

Reliability Analysis for Likert Scales

Method: Reliability Analysis for Likert Scales

Method type: reliability_analysis

Design: Internal-consistency analysis of the six-item directionally aligned scale.

Variables: famrel, freetime, goout, Dalc, Walc, health

Inference scope: No significance test is required; alpha, standardized alpha, omega, item-total correlations, and alpha-if-deleted diagnose consistency.

Formula: $\alpha = k/(k-1) * (1 - \sum(s_i^2)/s_{total}^2)$; $\alpha_{std} = k * r_{bar} / [1 + (k-1)r_{bar}]$.

Source rows: 649

Calculated metrics:

cronbach_alpha: 0.111762631246865

standardized_alpha: 0.168909570161064

omega_total: 0.0201553821214475

minimum_item_total_r: -0.104769938029125

maximum_alpha_if_deleted: 0.234087184146637

items: 6

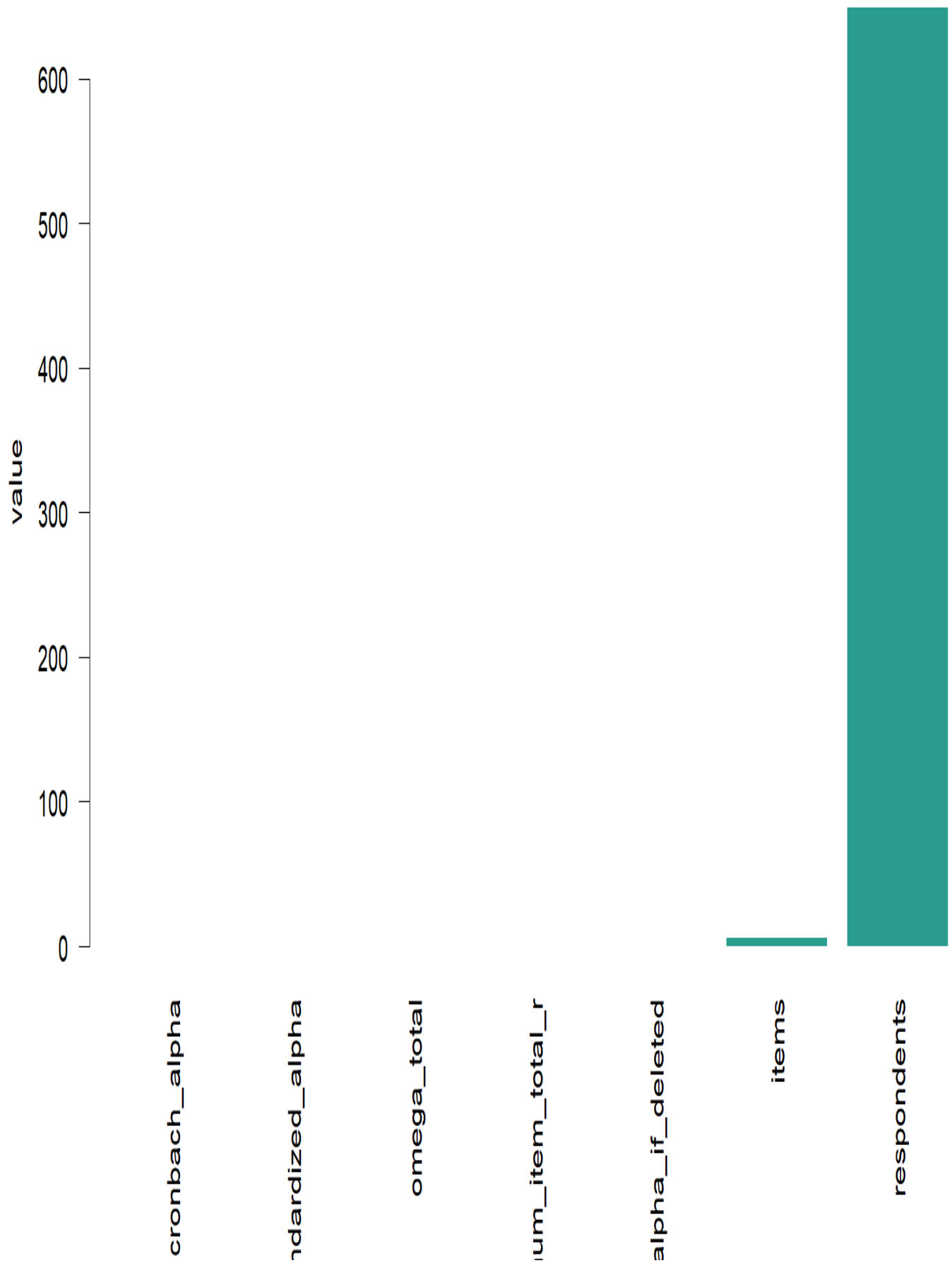
respondents: 649

Interpretation:

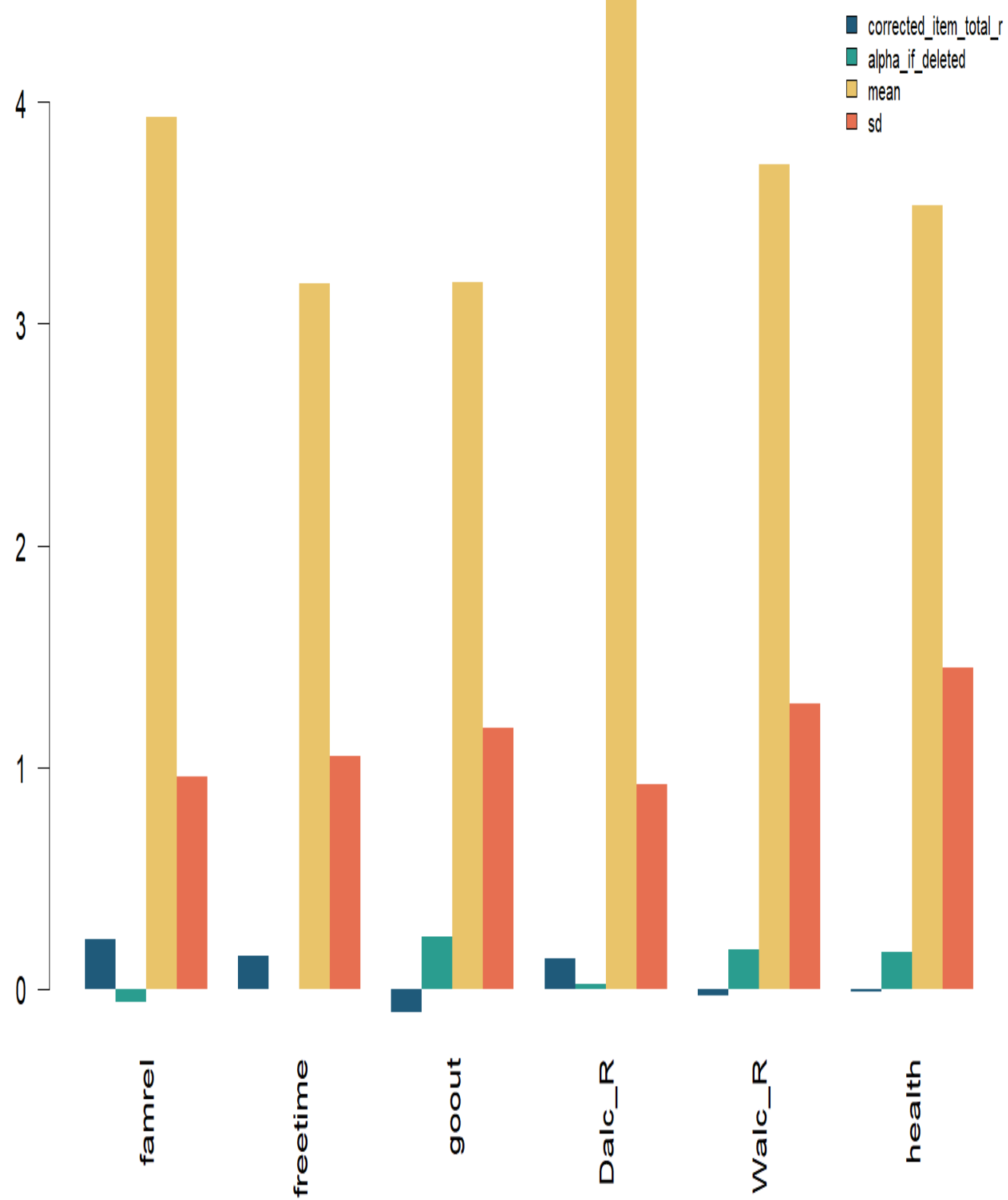
Alpha, standardized alpha, and omega are distinct estimates.

Alpha 0.111762631246865 omega 0.0201553821214475

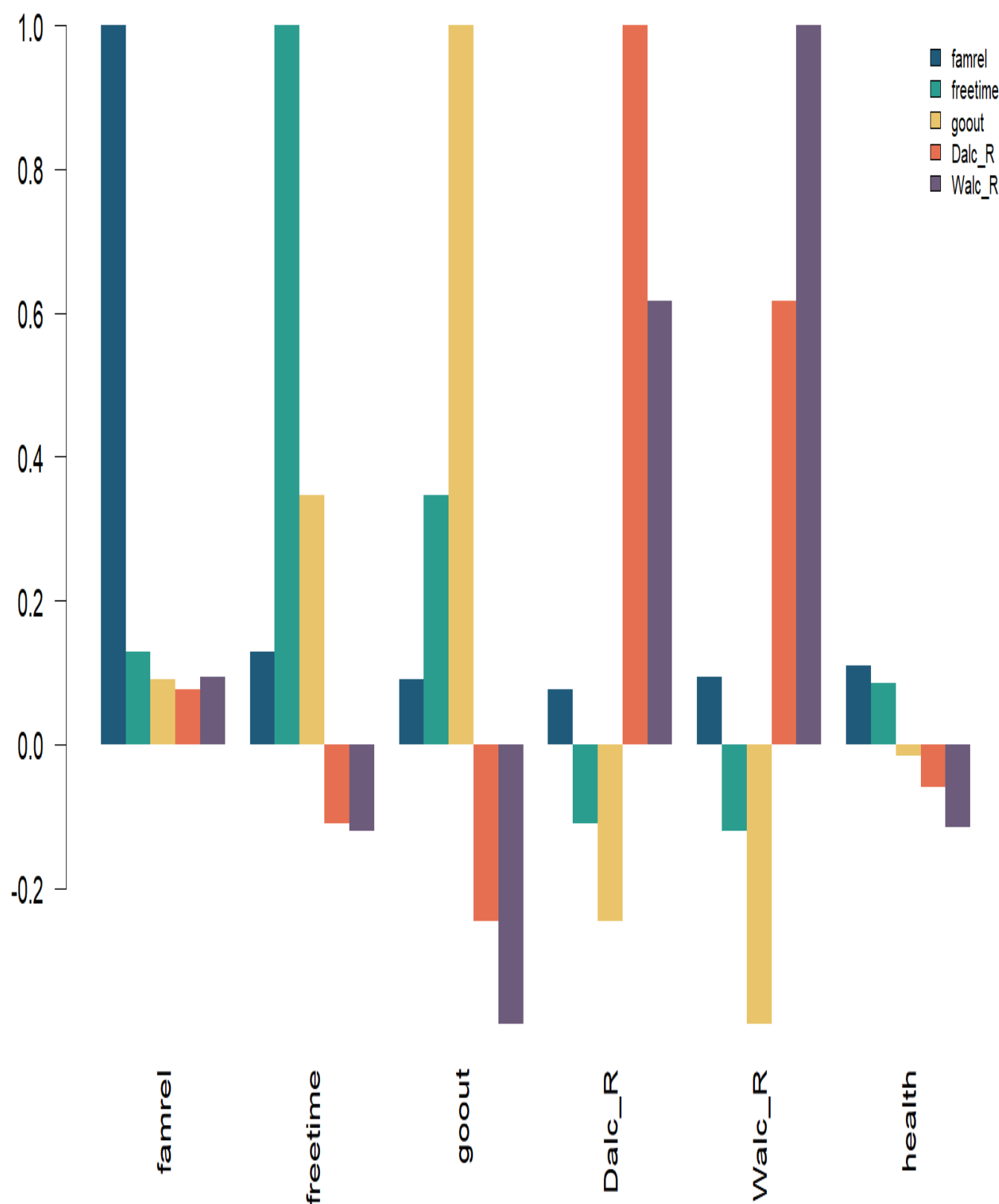
Reliability Analysis for Likert Scales - primary metrics



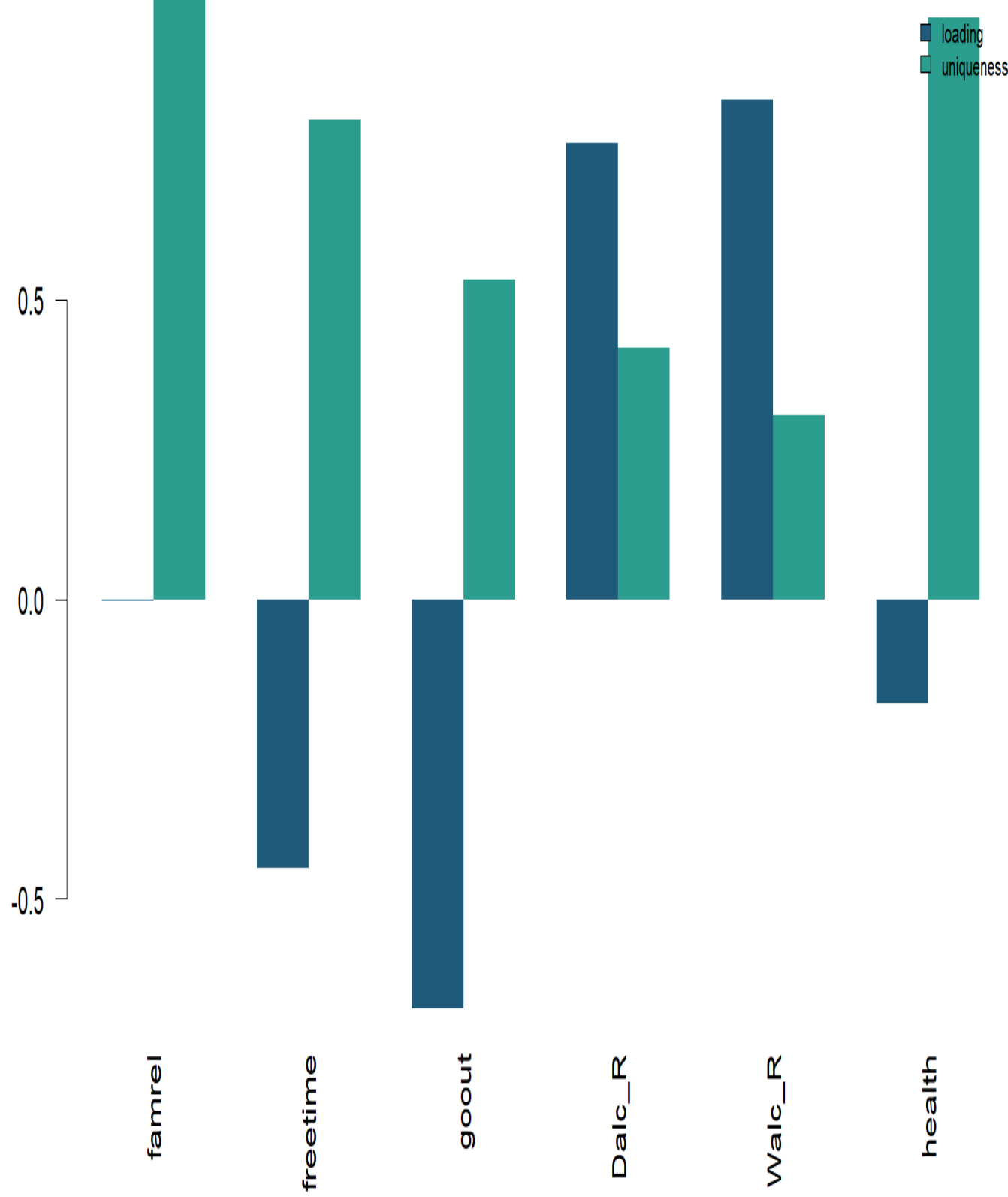
Reliability Analysis for Likert Scales - item reliability diagnostics



Reliability Analysis for Likert Scales - inter item correlation matrix



Reliability Analysis for Likert Scales - omega loadings



Reliability Analysis for Likert Scales verified results

