

Cronbach's Raw Alpha

Standalone verified Python analysis

Test: Cronbach's Raw Alpha

Design: Raw-score internal consistency of six transformed self-regulation and wellbeing items.

Variables: famrel, freetime, goout, Dalc_R, Walc_R, health

Null hypothesis: The six-item composite has no common-score reliability beyond item-specific variance.

Formula: $\alpha = k / (k - 1) [1 - \sum s_i^2 / s_{\text{total}}^2]$.

Source rows: 649

Calculated metrics:

cronbach_alpha: 0.1117626312468654

items: 6

n_cases: 649

total_score_variance: 8.818552759230725

Independent reference values:

cronbach_alpha: 0.1117626312468654

items: 6

n_cases: 649

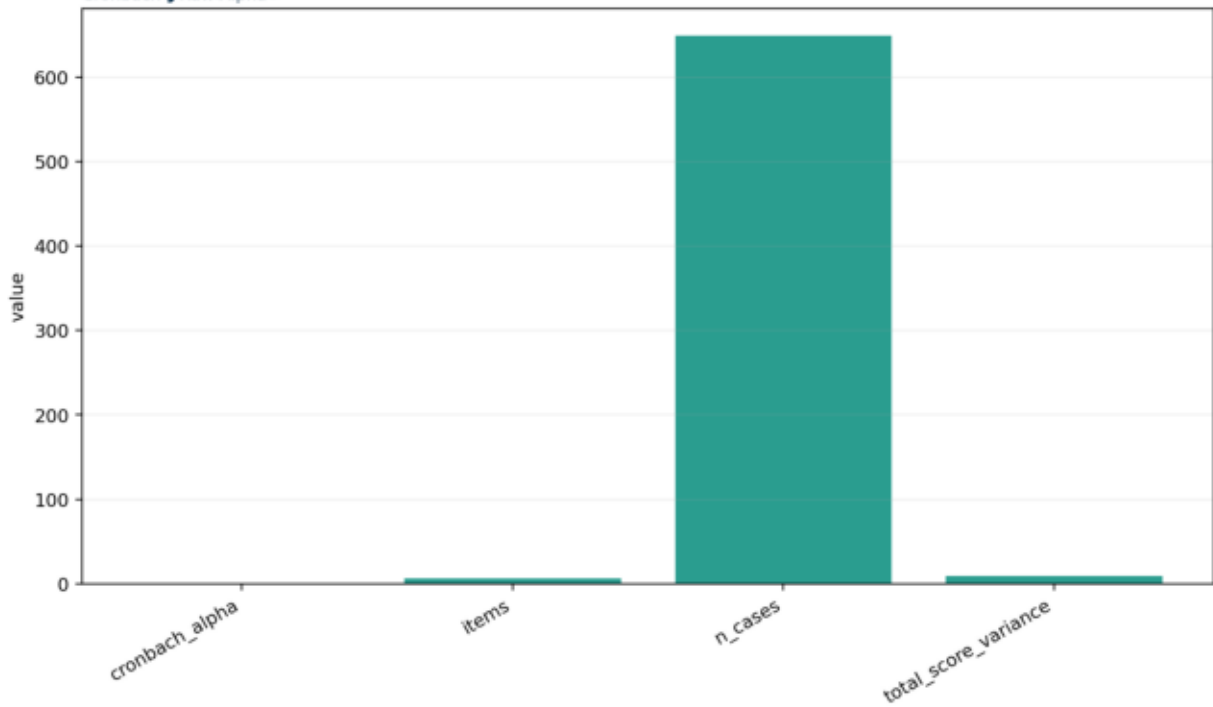
total_score_variance: 8.818552759230725

Interpretation:

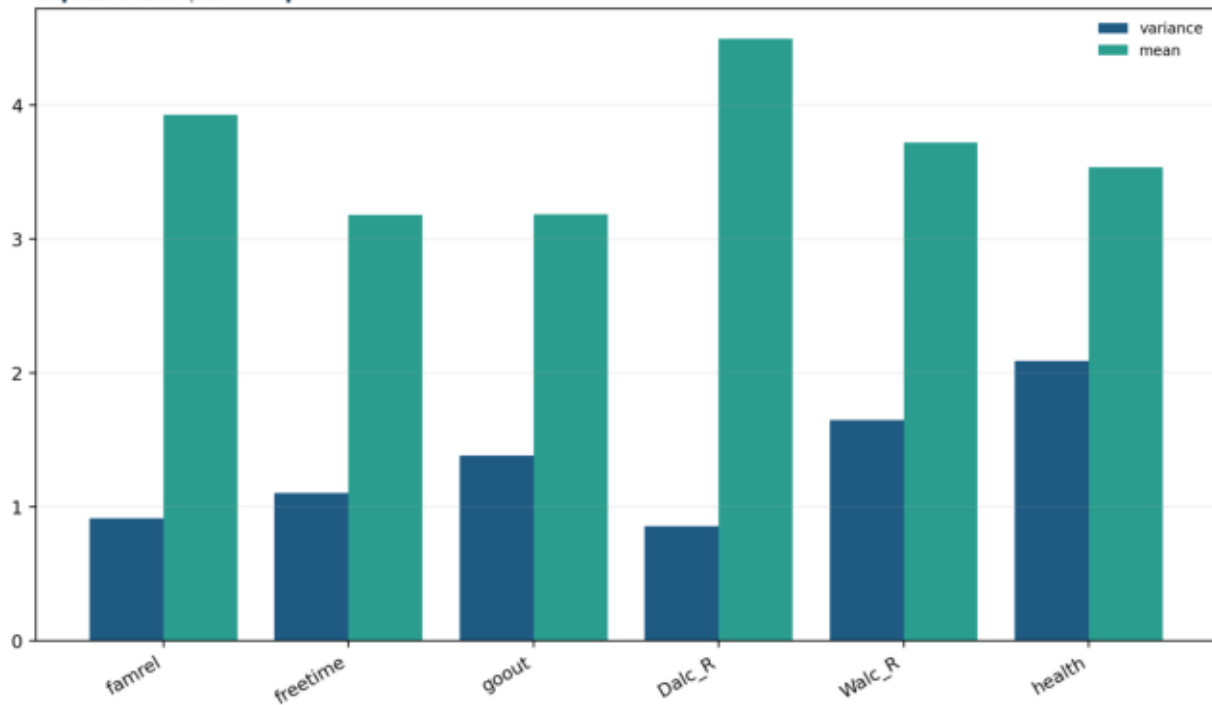
Dalc and Walc are reverse scored before raw alpha.

Cronbach alpha=0.111763.

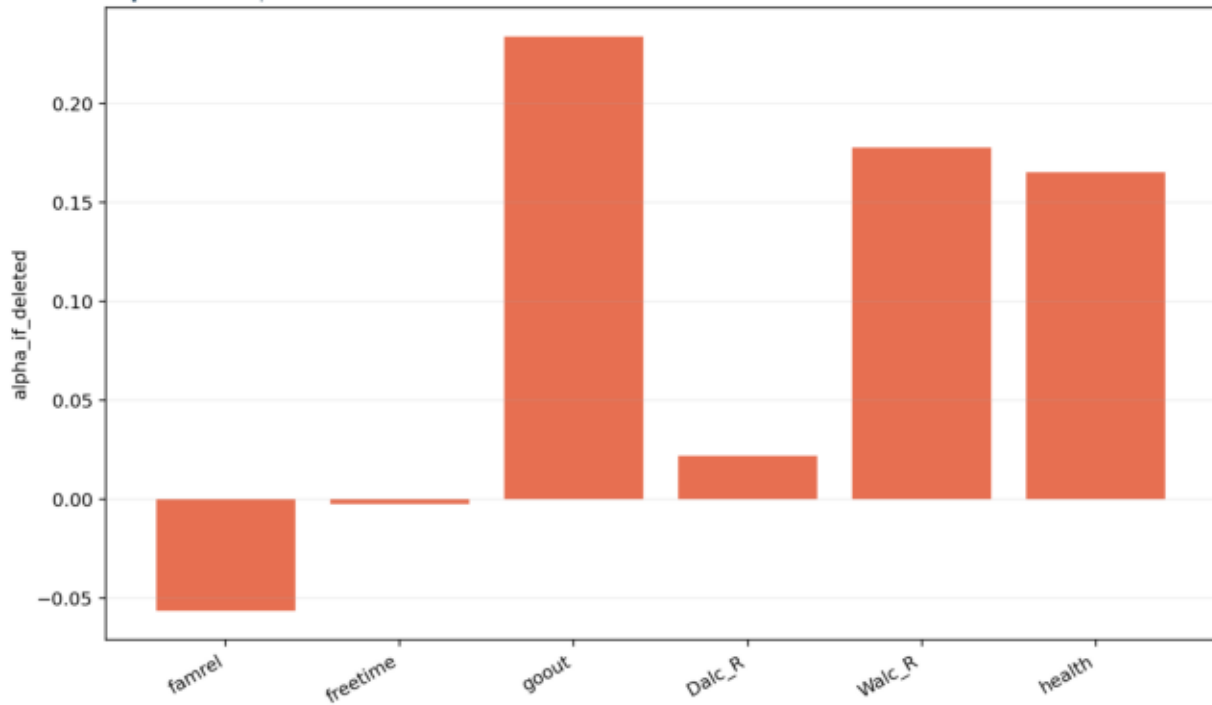
Primary Metrics



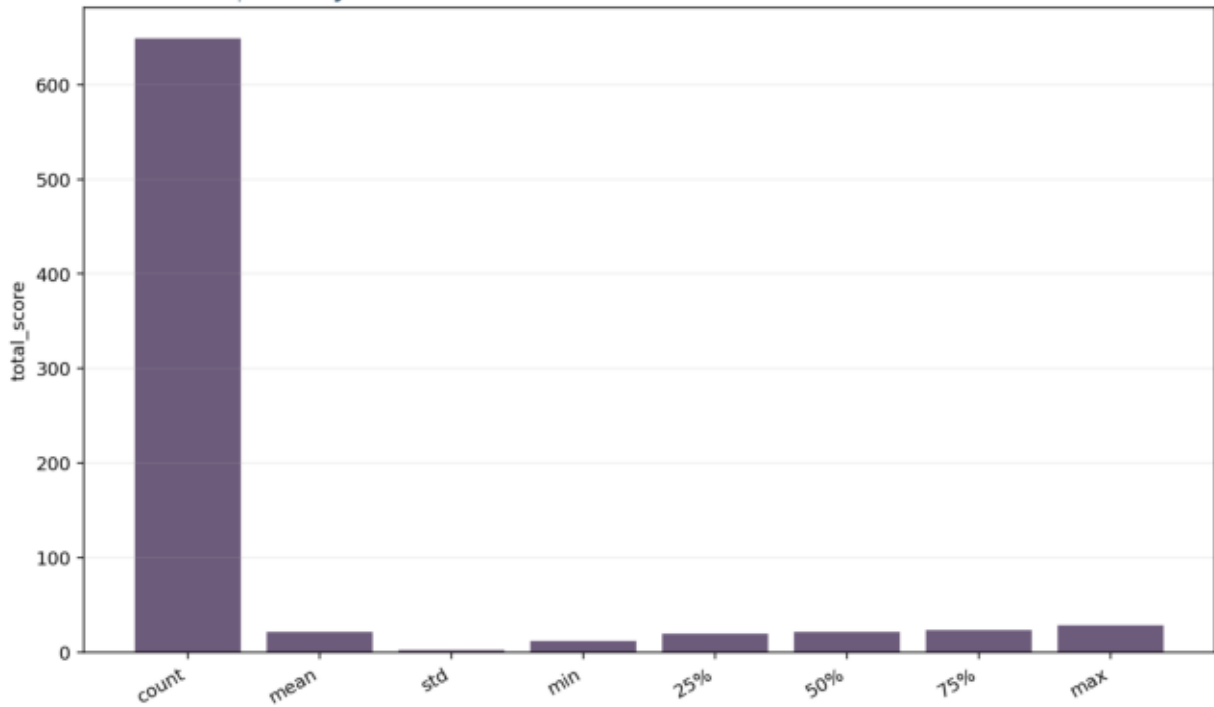
Alpha Variance Components



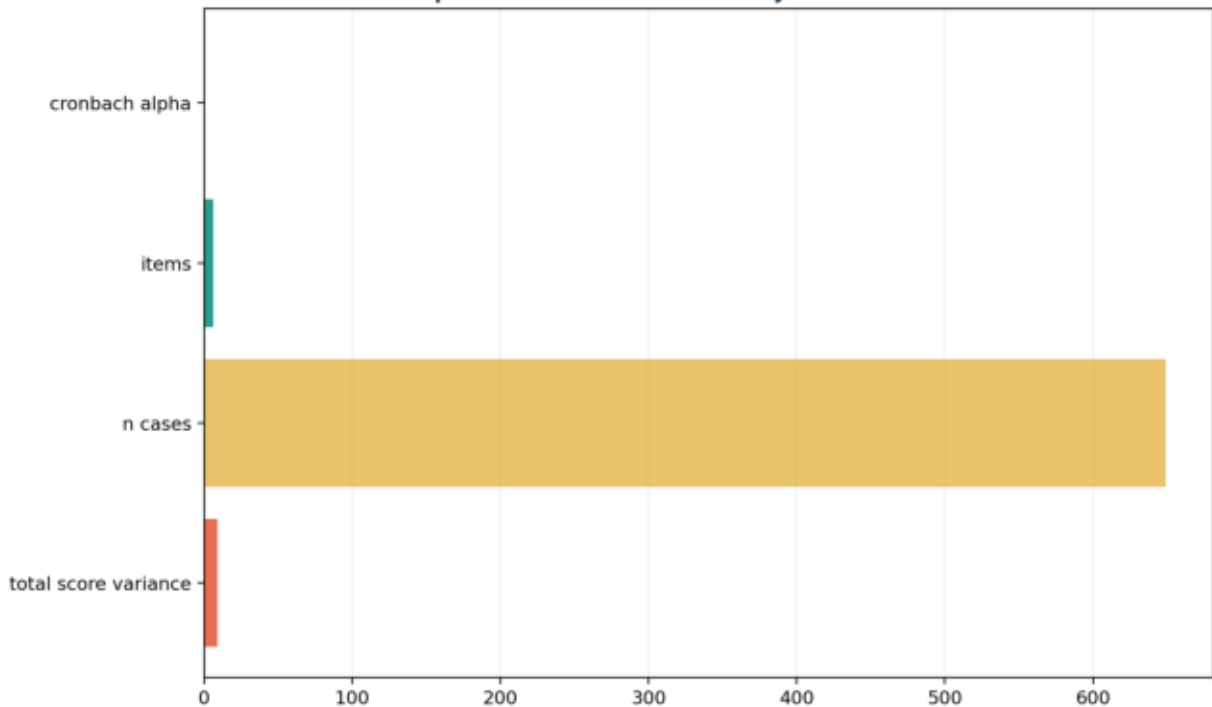
Alpha If Deleted



Total Score Summary



Cronbach's Raw Alpha verified result summary



Primary Metrics

metric	value
cronbach_alpha	0.111763
items	6
n_cases	649
total_score_variance	8.81855

Alpha Variance Components

item	variance	mean
famrel	0.913395	3.93066
freetime	1.1048	3.18028
goout	1.38243	3.1849
Dalc_R	0.855319	4.49769
Walc_R	1.64963	3.71957
health	2.09167	3.53621

Alpha If Deleted

deleted_item	alpha_if_deleted
famrel	-0.0564858
freetime	-0.0023642
goout	0.234087
Dalc_R	0.0219086
Walc_R	0.177823
health	0.165338

Total Score Summary

index	total_score
count	649
mean	22.0493
std	2.9696
min	12
25%	20
50%	22
75%	24
max	29