

Correlation–Matrix Eigenvalues

Test: Correlation–Matrix Eigenvalues

Design: Ordered PCA eigenvalues and variance proportions of the six–item correlation matrix.

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

Null hypothesis: No component eigenvalue exceeds the unit–eigenvalue benchmark.

Formula: $R v_j = \lambda_j v_j$; $\text{proportion}_j = \lambda_j / p$.

Source rows: 649

Calculated metrics:

largest_eigenvalue: 2.782869896154

second_eigenvalue: 1.38480367966778

eigenvalues_above_one: 2

first_two_variance: 0.694612262636963

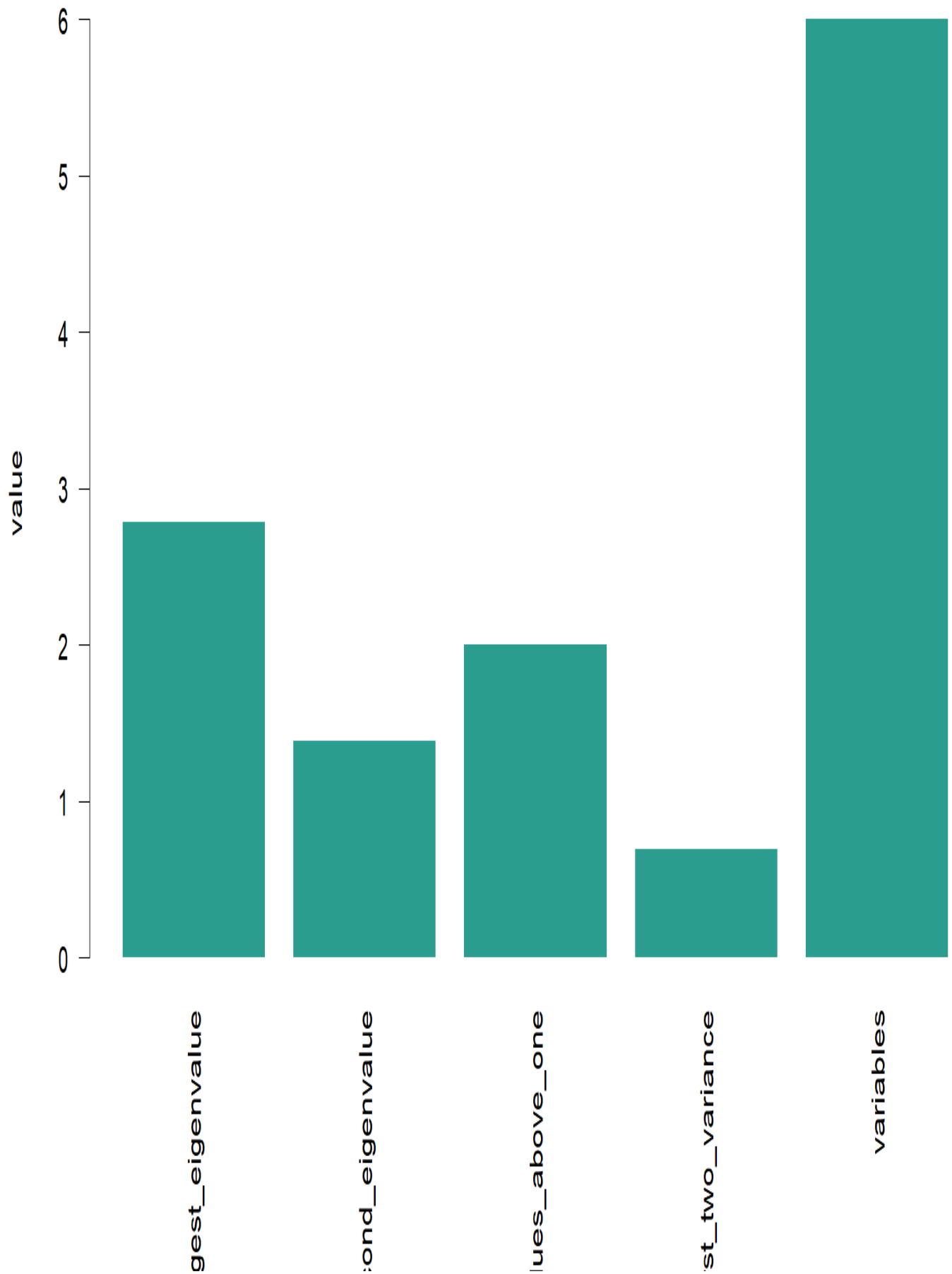
variables: 6

Interpretation:

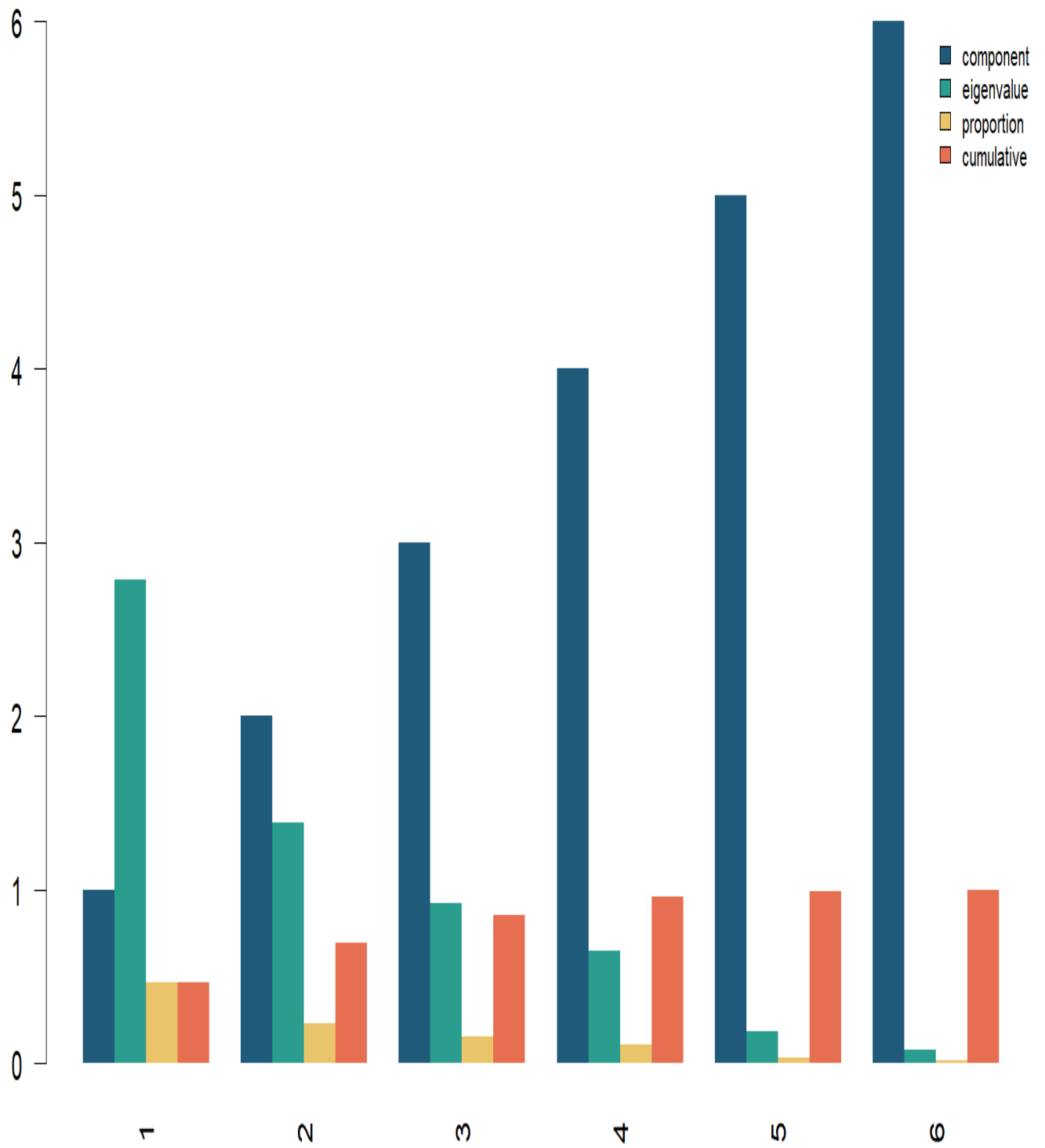
Correlation eigenvalues sum to six.

First two variance 0.694612262636963

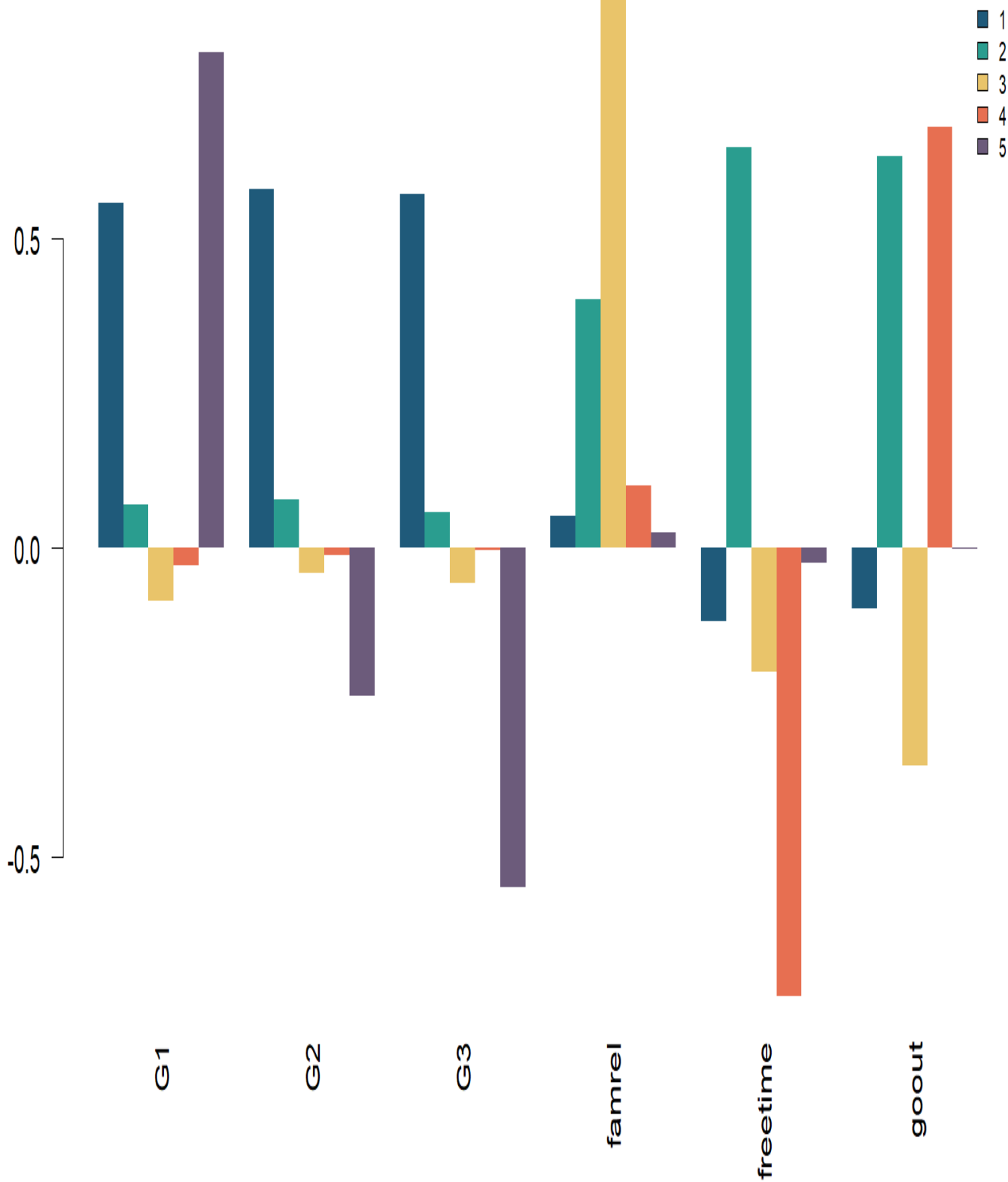
Correlation-Matrix Eigenvalues - primary metrics



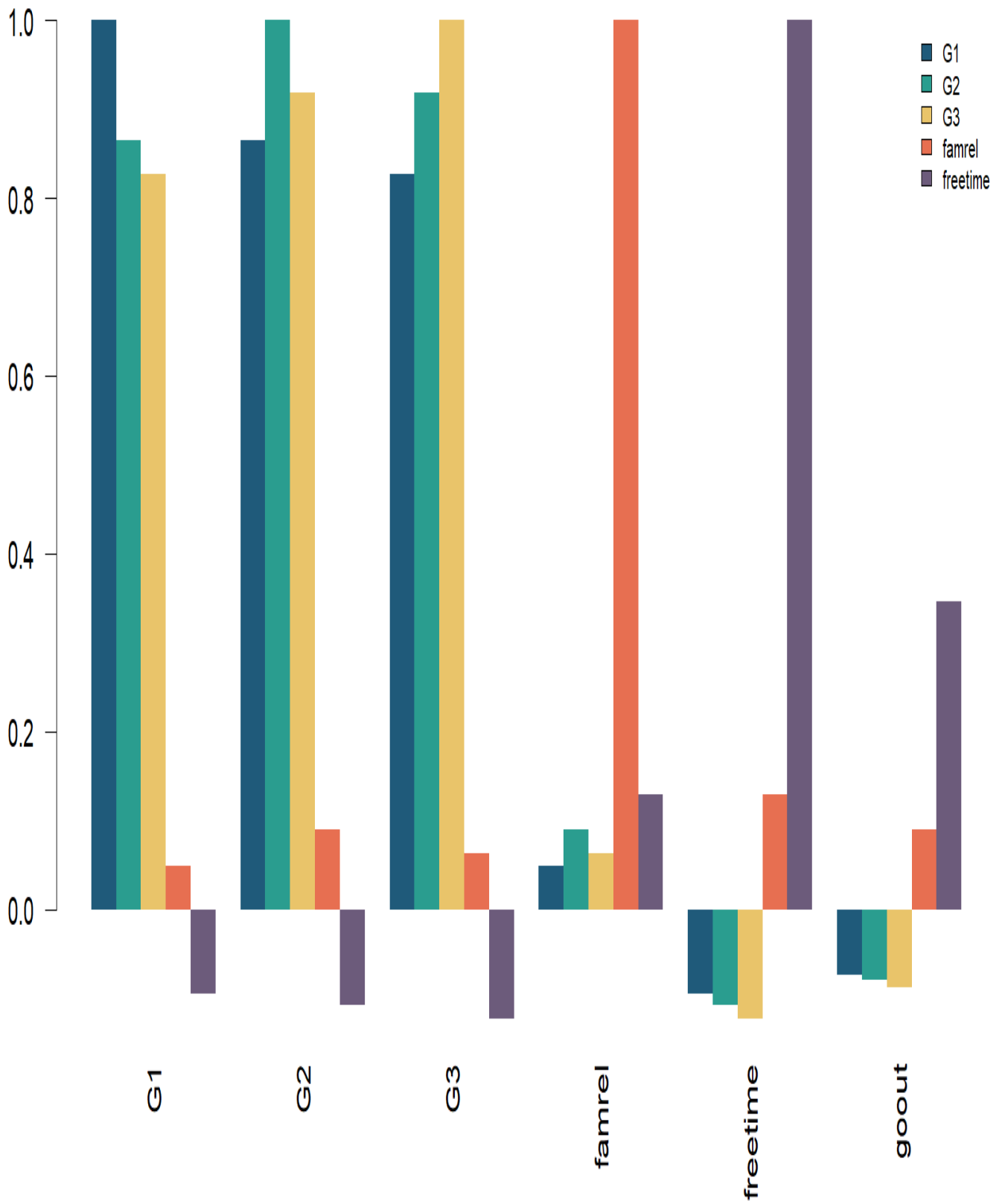
Correlation-Matrix Eigenvalues - ordered eigenvalues



Correlation-Matrix Eigenvalues - eigenvectors



Correlation-Matrix Eigenvalues - correlation matrix



Correlation-Matrix Eigenvalues verified results

