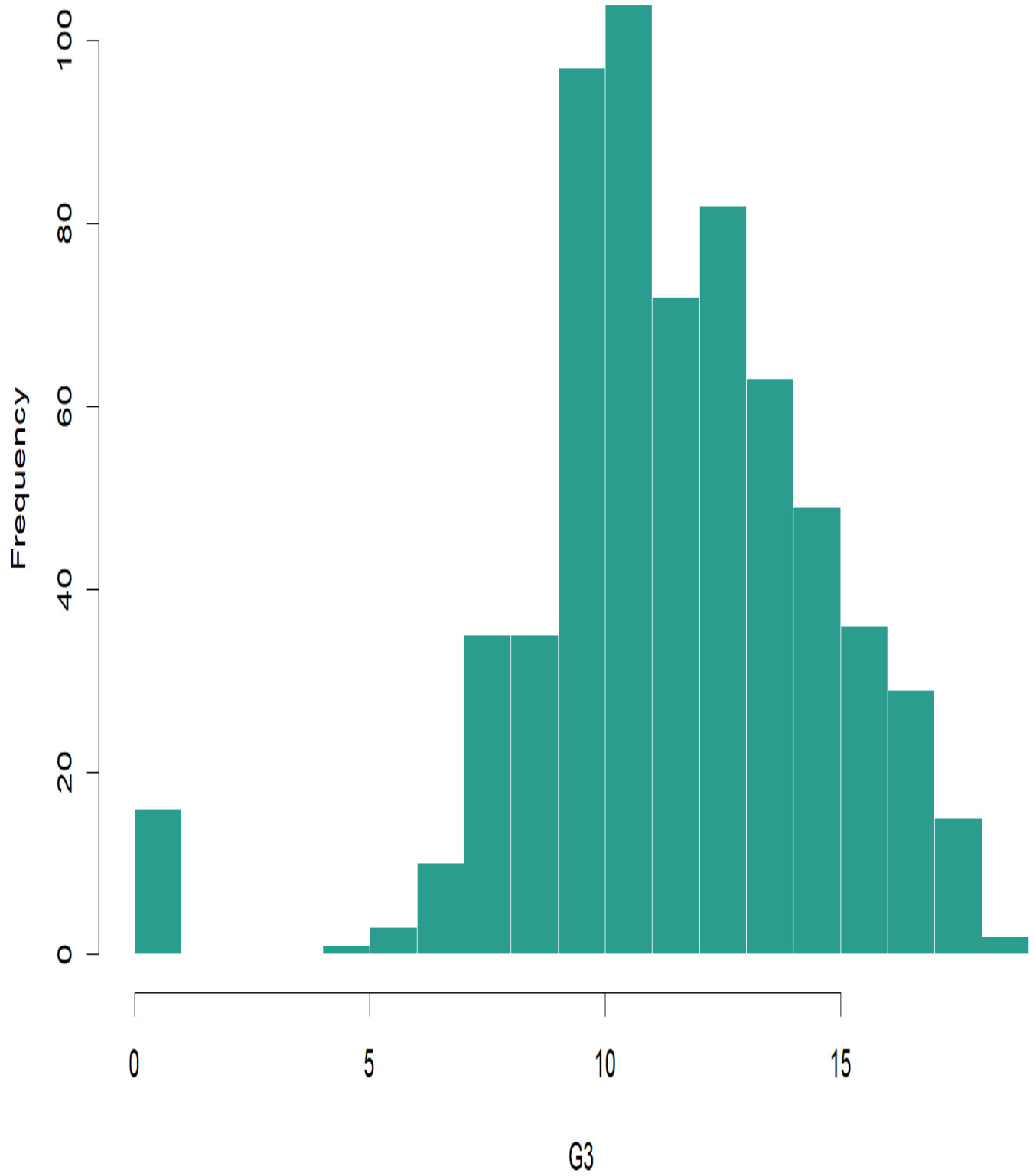
300
250
200
150
100
50
0

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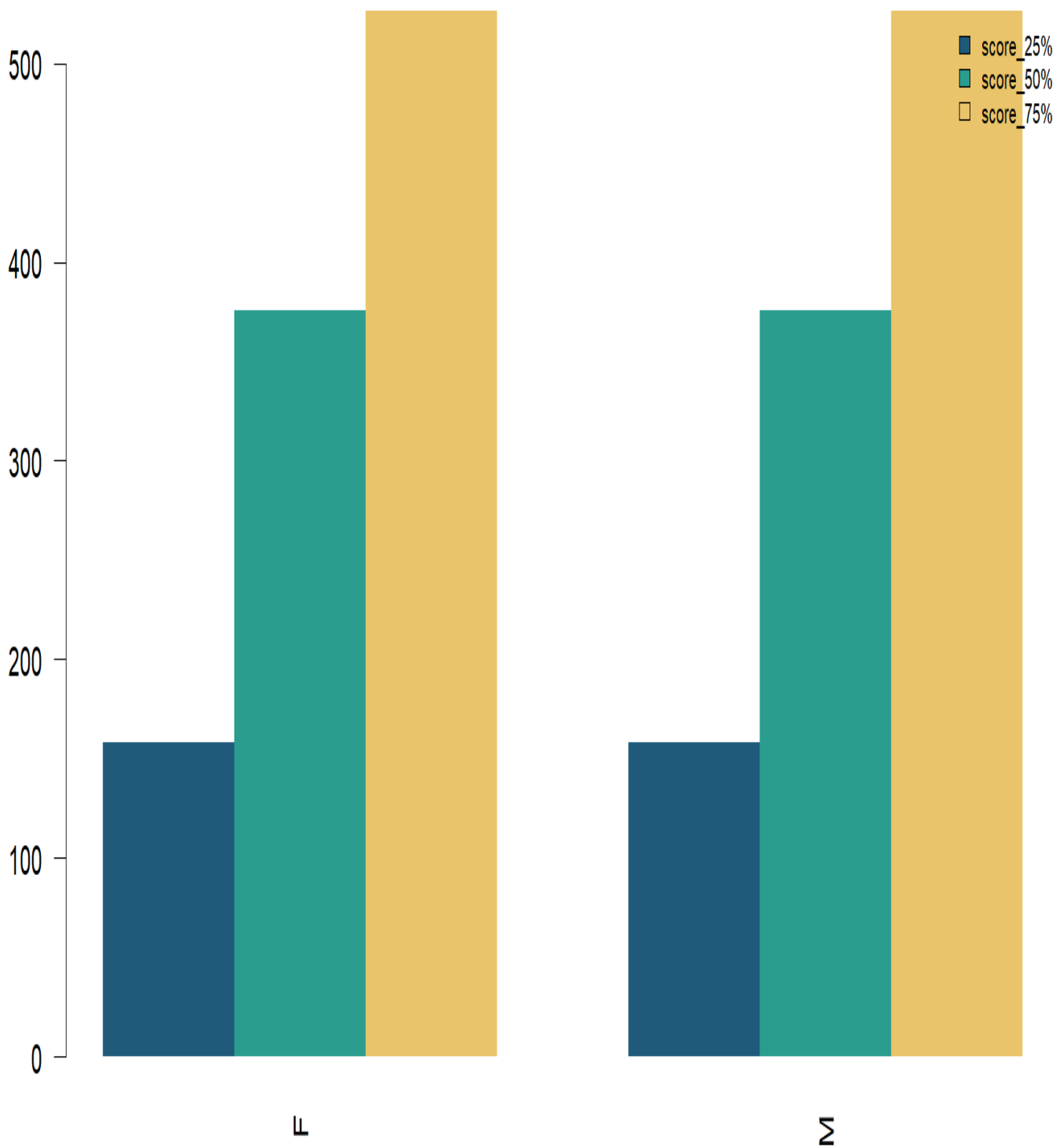
Σ



Siegel-Tukey Scale Test - alternating extreme scores



Siegel-Tukey Scale Test - score quantiles



Siegel-Tukey Scale Test verified results

