

Promax Oblique Rotation

Test: Promax Oblique Rotation

Design: Power-four target rotation of an initial varimax principal-axis solution.

Variables: G1, G2, G3, famrel, freetime, goout

Null hypothesis: Promax does not produce a simpler correlated-factor pattern.

Formula: $\text{Target}_{ij} = \text{sign}(l_{ij})|l_{ij}|^4$; regress target on varimax loadings to obtain oblique transform.

Source rows: 649

Calculated metrics:

power: 4

factor_correlation: -0.652545946219518

maximum_pattern_loading: 0.808825131772534

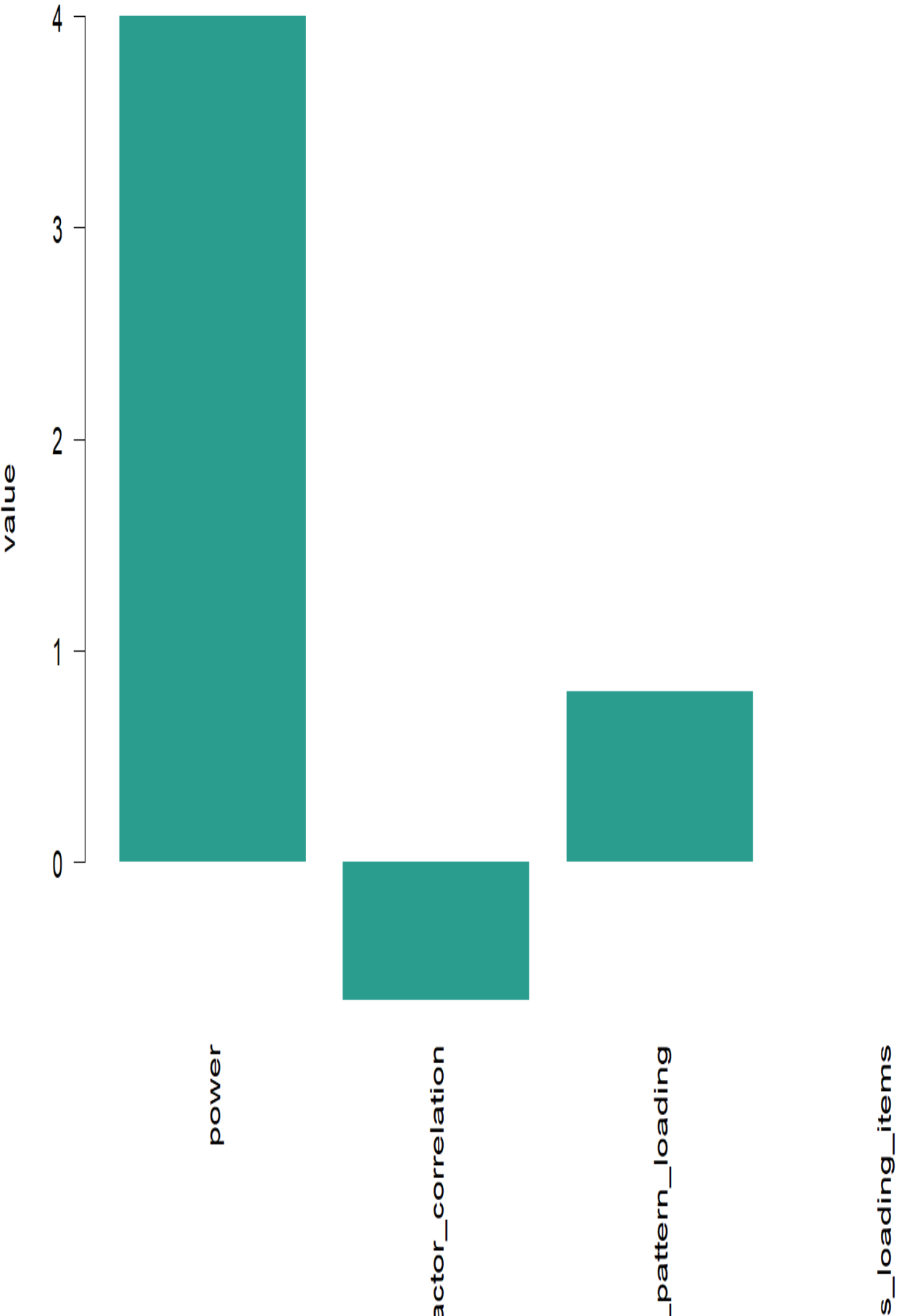
cross_loading_items: 0

Interpretation:

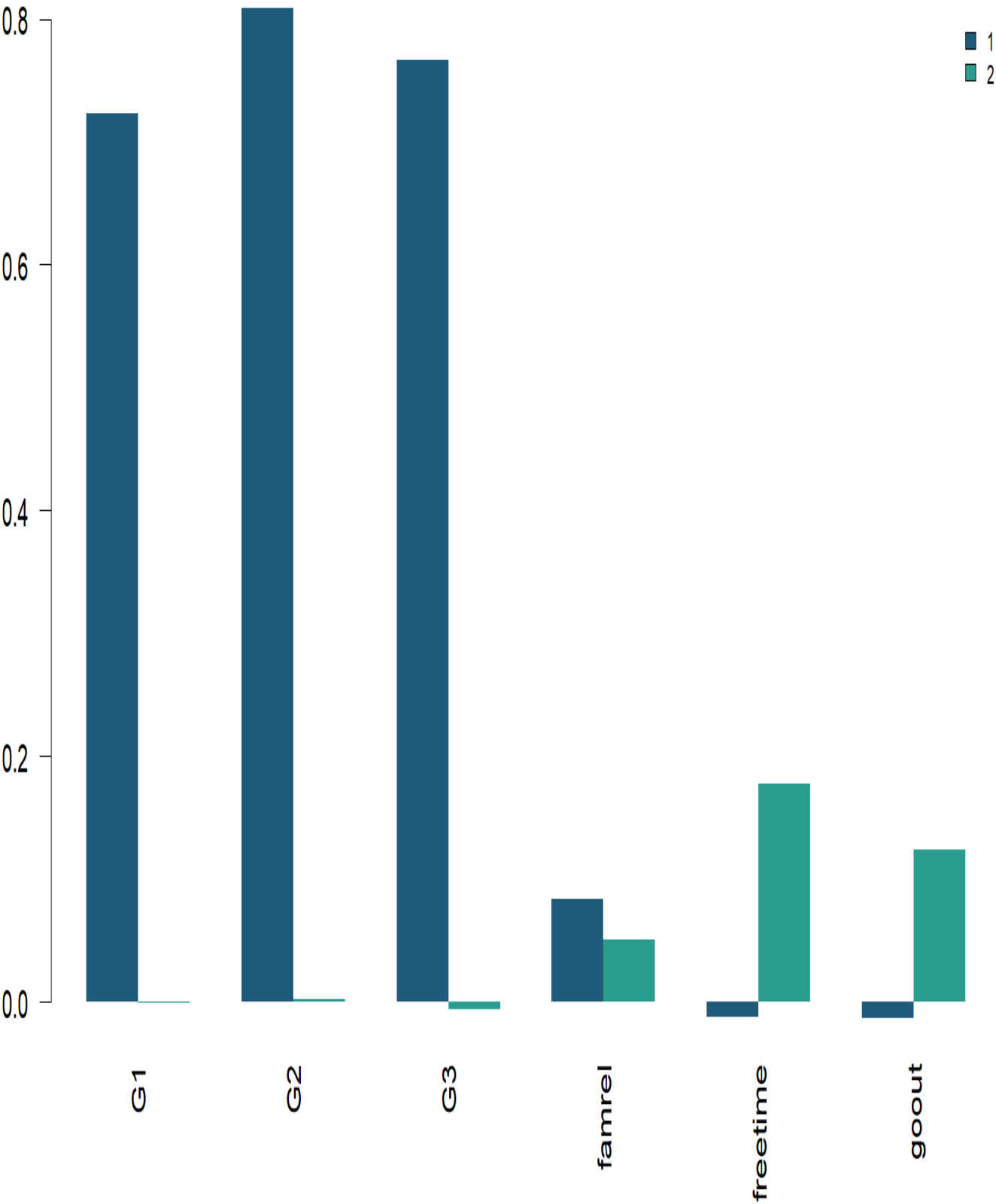
Promax uses a power-four varimax target.

Factor correlation -0.652545946219518

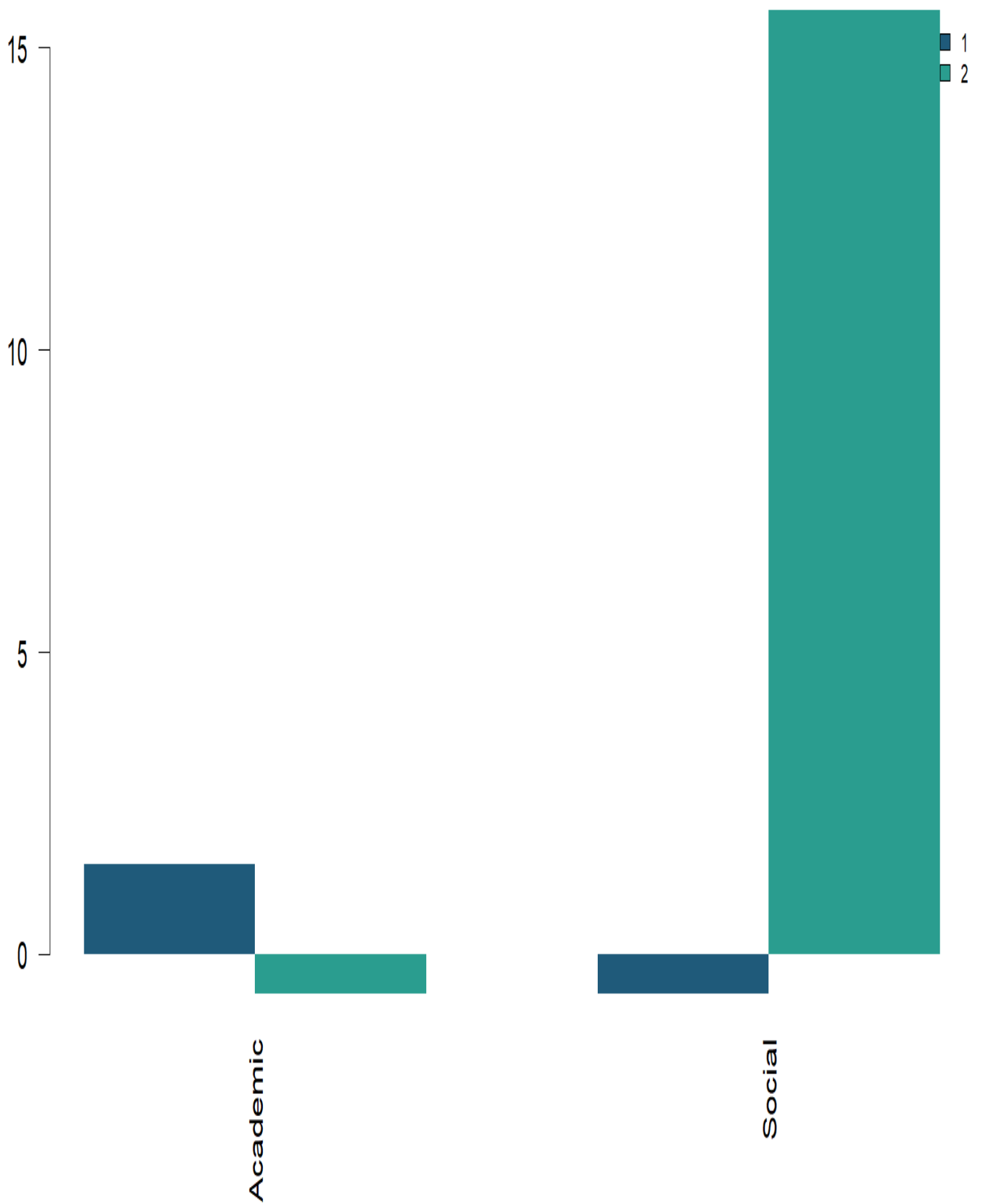
Promax Oblique Rotation - primary metrics



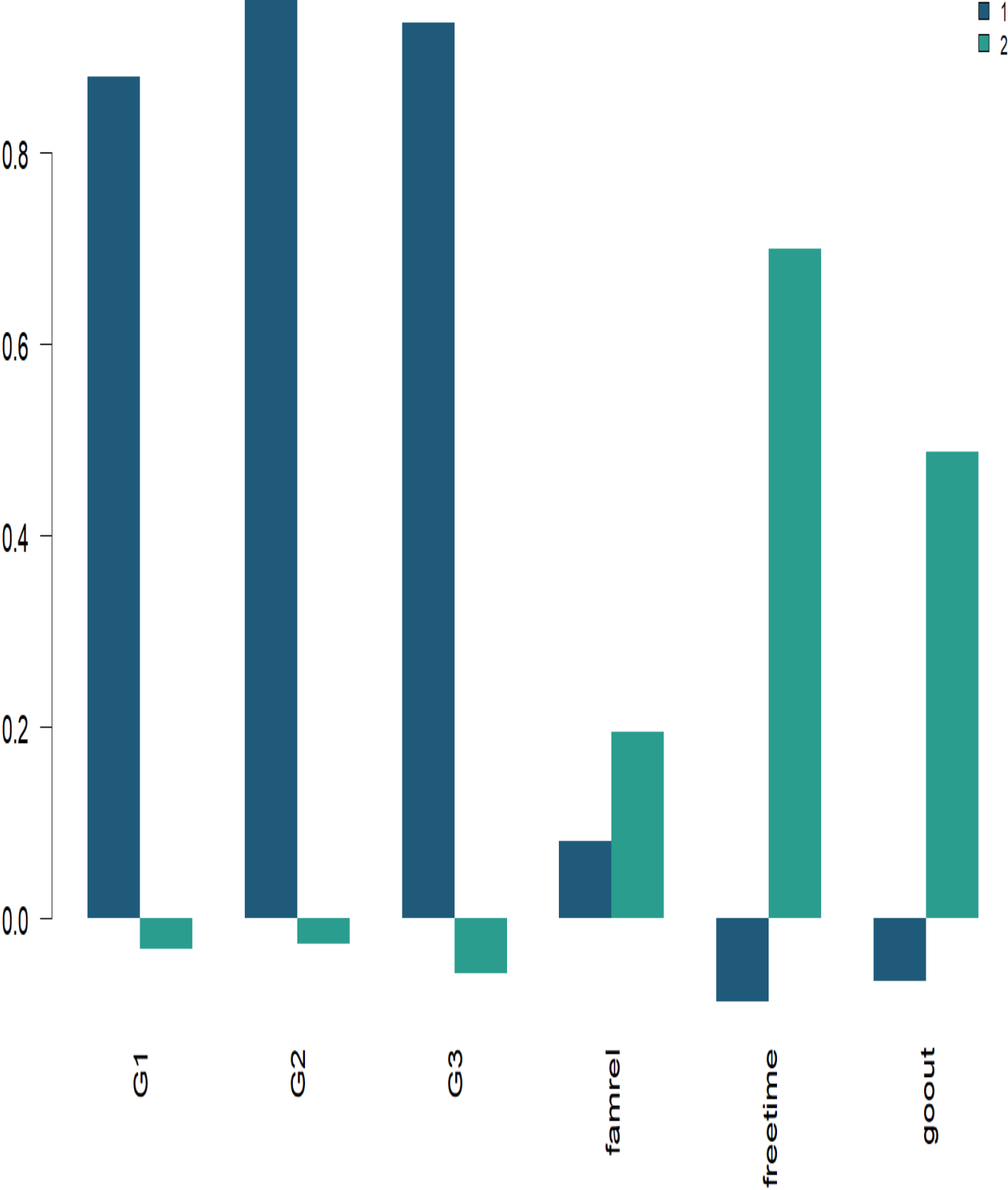
Promax Oblique Rotation - promax power four pattern



Promax Oblique Rotation - promax factor correlation



Promax Oblique Rotation - varimax starting solution



Promax Oblique Rotation verified results

