Brunner−Munzel Test

Test name: Brunner−Munzel Test

Dataset: D:/DATA ANALYSIS/J Nonparametric Tests/Brunner Munzel Test/dataset.csv

Rows in original dataset: 649

Rows used: 649

Grouping variable: sex

Outcome variable: G3

Group 1: F (n=383)

Group 2: M (n=266)

Brunner−Munzel W statistic: −3.468824

Degrees of freedom: 575.612839

Two−sided p value: 0.0005618282

Probability of superiority: 0.421696

Bootstrap 95% CI: [0.379815, 0.465469]

Decision: Statistically significant

Null hypothesis: equal relative effects (stochastic equality).

The Brunner−Munzel test does not require equal variances or identical distribution shapes.

Probability values above 0.50 favour larger observations in group 2.

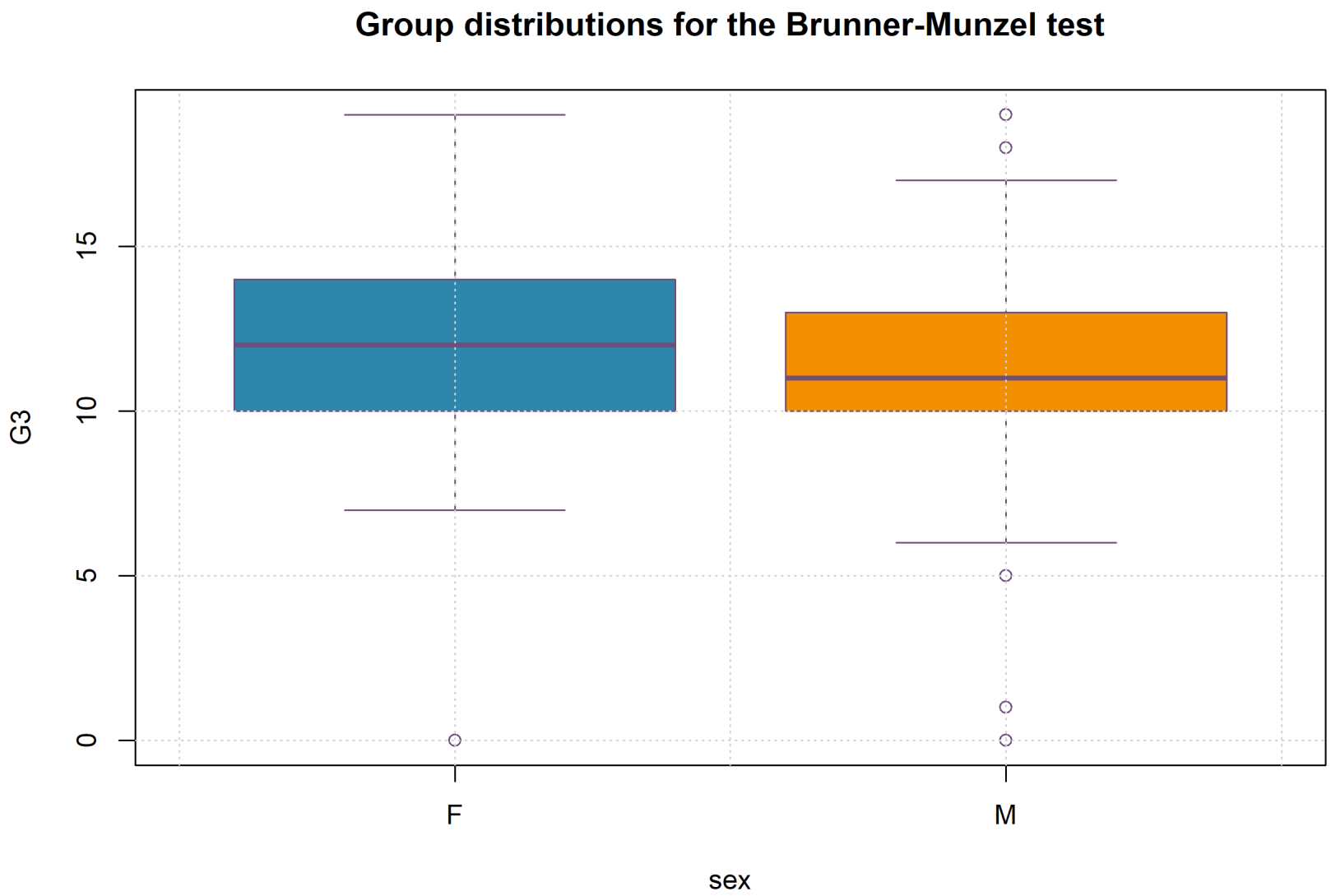
Charts generated: 4

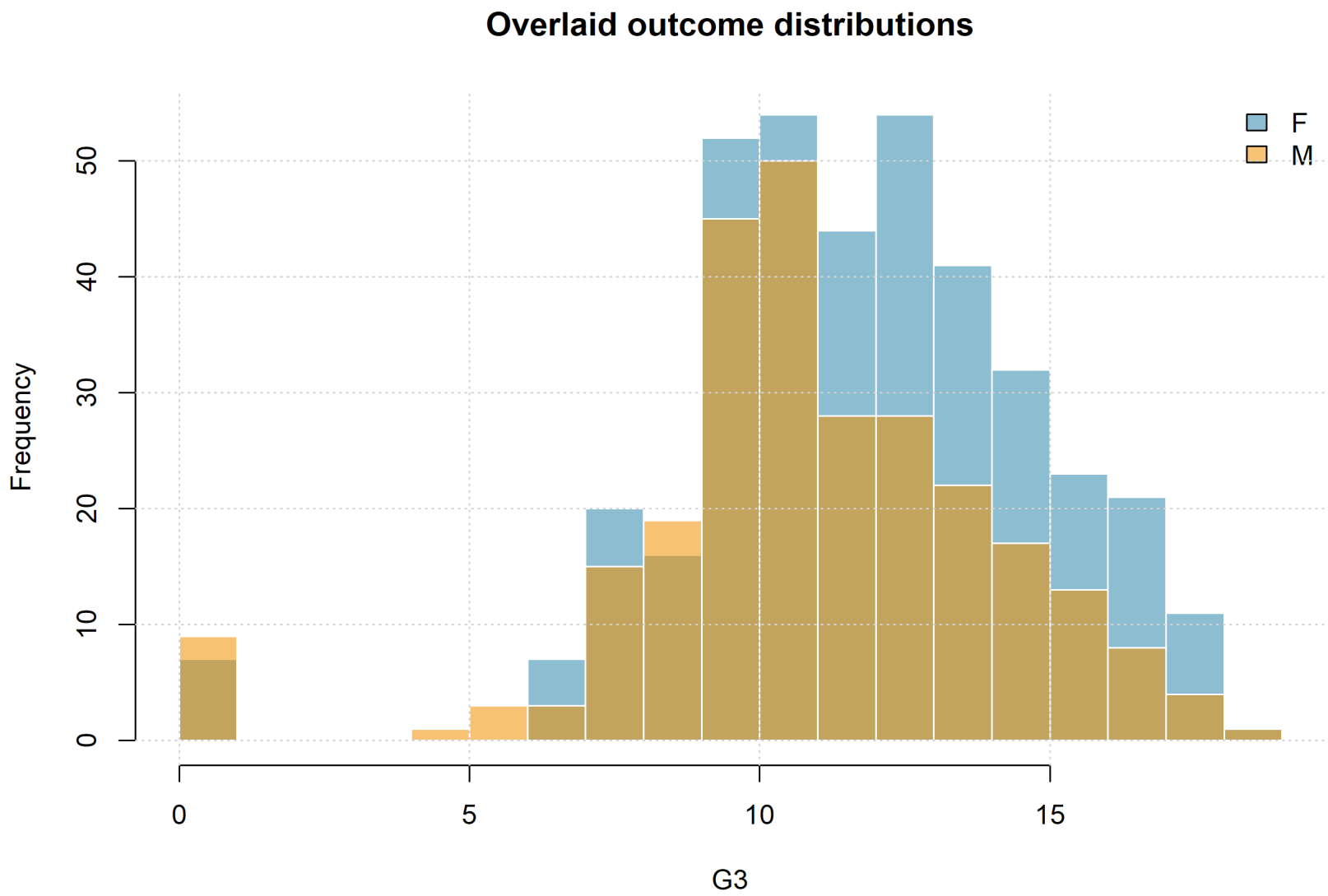
Brunner−Munzel results

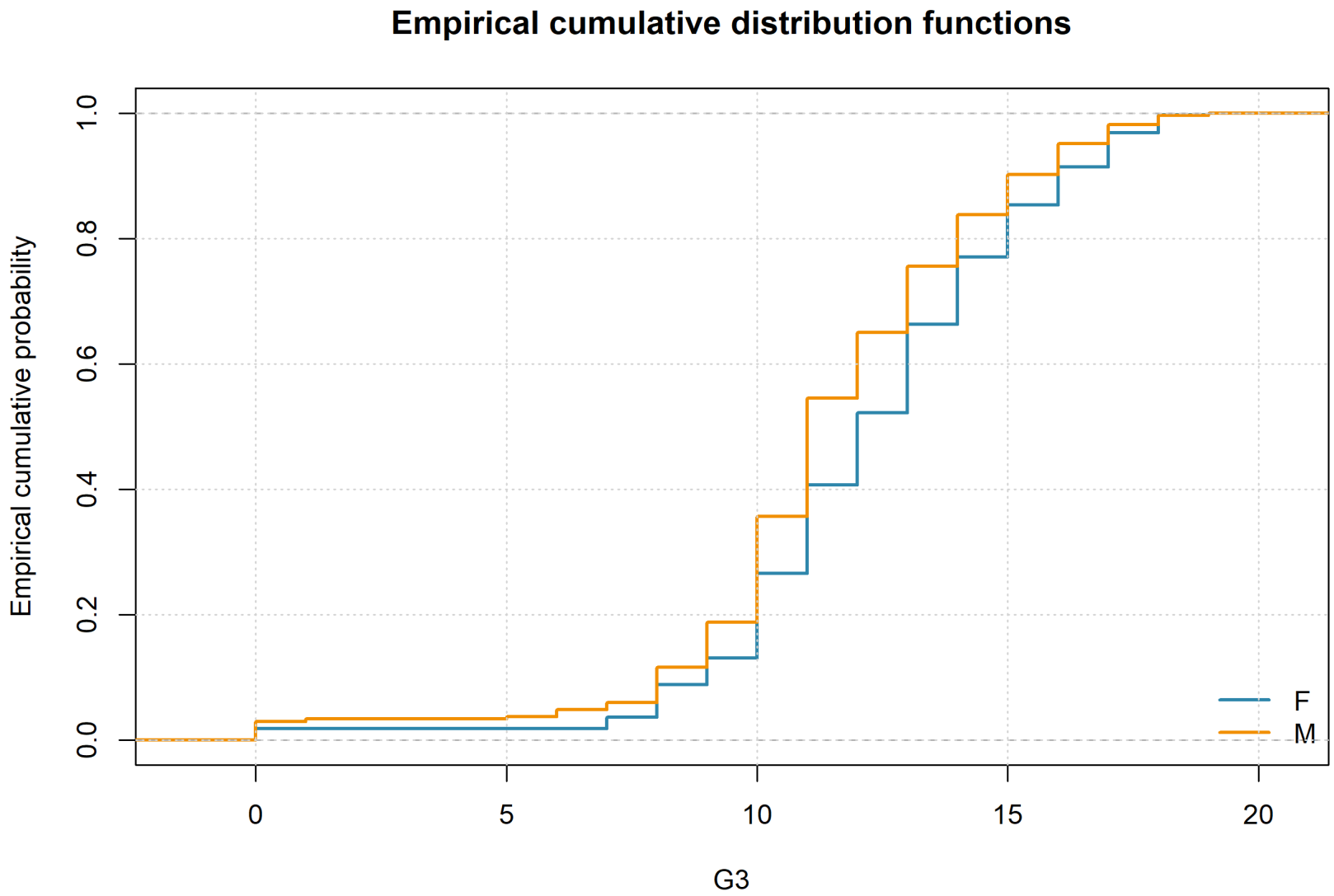
test	group_variable	outcome	group_1	group_2	n_group_1	n_group_2
Brunner−Munzel Test	sex	G3	F	M	383	266

w_statistic	degrees_of_freedom	p_value_two_sided	alpha
−3.468824	575.6128	0.0005618282	0.05

decision	probability_superiority	bootstrap_ci95_lower	bootstrap_ci95_upper
Reject equality of relative effects	0.4216956	0.3798147	0.465469


Group distributions for the Brunner-Munzel test
G3
0
5
10
15
F
M
sex


Overlaid outcome distributions
F
M
Frequency
0
10
20
30
40
50
0
5
10
15
G3


Empirical cumulative distribution functions
Empirical cumulative probability
0.0
0.2
0.4
0.6
0.8
1.0
0
5
10
15
20
G3
F
M


Group means with standard errors
Mean G3 ± SE
0
2
4
6
8
10
12
F
M