

Standardized Root Mean Square Residual

Standalone verified Python analysis

Test: Standardized Root Mean Square Residual

Design: Average magnitude of standardized covariance residuals for the CFA.

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

Null hypothesis: The standardized residual covariance matrix is zero.

Formula: $SRMR = \sqrt{\text{mean}_{i \geq j} [(s_{ij} - \sigma_{ij}) / \sqrt{s_{ii} s_{jj}}]^2}$.

Source rows: 649

Calculated metrics:

srmr: 0.03566318315739957

maximum_standardized_residual: 0.11318873562601585

mean_absolute_residual: 0.01734476662495954

residual_elements: 21

Independent reference values:

srmr: 0.03566318315739957

maximum_standardized_residual: 0.11318873562601585

mean_absolute_residual: 0.01734476662495954

residual_elements: 21

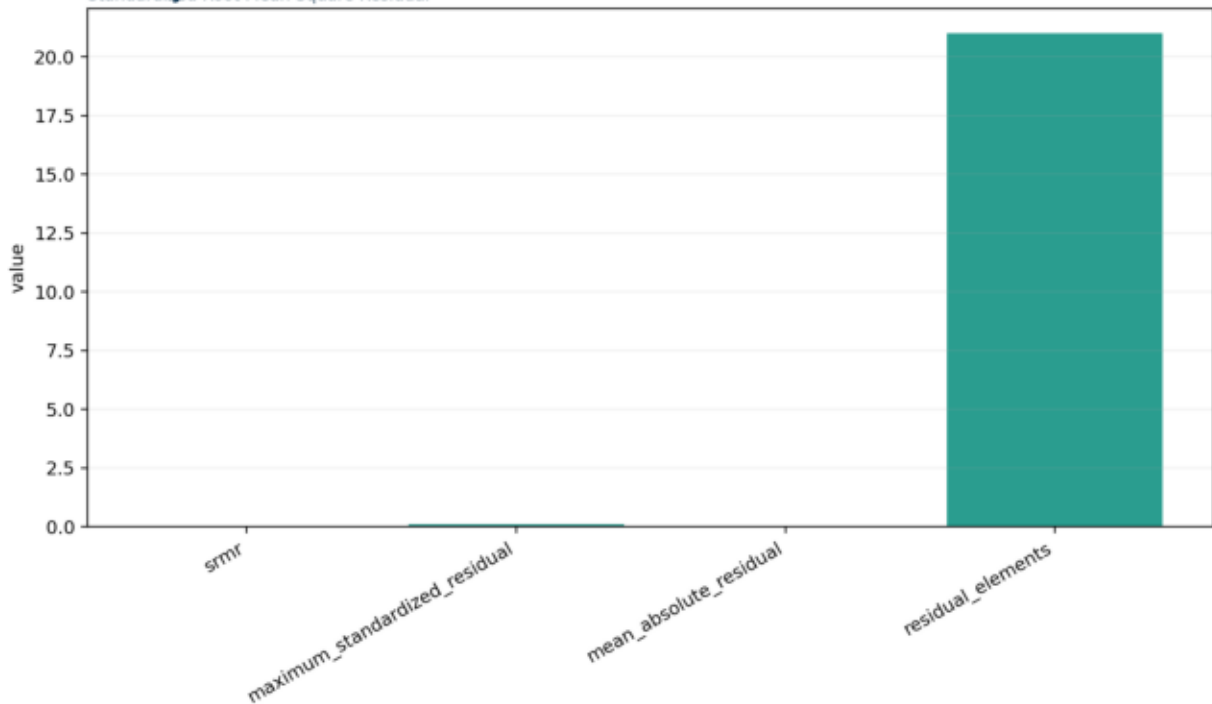
Interpretation:

SRMR is the root mean square of standardized lower-triangle covariance residuals.

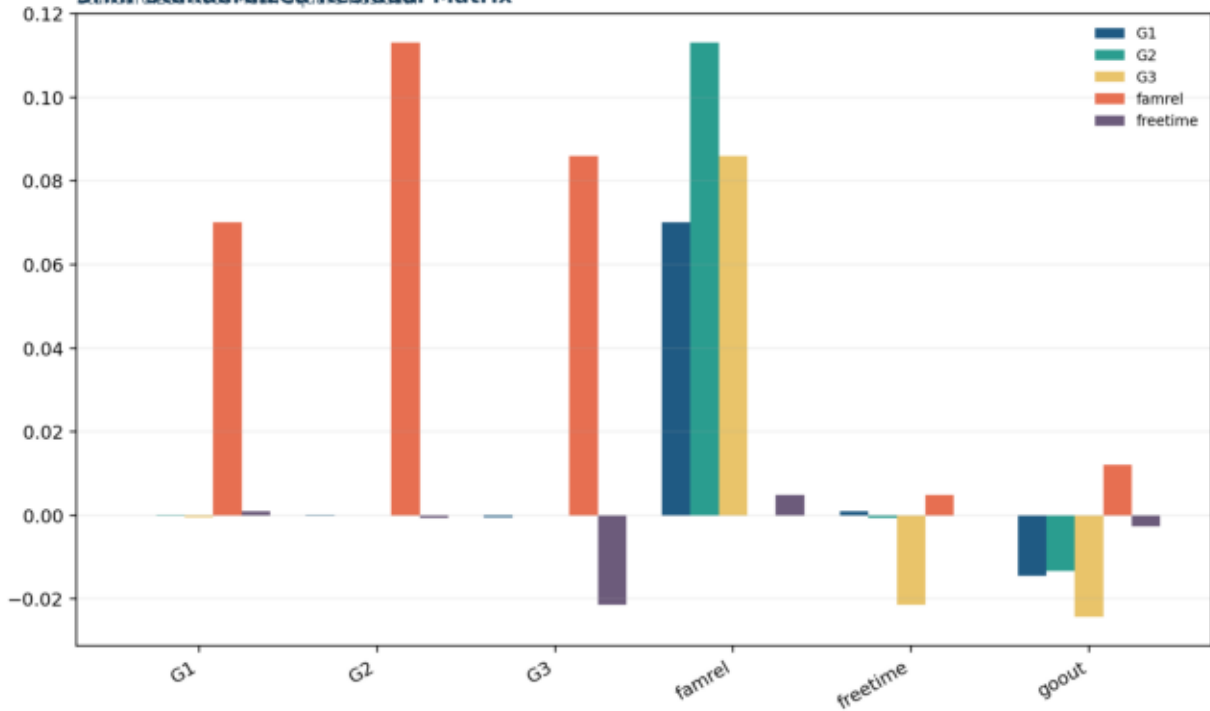
SRMR=0.035663.

Primary Metrics

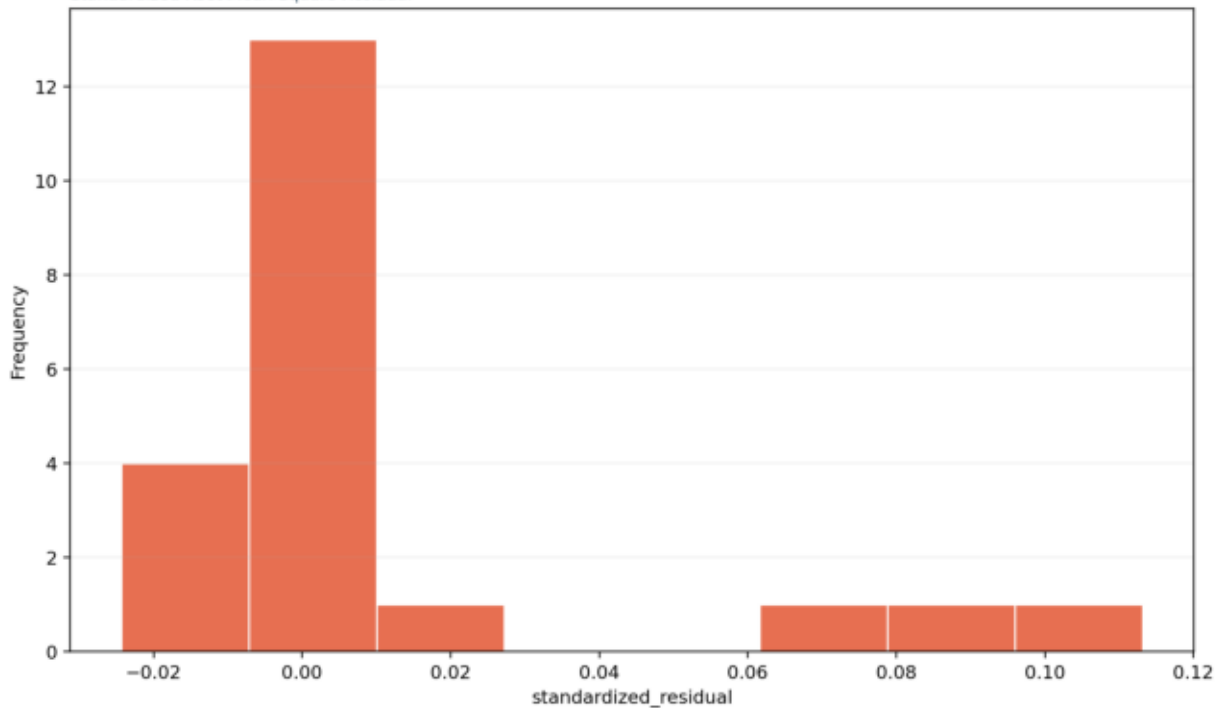
Estimated Mean Square Residual



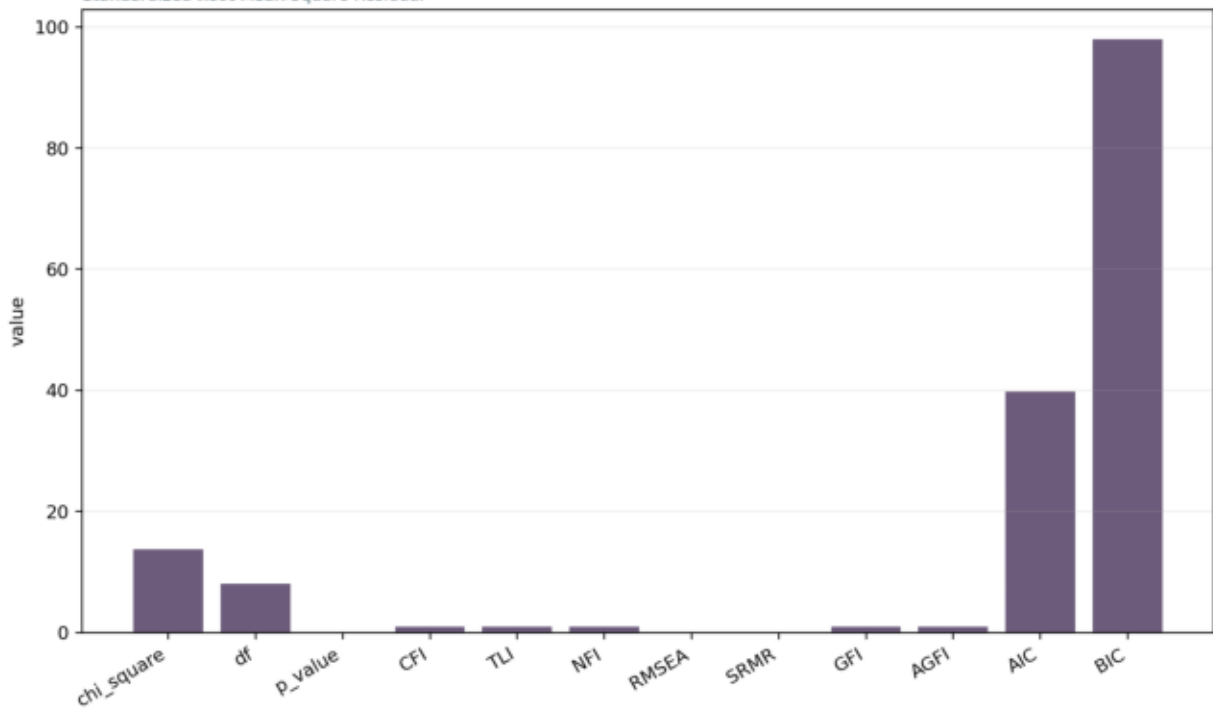
Srmr Standardized Residual Matrix



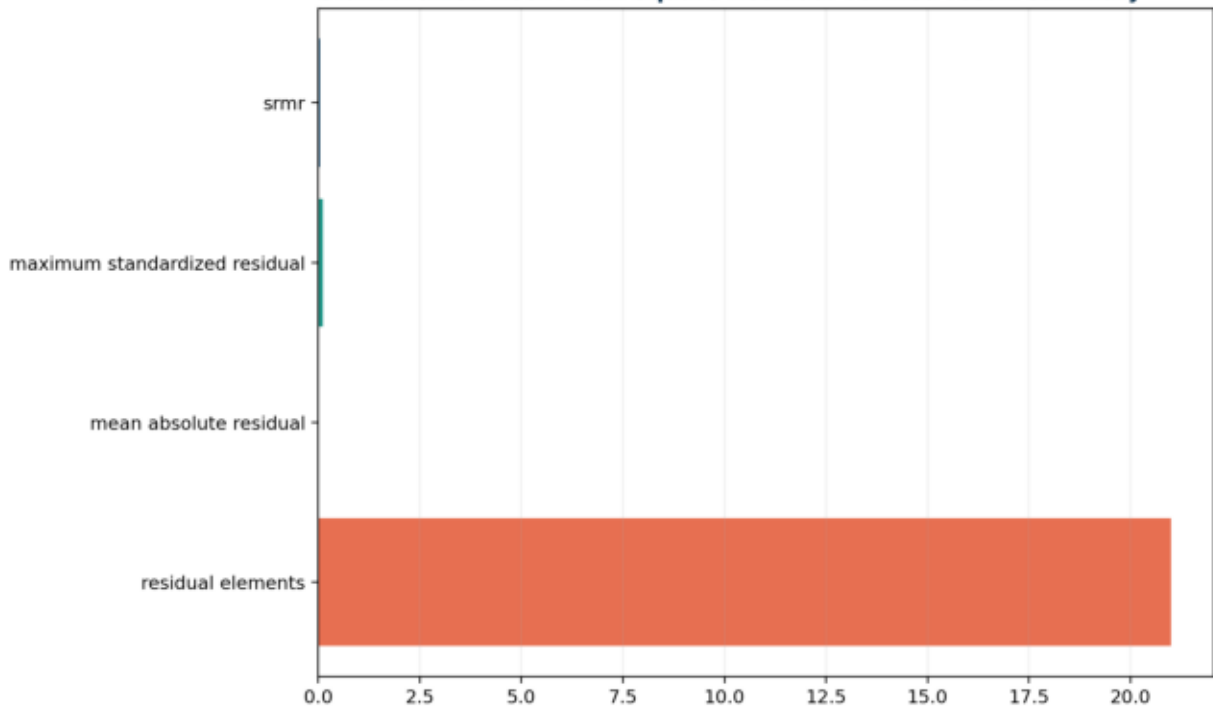
Srmr Residual Distribution



Srmr Fit Context



Standardized Root Mean Square Residual verified result summary



Primary Metrics

metric	value
srmr	0.0356632
maximum_standardized_residual	0.113189
mean_absolute_residual	0.0173448
residual_elements	21

Srmr Standardized Residual Matrix

item	G1	G2	G3	famrel	freetime	goout
G1	9.82827e-09	0.000158759	-0.000478078	0.0700397	0.000923277	-0.0144466
G2	0.000158759	6.59088e-08	-5.69385e-06	0.113189	-0.000677231	-0.0132537
G3	-0.000478078	-5.69385e-06	1.85794e-07	0.0859262	-0.0213567	-0.0243314
famrel	0.0700397	0.113189	0.0859262	9.66359e-09	0.00483956	0.0120124
freetime	0.000923277	-0.000677231	-0.0213567	0.00483956	6.20226e-08	-0.00260153
goout	-0.0144466	-0.0132537	-0.0243314	0.0120124	-0.00260153	8.58988e-08

Srmr Residual Distribution

standardized_residual
9.82827e-09
0.000158759
6.59088e-08
-0.000478078
-5.69385e-06
1.85794e-07
0.0700397
0.113189
0.0859262
9.66359e-09
0.000923277
-0.000677231
-0.0213567
0.00483956
6.20226e-08
-0.0144466
-0.0132537
-0.0243314
0.0120124
-0.00260153
8.58988e-08

Srmr Fit Context

index	value
chi_square	13.764
df	8
p_value	0.0881286
CFI	0.997398
TLI	0.995122
NFI	0.993829
RMSEA	0.0333448
SRMR	0.0356632
GFI	0.992635
AGFI	0.980667
AIC	39.764
BIC	97.9446