Bartlett's Test of Sphericity

Test: Bartlett's Test of Sphericity

Design: Likelihood−ratio test that the six−variable population correlation matrix is identity.

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

Null hypothesis: The population correlation matrix is the identity matrix.

Formula: chi2=−[n−1−(2p+5)/6] ln|R|; df=p(p−1)/2.

Source rows: 649

Calculated metrics:

chi_square: 2220.63174159018

df: 15

p_value: 0

determinant: 0.0320022035843034

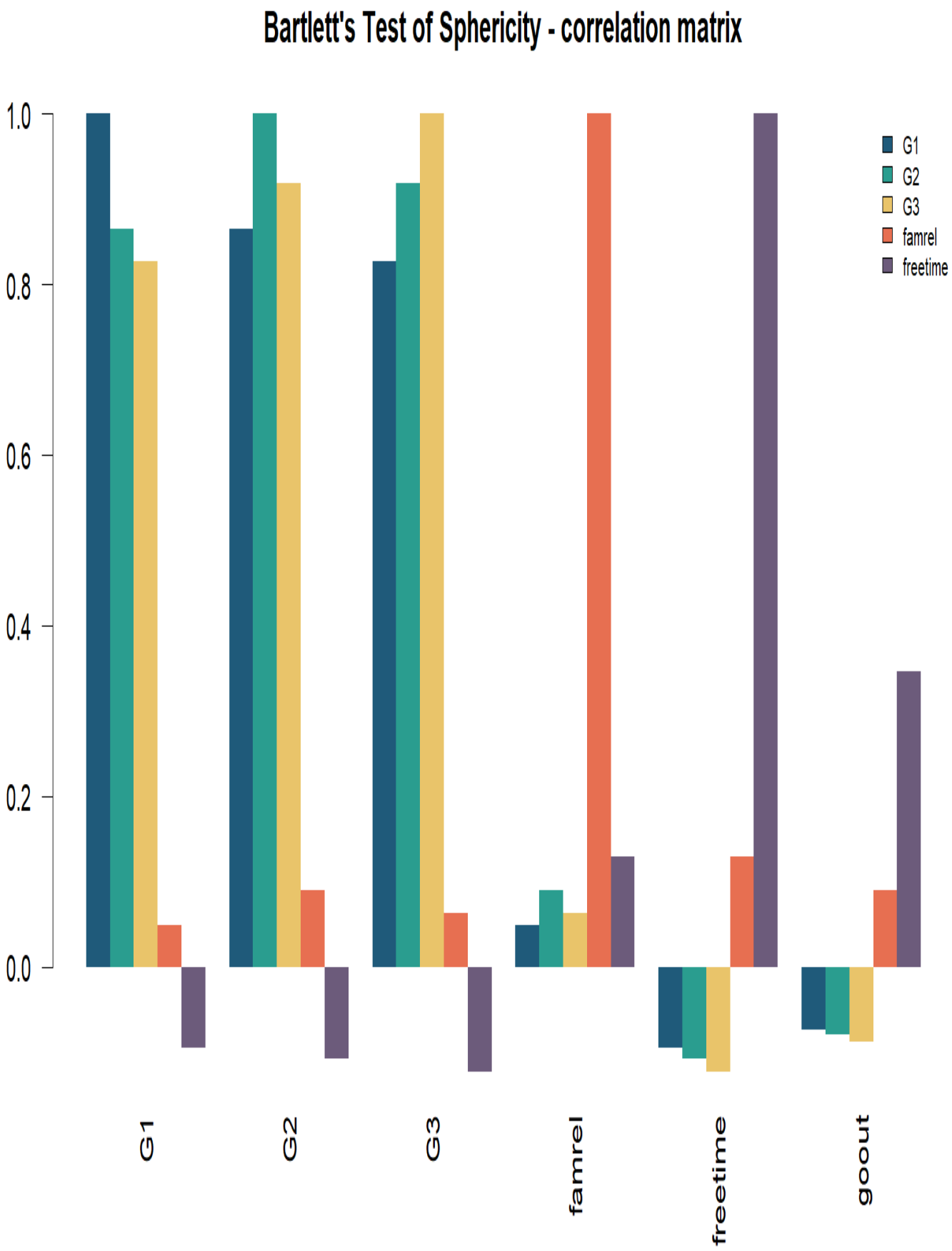
n_cases: 649

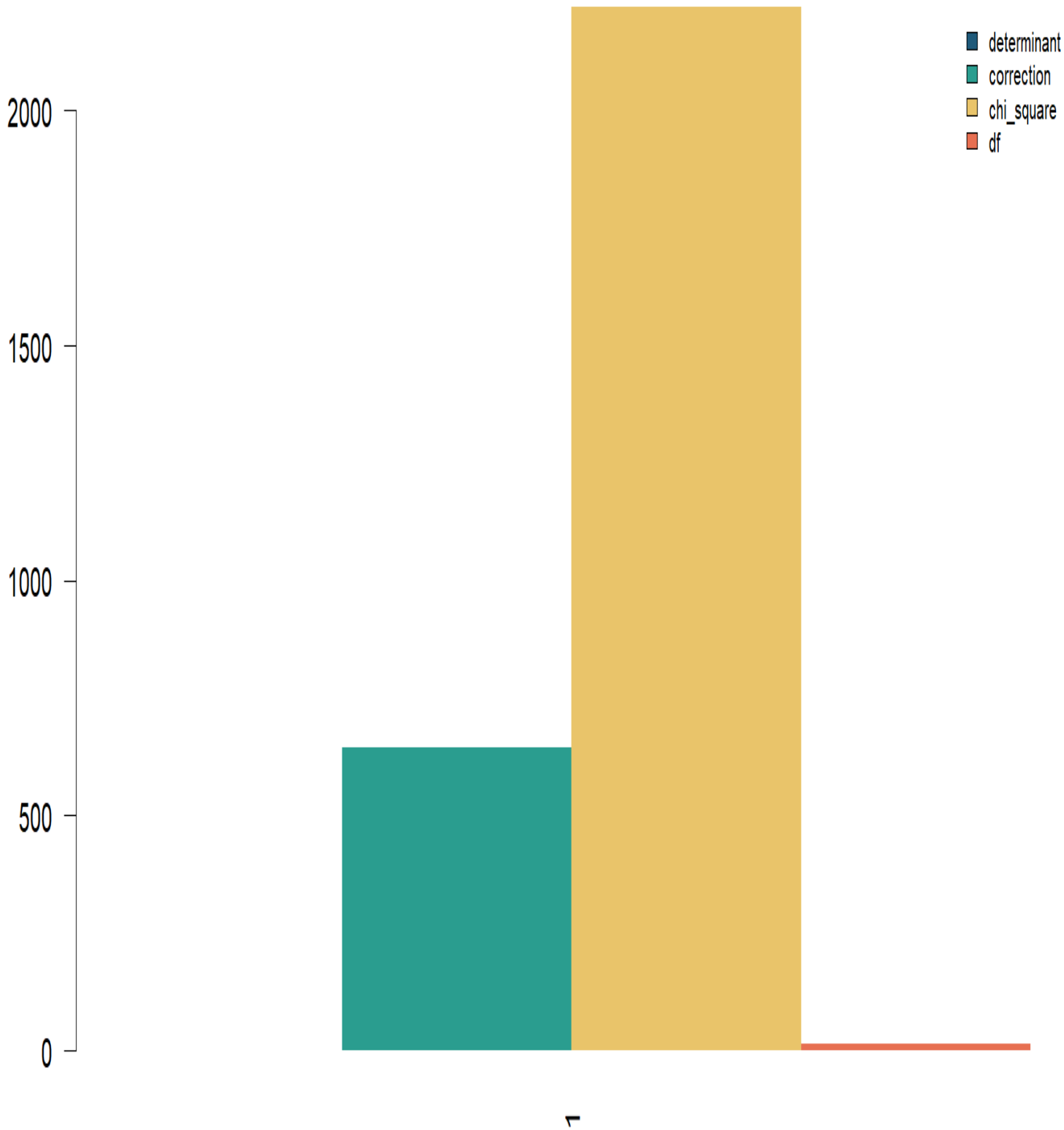
Interpretation:

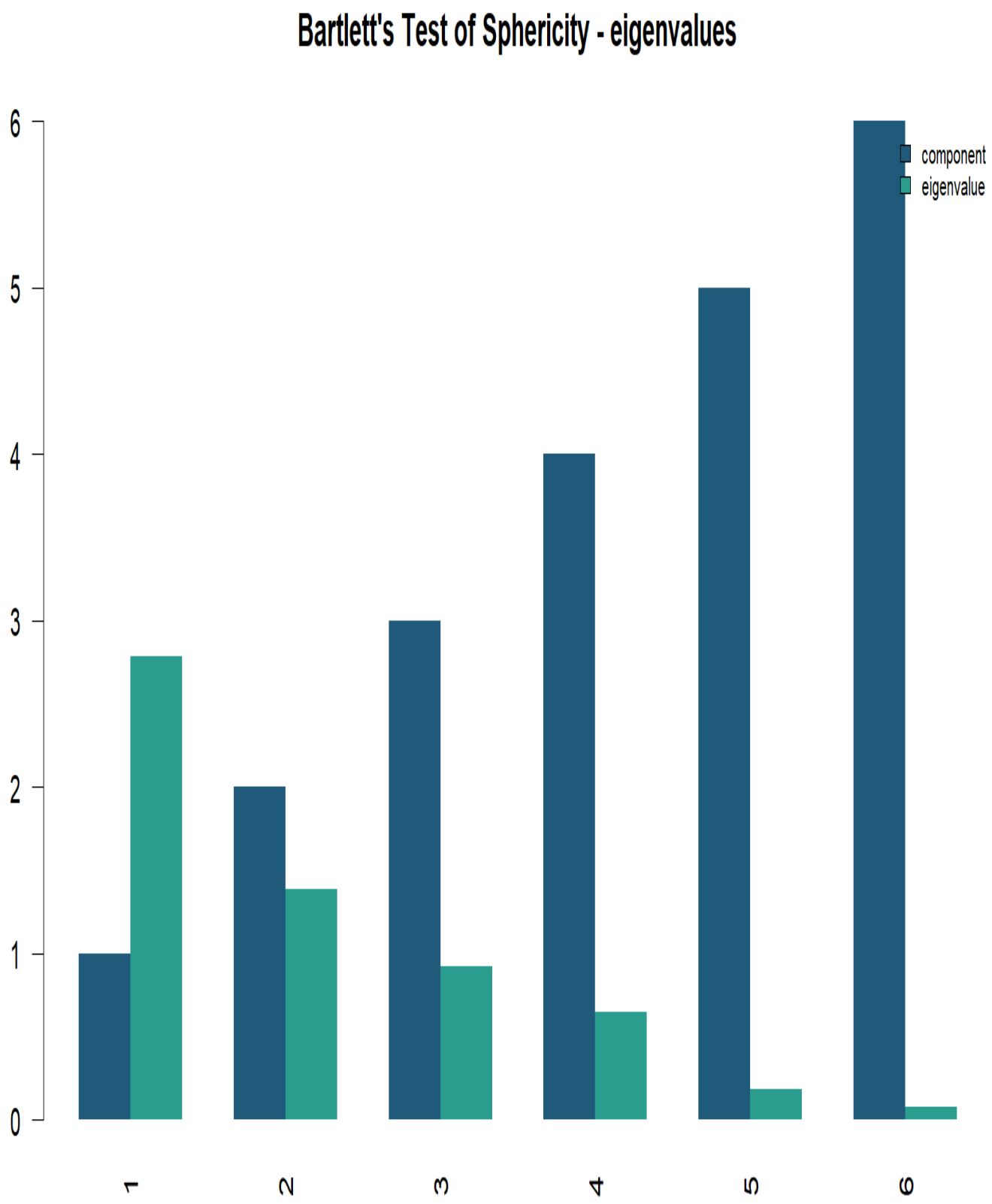
Bartlett's test evaluates identity of the full correlation matrix.

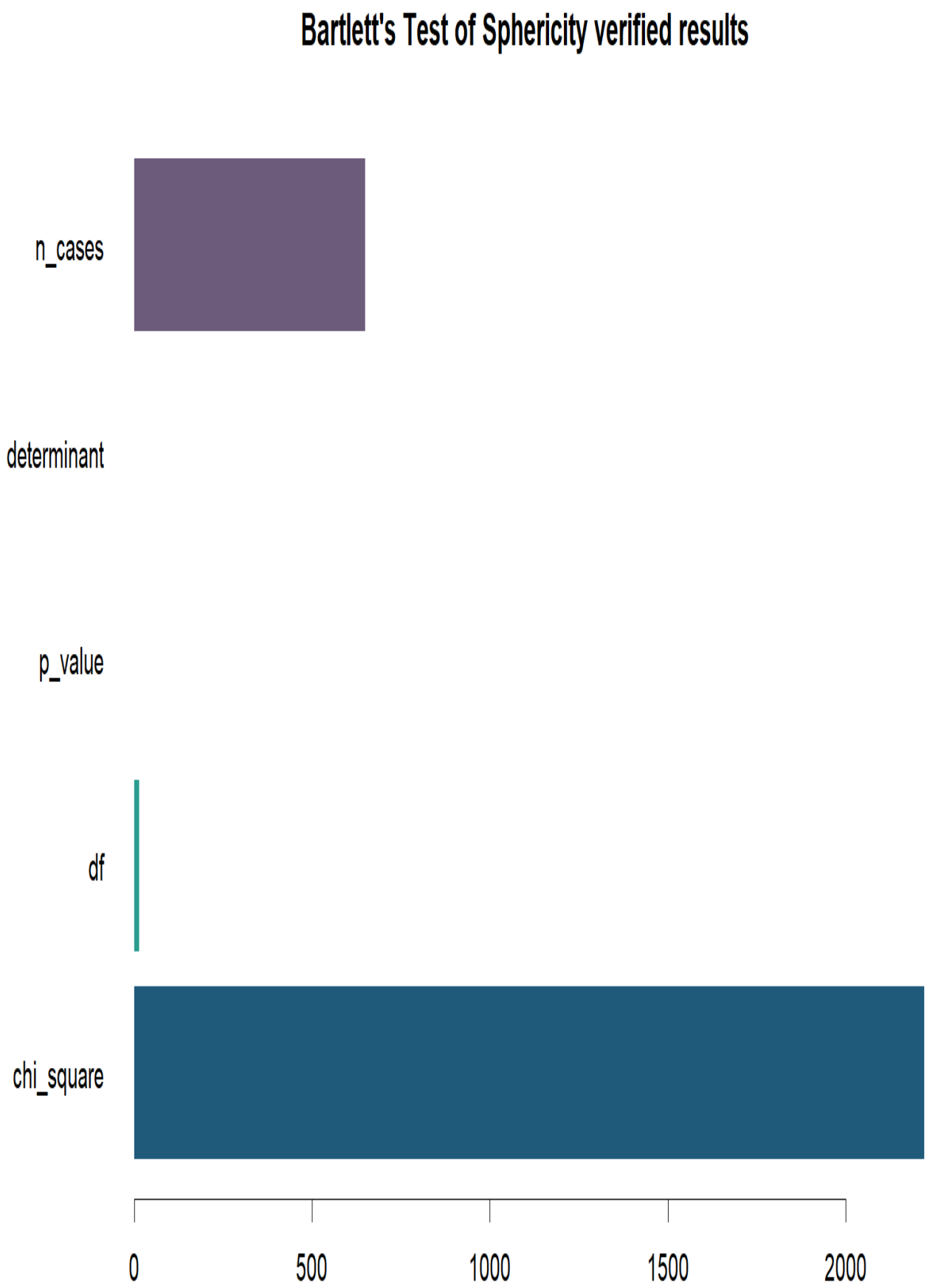
Chi−square 2220.63174159018

Bartlett's Test of Sphericity - primary metrics
value
2000
1500
1000
500
0
chi_square
df
p_value
determinant
n_cases


Bartlett's Test of Sphericity - correlation matrix
1.0
0.8
0.6
0.4
0.2
0.0
G1
G2
G3
famrel
freetime
goout
G1
G2
G3
famrel
freetime


Bartlett's Test of Sphericity - bartlett components
determinant
correction
chi_square
df
2000
1500
1000
500
0
۱


Bartlett's Test of Sphericity - eigenvalues
component
eigenvalue
0
1
2
3
4
5
6
1
2
3
4
5
6


Bartlett's Test of Sphericity verified results
n_cases
determinant
p_value
df
chi_square
0
500
1000
1500
2000