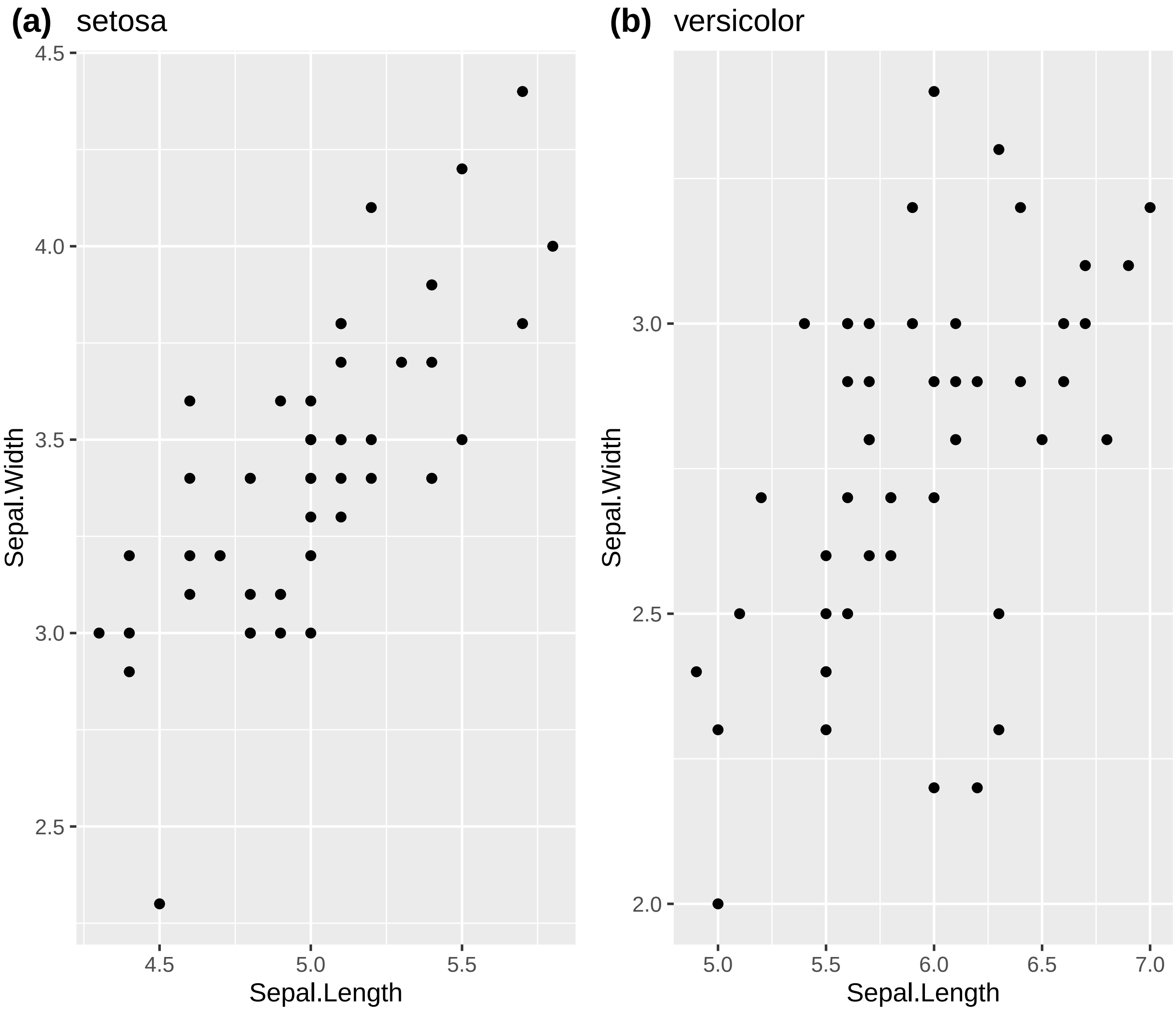
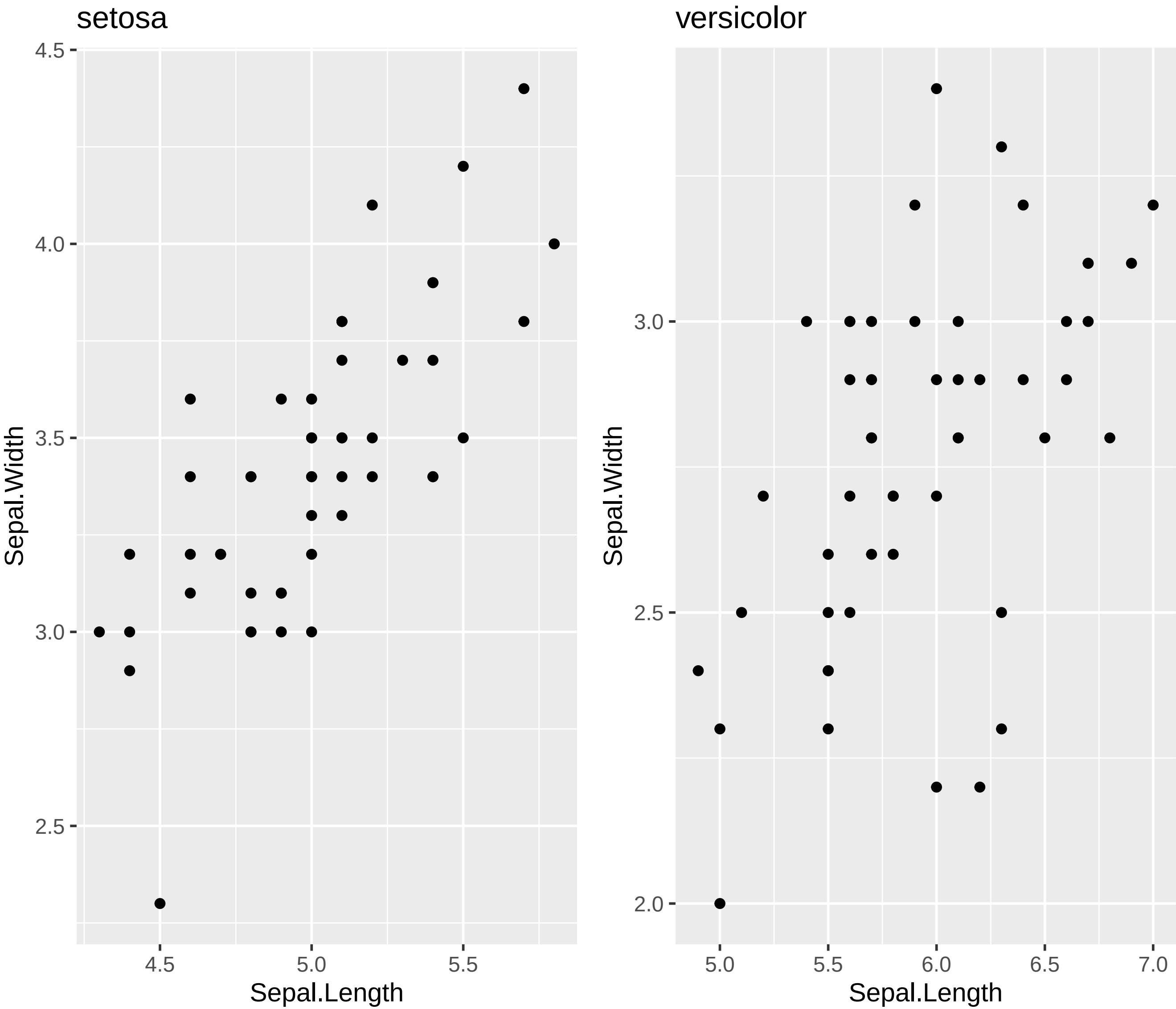
Dataset: Iris Flower dataset

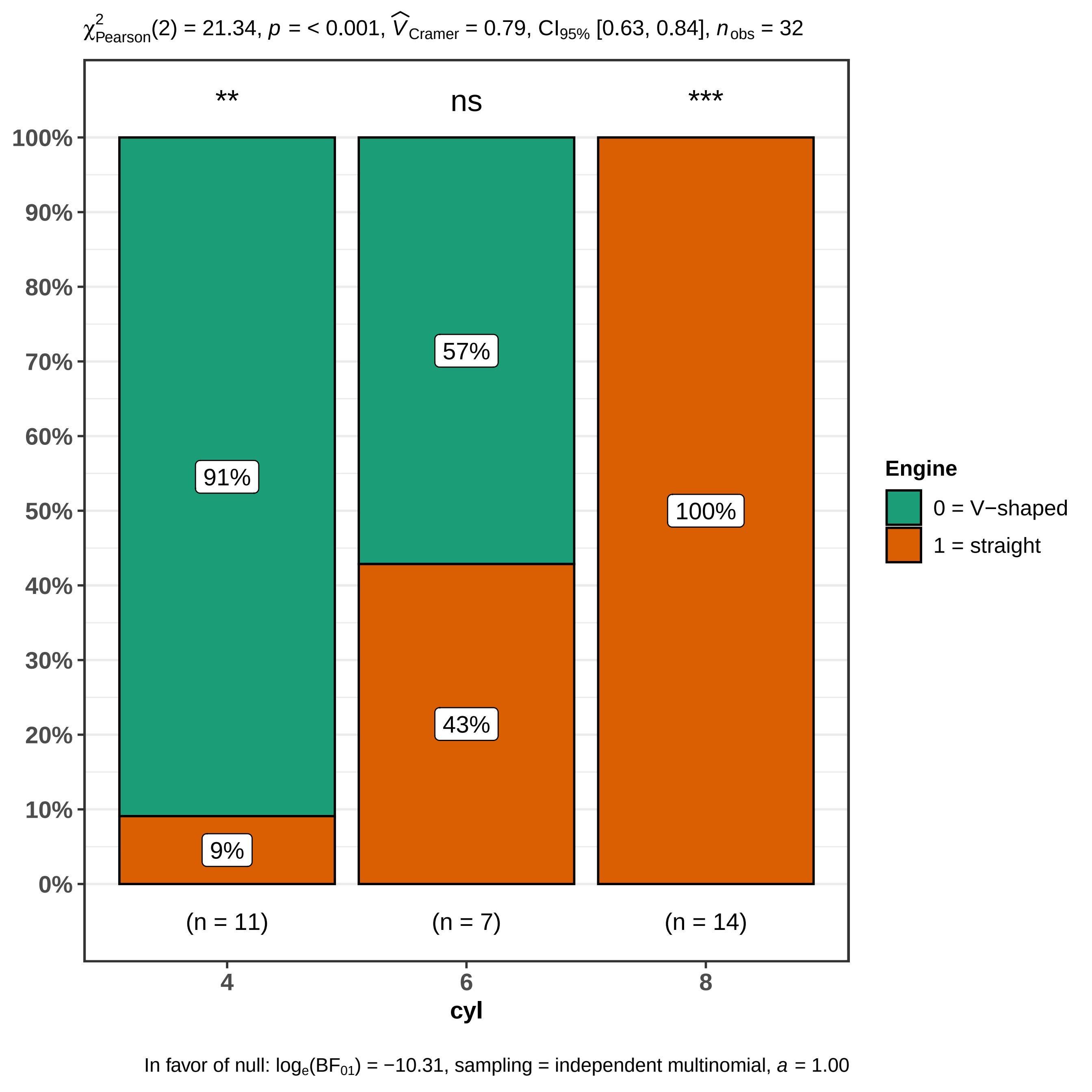


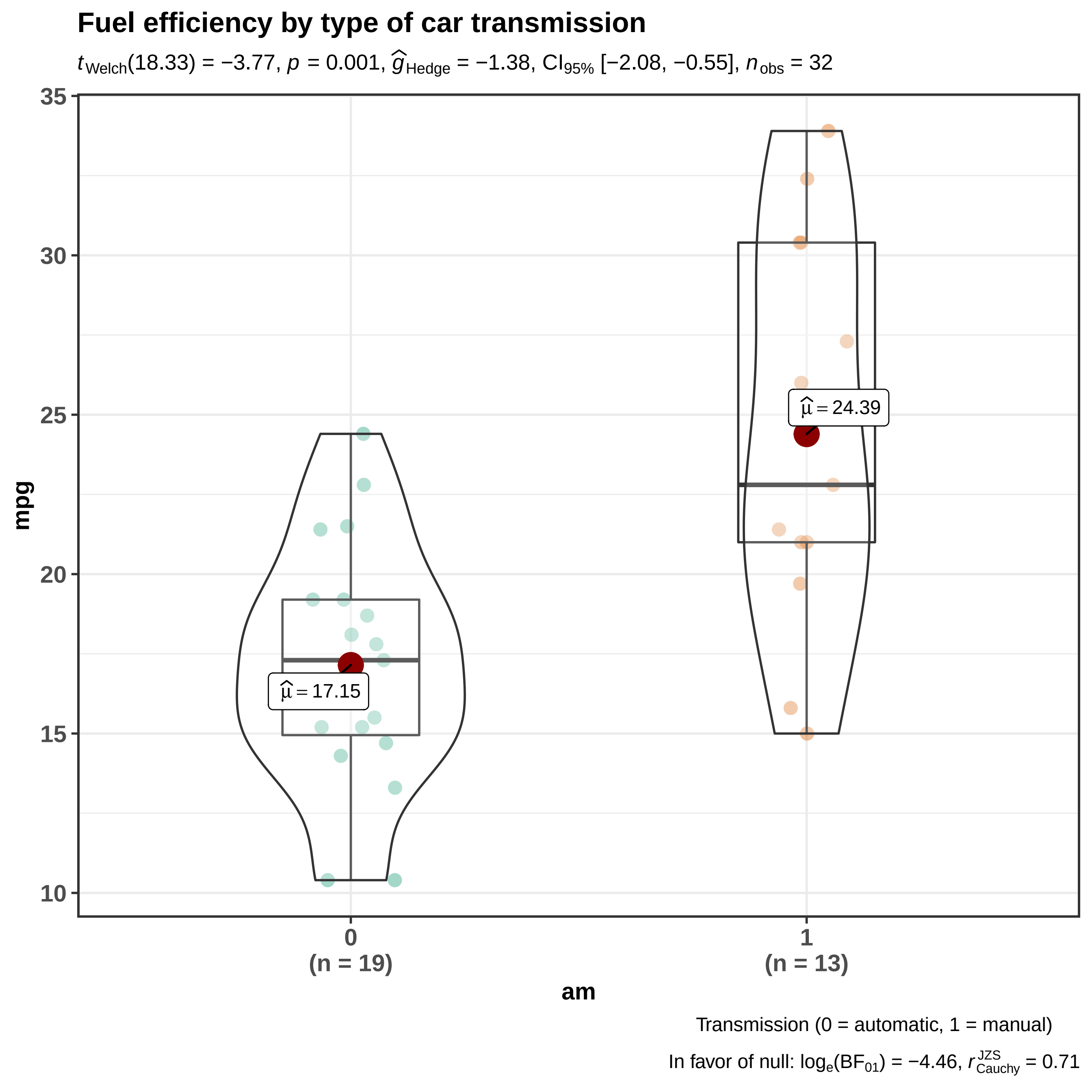
Note: Only two species of flower are displayed

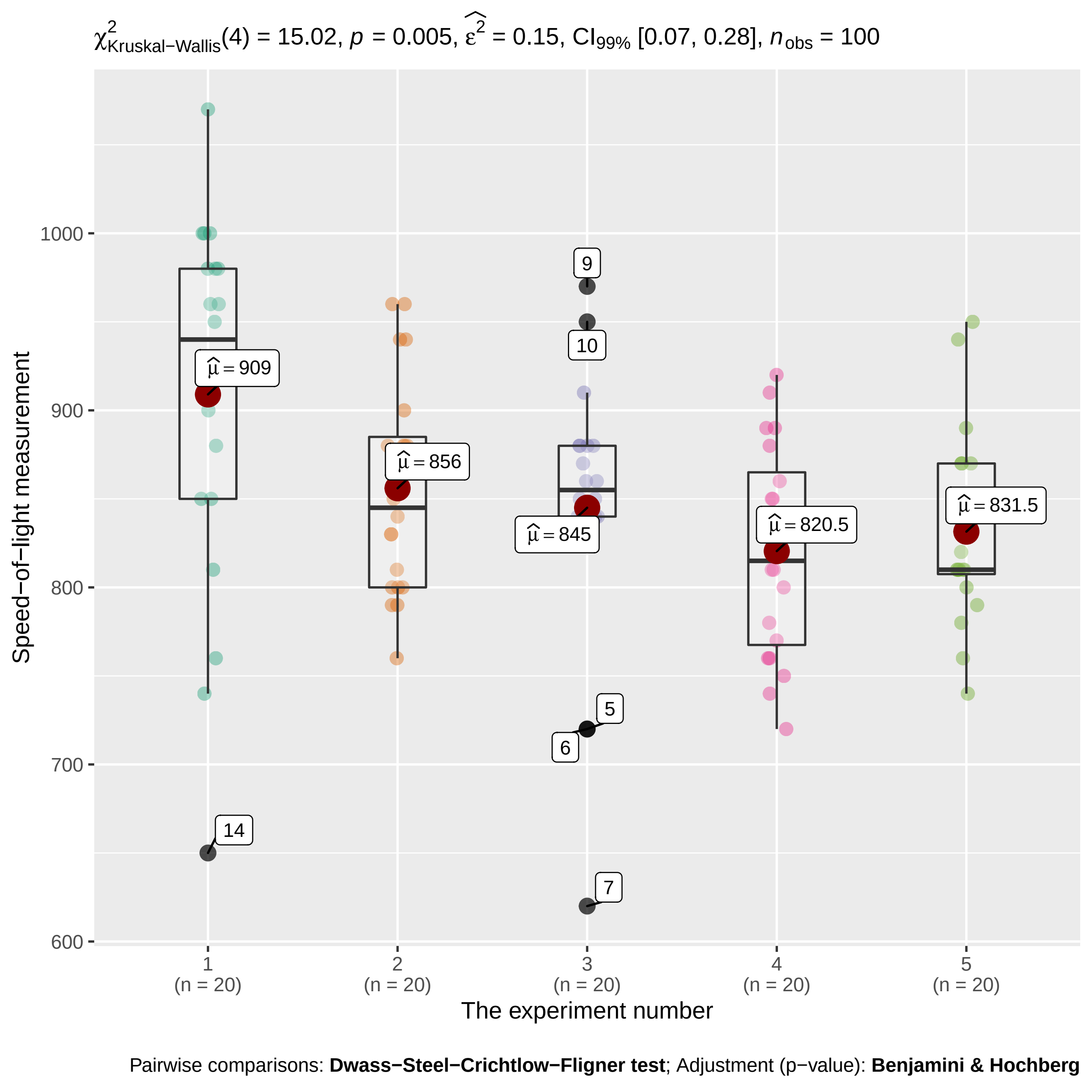
Dataset: Iris Flower dataset

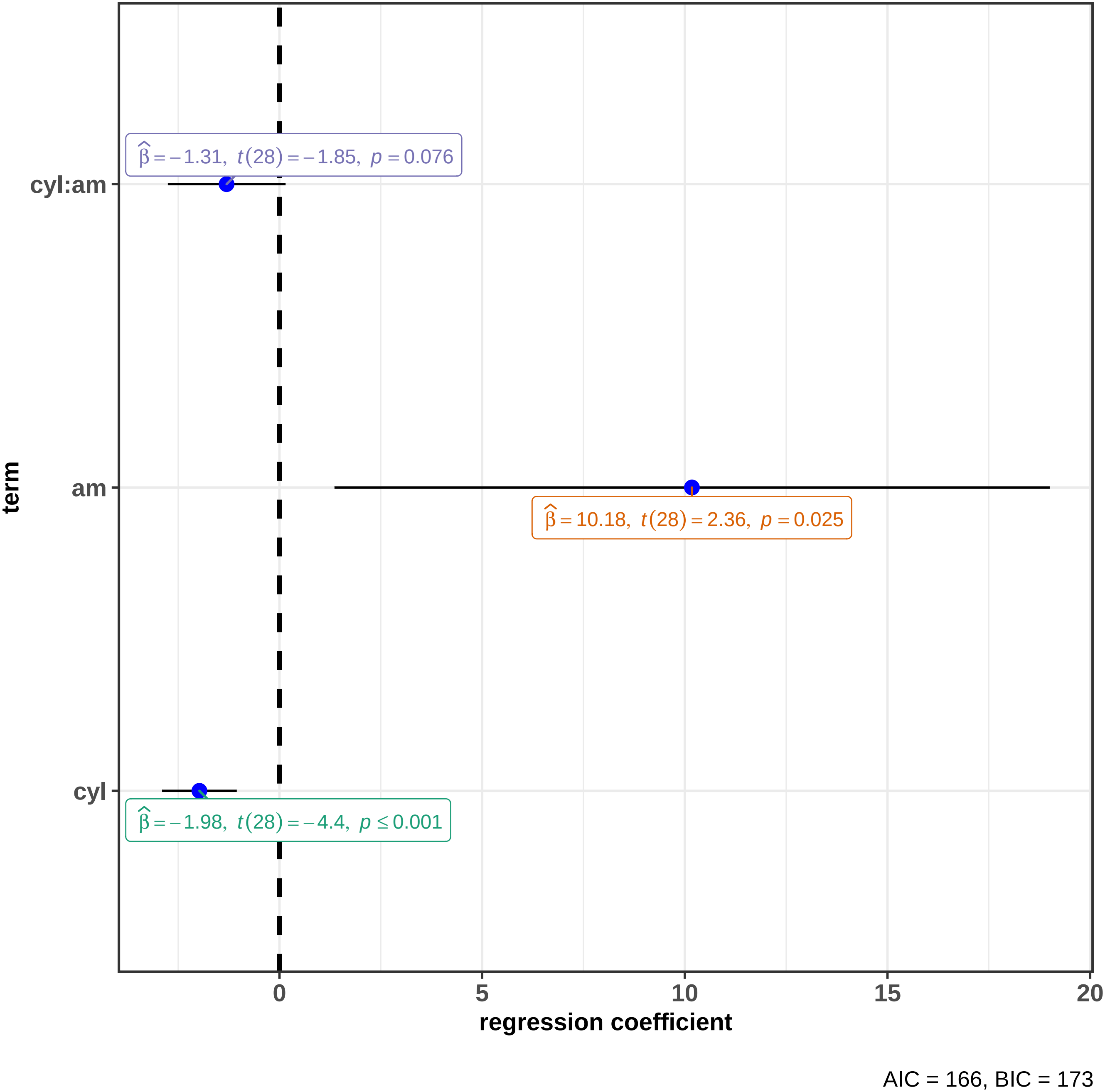


Note: Only two species of flower are displayed

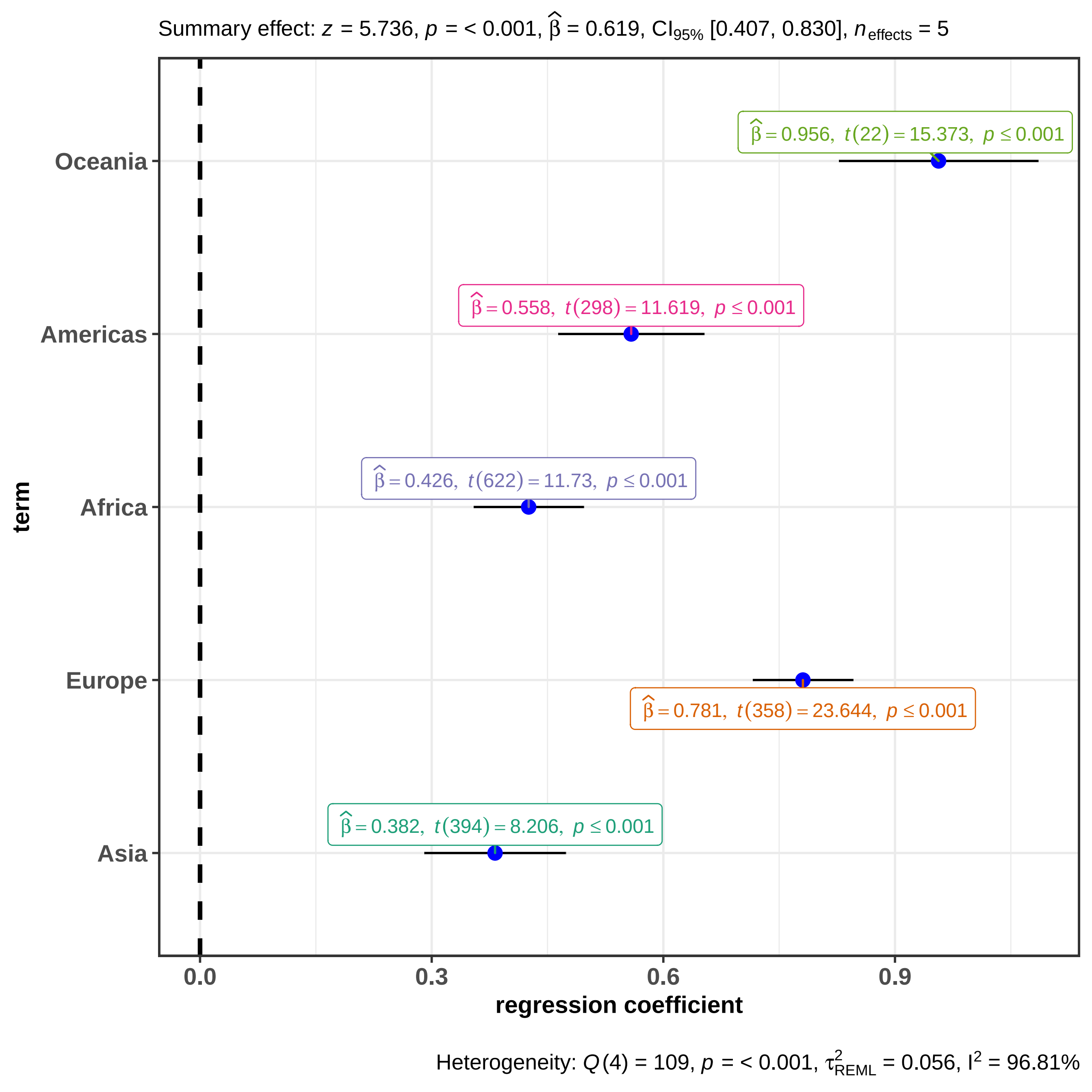

$\chi^2_{Pearson}(2) = 21.34$, $p = < 0.001$, $\widehat{V}_{Cramer} = 0.79$, $CI_{95\%}$ [0.63, 0.84], $n_{obs} = 32$
**
ns
***
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
91%
9%
57%
43%
100%
(n = 11)
(n = 7)
(n = 14)
4
6
8
cyl
Engine
0 = V−shaped
1 = straight
In favor of null: $\log_e(BF_{01}) = -10.31$, sampling = independent multinomial, $a = 1.00$


Fuel efficiency by type of car transmission
$t_{\text{Welch}}(18.33) = -3.77$, $p = 0.001$, $\widehat{g}_{\text{Hedge}} = -1.38$, $\text{CI}_{95\%}$ [−2.08, −0.55], $n_{\text{obs}} = 32$
mpg
35
30
25
20
15
10
$\widehat{\mu} = 17.15$
$\widehat{\mu} = 24.39$
0
(n = 19)
1
(n = 13)
am
Transmission (0 = automatic, 1 = manual)
In favor of null: $\log_e(\text{BF}_{01}) = -4.46$, $r^{\text{JZS}}_{\text{Cauchy}} = 0.71$

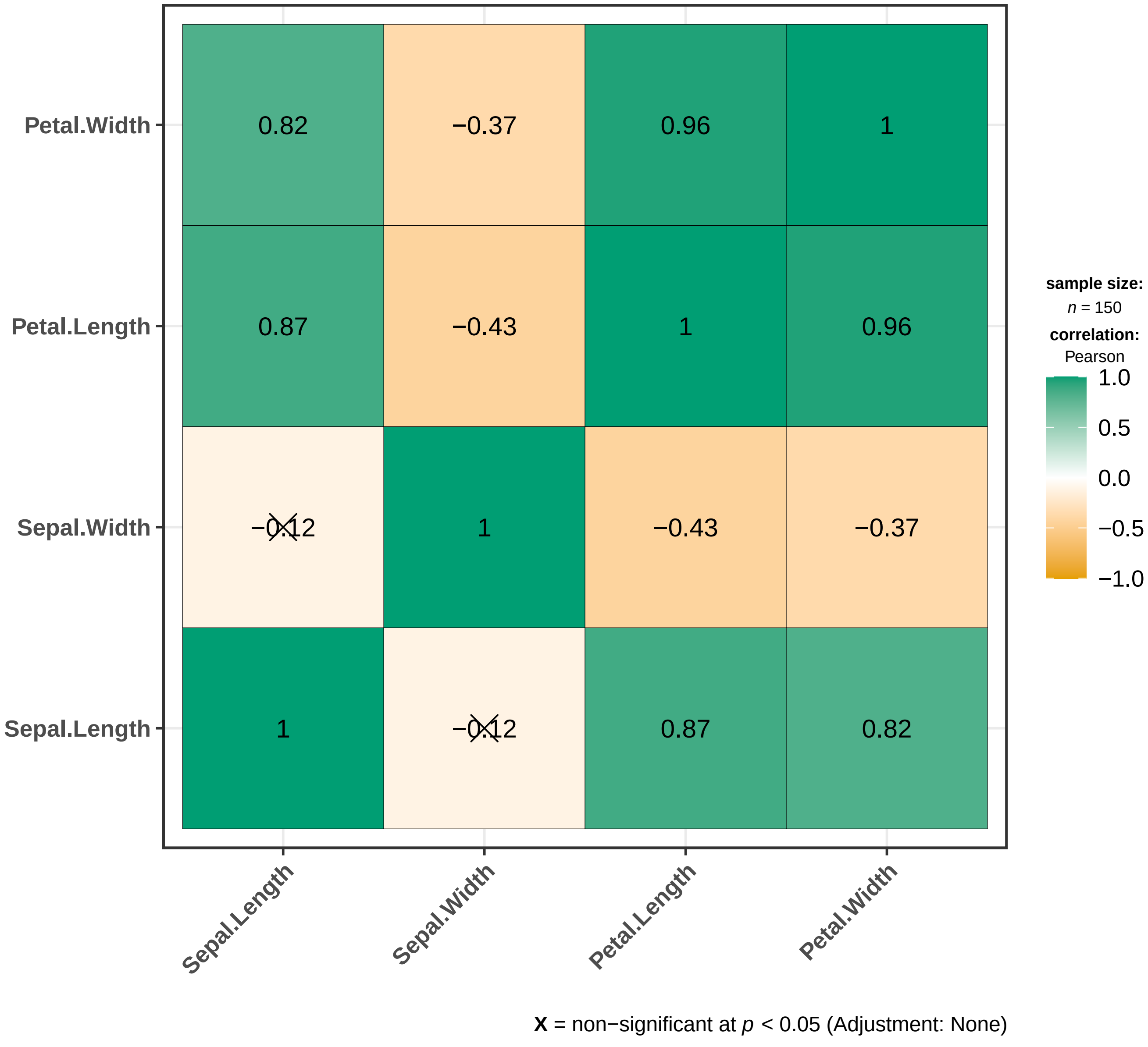

$\chi^2_{\text{Kruskal-Wallis}}(4) = 15.02$, $p = 0.005$, $\widehat{\varepsilon^2} = 0.15$, $\text{CI}_{99\%}$ [0.07, 0.28], $n_{\text{obs}} = 100$
Speed−of−light measurement
1000
900
800
700
600
$\hat{\mu} = 909$
$\hat{\mu} = 856$
$\hat{\mu} = 845$
$\hat{\mu} = 820.5$
$\hat{\mu} = 831.5$
9
10
5
6
7
14
1
(n = 20)
2
(n = 20)
3
(n = 20)
4
(n = 20)
5
(n = 20)
The experiment number
Pairwise comparisons: **Dwass−Steel−Crichtlow−Fligner test**; Adjustment (p−value): **Benjamini & Hochberg**

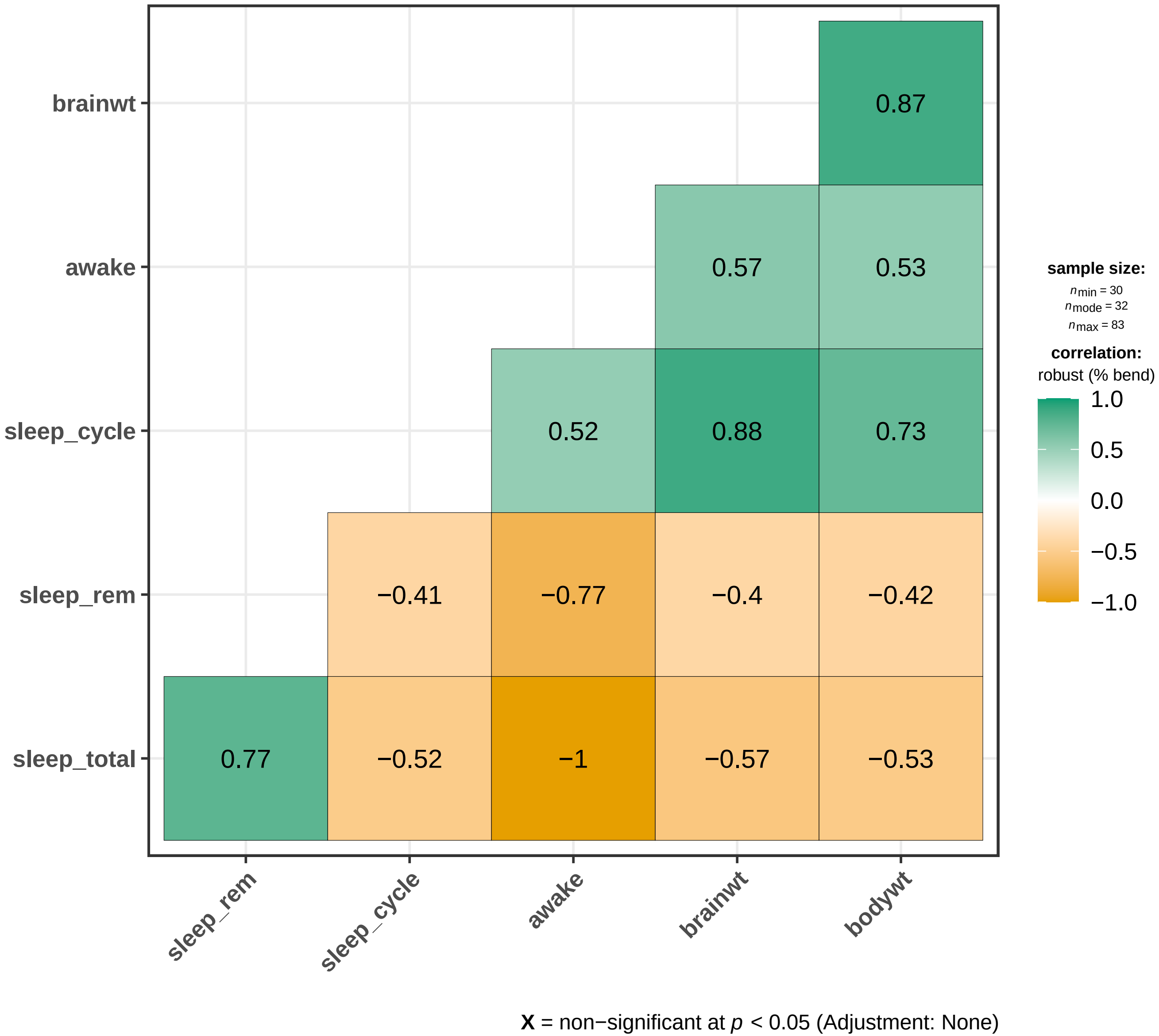


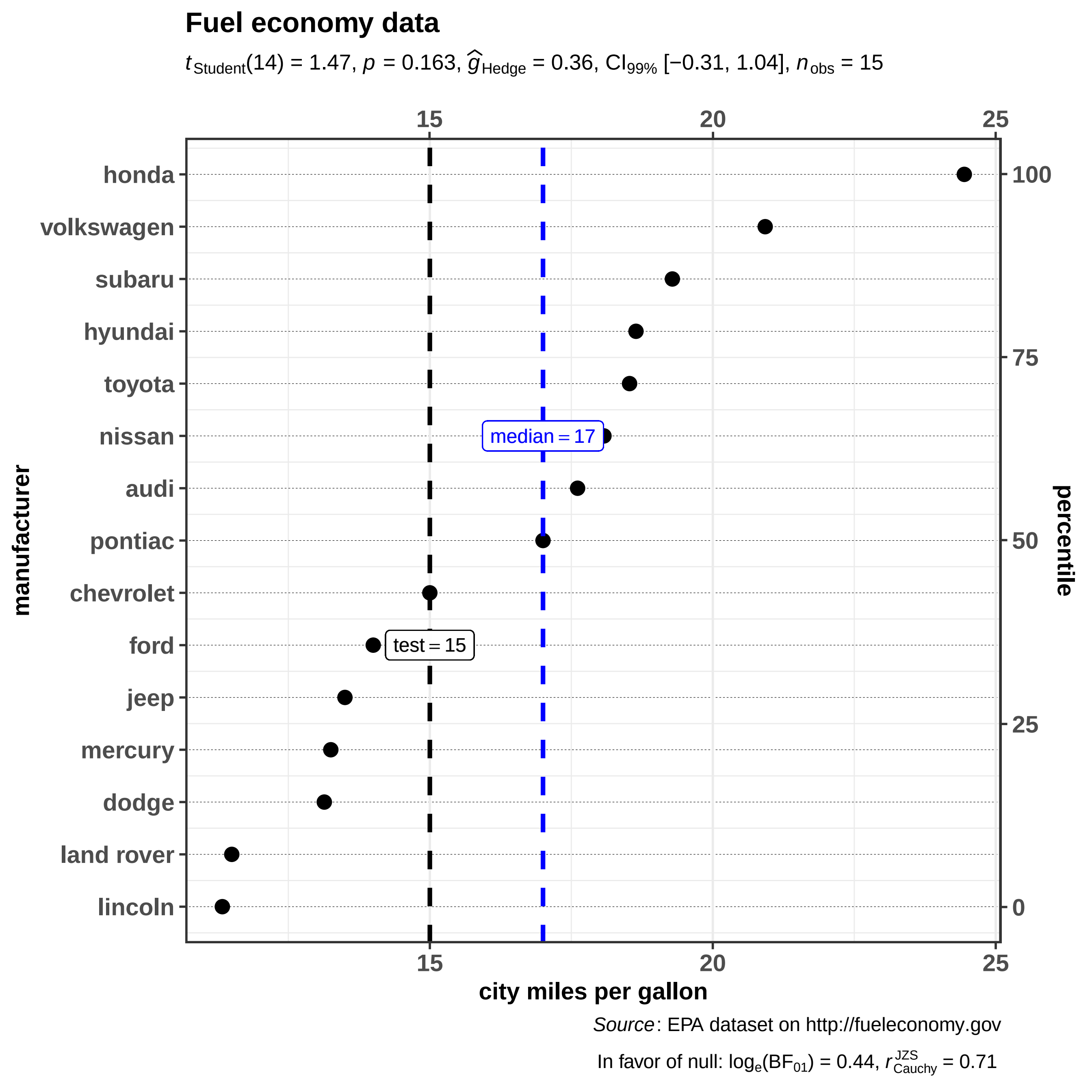
$\widehat{\beta} = -1.31,\ t(28) = -1.85,\ p = 0.076$
$\widehat{\beta} = 10.18,\ t(28) = 2.36,\ p = 0.025$
$\widehat{\beta} = -1.98,\ t(28) = -4.4,\ p \leq 0.001$
cyl:am
am
cyl
term
0
5
10
15
20
regression coefficient
AIC = 166, BIC = 173

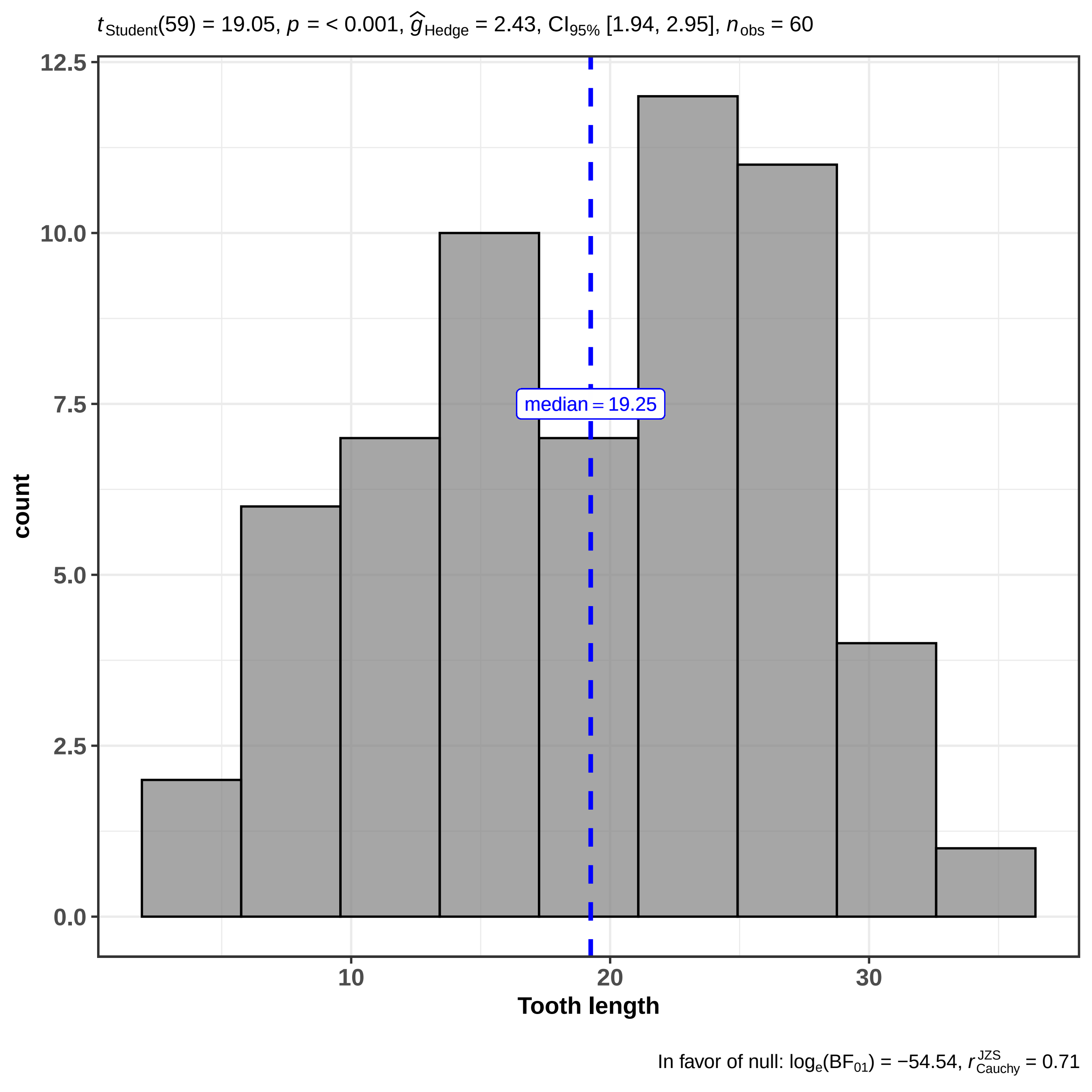


Summary effect: z = 5.736, p = < 0.001, $\widehat{\beta}$ = 0.619, $\mathrm{CI}_{95\%}$ [0.407, 0.830], n_{effects} = 5
$\widehat{\beta} = 0.956,\ t(22) = 15.373,\ p \leq 0.001$
$\widehat{\beta} = 0.558,\ t(298) = 11.619,\ p \leq 0.001$
$\widehat{\beta} = 0.426,\ t(622) = 11.73,\ p \leq 0.001$
$\widehat{\beta} = 0.781,\ t(358) = 23.644,\ p \leq 0.001$
$\widehat{\beta} = 0.382,\ t(394) = 8.206,\ p \leq 0.001$
Oceania
Americas
Africa
Europe
Asia
term
0.0
0.3
0.6
0.9
regression coefficient
Heterogeneity: $Q(4)$ = 109, p = < 0.001, τ^2_{REML} = 0.056, I^2 = 96.81%

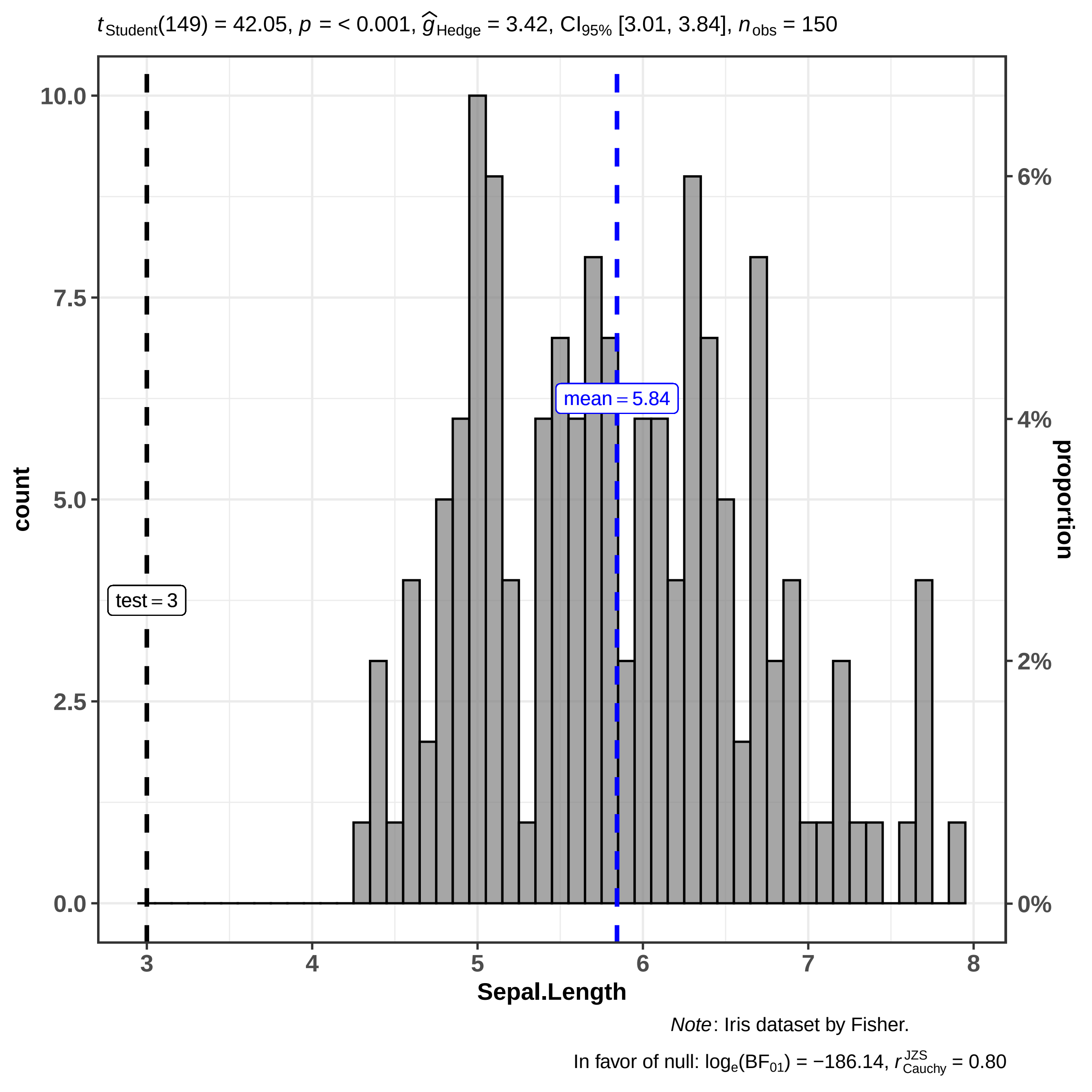

Petal.Width
Petal.Length
Sepal.Width
Sepal.Length
0.82
−0.37
0.96
1
0.87
−0.43
1
0.96
−0.12
1
−0.43
−0.37
1
−0.12
0.87
0.82
Sepal.Length
Sepal.Width
Petal.Length
Petal.Width
sample size:
n = 150
correlation:
Pearson
1.0
0.5
0.0
−0.5
−1.0
X = non−significant at p < 0.05 (Adjustment: None)

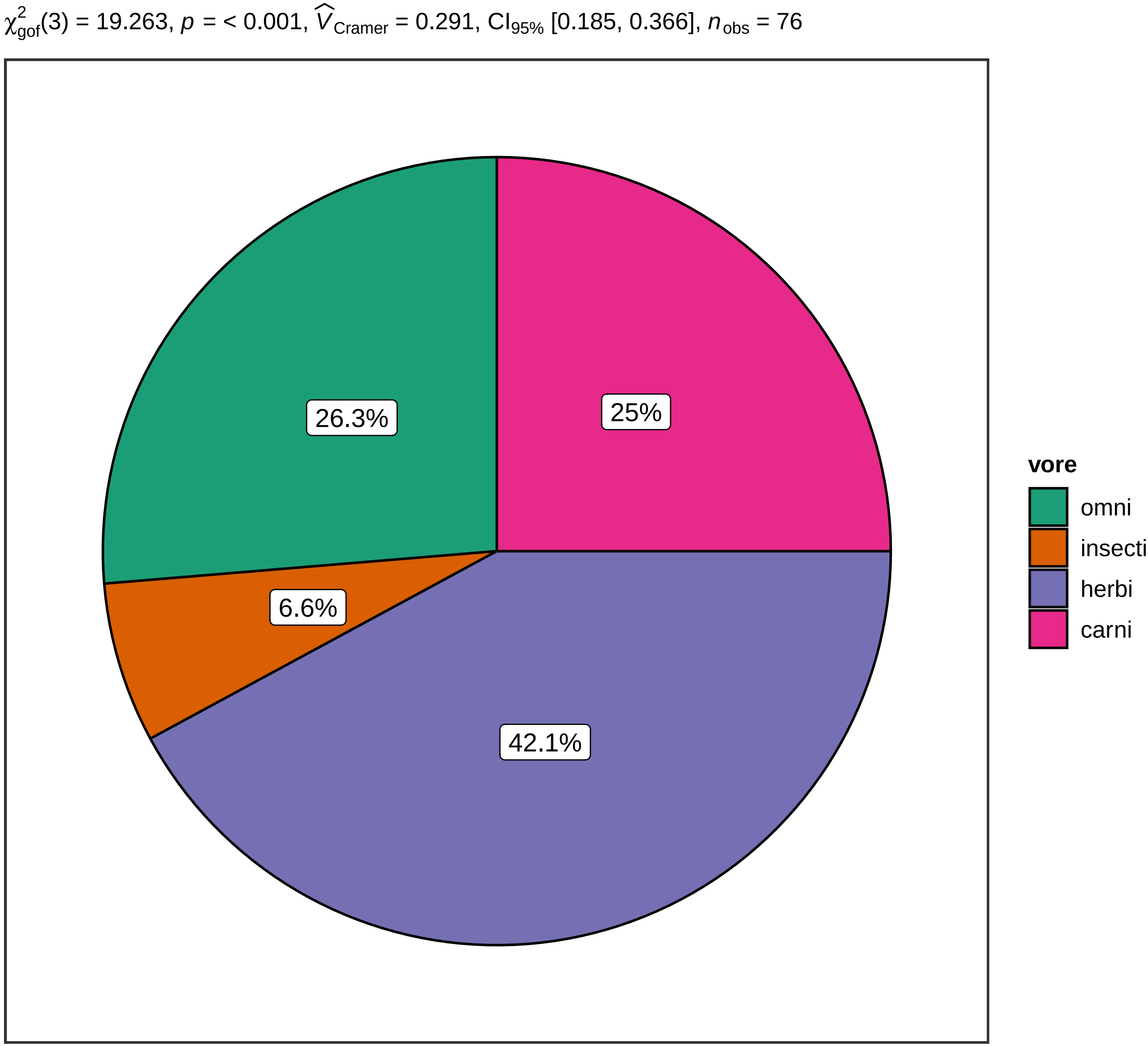

brainwt
awake
sleep_cycle
sleep_rem
sleep_total
0.87
0.57
0.53
0.52
0.88
0.73
−0.41
−0.77
−0.4
−0.42
0.77
−0.52
−1
−0.57
−0.53
sleep_rem
sleep_cycle
awake
brainwt
bodywt
sample size:
n_{min} = 30
n_{mode} = 32
n_{max} = 83
correlation:
robust (% bend)
1.0
0.5
0.0
−0.5
−1.0
X = non−significant at p < 0.05 (Adjustment: None)

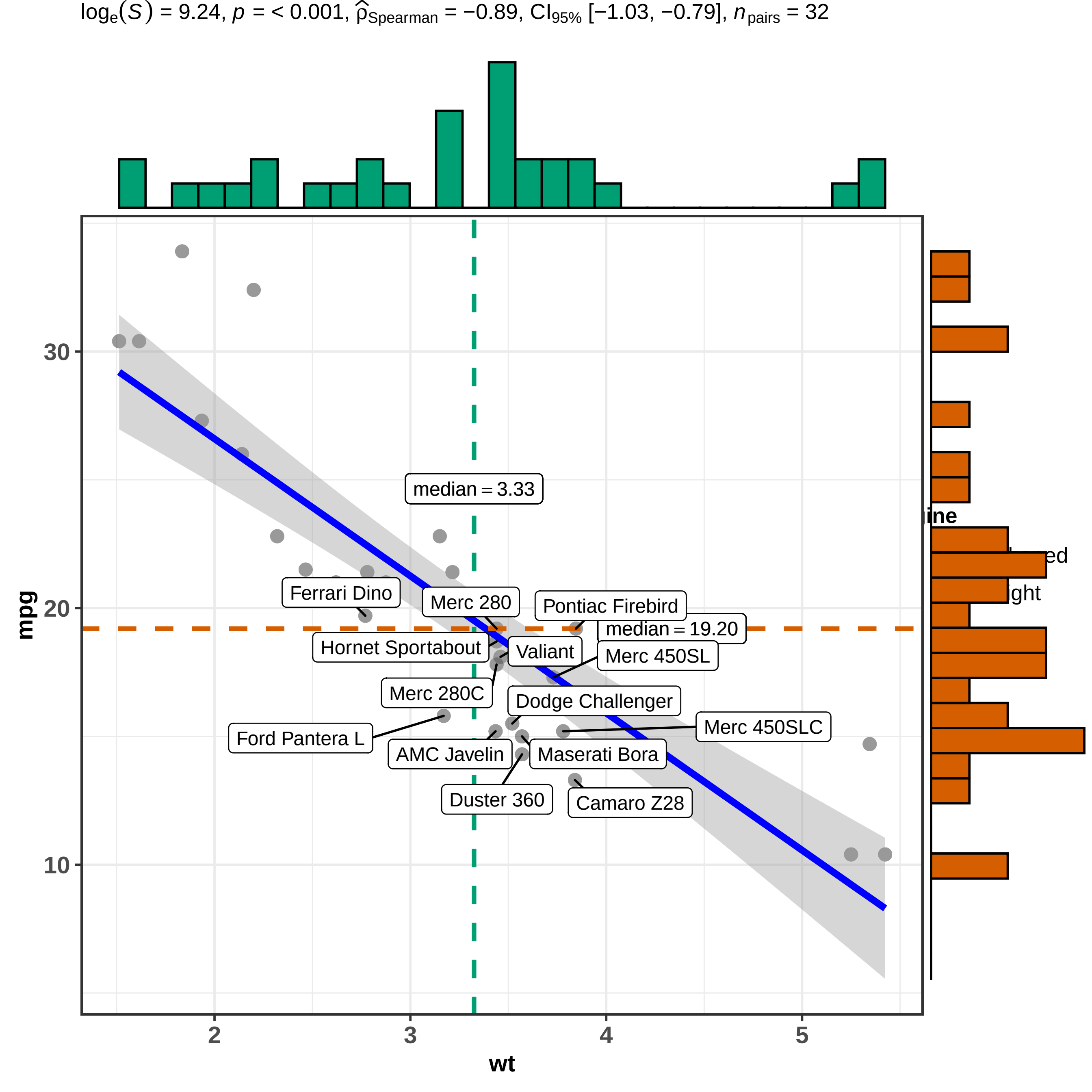

Fuel economy data
$t_{\text{Student}}(14) = 1.47$, $p = 0.163$, $\widehat{g}_{\text{Hedge}} = 0.36$, $\text{CI}_{99\%}$ [−0.31, 1.04], $n_{\text{obs}} = 15$
honda
volkswagen
subaru
hyundai
toyota
nissan
audi
pontiac
chevrolet
ford
jeep
mercury
dodge
land rover
lincoln
manufacturer
median = 17
test = 15
15
20
25
100
75
50
25
0
percentile
city miles per gallon
Source: EPA dataset on http://fueleconomy.gov
In favor of null: $\log_e(\text{BF}_{01}) = 0.44$, $r_{\text{Cauchy}}^{\text{JZS}} = 0.71$

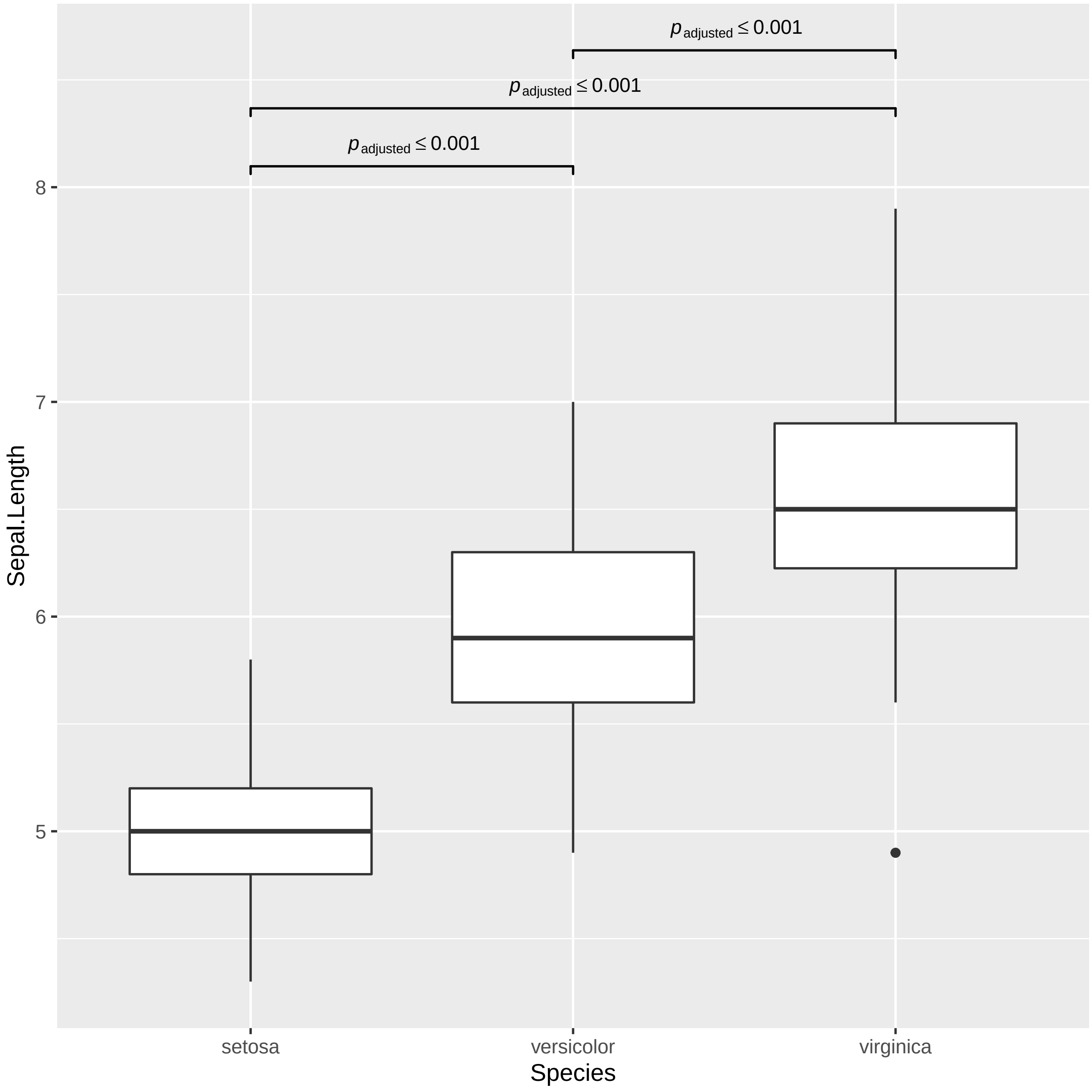


$t_{\text{Student}}(59) = 19.05$, $p = < 0.001$, $\widehat{g}_{\text{Hedge}} = 2.43$, $\text{CI}_{95\%}$ [1.94, 2.95], $n_{\text{obs}} = 60$
12.5
10.0
7.5
5.0
2.5
0.0
count
median = 19.25
10
20
30
Tooth length
In favor of null: $\log_e(\text{BF}_{01}) = -54.54$, $r^{\text{JZS}}_{\text{Cauchy}} = 0.71$

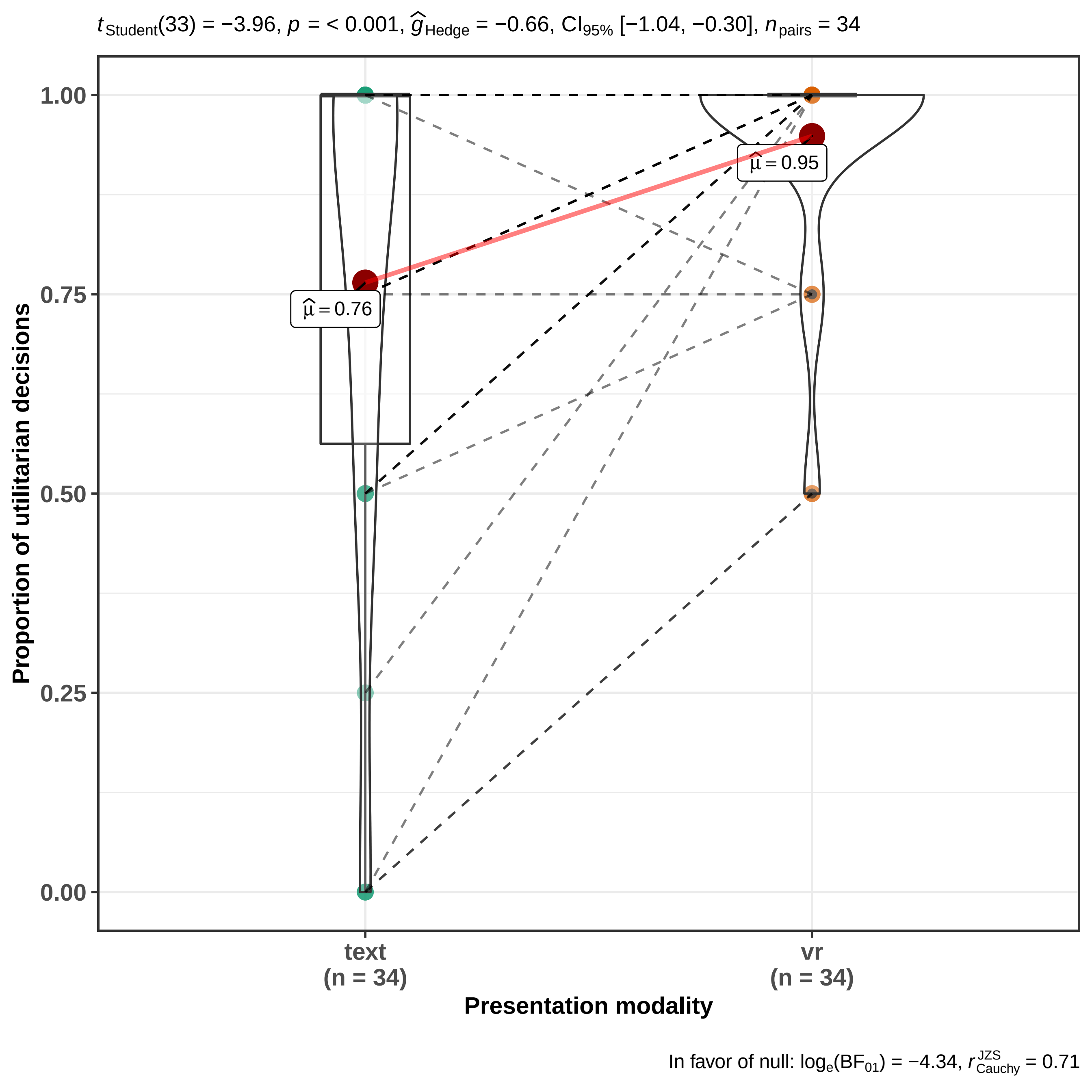

$t_{\text{Student}}(149) = 42.05$, $p = < 0.001$, $\widehat{g}_{\text{Hedge}} = 3.42$, $\text{CI}_{95\%}$ [3.01, 3.84], $n_{\text{obs}} = 150$
count
proportion
10.0
7.5
5.0
2.5
0.0
6%
4%
2%
0%
test = 3
mean = 5.84
3
4
5
6
7
8
Sepal.Length
Note: Iris dataset by Fisher.
In favor of null: $\log_e(\text{BF}_{01}) = -186.14$, $r_{\text{Cauchy}}^{\text{JZS}} = 0.80$


$\chi^2_{gof}(3) = 19.263$, $p = < 0.001$, $\widehat{V}_{Cramer} = 0.291$, $CI_{95\%}$ [0.185, 0.366], $n_{obs} = 76$
26.3%
25%
6.6%
42.1%
vore
omni
insecti
herbi
carni

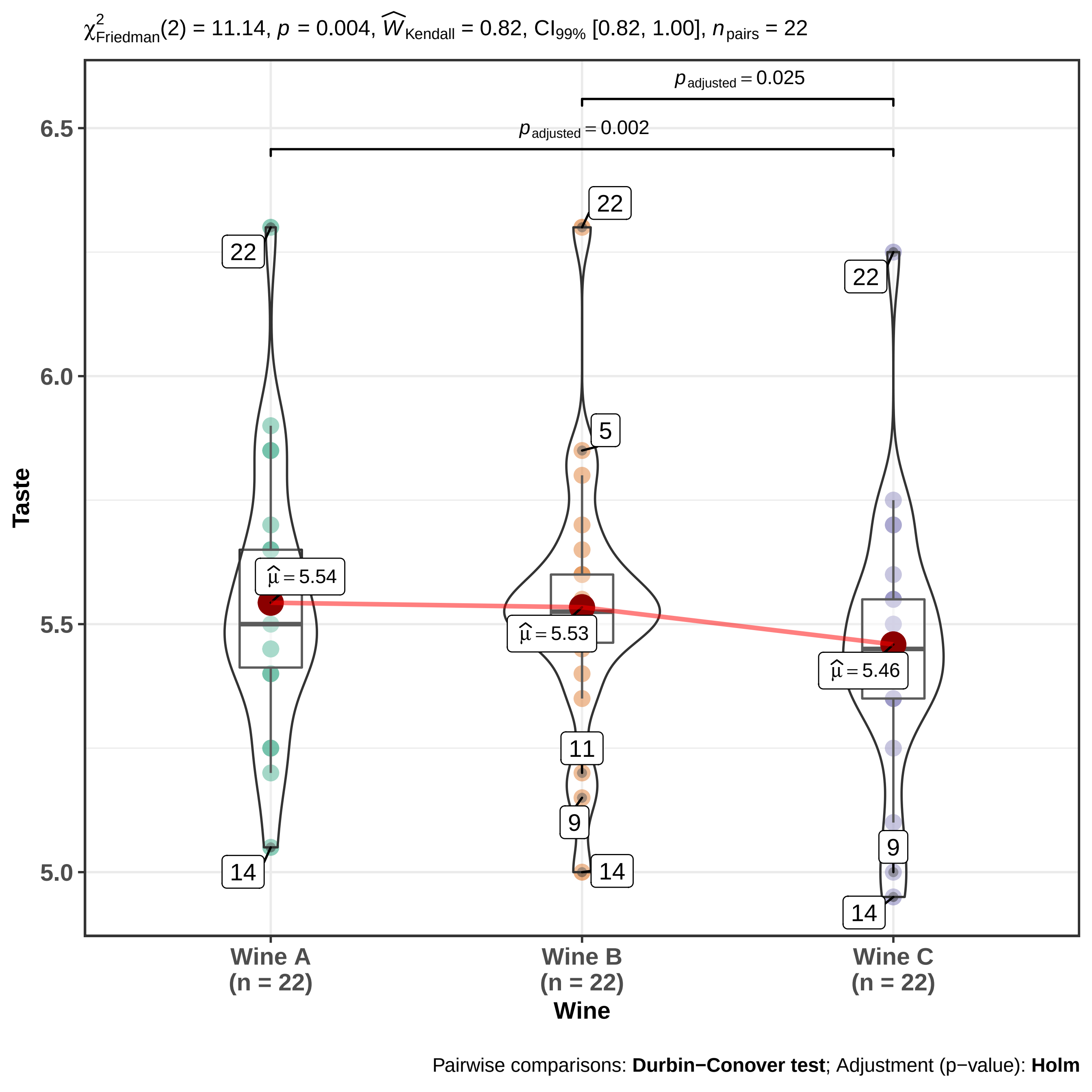

$\log_e(S) = 9.24$, $p = < 0.001$, $\widehat{\rho}_{Spearman} = -0.89$, $CI_{95\%}$ [−1.03, −0.79], $n_{pairs} = 32$
median = 3.33
median = 19.20
Ferrari Dino
Merc 280
Pontiac Firebird
Hornet Sportabout
Valiant
Merc 450SL
Merc 280C
Dodge Challenger
Ford Pantera L
Merc 450SLC
AMC Javelin
Maserati Bora
Duster 360
Camaro Z28
30
20
10
mpg
2
3
4
5
wt



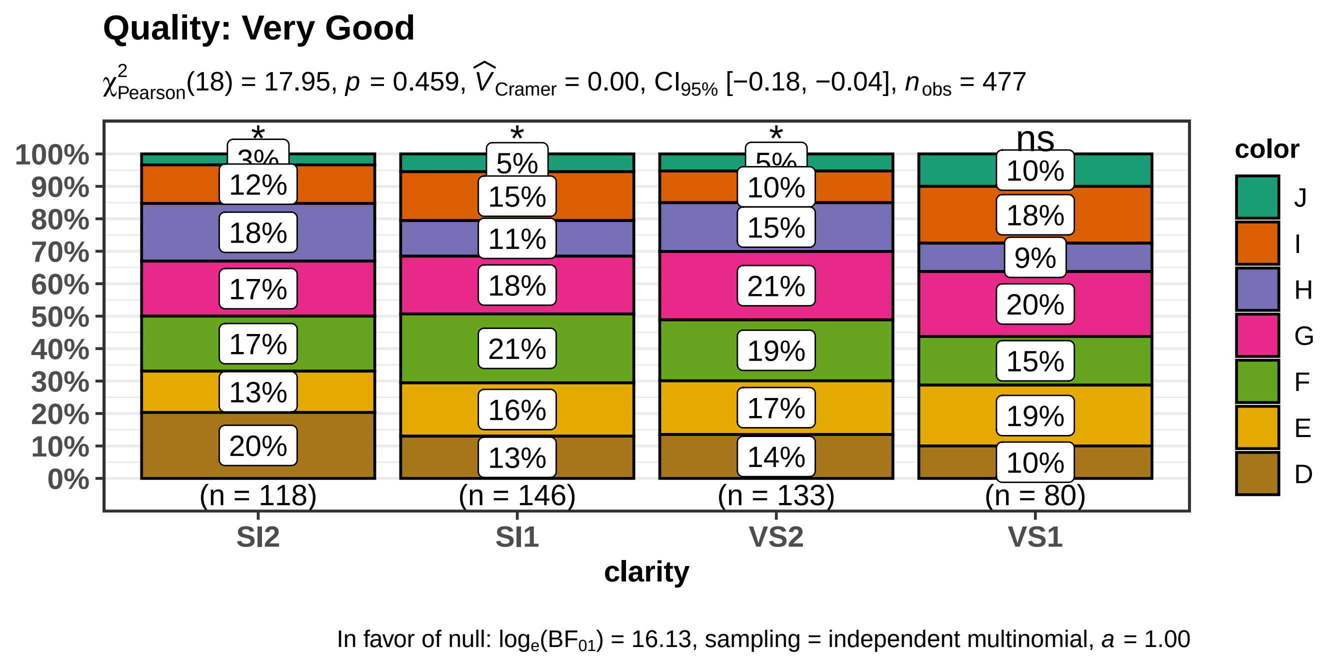
$p_{\text{adjusted}} \leq 0.001$
$p_{\text{adjusted}} \leq 0.001$
$p_{\text{adjusted}} \leq 0.001$
8
7
6
5
Sepal.Length
setosa
versicolor
virginica
Species

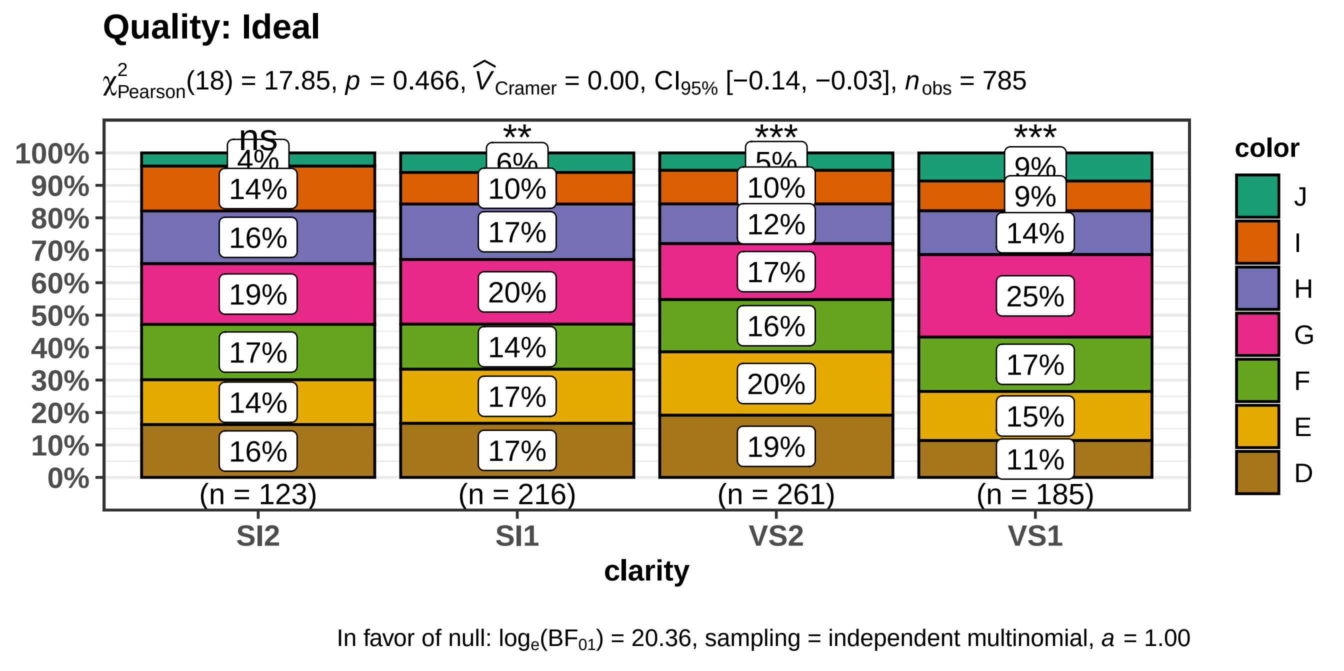


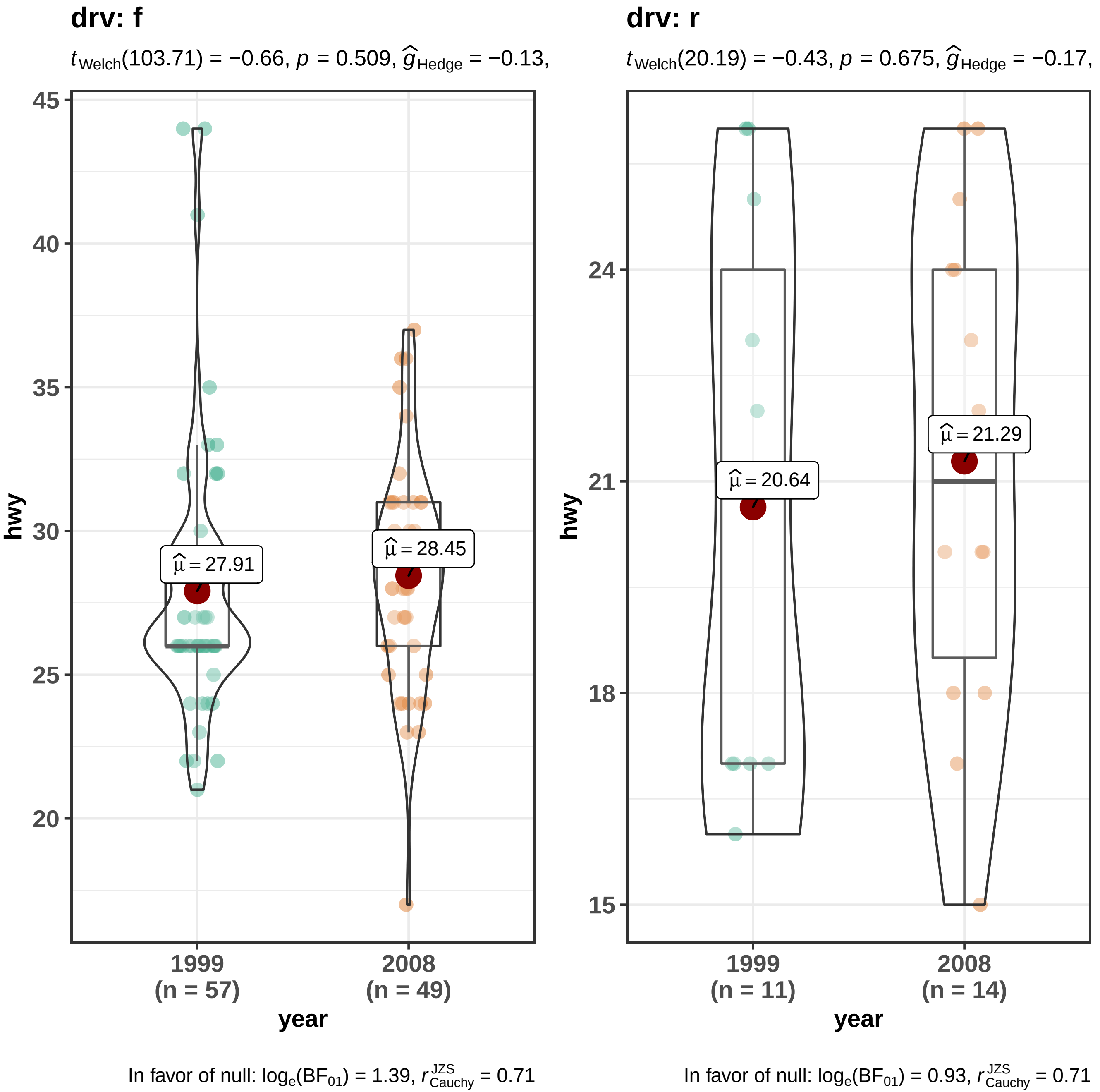
$t_{\mathrm{Student}}(33) = -3.96$, $p = < 0.001$, $\widehat{g}_{\mathrm{Hedge}} = -0.66$, $\mathrm{CI}_{95\%}$ [−1.04, −0.30], $n_{\mathrm{pairs}} = 34$
Proportion of utilitarian decisions
1.00
0.75
0.50
0.25
0.00
$\widehat{\mu} = 0.76$
$\widehat{\mu} = 0.95$
text
(n = 34)
vr
(n = 34)
Presentation modality
In favor of null: $\log_e(\mathrm{BF}_{01}) = -4.34$, $r^{\mathrm{JZS}}_{\mathrm{Cauchy}} = 0.71$

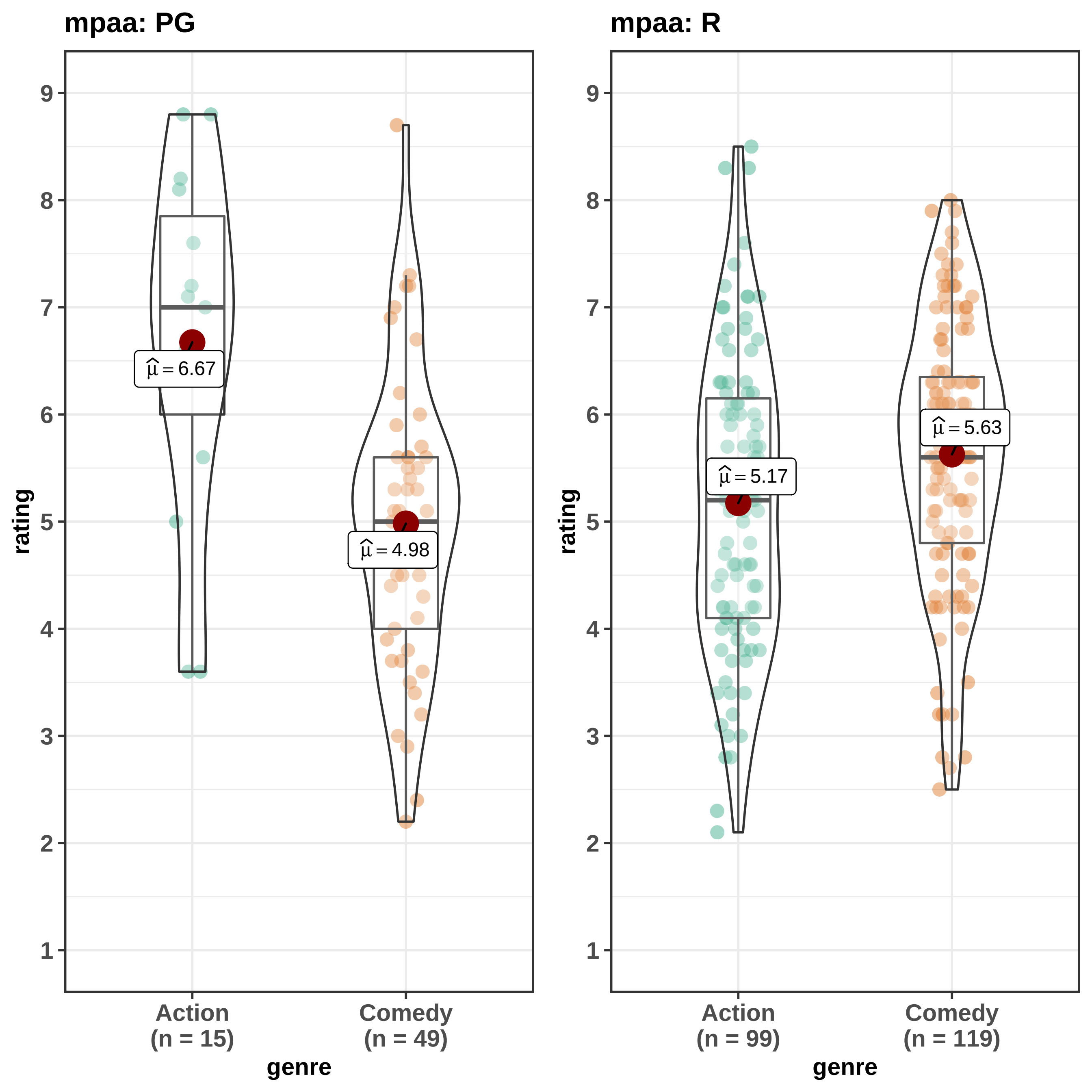


$\chi^2_{\text{Friedman}}(2) = 11.14$, $p = 0.004$, $\widehat{W}_{\text{Kendall}} = 0.82$, $\text{CI}_{99\%}$ [0.82, 1.00], $n_{\text{pairs}} = 22$
$p_{\text{adjusted}} = 0.025$
$p_{\text{adjusted}} = 0.002$
6.5
6.0
5.5
5.0
Taste
22
22
22
5
$\hat{\mu} = 5.54$
$\hat{\mu} = 5.53$
$\hat{\mu} = 5.46$
11
9
9
14
14
14
Wine A
(n = 22)
Wine B
(n = 22)
Wine C
(n = 22)
Wine
Pairwise comparisons: **Durbin−Conover test**; Adjustment (p−value): **Holm**

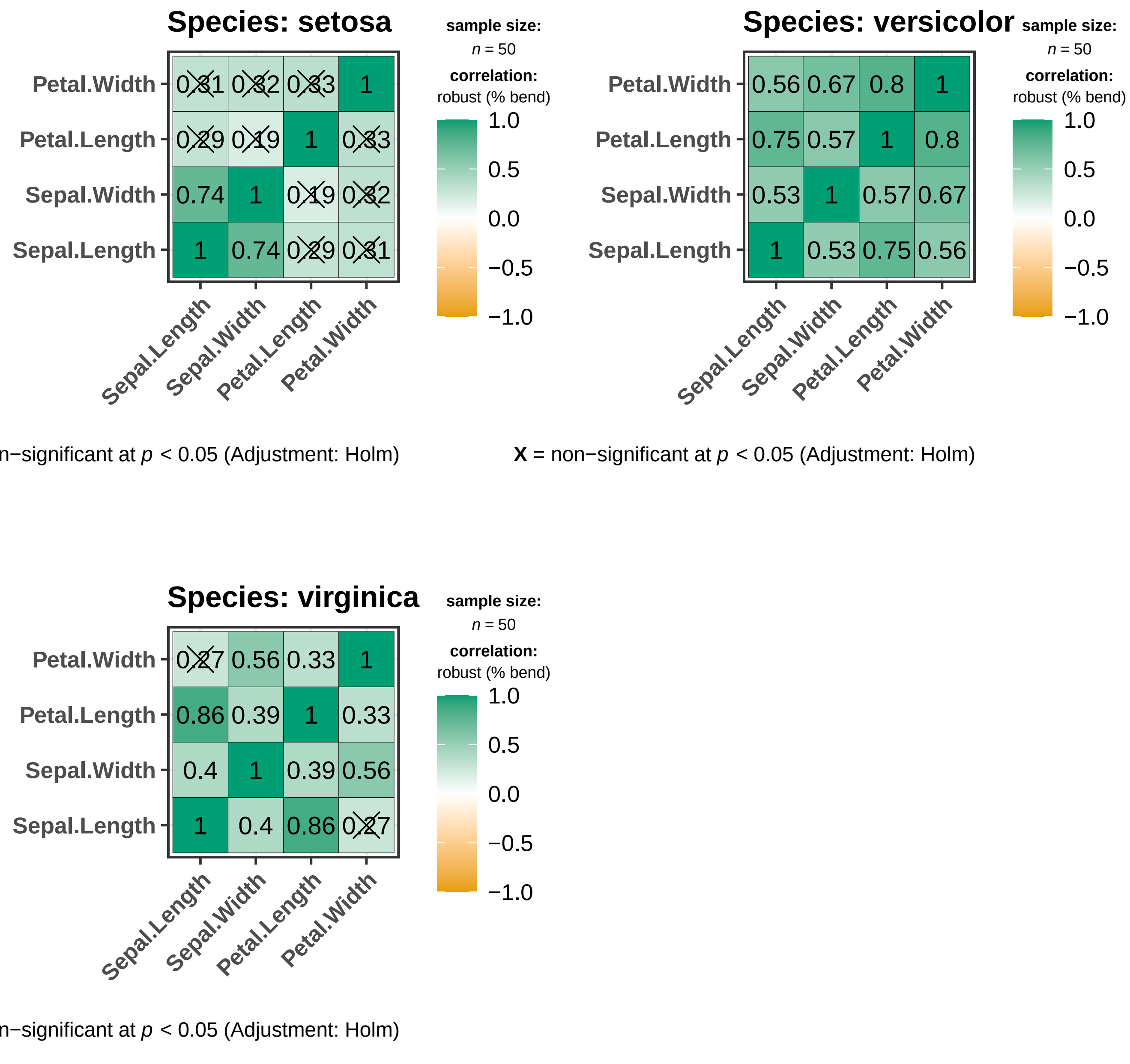

Quality: Very Good
$\chi^2_{\text{Pearson}}(18) = 17.95$, $p = 0.459$, $\widehat{V}_{\text{Cramer}} = 0.00$, $\text{CI}_{95\%}$ [−0.18, −0.04], $n_{\text{obs}} = 477$
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
*
3%
12%
18%
17%
17%
13%
20%
(n = 118)
*
5%
15%
11%
18%
21%
16%
13%
(n = 146)
*
5%
10%
15%
21%
19%
17%
14%
(n = 133)
ns
10%
18%
9%
20%
15%
19%
10%
(n = 80)
SI2
SI1
VS2
VS1
clarity
color
J
I
H
G
F
E
D
In favor of null: $\log_e(\text{BF}_{01}) = 16.13$, sampling = independent multinomial, $a = 1.00$


Quality: Ideal
$\chi^2_{\text{Pearson}}(18) = 17.85$, $p = 0.466$, $\widehat{V}_{\text{Cramer}} = 0.00$, $\text{CI}_{95\%}$ [−0.14, −0.03], $n_{\text{obs}} = 785$
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
ns
4%
14%
16%
19%
17%
14%
16%
(n = 123)
**
6%
10%
17%
20%
14%
17%
17%
(n = 216)
***
5%
10%
12%
17%
16%
20%
19%
(n = 261)
***
9%
9%
14%
25%
17%
15%
11%
(n = 185)
SI2
SI1
VS2
VS1
clarity
color
J
I
H
G
F
E
D
In favor of null: $\log_e(\text{BF}_{01}) = 20.36$, sampling = independent multinomial, $a = 1.00$

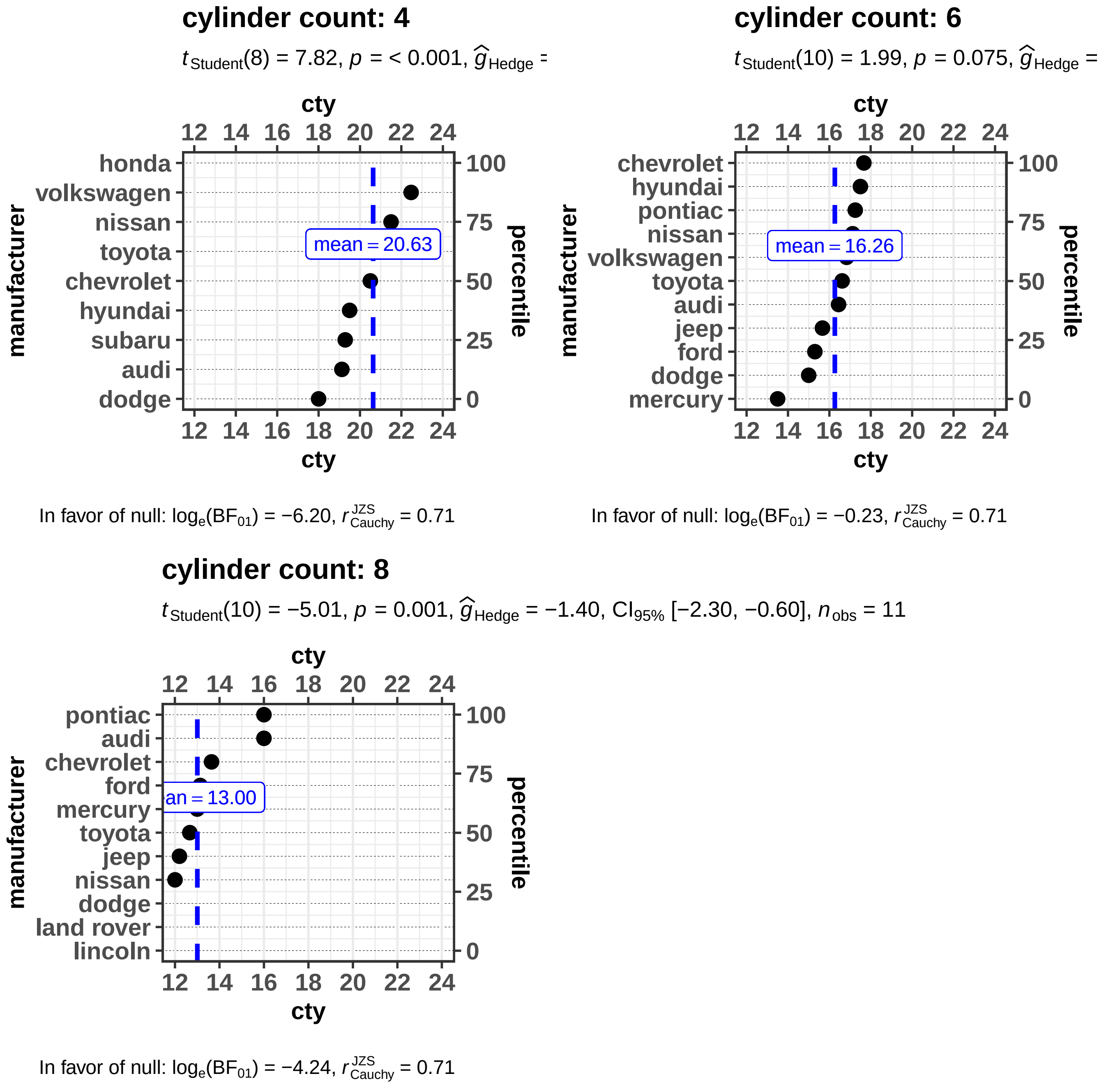

drv: f
$t_{\mathrm{Welch}}(103.71) = -0.66$, $p = 0.509$, $\widehat{g}_{\mathrm{Hedge}} = -0.13$,
45
40
35
30
25
20
hwy
$\widehat{\mu} = 27.91$
$\widehat{\mu} = 28.45$
1999
(n = 57)
2008
(n = 49)
year
In favor of null: $\log_e(\mathrm{BF}_{01}) = 1.39$, $r^{\mathrm{JZS}}_{\mathrm{Cauchy}} = 0.71$
drv: r
$t_{\mathrm{Welch}}(20.19) = -0.43$, $p = 0.675$, $\widehat{g}_{\mathrm{Hedge}} = -0.17$,
24
21
18
15
hwy
$\widehat{\mu} = 20.64$
$\widehat{\mu} = 21.29$
1999
(n = 11)
2008
(n = 14)
year
In favor of null: $\log_e(\mathrm{BF}_{01}) = 0.93$, $r^{\mathrm{JZS}}_{\mathrm{Cauchy}} = 0.71$



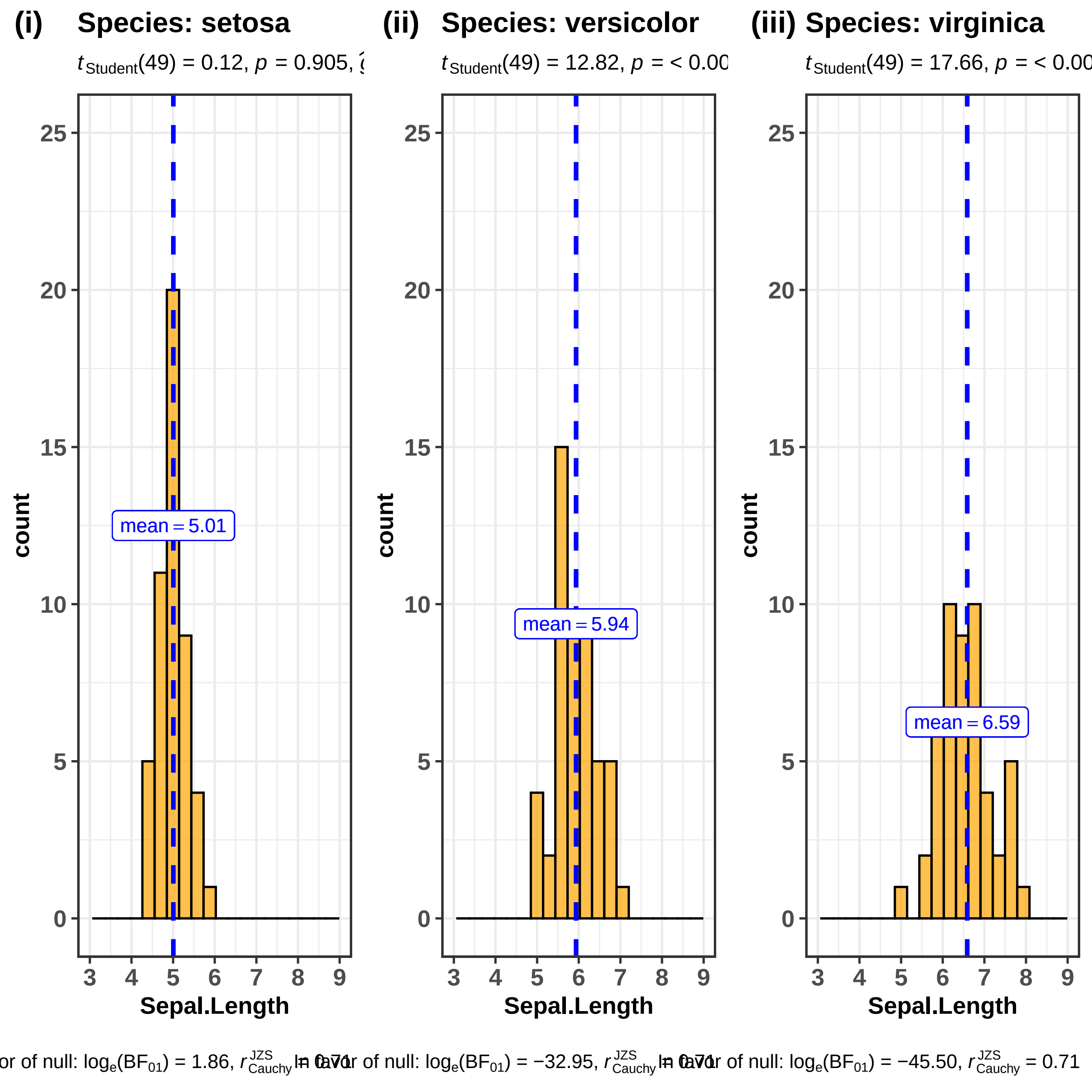
mpaa: PG
mpaa: R
rating
genre
Action
(n = 15)
Comedy
(n = 49)
Action
(n = 99)
Comedy
(n = 119)
$\widehat{\mu} = 6.67$
$\widehat{\mu} = 4.98$
$\widehat{\mu} = 5.17$
$\widehat{\mu} = 5.63$
1
2
3
4
5
6
7
8
9



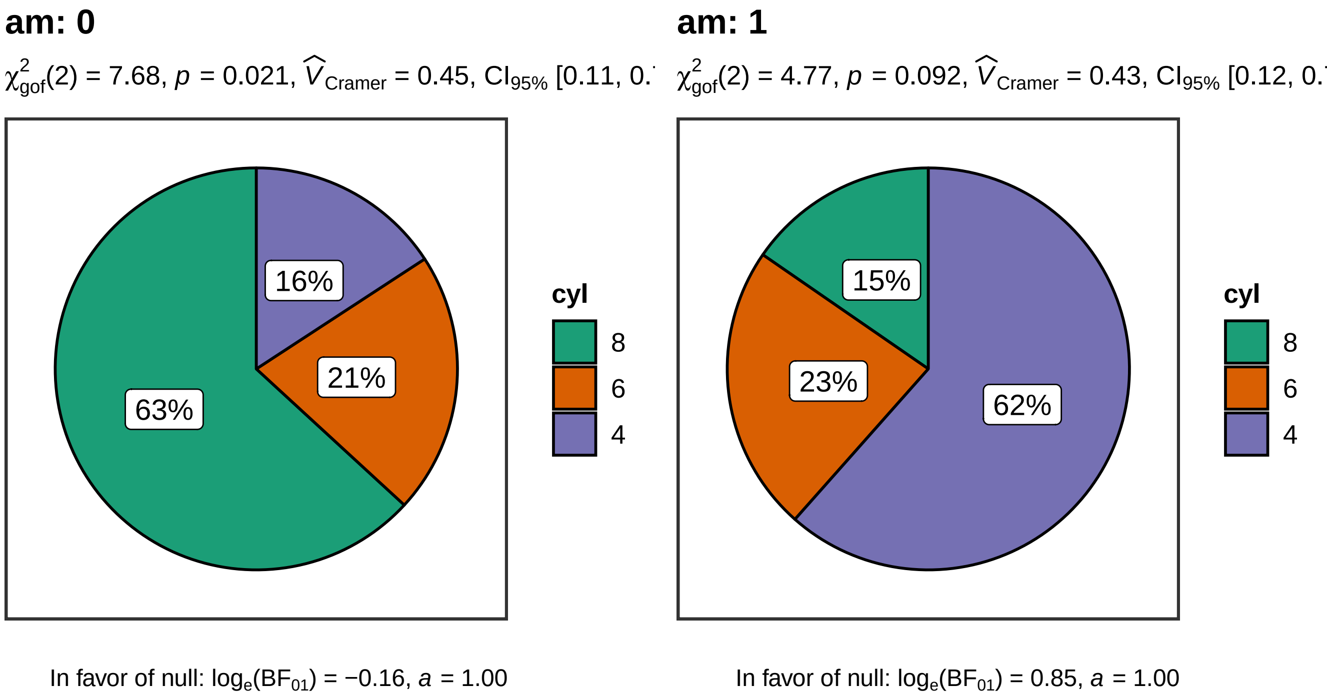
Species: setosa
sample size:
n = 50
correlation:
robust (% bend)
Petal.Width
Petal.Length
Sepal.Width
Sepal.Length
1.0
0.5
0.0
−0.5
−1.0
n−significant at p < 0.05 (Adjustment: Holm)
Species: versicolor
X = non−significant at p < 0.05 (Adjustment: Holm)
Species: virginica
n−significant at p < 0.05 (Adjustment: Holm)

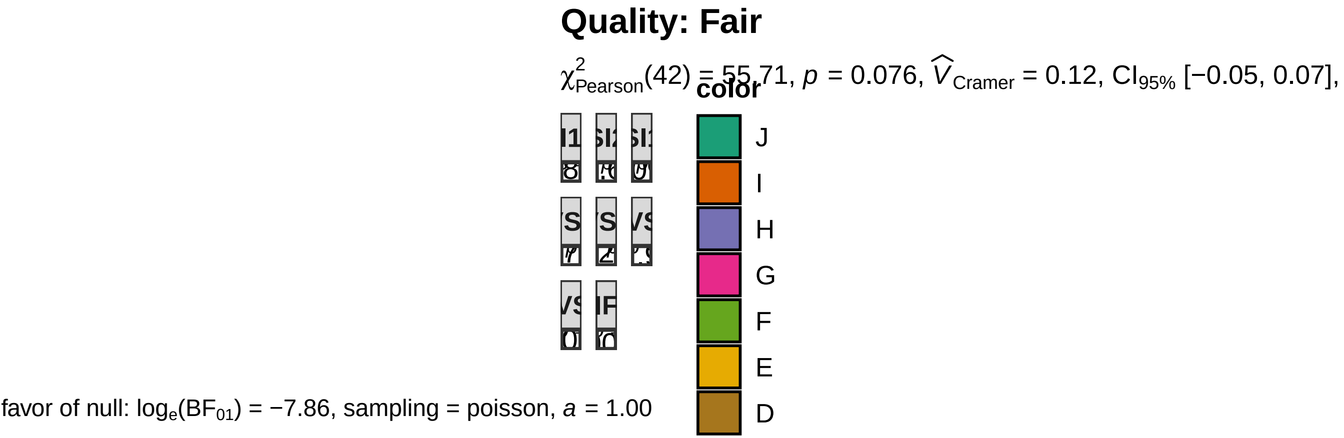


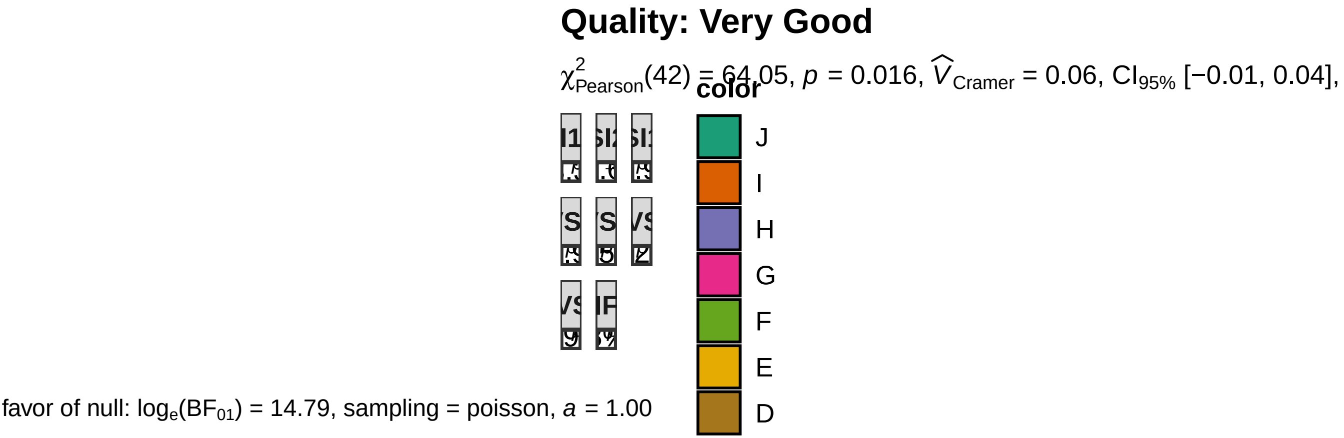
cylinder count: 4
$t_{\mathrm{Student}}(8) = 7.82$, $p = < 0.001$, $\widehat{g}_{\mathrm{Hedge}} =$
cty
12 14 16 18 20 22 24
honda
volkswagen
nissan
toyota
chevrolet
hyundai
subaru
audi
dodge
mean = 20.63
100 75 50 25 0
manufacturer
percentile
In favor of null: $\log_e(\mathrm{BF}_{01}) = -6.20$, $r^{\mathrm{JZS}}_{\mathrm{Cauchy}} = 0.71$
cylinder count: 6
$t_{\mathrm{Student}}(10) = 1.99$, $p = 0.075$, $\widehat{g}_{\mathrm{Hedge}} =$
chevrolet
hyundai
pontiac
nissan
volkswagen
toyota
audi
jeep
ford
dodge
mercury
mean = 16.26
In favor of null: $\log_e(\mathrm{BF}_{01}) = -0.23$, $r^{\mathrm{JZS}}_{\mathrm{Cauchy}} = 0.71$
cylinder count: 8
$t_{\mathrm{Student}}(10) = -5.01$, $p = 0.001$, $\widehat{g}_{\mathrm{Hedge}} = -1.40$, $\mathrm{CI}_{95\%}$ [−2.30, −0.60], $n_{\mathrm{obs}} = 11$
pontiac
audi
chevrolet
ford
mercury
toyota
jeep
nissan
dodge
land rover
lincoln
an = 13.00
In favor of null: $\log_e(\mathrm{BF}_{01}) = -4.24$, $r^{\mathrm{JZS}}_{\mathrm{Cauchy}} = 0.71$

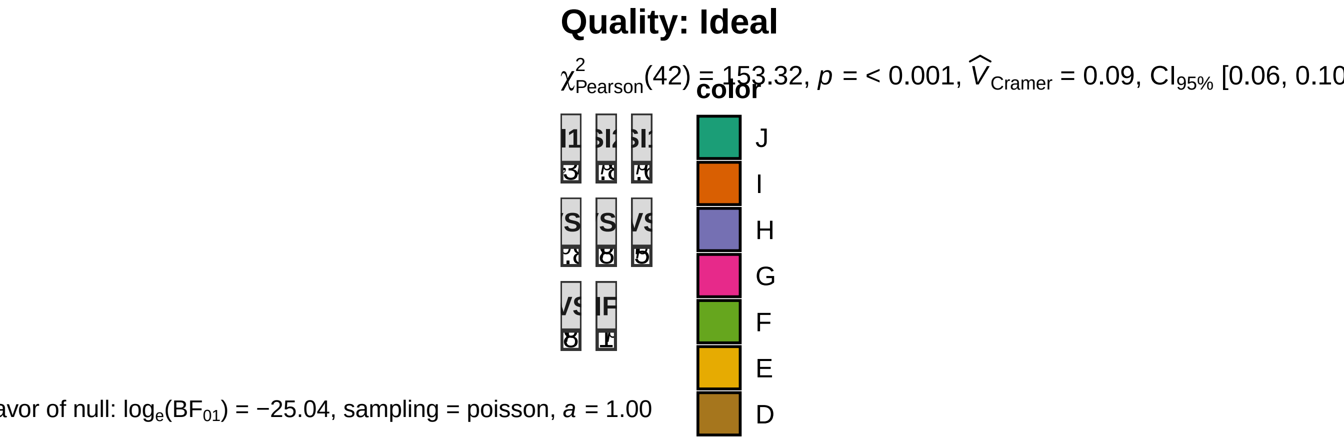


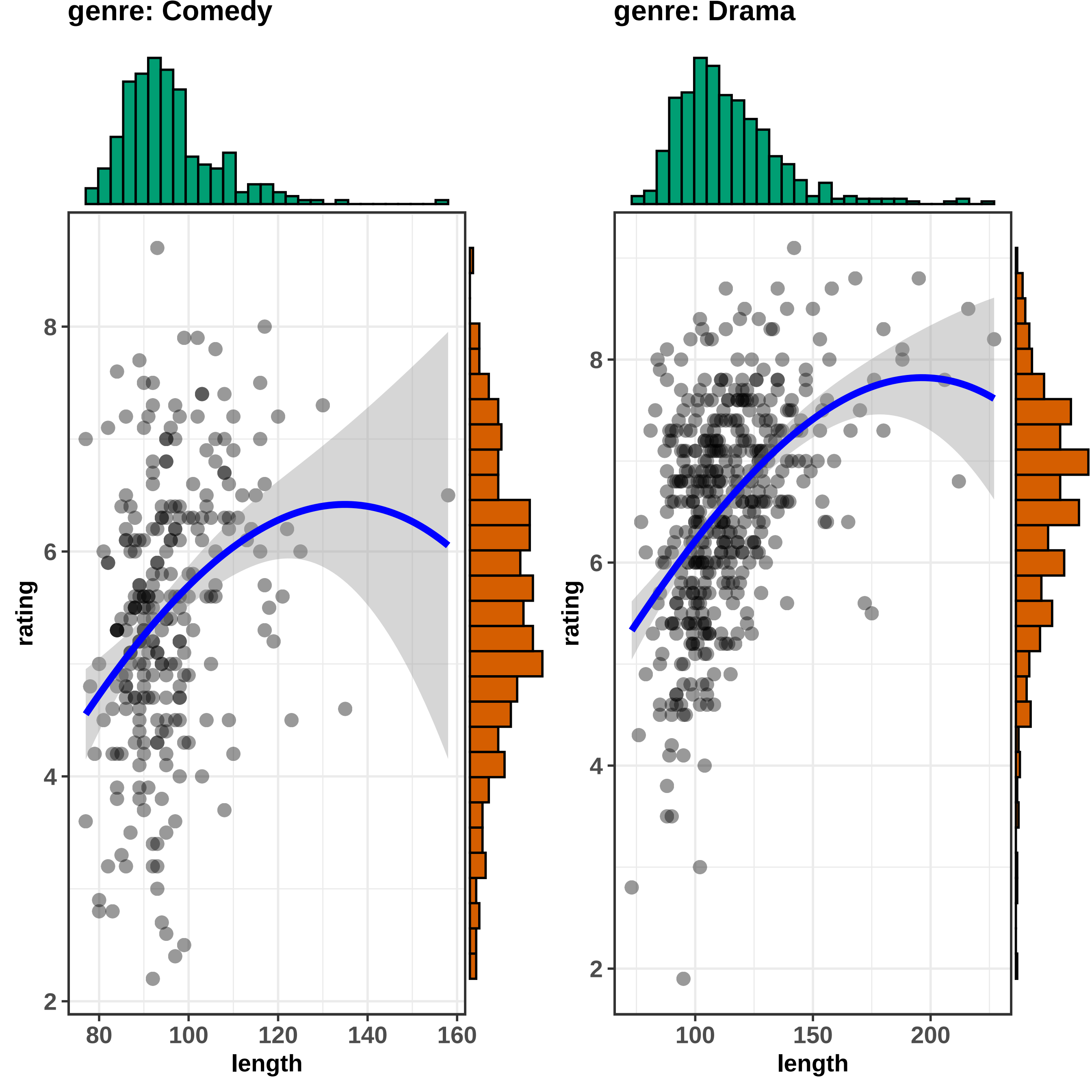
(i) Species: setosa
$t_{\mathrm{Student}}(49) = 0.12$, $p = 0.905$,
mean = 5.01
(ii) Species: versicolor
$t_{\mathrm{Student}}(49) = 12.82$, $p = < 0.00$
mean = 5.94
(iii) Species: virginica
$t_{\mathrm{Student}}(49) = 17.66$, $p = < 0.00$
mean = 6.59
count
Sepal.Length
25
20
15
10
5
0
3
4
5
6
7
8
9
or of null: $\log_e(\mathrm{BF}_{01}) = 1.86$, $r^{\mathrm{JZS}}_{\mathrm{Cauchy}} = 0.71$
In favor of null: $\log_e(\mathrm{BF}_{01}) = -32.95$, $r^{\mathrm{JZS}}_{\mathrm{Cauchy}} = 0.71$
In favor of null: $\log_e(\mathrm{BF}_{01}) = -45.50$, $r^{\mathrm{JZS}}_{\mathrm{Cauchy}} = 0.71$

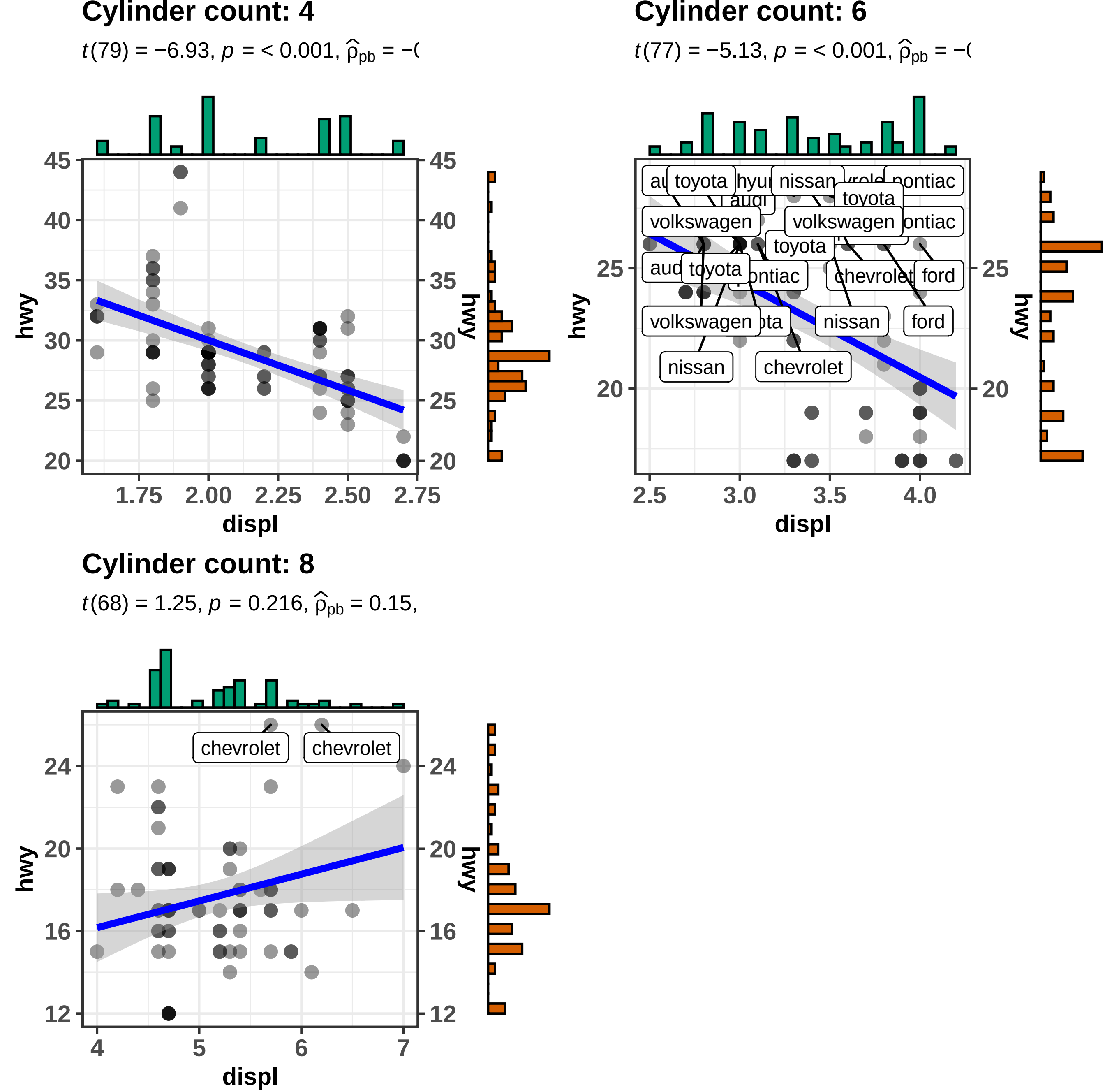

am: 0
$\chi^2_{gof}(2) = 7.68$, $p = 0.021$, $\widehat{V}_{Cramer} = 0.45$, $CI_{95\%}$ [0.11, 0.
16%
21%
63%
cyl
8
6
4
In favor of null: $\log_e(BF_{01}) = -0.16$, $a = 1.00$
am: 1
$\chi^2_{gof}(2) = 4.77$, $p = 0.092$, $\widehat{V}_{Cramer} = 0.43$, $CI_{95\%}$ [0.12, 0.
15%
23%
62%
cyl
8
6
4
In favor of null: $\log_e(BF_{01}) = 0.85$, $a = 1.00$


Quality: Fair
χ²Pearson(42) = 55.71, p = 0.076, V̂Cramer = 0.12, CI95% [−0.05, 0.07],
favor of null: loge(BF01) = −7.86, sampling = poisson, a = 1.00
color
J
I
H
G
F
E
D

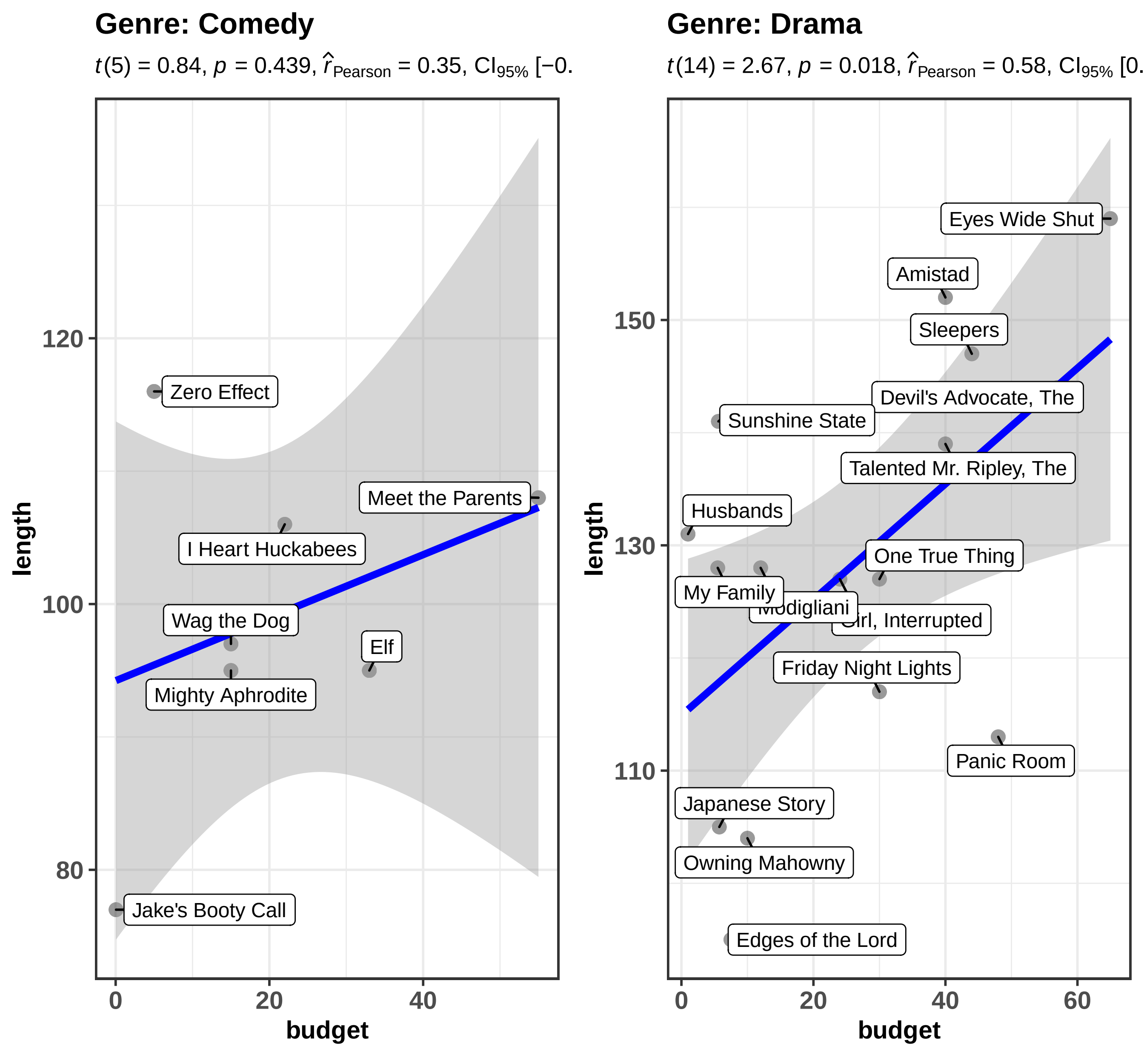

Quality: Very Good
χ²Pearson(42) = 64.05, p = 0.016, V̂Cramer = 0.06, CI95% [−0.01, 0.04],
favor of null: loge(BF01) = 14.79, sampling = poisson, a = 1.00
color
J
I
H
G
F
E
D


Quality: Ideal
χ²Pearson(42) = 153.32, p = < 0.001, V̂Cramer = 0.09, CI95% [0.06, 0.10
avor of null: loge(BF01) = −25.04, sampling = poisson, a = 1.00
color
J
I
H
G
F
E
D

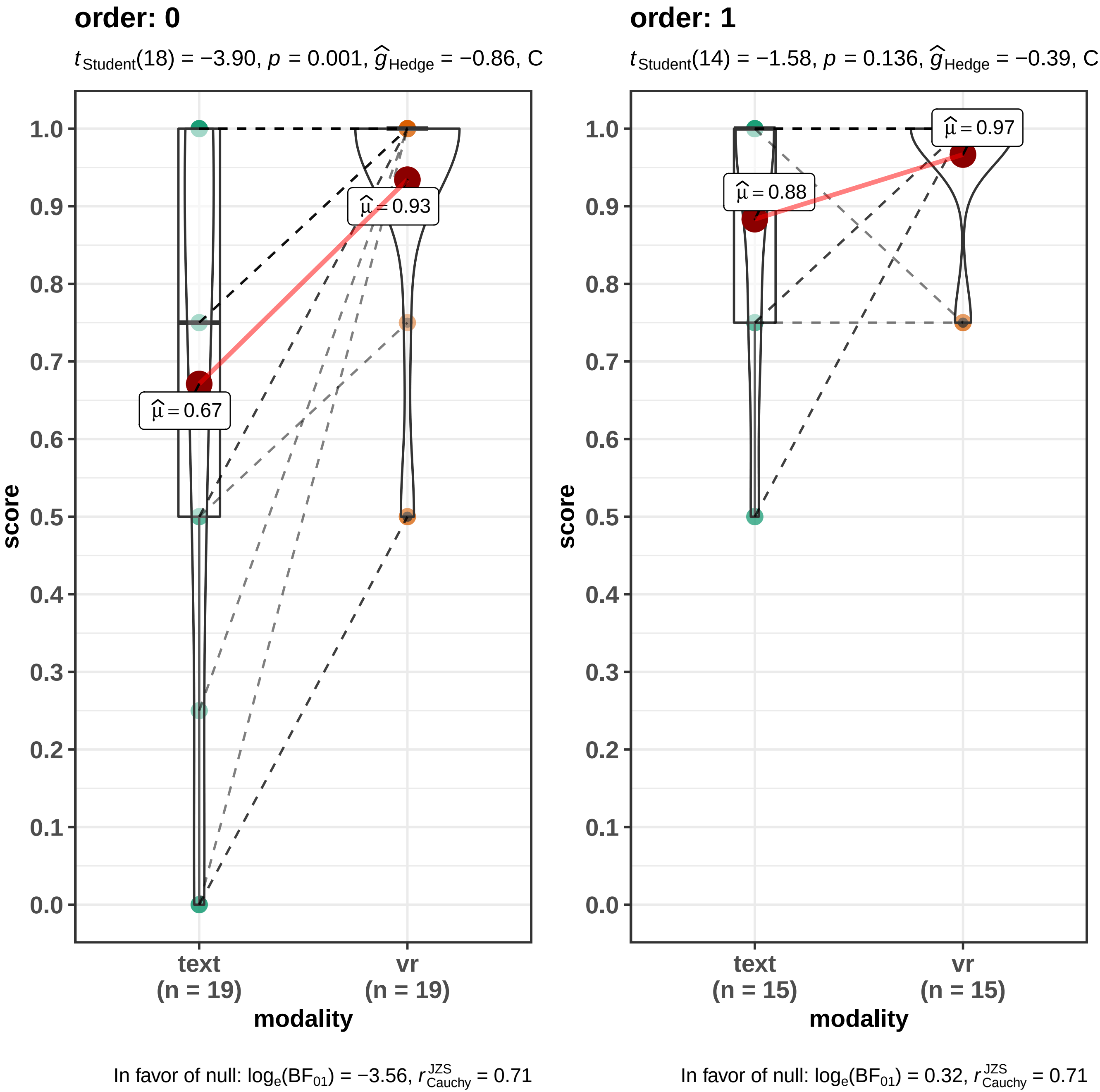

genre: Comedy
genre: Drama
rating
length
2
4
6
8
80
100
120
140
160
150
200



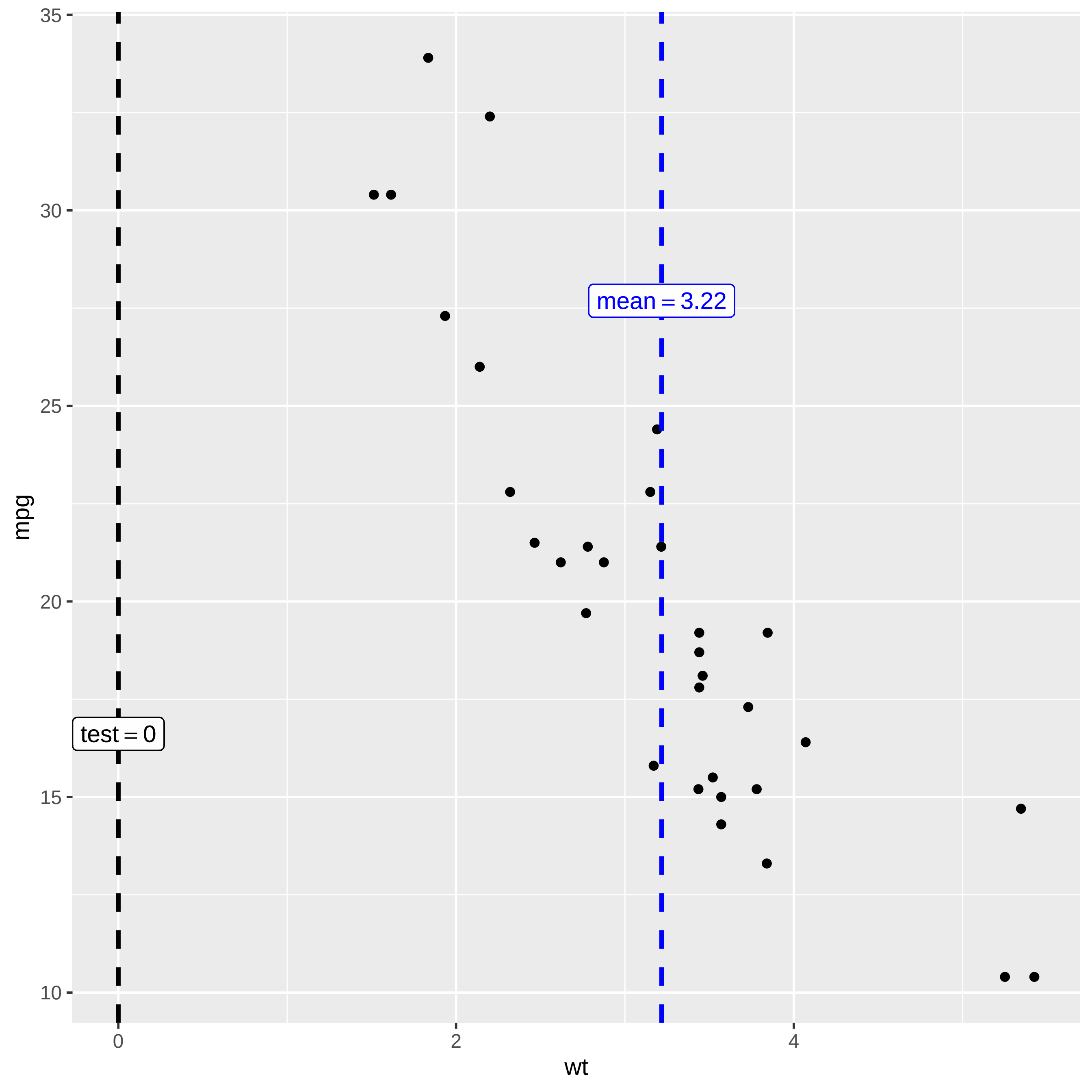
Cylinder count: 4
t(79) = −6.93, p = < 0.001, ρ̂pb = −(
hwy
displ
1.75
2.00
2.25
2.50
2.75
20
25
30
35
40
45
Cylinder count: 6
t(77) = −5.13, p = < 0.001, ρ̂pb = −(
hwy
displ
2.5
3.0
3.5
4.0
20
25
toyota
nissan
pontiac
volkswagen
toyota
chevrolet
ford
nissan
chevrolet
Cylinder count: 8
t(68) = 1.25, p = 0.216, ρ̂pb = 0.15,
hwy
displ
4
5
6
7
12
16
20
24
chevrolet
chevrolet

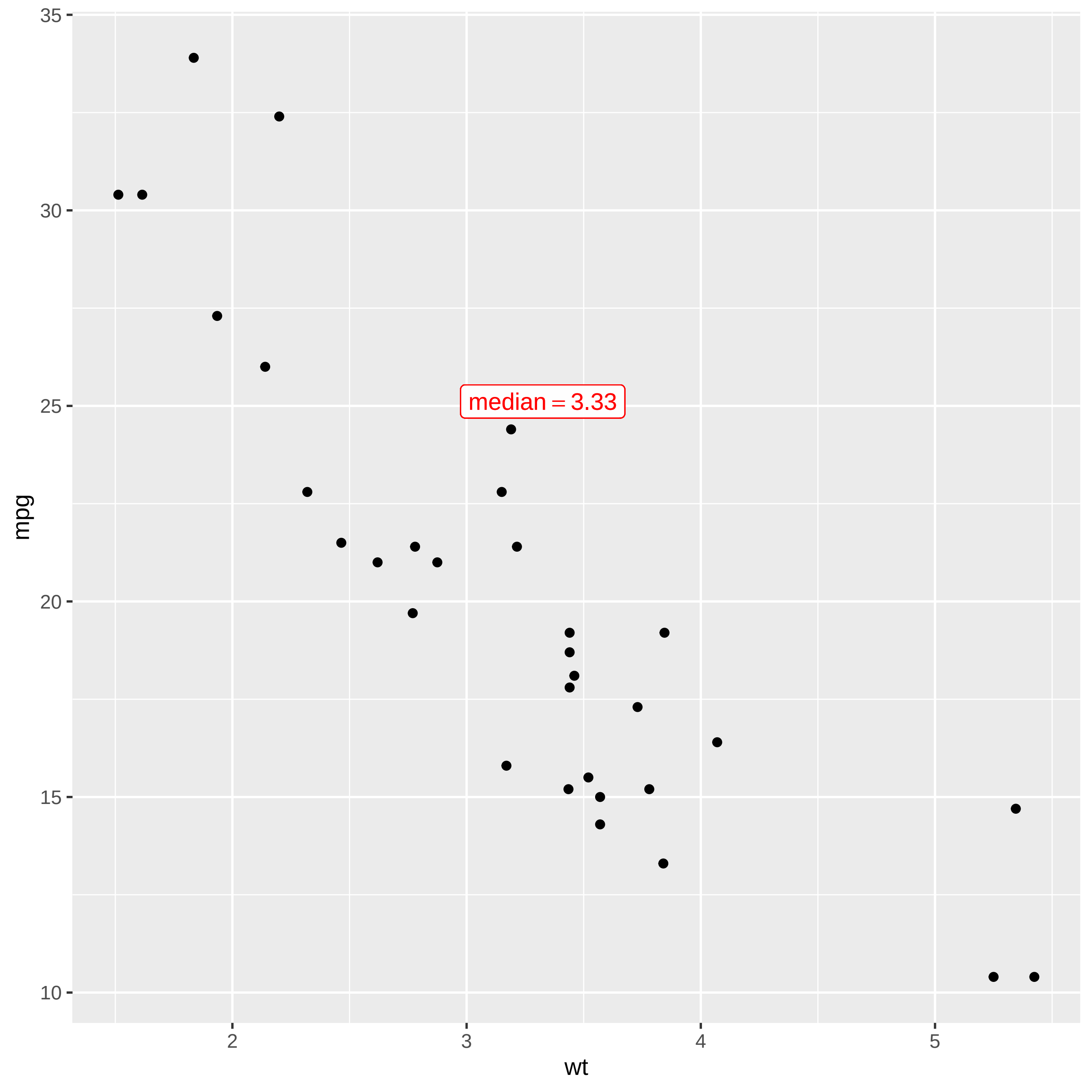


All movies have IMDB rating equal to 7.

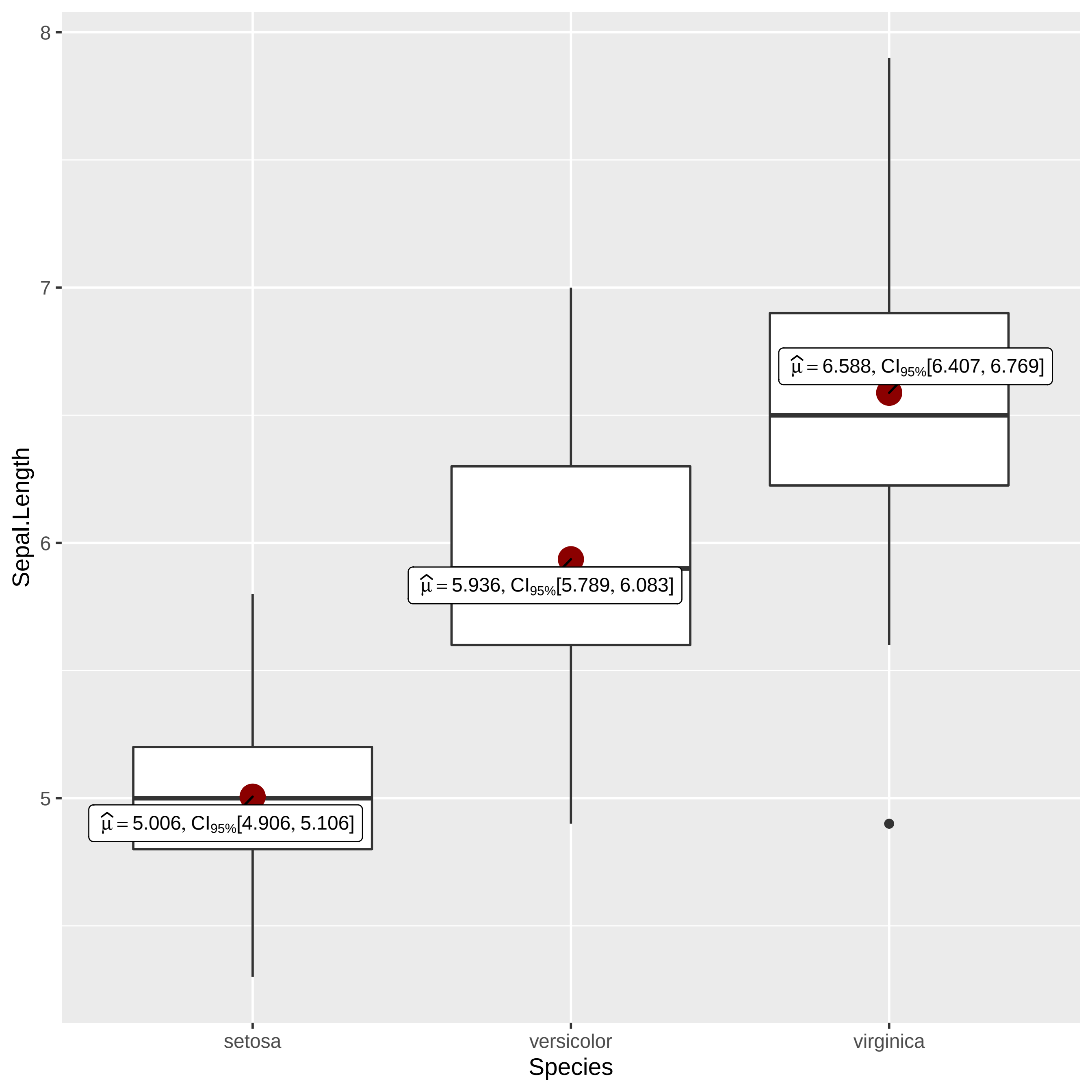


order: 0
$t_{\text{Student}}(18) = -3.90$, $p = 0.001$, $\widehat{g}_{\text{Hedge}} = -0.86$, C
order: 1
$t_{\text{Student}}(14) = -1.58$, $p = 0.136$, $\widehat{g}_{\text{Hedge}} = -0.39$, C
$\widehat{\mu} = 0.67$
$\widehat{\mu} = 0.93$
$\widehat{\mu} = 0.88$
$\widehat{\mu} = 0.97$
score
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
text
(n = 19)
vr
(n = 19)
text
(n = 15)
vr
(n = 15)
modality
In favor of null: $\log_e(\text{BF}_{01}) = -3.56$, $r_{\text{Cauchy}}^{\text{JZS}} = 0.71$
In favor of null: $\log_e(\text{BF}_{01}) = 0.32$, $r_{\text{Cauchy}}^{\text{JZS}} = 0.71$


mean = 3.22
test = 0
35
30
25
20
15
10
0
2
4
mpg
wt



35
30
25
20
15
10
mpg
median = 3.33
2
3
4
5
wt



8
7
6
5
$\hat{\mu} = 6.588$, $CI_{95\%}$[6.407, 6.769]
$\hat{\mu} = 5.936$, $CI_{95\%}$[5.789, 6.083]
$\hat{\mu} = 5.006$, $CI_{95\%}$[4.906, 5.106]
Sepal.Length
setosa
versicolor
virginica
Species