

Exploratory Principal–Axis Factor Analysis

Test: Exploratory Principal–Axis Factor Analysis

Design: Unconstrained two–factor principal–axis extraction followed by oblimin rotation.

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

Null hypothesis: Two common factors explain no reproducible covariance beyond uniqueness.

Formula: Iterate communalities, extract two reduced–correlation eigenvectors, then rotate obliquely.

Source rows: 649

Calculated metrics:

factors: 2

mean_communality: 0.566842520071384

minimum_communality: 0.0446441941565061

iterations: 500

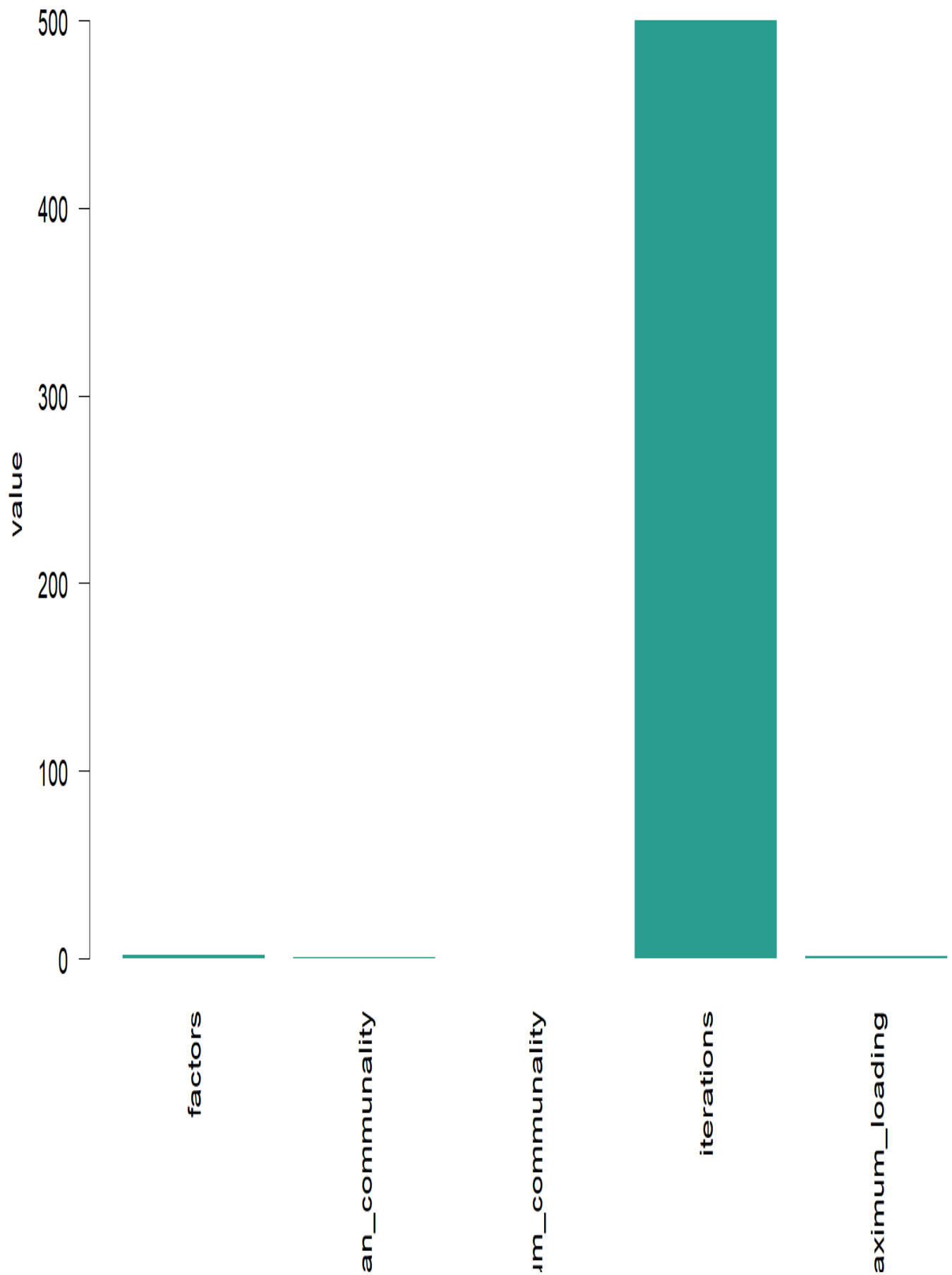
maximum_loading: 0.984992208004437

Interpretation:

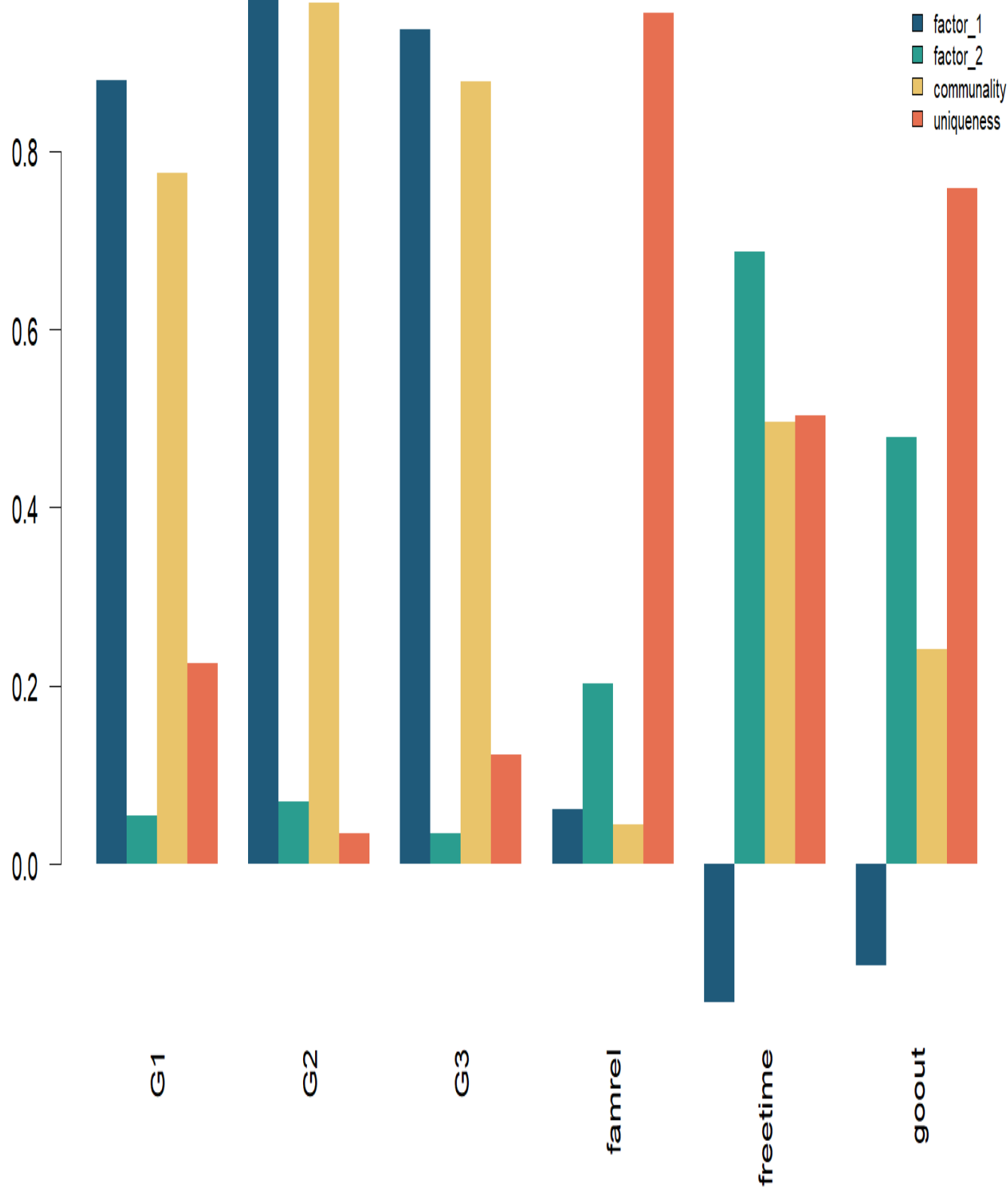
EFA uses principal–axis extraction and oblimin rotation.

Maximum loading 0.984992208004437

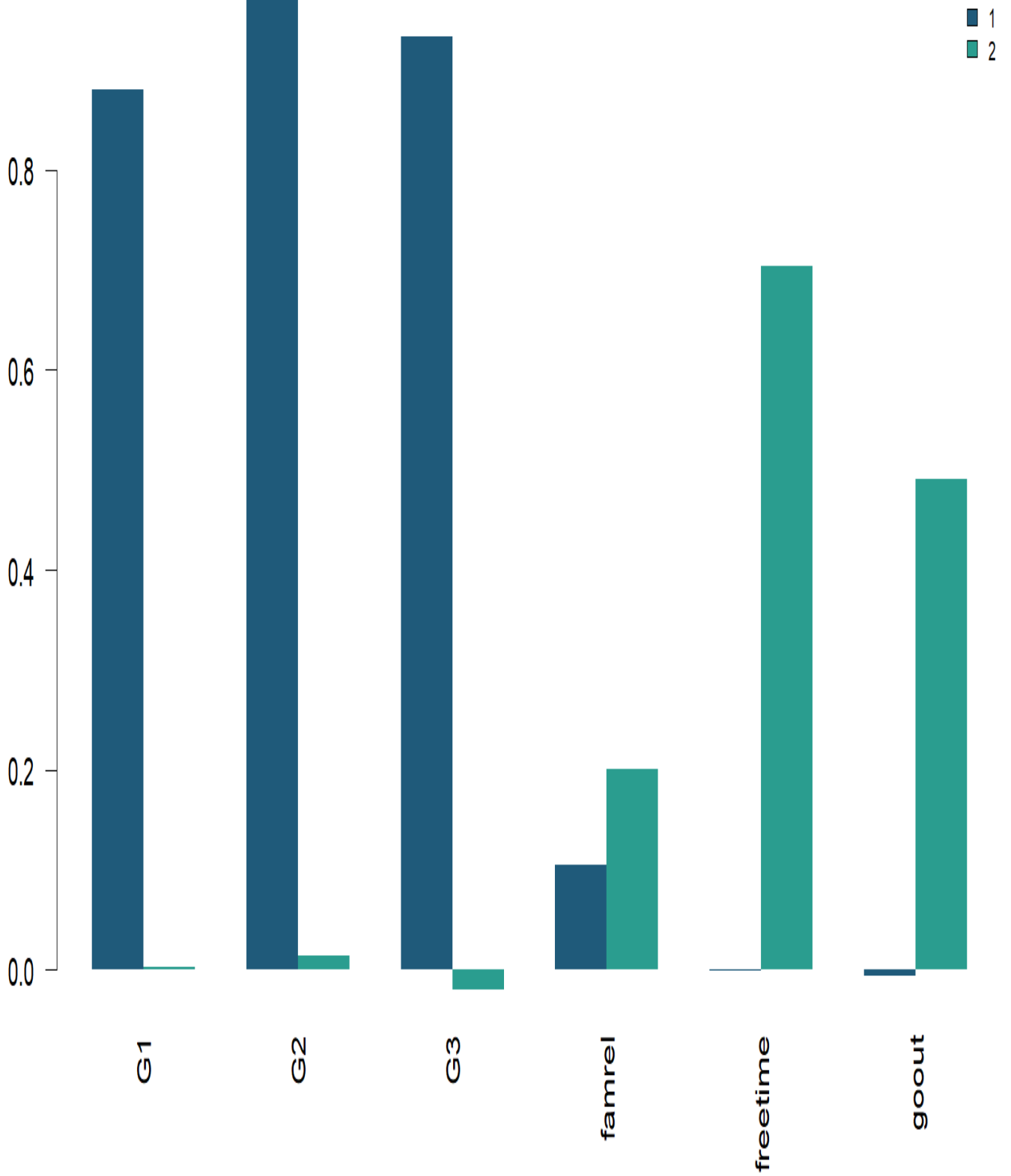
Exploratory Principal-Axis Factor Analysis - primary metrics



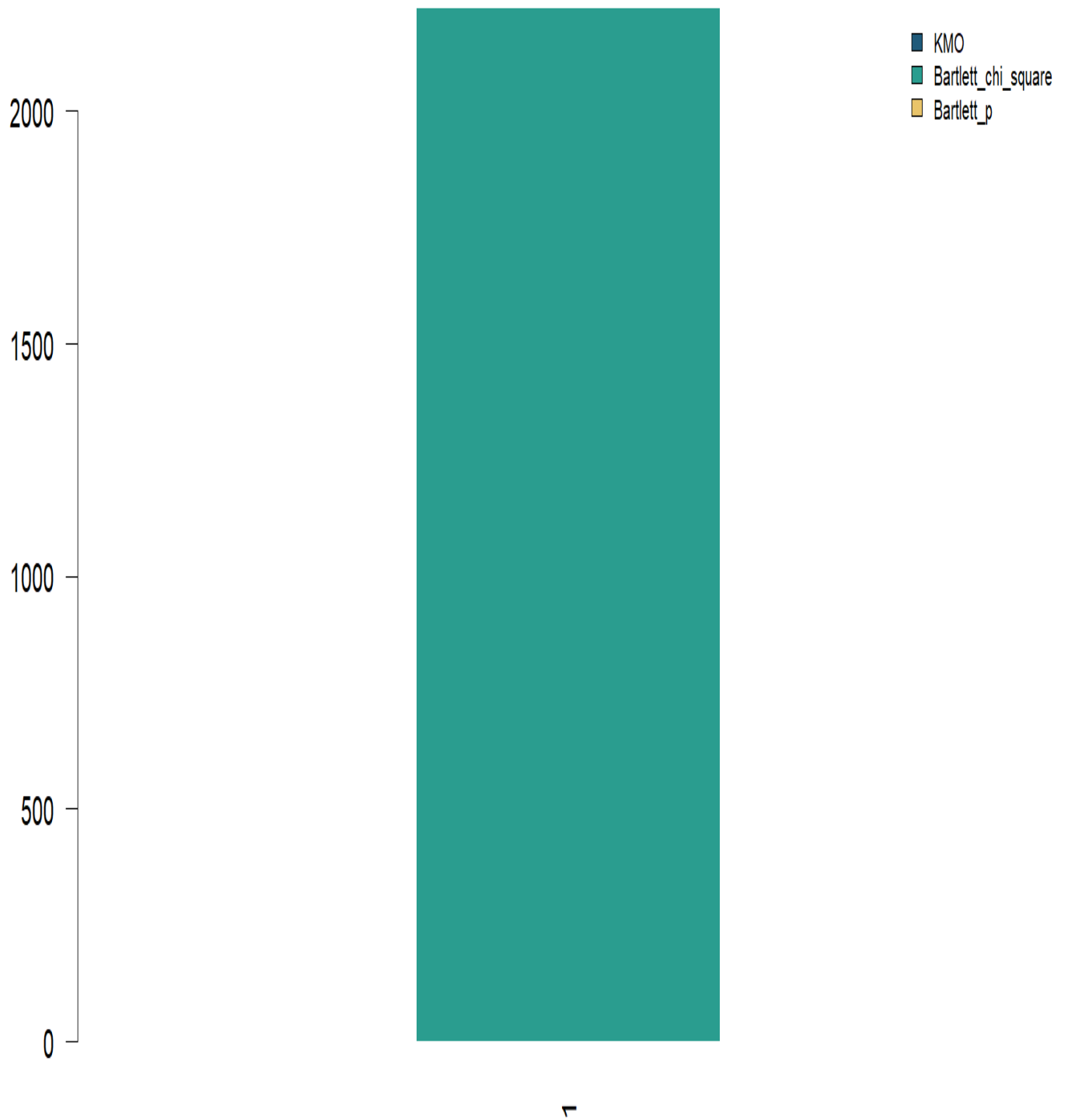
Exploratory Principal-Axis Factor Analysis - principal axis unrotated



Exploratory Principal-Axis Factor Analysis - oblimin pattern



Exploratory Principal-Axis Factor Analysis - efa factorability



Exploratory Principal-Axis Factor Analysis verified results

