

Two-Factor Confirmatory Factor Analysis

Test: Two-Factor Confirmatory Factor Analysis

Design: Maximum-likelihood CFA with three academic and three social indicators.

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

Null hypothesis: The prespecified two-factor covariance model fits exactly.

Formula: $\Sigma = \Lambda \Phi \Lambda' + \Theta$; minimize $F_{ML}(S, \Sigma)$.

Source rows: 649

Calculated metrics:

chi_square: 13.7639720984401

df: 8

p_value: 0.0881286444684742

cfi: 0.997398206239512

rmsea: 0.0333448246929569

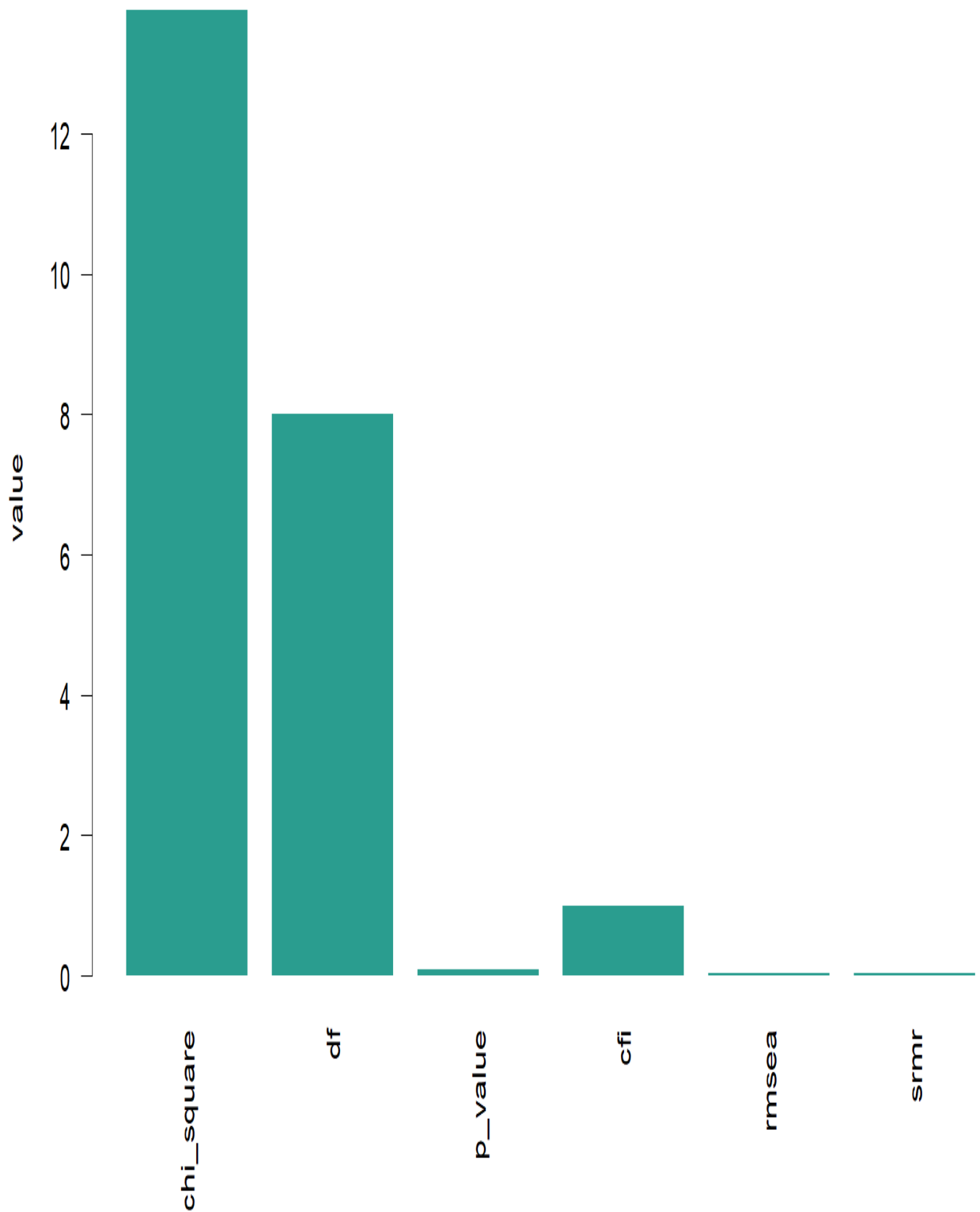
srmr: 0.0356631632047897

Interpretation:

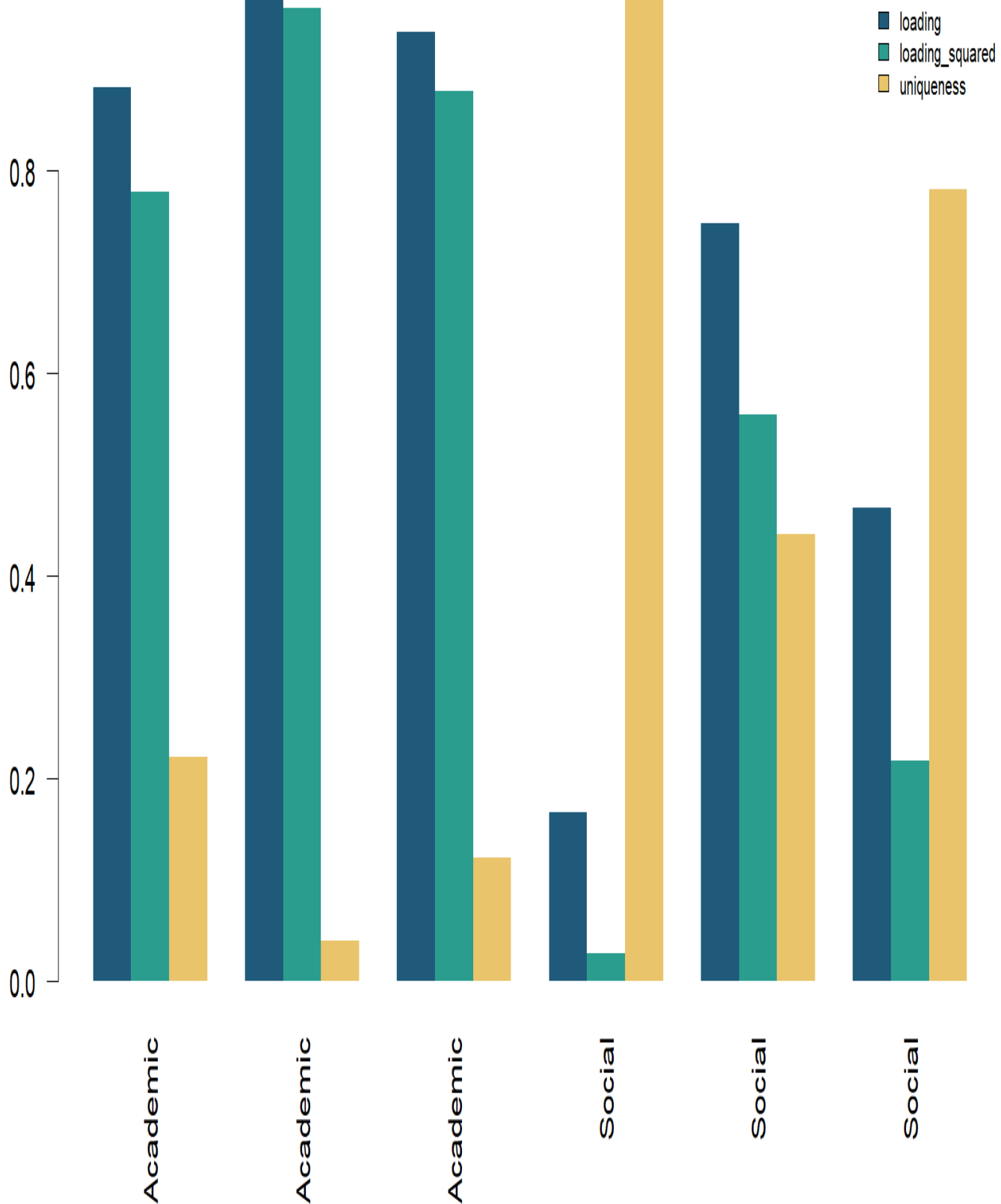
The two-factor CFA fixes cross-loadings to zero.

CFI 0.997398206239512 RMSEA 0.0333448246929569

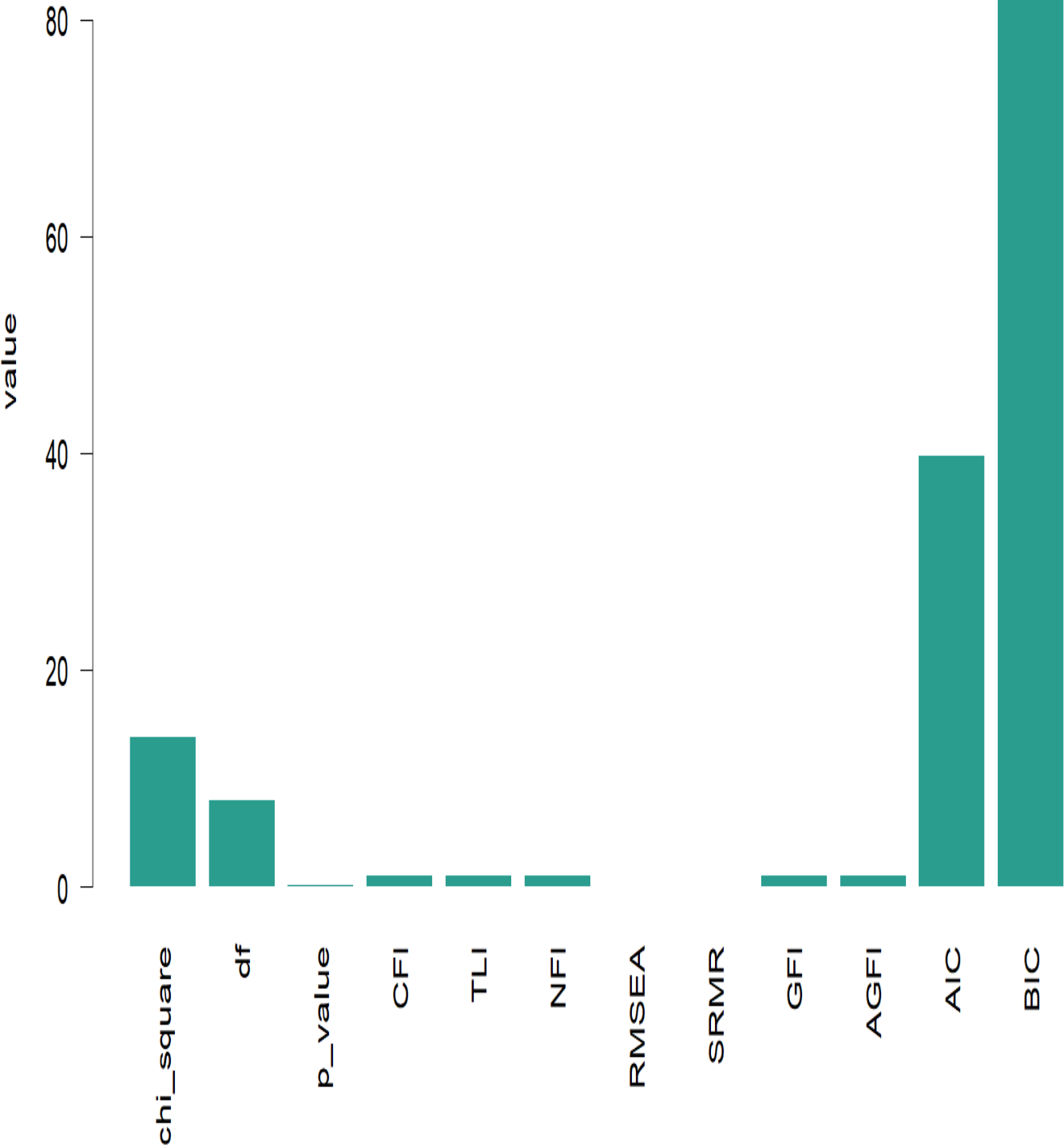
Two-Factor Confirmatory Factor Analysis - primary metrics



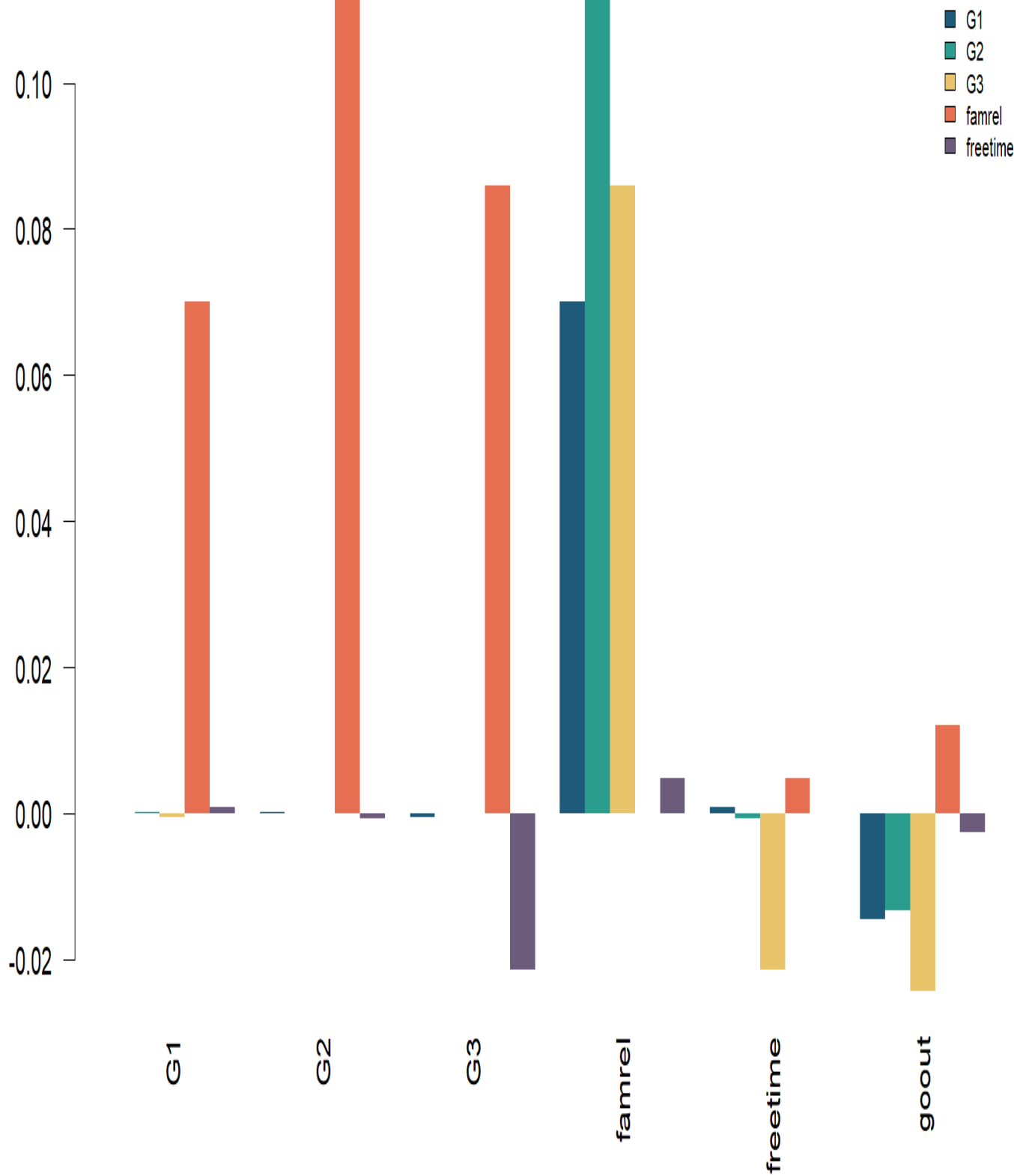
Two-Factor Confirmatory Factor Analysis - cfa standardized loadings



Two-Factor Confirmatory Factor Analysis - cfa fit indices



Two-Factor Confirmatory Factor Analysis - cfa standardized residuals



Two-Factor Confirmatory Factor Analysis verified results

