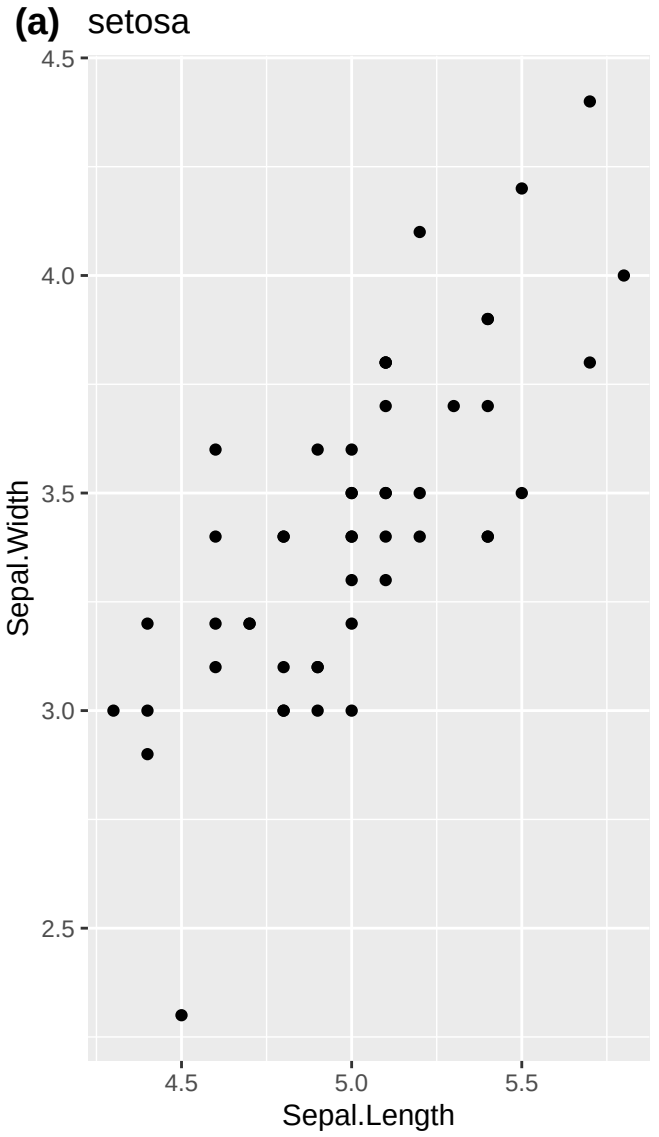
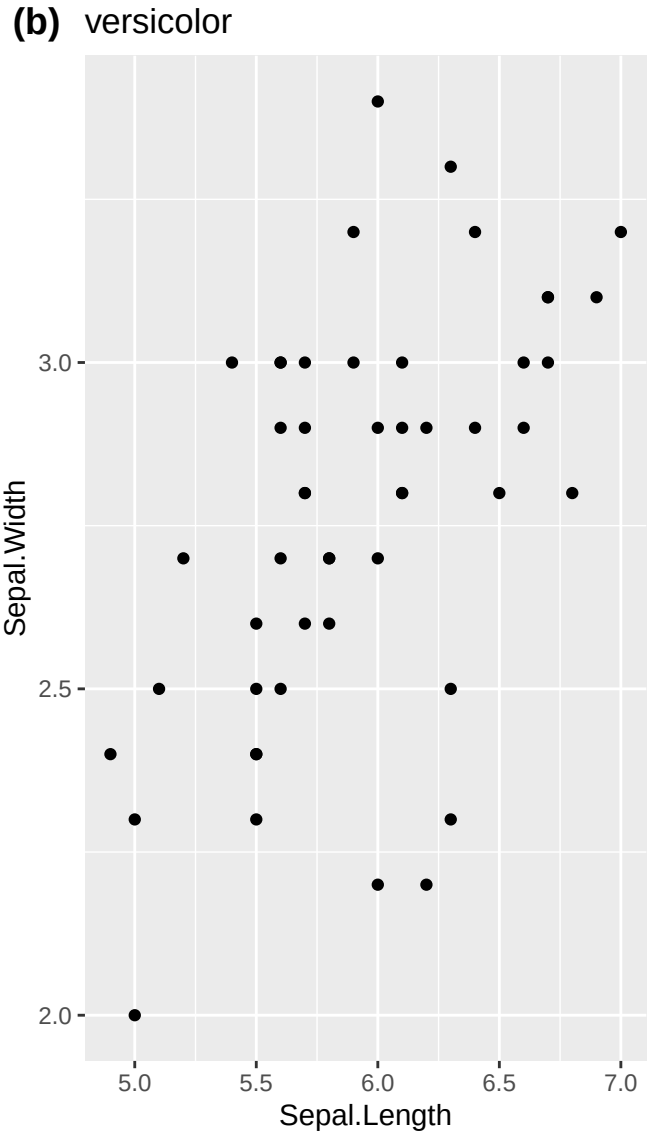
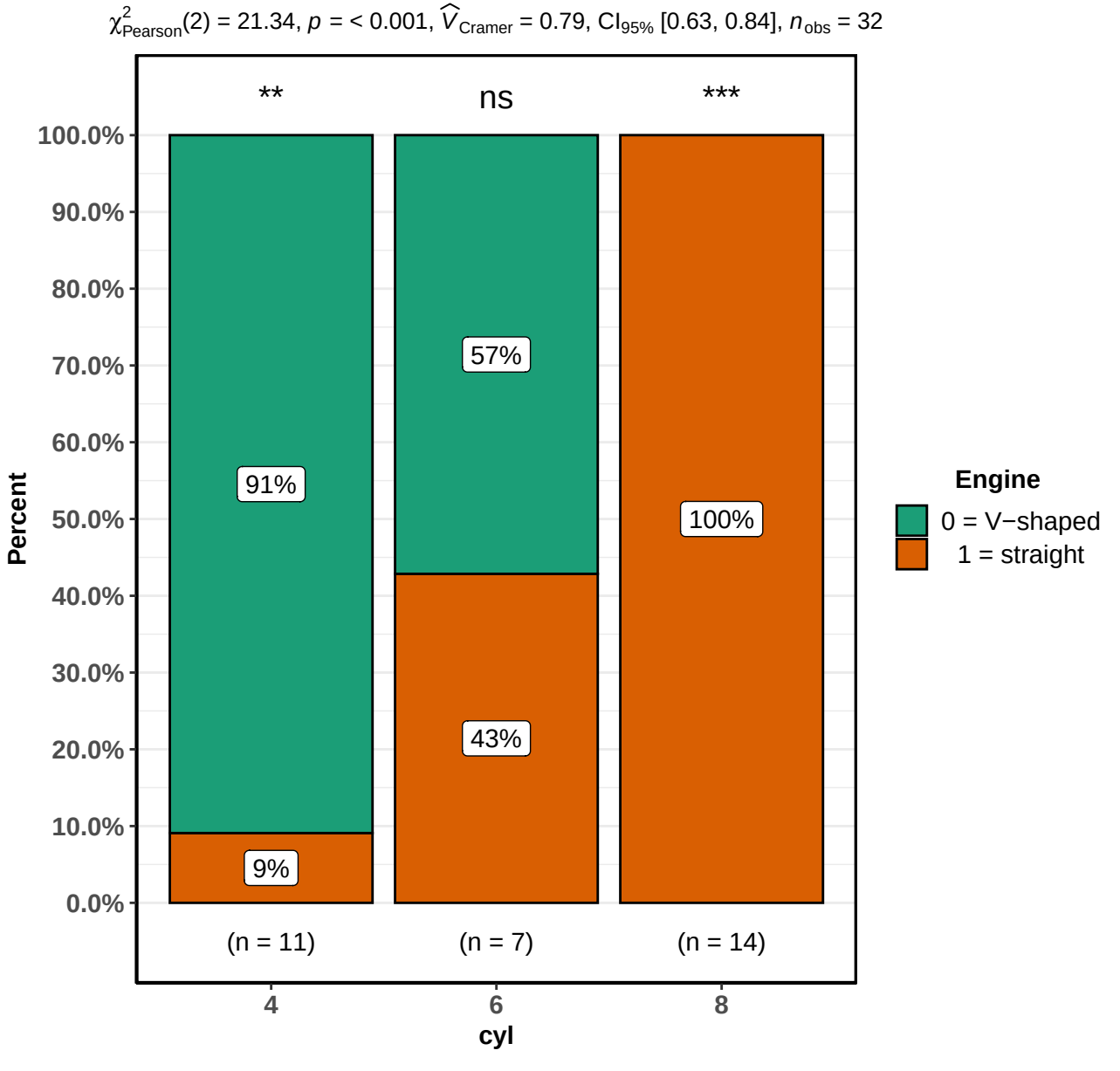
# Dataset: Iris Flower dataset

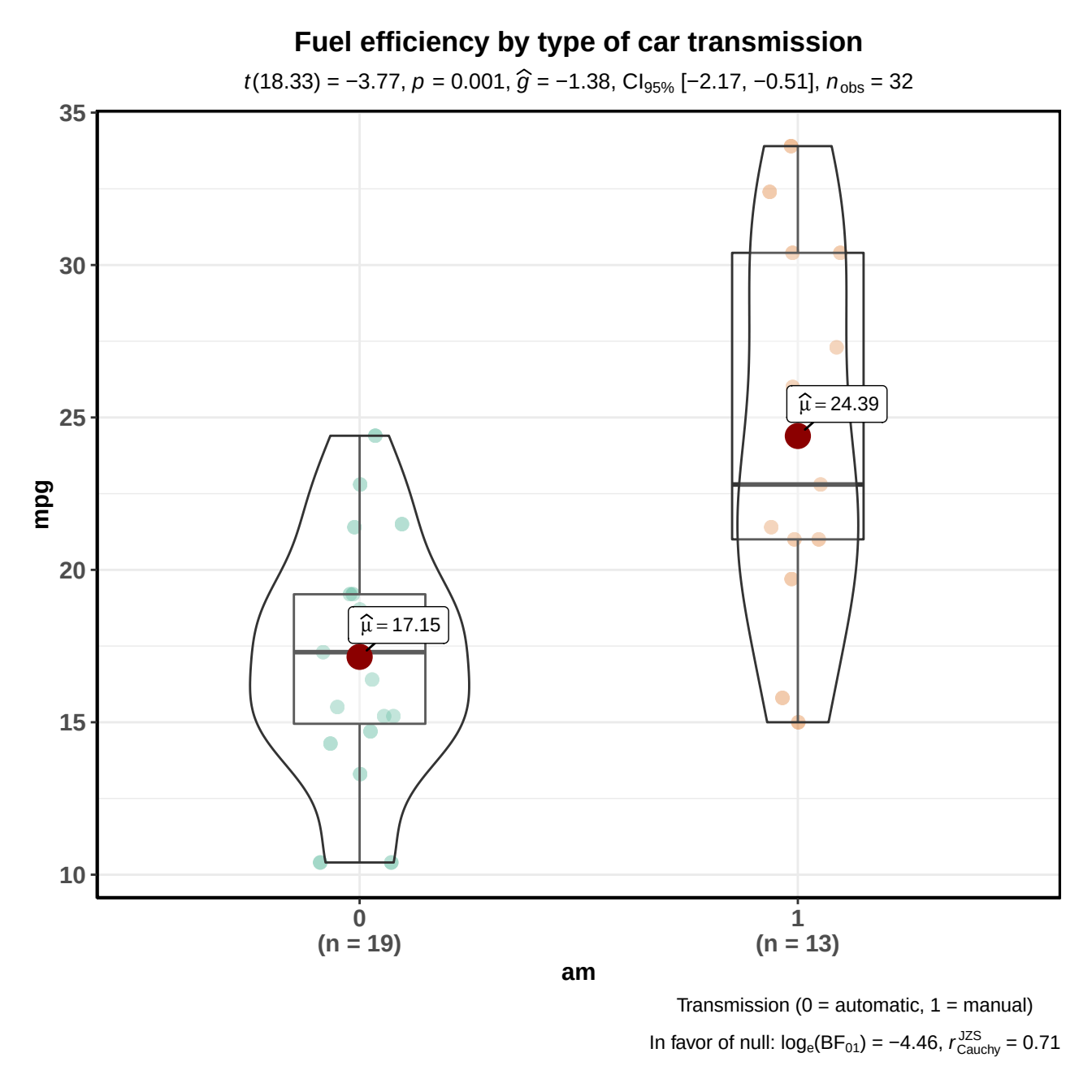


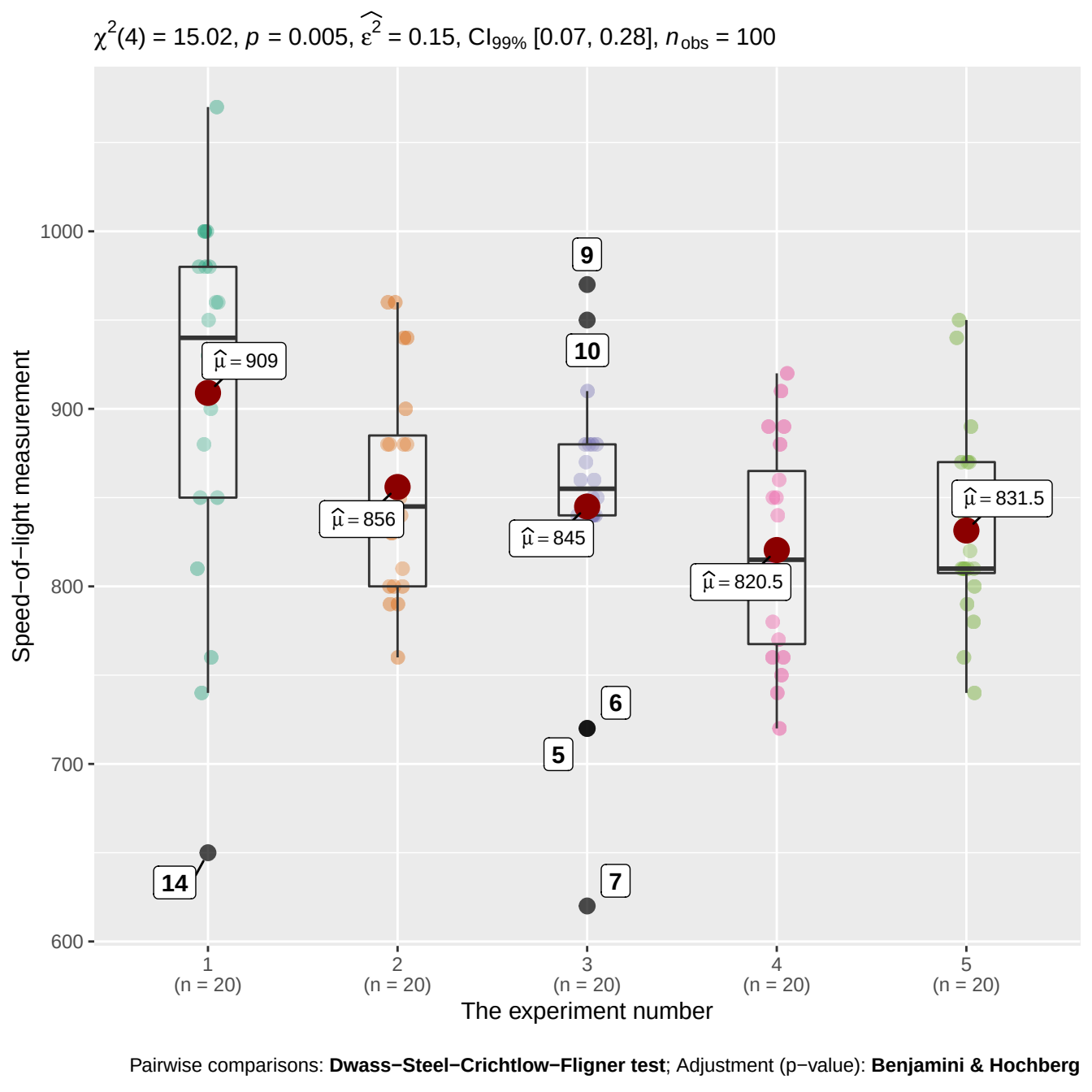



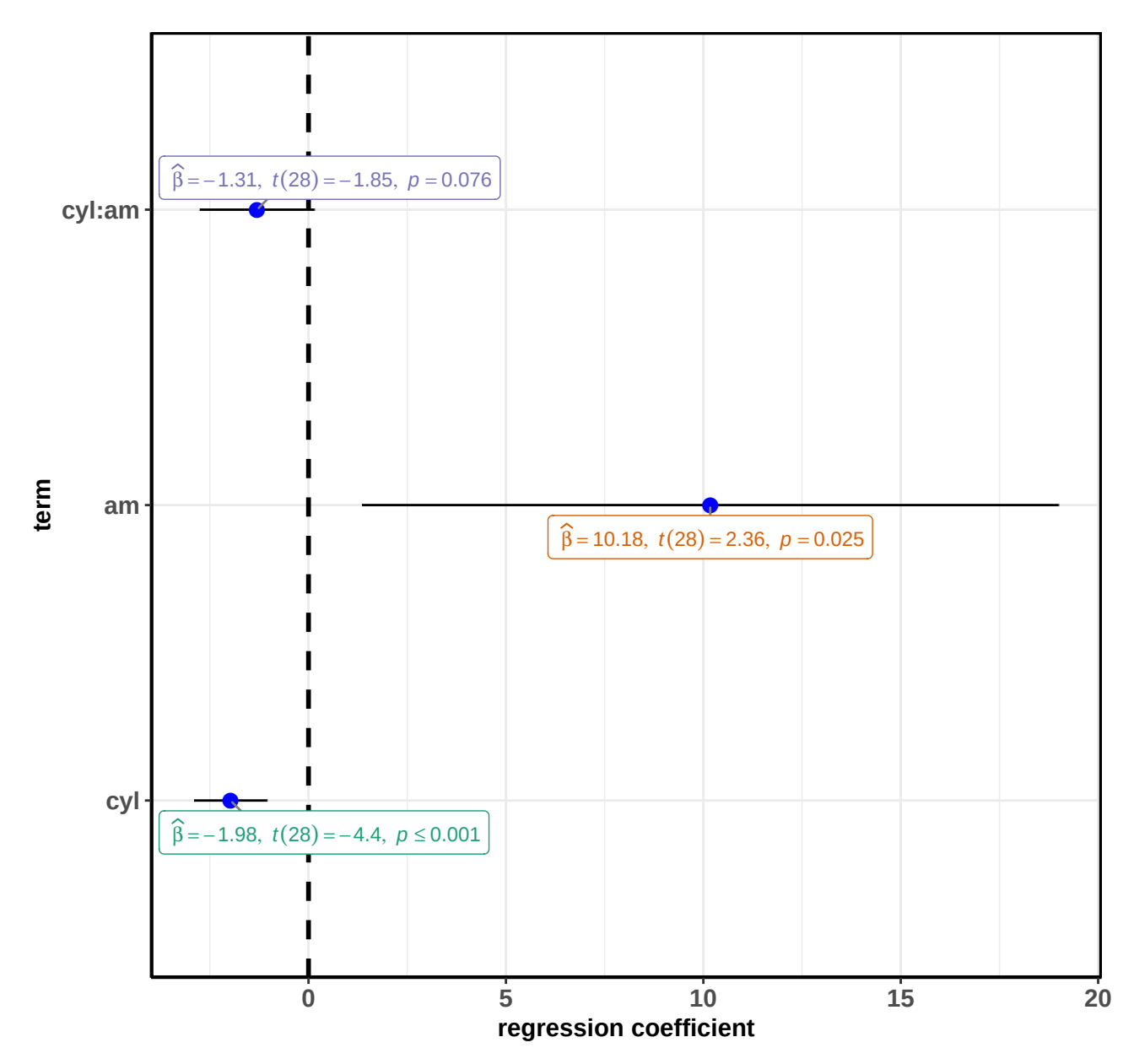

Note: Only two species of flower are displayed



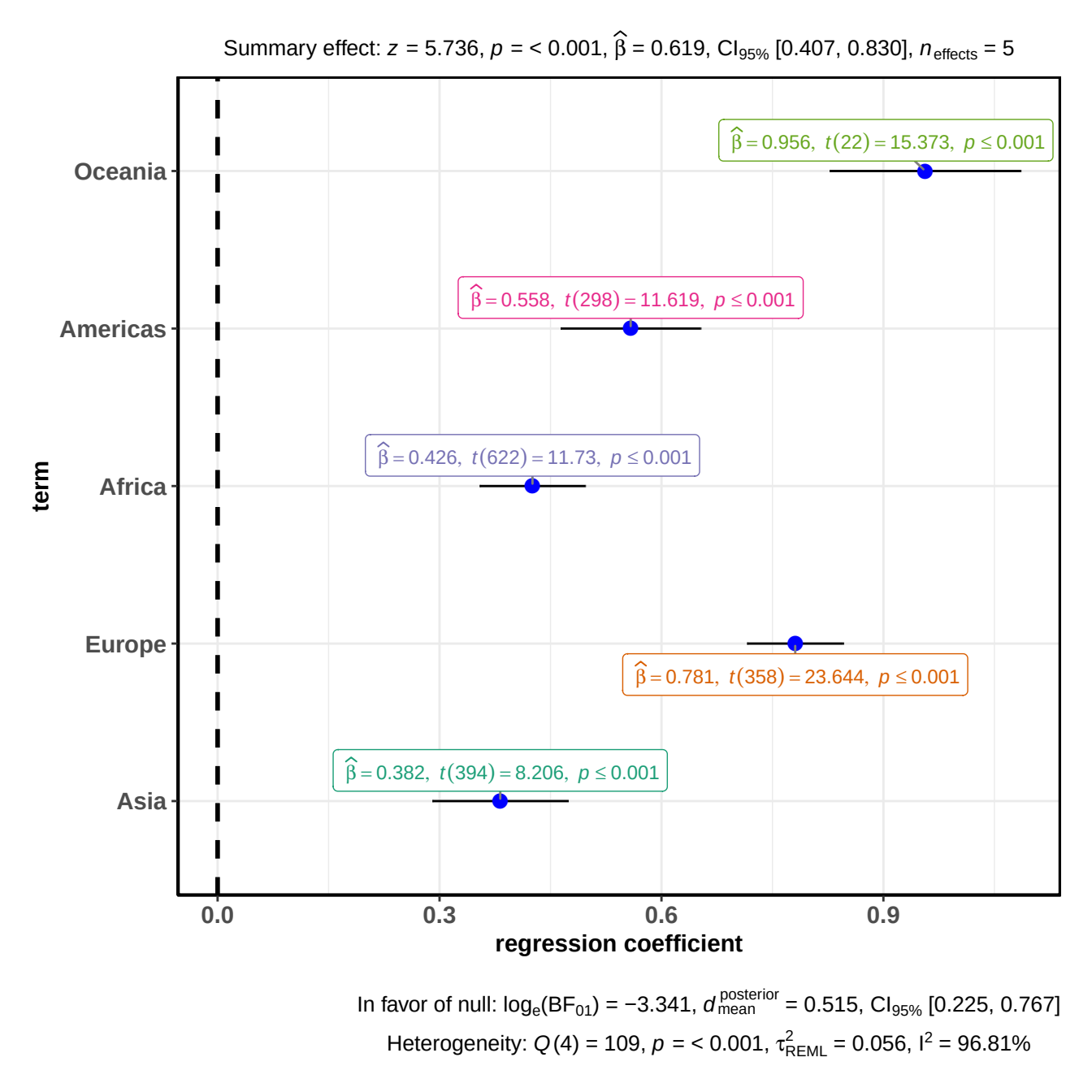

In favor of null: $\log_e(BF_{01}) = -10.31$, sampling = independent multinomial, $a = 1.00$

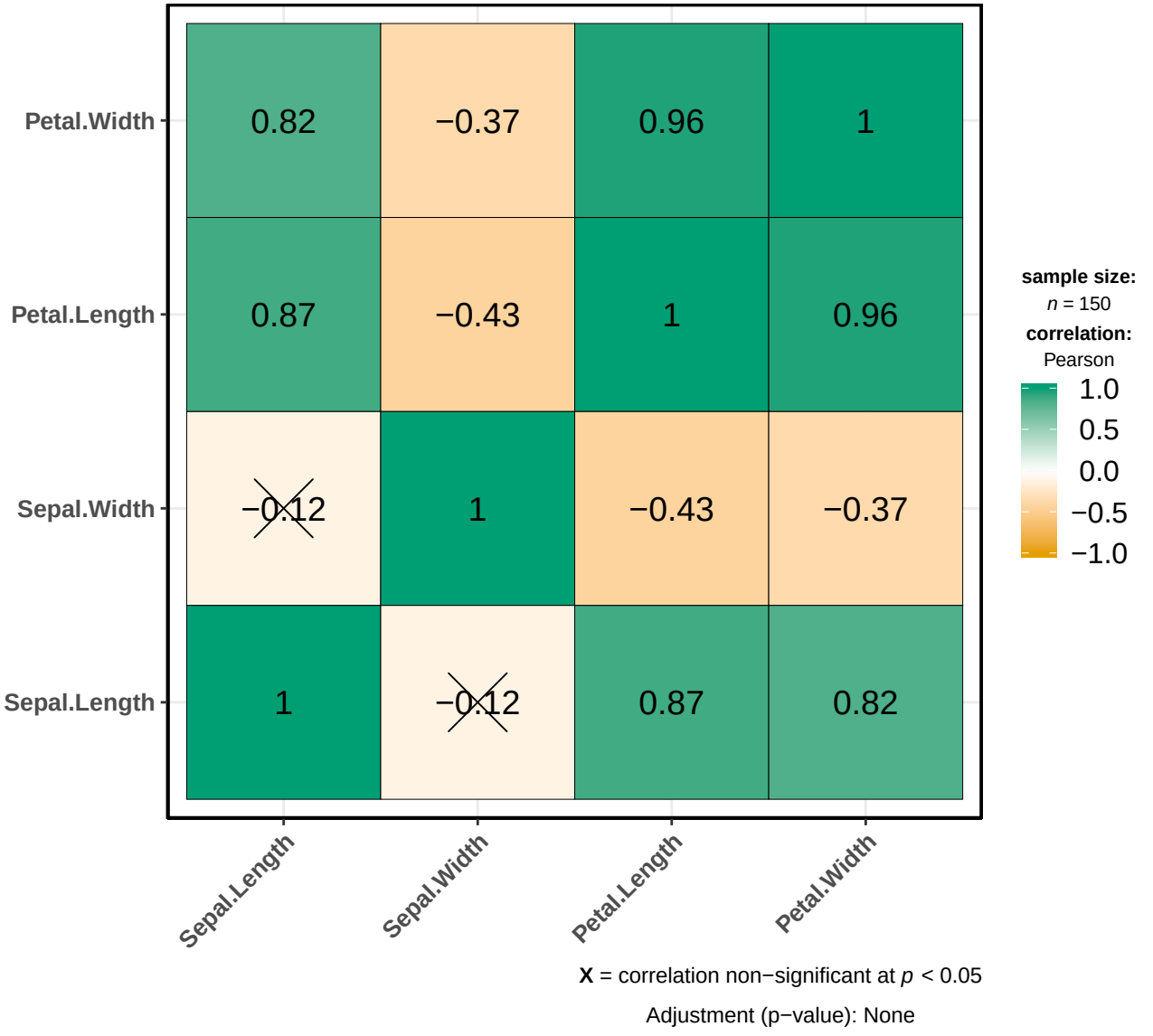

Fuel efficiency by type of car transmission
$t(18.33) = -3.77$, $p = 0.001$, $\hat{g} = -1.38$, $CI_{95\%}$ [−2.17, −0.51], $n_{obs} = 32$
mpg
35
30
25
20
15
10
$\hat{\mu} = 17.15$
$\hat{\mu} = 24.39$
0
(n = 19)
1
(n = 13)
am
Transmission (0 = automatic, 1 = manual)
In favor of null: $\log_e(BF_{01}) = -4.46$, $r^{JZS}_{Cauchy} = 0.71$

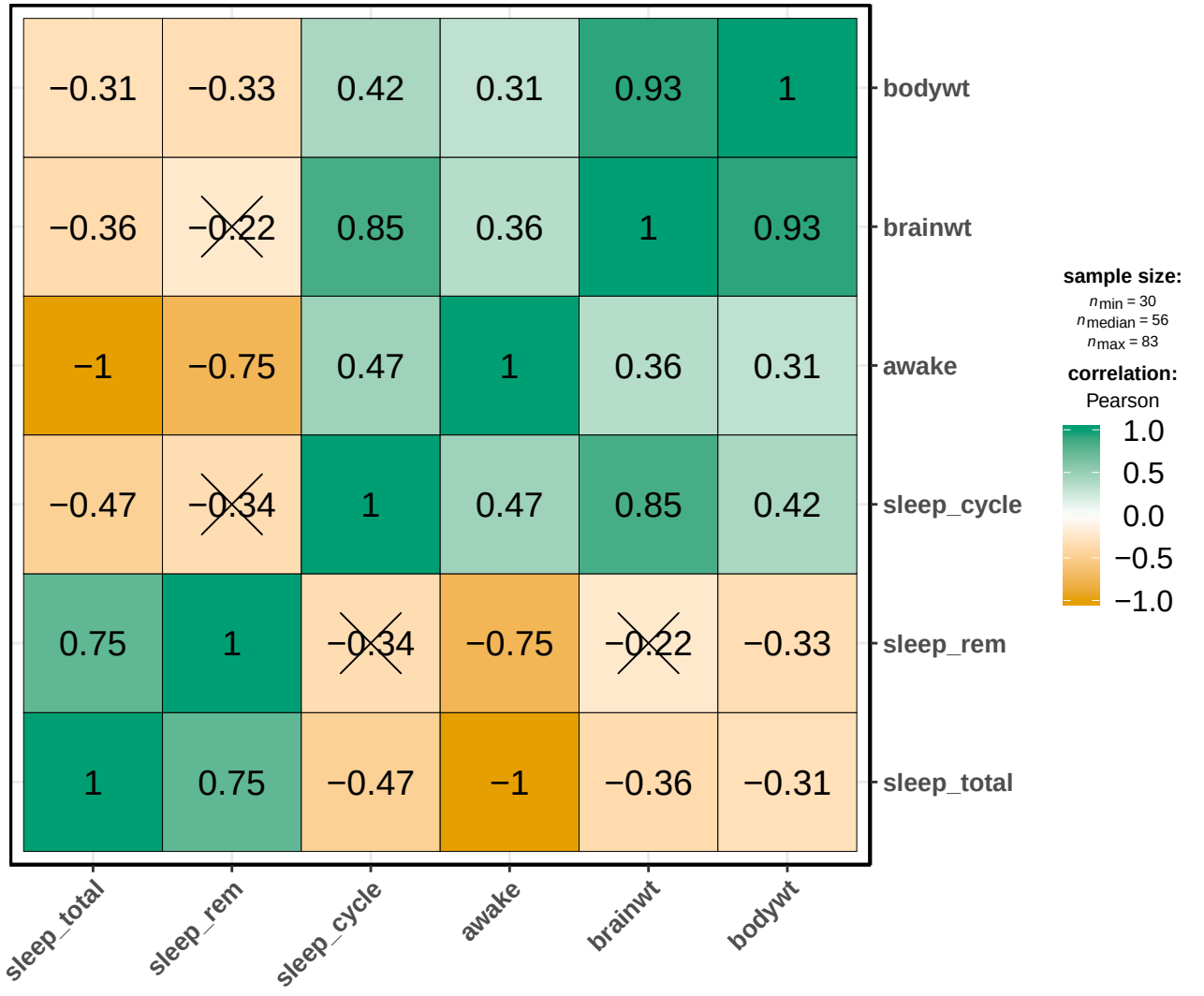

$\chi^2(4) = 15.02$, $p = 0.005$, $\widehat{\varepsilon^2} = 0.15$, $CI_{99\%}$ [0.07, 0.28], $n_{obs} = 100$
Speed−of−light measurement
1000
900
800
700
600
$\hat{\mu} = 909$
$\hat{\mu} = 856$
$\hat{\mu} = 845$
$\hat{\mu} = 820.5$
$\hat{\mu} = 831.5$
9
10
6
5
7
14
1
(n = 20)
2
(n = 20)
3
(n = 20)
4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

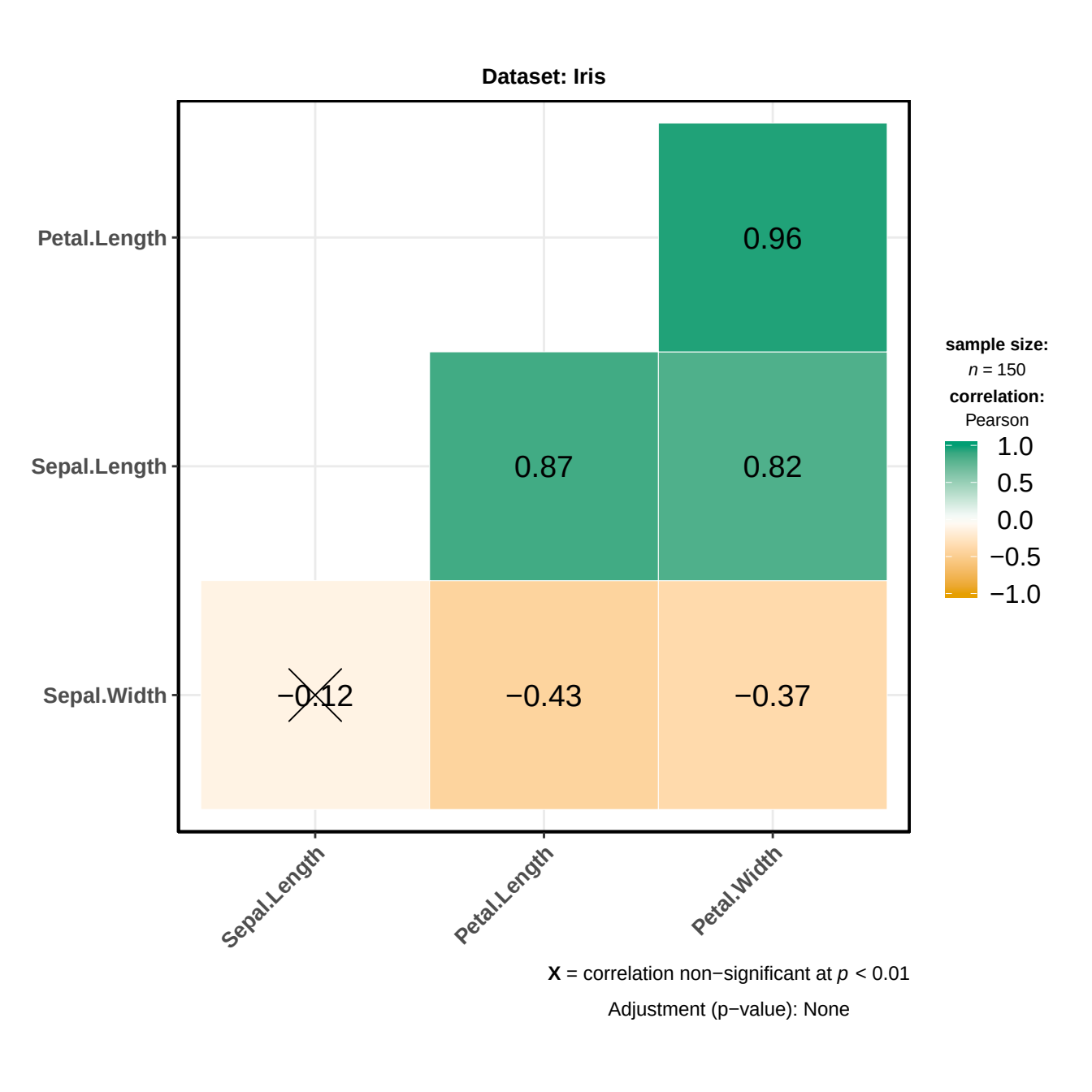


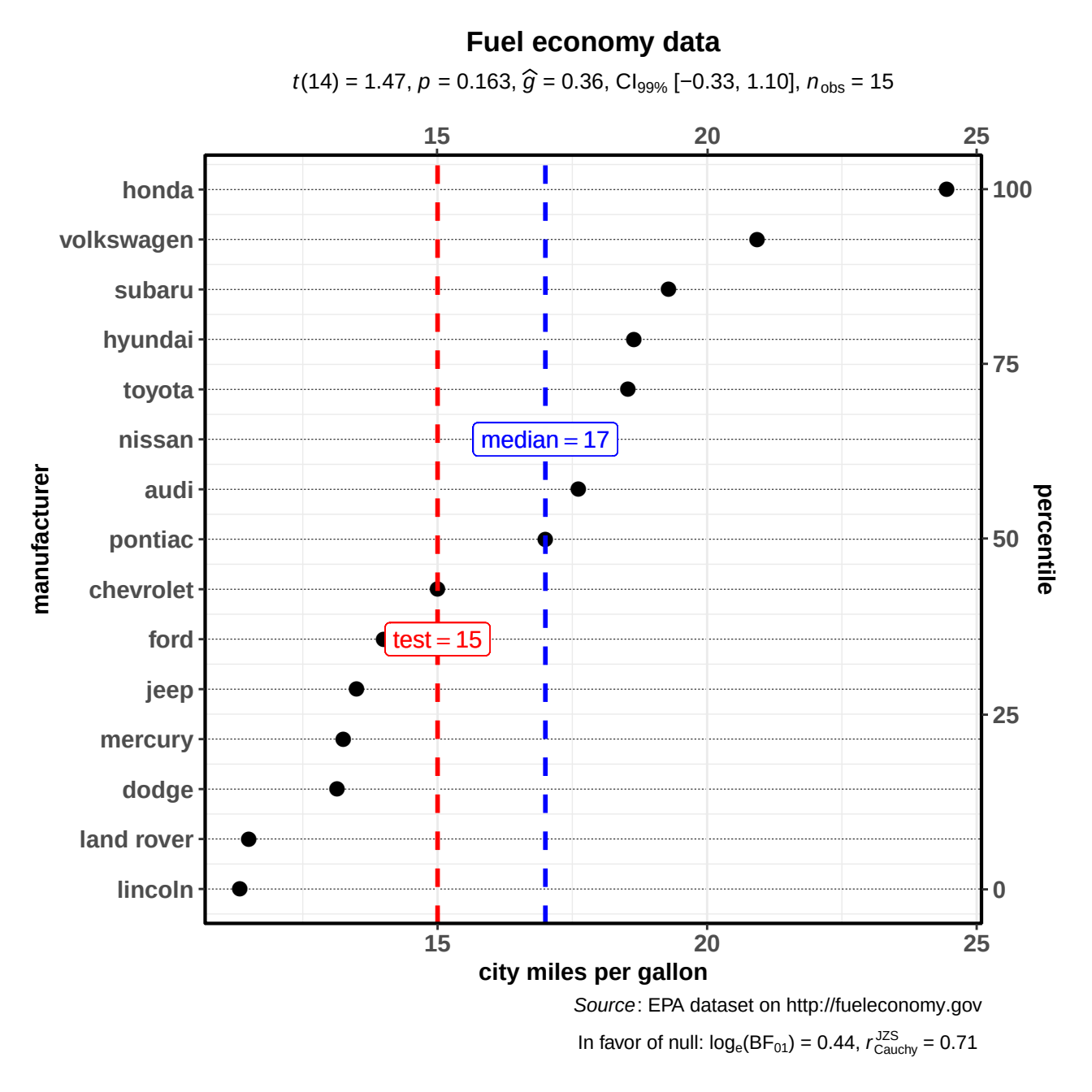

AIC = 166, BIC = 173

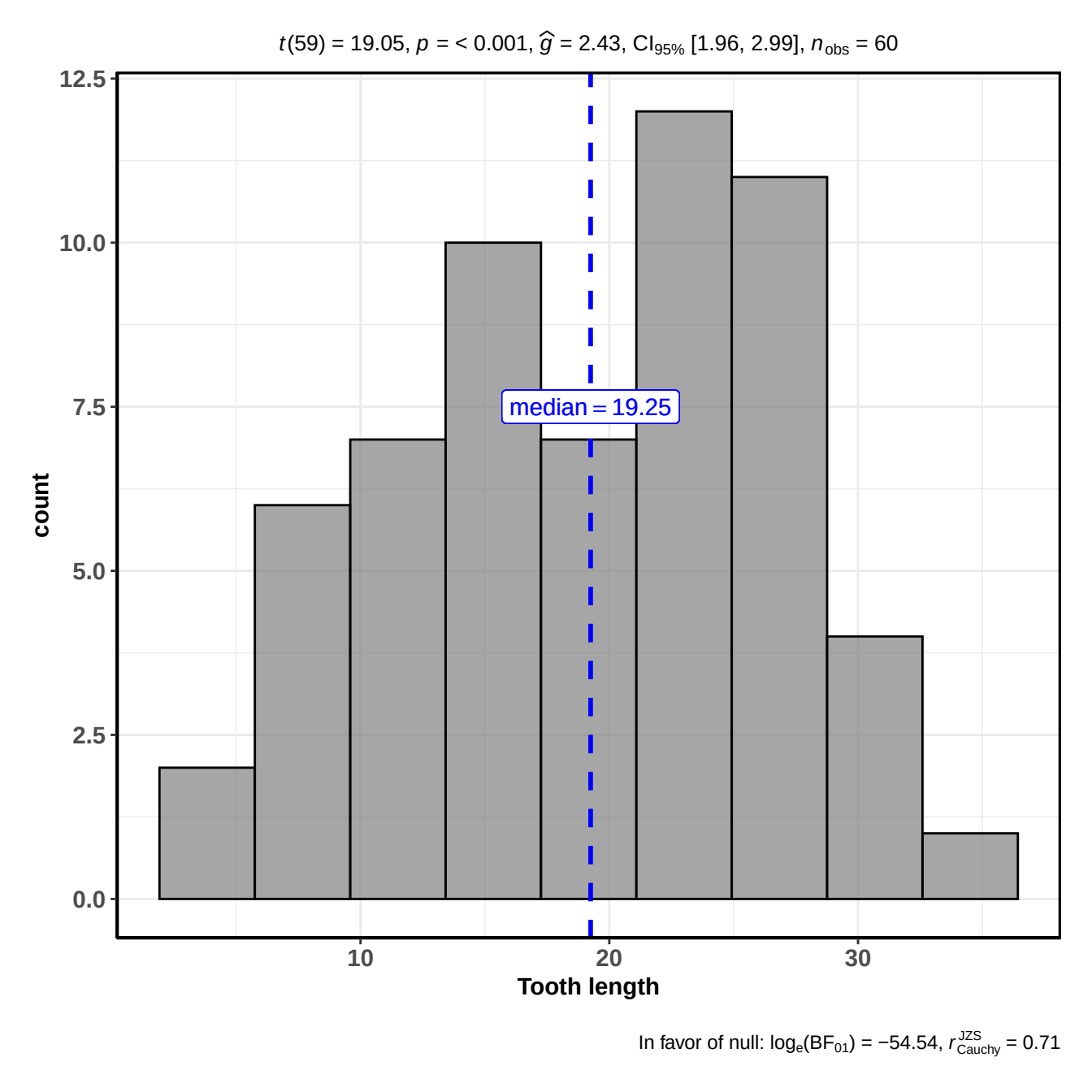

Summary effect: $z$ = 5.736, $p$ = < 0.001, $\hat{\beta}$ = 0.619, $CI_{95\%}$ [0.407, 0.830], $n_{effects}$ = 5
$\hat{\beta} = 0.956,\ t(22) = 15.373,\ p \leq 0.001$
$\hat{\beta} = 0.558,\ t(298) = 11.619,\ p \leq 0.001$
$\hat{\beta} = 0.426,\ t(622) = 11.73,\ p \leq 0.001$
$\hat{\beta} = 0.781,\ t(358) = 23.644,\ p \leq 0.001$
$\hat{\beta} = 0.382,\ t(394) = 8.206,\ p \leq 0.001$
Oceania
Americas
Africa
Europe
Asia
term
0.0
0.3
0.6
0.9
regression coefficient
In favor of null: $\log_e(BF_{01})$ = −3.341, $d_{mean}^{posterior}$ = 0.515, $CI_{95\%}$ [0.225, 0.767]
Heterogeneity: $Q(4)$ = 109, $p$ = < 0.001, $\tau^2_{REML}$ = 0.056, $I^2$ = 96.81%

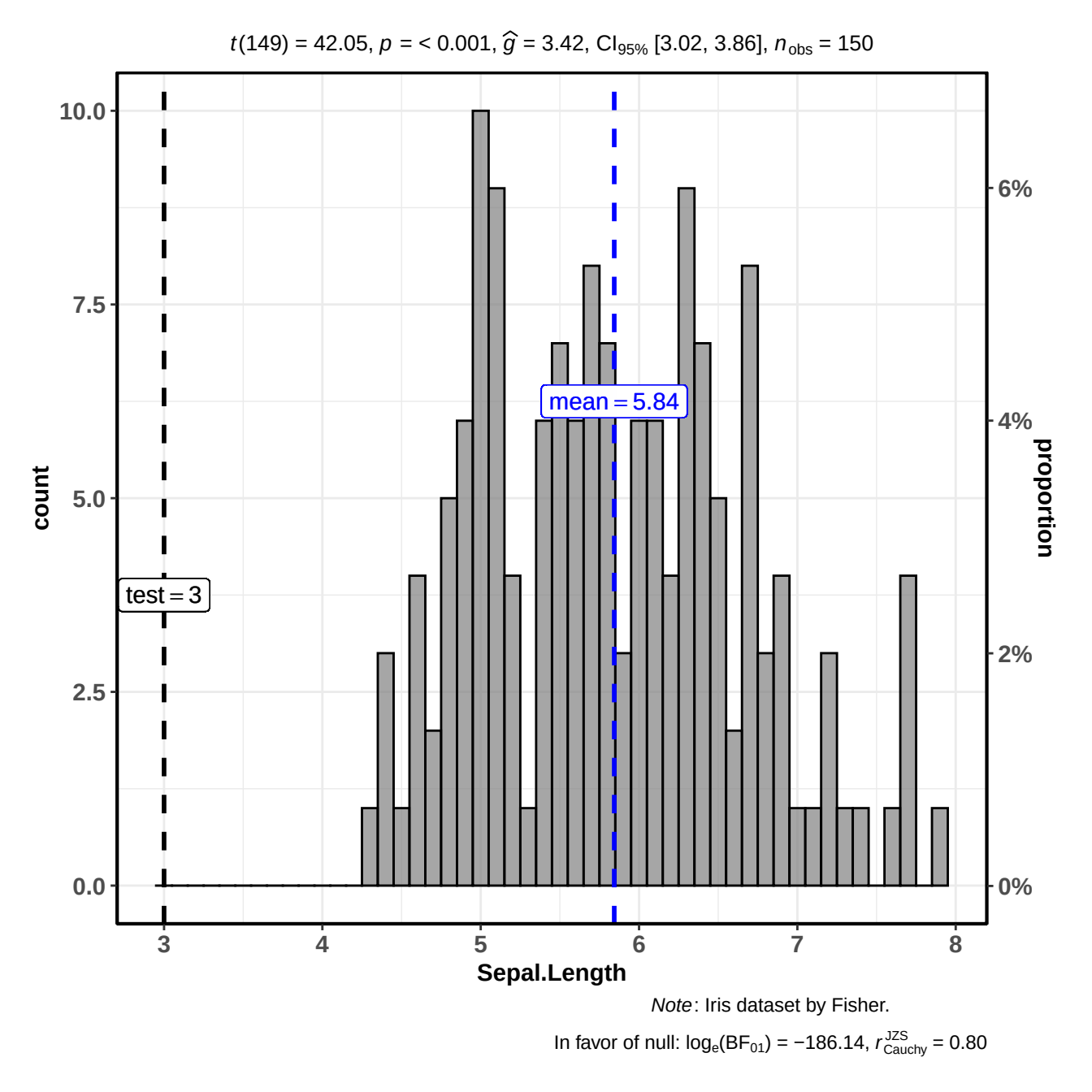

Petal.Width
Petal.Length
Sepal.Width
Sepal.Length
0.82
−0.37
0.96
1
0.87
−0.43
1
0.96
−0.12
1
−0.43
−0.37
1
−0.12
0.87
0.82
Sepal.Length
Sepal.Width
Petal.Length
Petal.Width
sample size:
n = 150
correlation:
Pearson
1.0
0.5
0.0
−0.5
−1.0
X = correlation non−significant at p < 0.05
Adjustment (p−value):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


−0.31
−0.33
0.42
0.31
0.93
1
bodywt
−0.36
−0.22
0.85
0.36
1
0.93
brainwt
−1
−0.75
0.47
1
0.36
0.31
awake
−0.47
−0.34
1
0.47
0.85
0.42
sleep_cycle
0.75
1
−0.34
−0.75
−0.22
−0.33
sleep_rem
1
0.75
−0.47
−1
−0.36
−0.31
sleep_total
sleep_total
sleep_rem
sleep_cycle
awake
brainwt
bodywt
sample size:
$n_{min}$ = 30
$n_{median}$ = 56
$n_{max}$ = 83
correlation:
Pearson
1.0
0.5
0.0
−0.5
−1.0
X = correlation non−significant at $p$ < 0.05
Adjustment (p−value): None

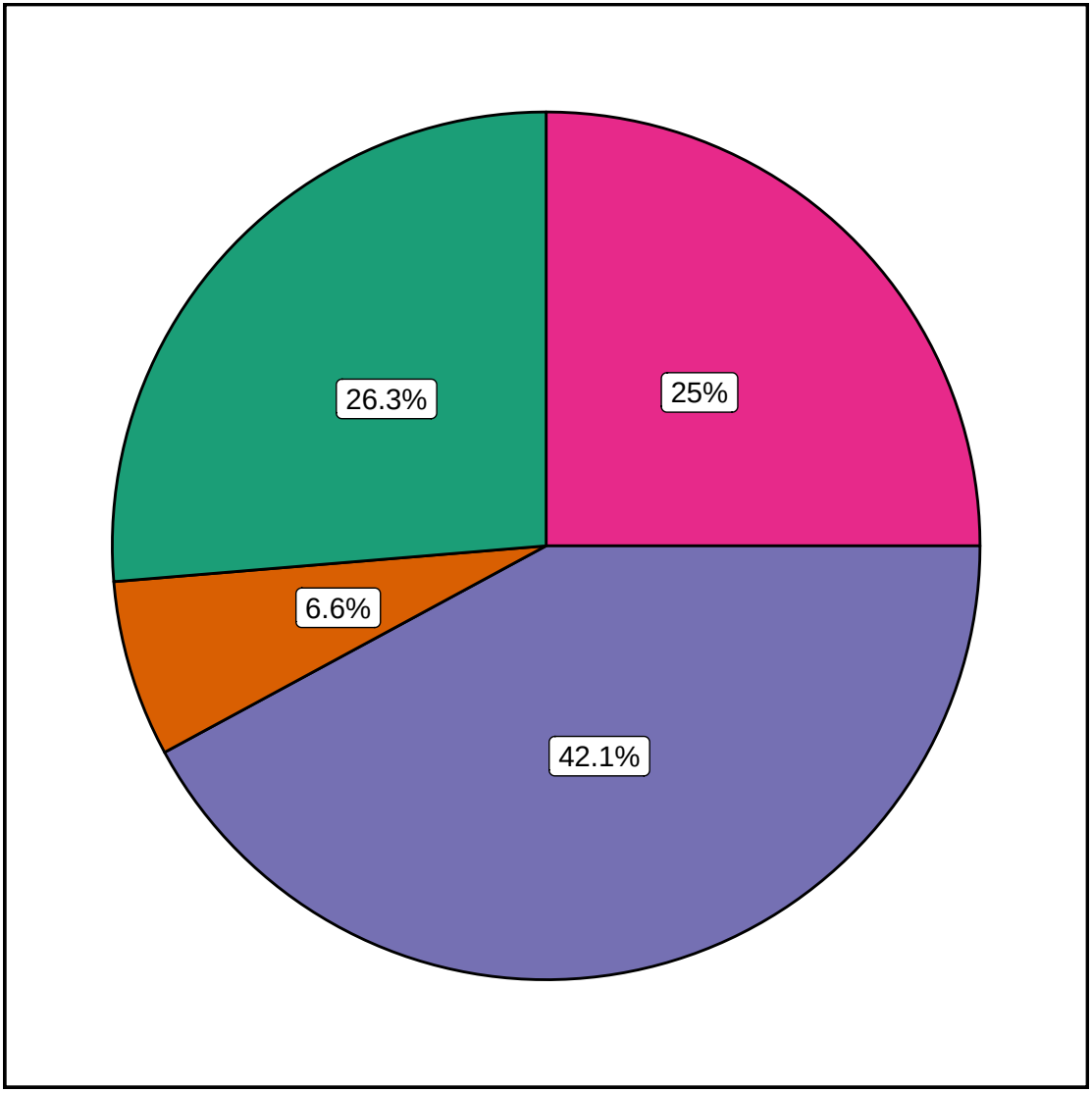

Dataset: Iris
Petal.Length
Sepal.Length
Sepal.Width
0.96
0.87
0.82
−0.12
−0.43
−0.37
Sepal.Length
Petal.Length
Petal.Width
sample size:
n = 150
correlation:
Pearson
1.0
0.5
0.0
−0.5
−1.0
X = correlation non−significant at p < 0.01
Adjustment (p−value): None

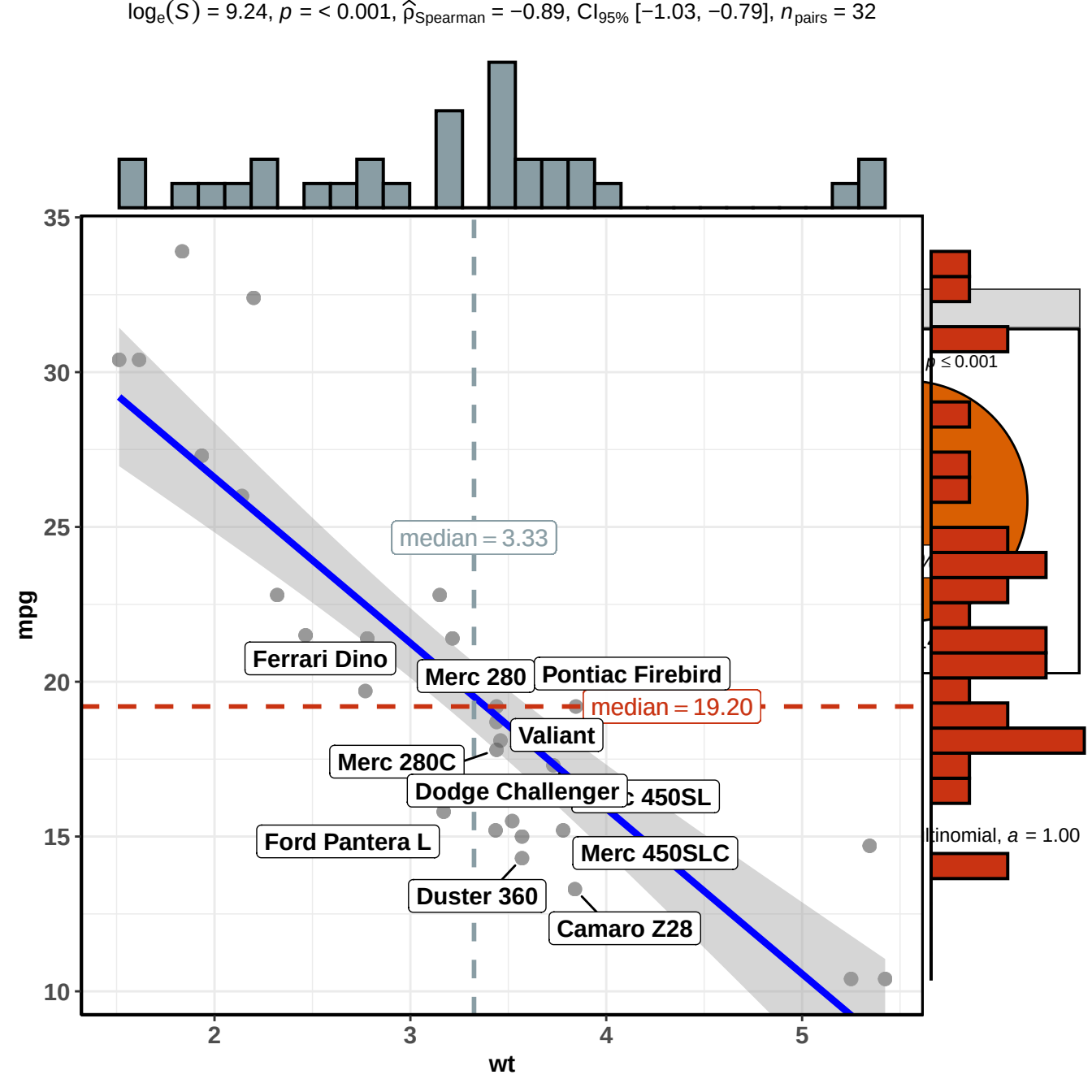

Fuel economy data
t(14) = 1.47, p = 0.163, ĝ = 0.36, CI99% [−0.33, 1.10], nobs = 15
15
20
25
honda
volkswagen
subaru
hyundai
toyota
nissan
audi
pontiac
chevrolet
ford
jeep
mercury
dodge
land rover
lincoln
median = 17
test = 15
100
75
50
25
0
percentile
manufacturer
15
20
25
city miles per gallon
Source: EPA dataset on http://fueleconomy.gov
In favor of null: log_e(BF01) = 0.44, r^JZS_Cauchy = 0.71

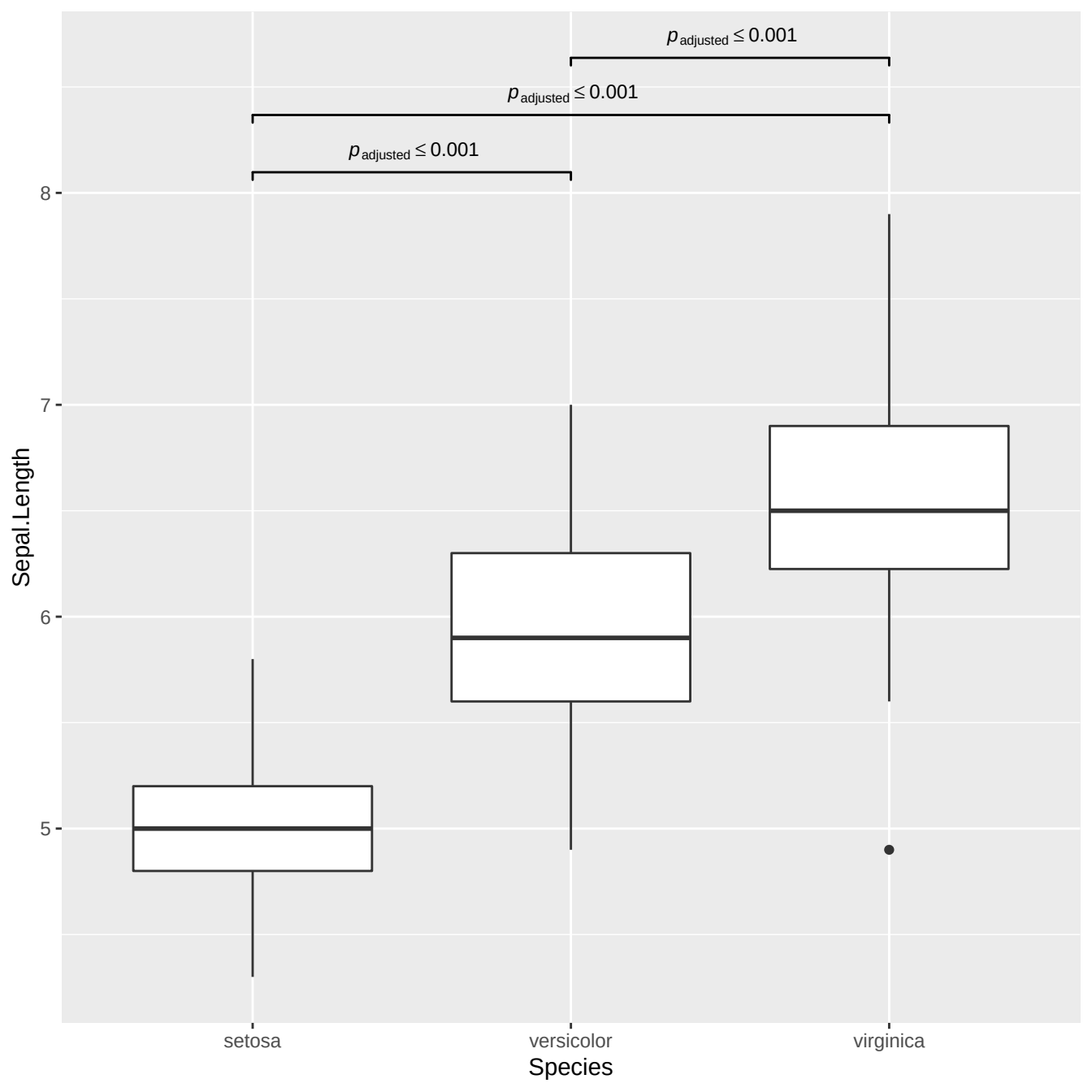

$t(59) = 19.05$, $p = < 0.001$, $\widehat{g} = 2.43$, $CI_{95\%}$ [1.96, 2.99], $n_{obs} = 60$
median = 19.25
count
Tooth length
12.5
10.0
7.5
5.0
2.5
0.0
10
20
30
In favor of null: $\log_e(BF_{01}) = -54.54$, $r^{JZS}_{Cauchy} = 0.71$

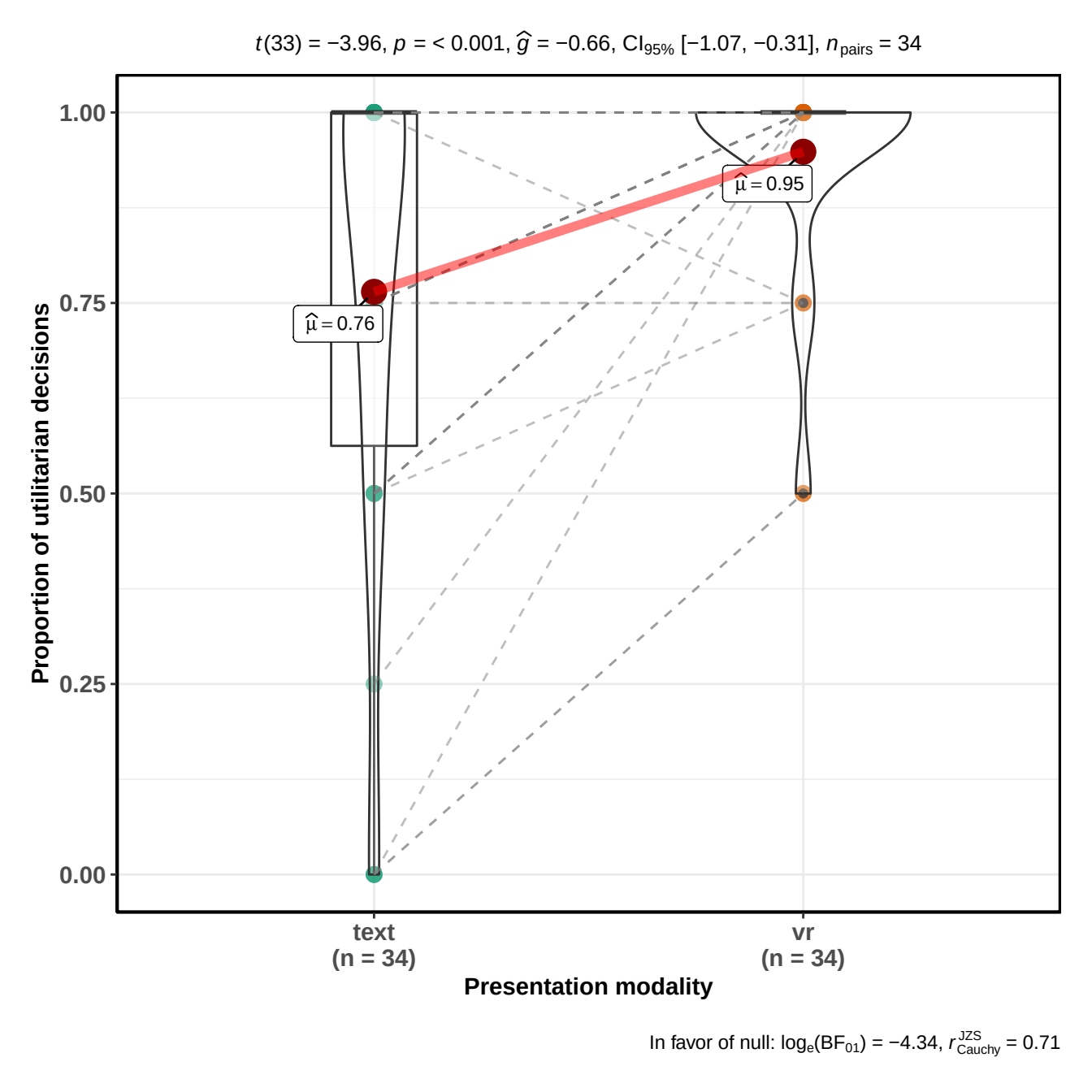

$t(149) = 42.05$, $p = < 0.001$, $\widehat{g} = 3.42$, $CI_{95\%}$ [3.02, 3.86], $n_{obs} = 150$
mean = 5.84
test = 3
count
proportion
Sepal.Length
10.0
7.5
5.0
2.5
0.0
6%
4%
2%
0%
3
4
5
6
7
8
*Note*: Iris dataset by Fisher.
In favor of null: $\log_e(BF_{01}) = -186.14$, $r^{JZS}_{Cauchy} = 0.80$

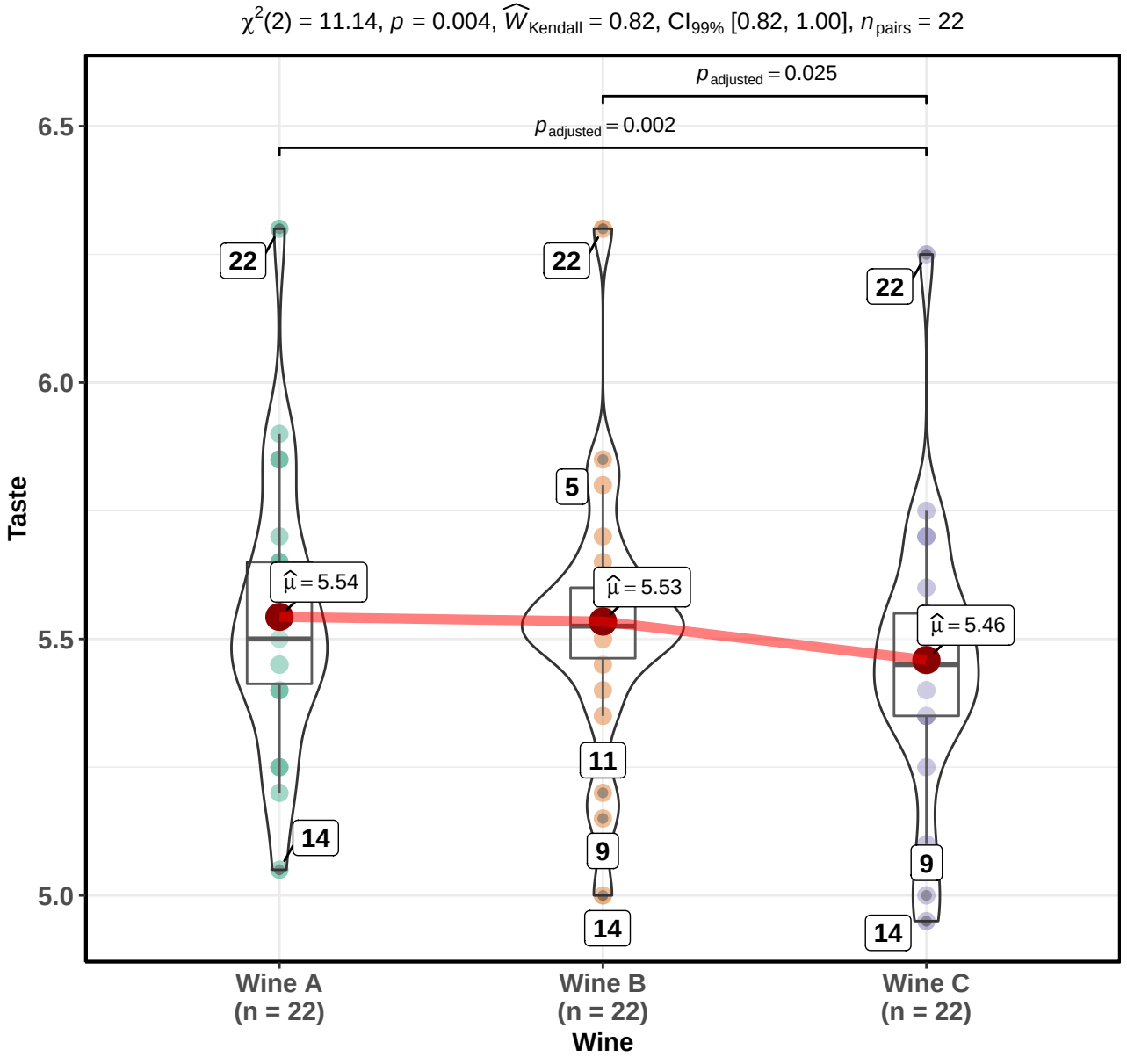
$\chi^2_{gof}(3) = 19.263$, $p = < 0.001$, $\widehat{V}_{Cramer} = 0.291$, $CI_{95\%}$ [0.185, 0.366], $n_{obs} = 76$




log_e(S) = 9.24, p = < 0.001, ρ̂_Spearman = −0.89, CI_95% [−1.03, −0.79], n_pairs = 32
median = 3.33
median = 19.20
Ferrari Dino
Merc 280
Pontiac Firebird
Valiant
Merc 280C
Dodge Challenger
450SL
Ford Pantera L
Merc 450SLC
Duster 360
Camaro Z28
p ≤ 0.001
ltinomial, a = 1.00
mpg
wt
35
30
25
20
15
10
2
3
4
5


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

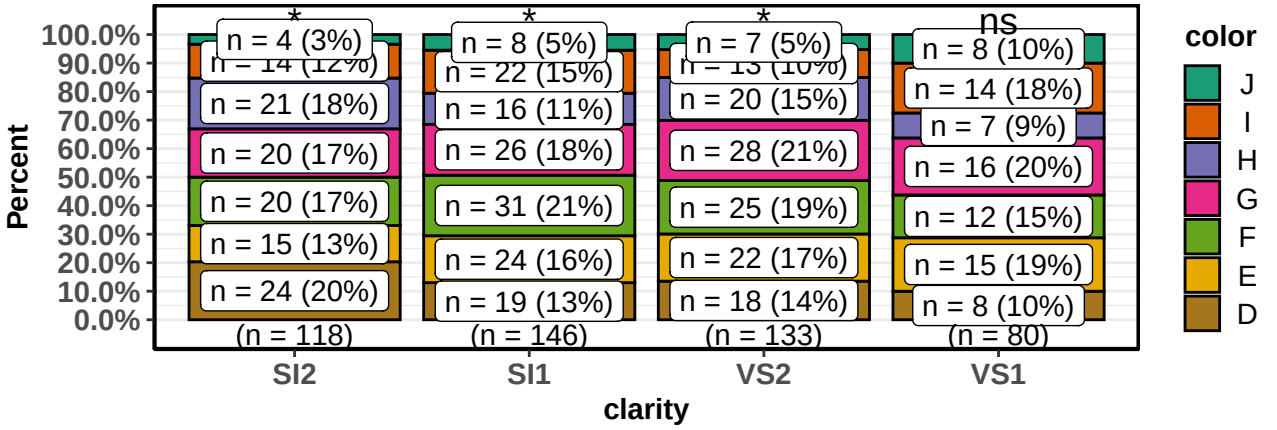

$t(33) = -3.96$, $p = < 0.001$, $\hat{g} = -0.66$, $CI_{95\%}$ [−1.07, −0.31], $n_{pairs} = 34$
1.00
0.75
0.50
0.25
0.00
Proportion of utilitarian decisions
$\hat{\mu} = 0.76$
$\hat{\mu} = 0.95$
text
(n = 34)
vr
(n = 34)
Presentation modality
In favor of null: $\log_e(BF_{01}) = -4.34$, $r^{JZS}_{Cauchy} = 0.71$




Pairwise comparisons: **Durbin−Conover test**; Adjustment (p−value): **Holm**

## Quality: Very Good

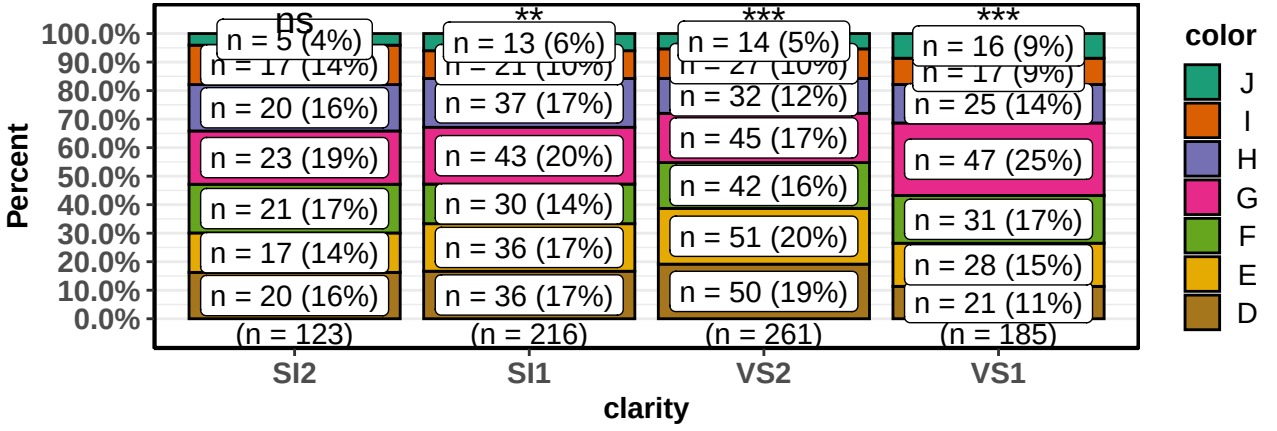
$\chi^2_{\text{Pearson}}(18) = 17.95$, $p = 0.459$, $\widehat{V}_{\text{Cramer}} = 0.00$, $\text{CI}_{95\%}$ [−0.18, −0.04], $n_{\text{obs}} = 477$



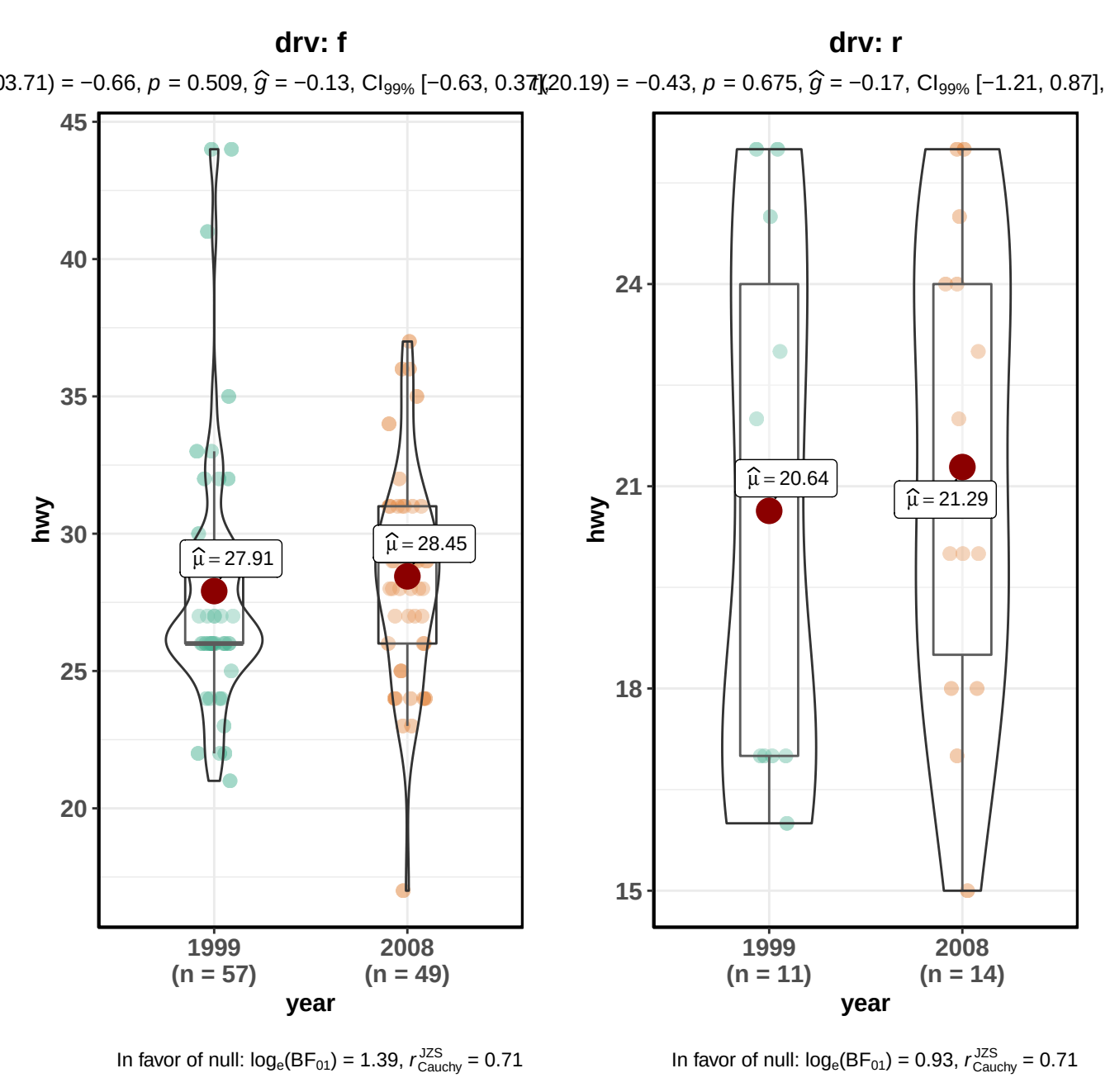

In favor of null: $\log_e(\text{BF}_{01}) = 16.13$, sampling = independent multinomial, $a = 1.00$

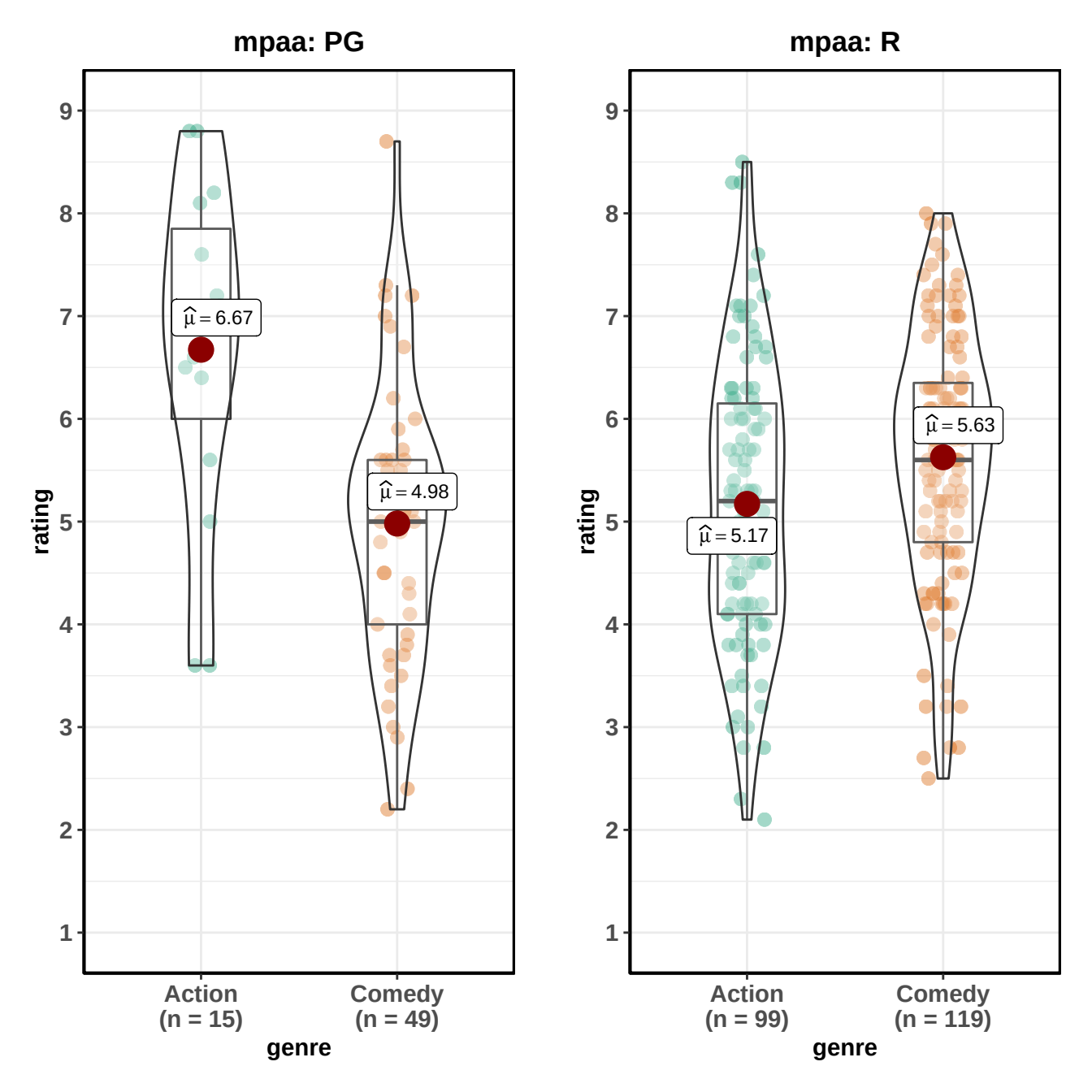
## Quality: Ideal

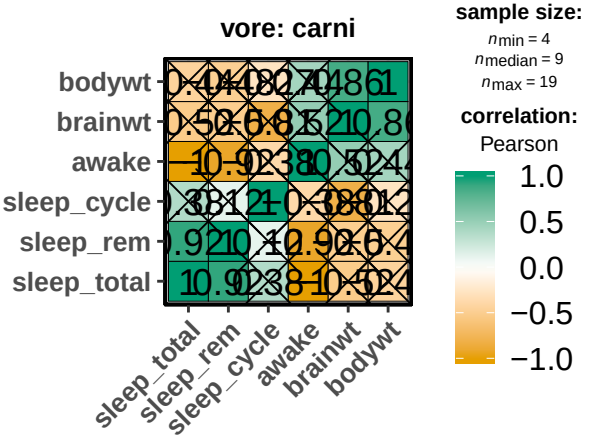
$\chi^2_{\text{Pearson}}(18) = 17.85$, $p = 0.466$, $\widehat{V}_{\text{Cramer}} = 0.00$, $\text{CI}_{95\%}$ [−0.14, −0.03], $n_{\text{obs}} = 785$




In favor of null: $\log_e(\text{BF}_{01}) = 20.36$, sampling = independent multinomial, $a = 1.00$

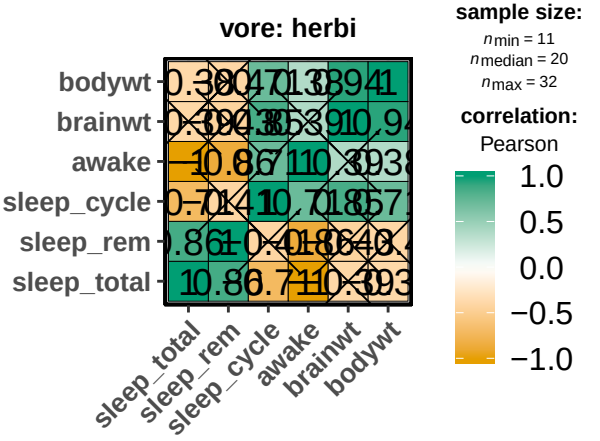

drv: f
03.71) = −0.66, p = 0.509, ĝ = −0.13, CI99% [−0.63, 0.37],
hwy
45
40
35
30
25
20
μ̂ = 27.91
μ̂ = 28.45
1999
(n = 57)
2008
(n = 49)
year
In favor of null: log_e(BF01) = 1.39, r^JZS_Cauchy = 0.71
drv: r
t(20.19) = −0.43, p = 0.675, ĝ = −0.17, CI99% [−1.21, 0.87],
hwy
24
21
18
15
μ̂ = 20.64
μ̂ = 21.29
1999
(n = 11)
2008
(n = 14)
year
In favor of null: log_e(BF01) = 0.93, r^JZS_Cauchy = 0.71


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



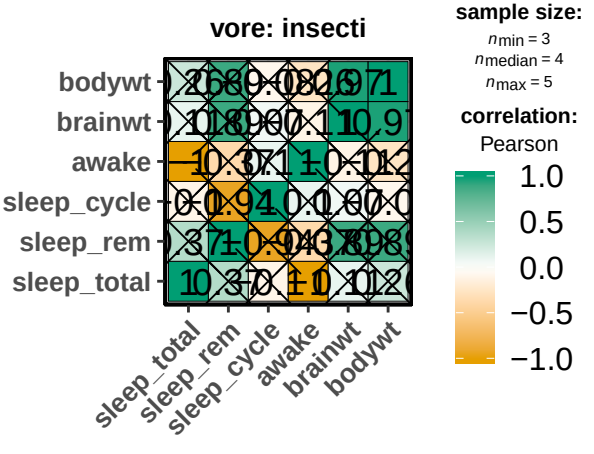

**X** = correlation non−significant at $p < 0.05$

Adjustment (p−value): None



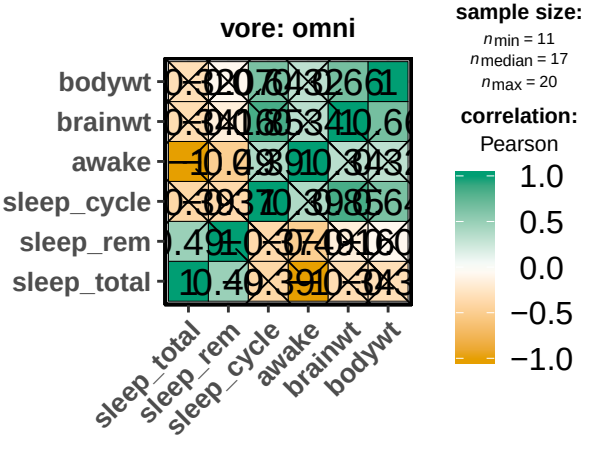

**X** = correlation non−significant at $p < 0.05$

Adjustment (p−value): None



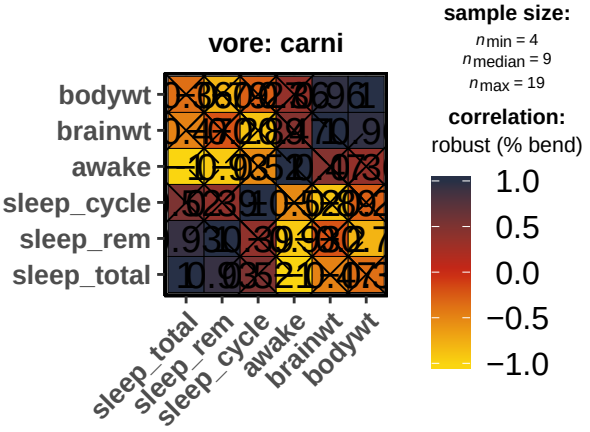

**X** = correlation non−significant at $p < 0.05$

Adjustment (p−value): None



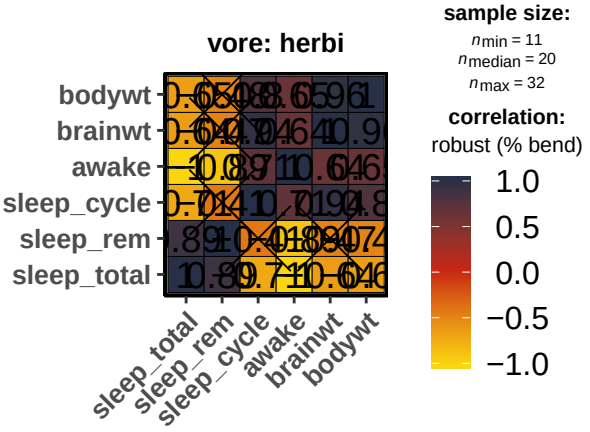

**X** = correlation non−significant at $p < 0.05$

Adjustment (p−value): None



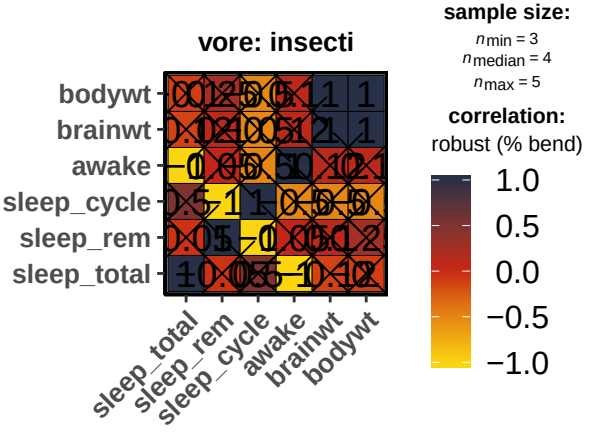

= correlation non−significant at $p < 0.05$

Adjustment (p−value): Holm



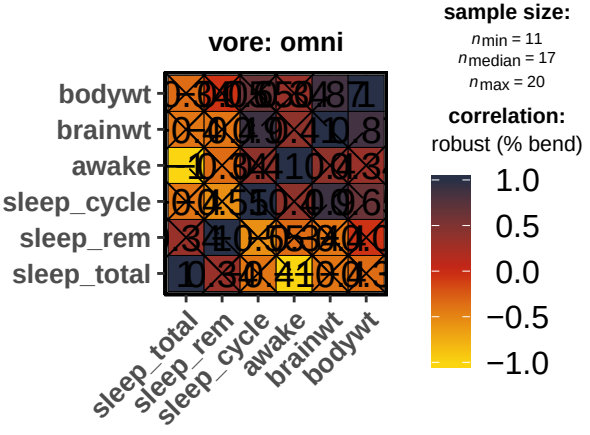

**X** = correlation non−significant at $p < 0.05$

Adjustment (p−value): Holm




= correlation non−significant at $p < 0.05$

Adjustment (p−value): Holm

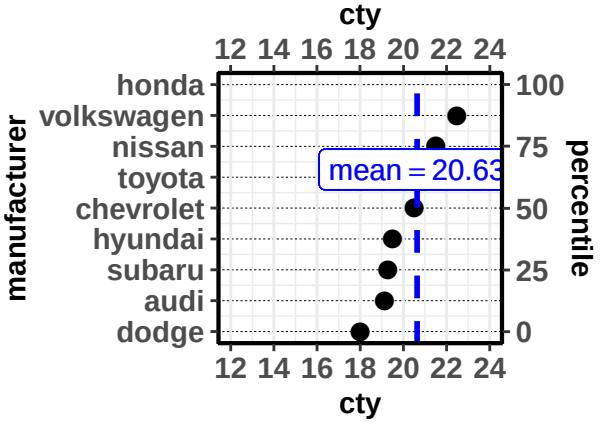



**X** = correlation non−significant at $p < 0.05$

Adjustment (p−value): Holm

## cylinder count: 4

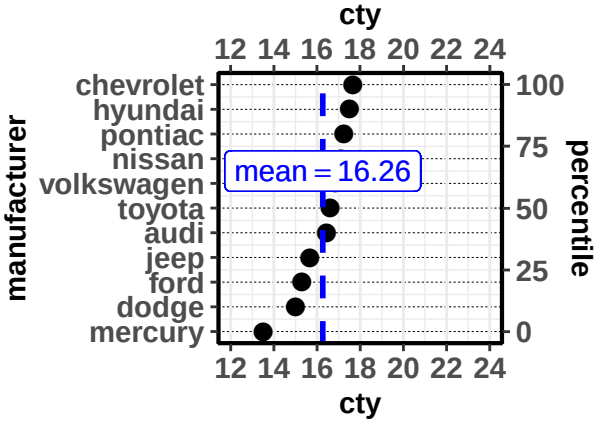
$t(8) = 7.82$, $p = < 0.001$, $\widehat{g} = 2.32$, $CI_{95\%}$ [1.25, 4.25], $n$




In favor of null: $\log_e(BF_{01}) = -6.20$, $r^{JZS}_{Cauchy} = 0.71$

## cylinder count: 6

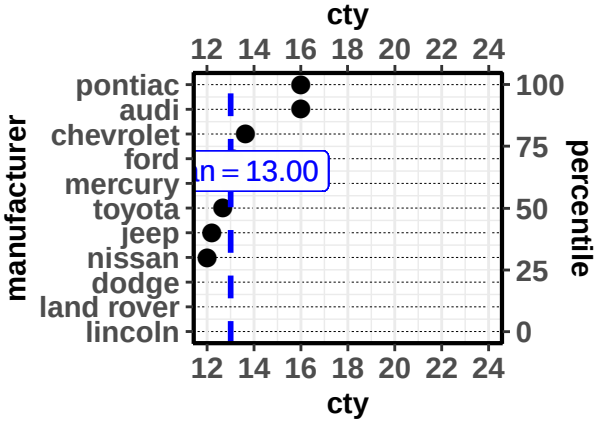
$t(10) = 1.99$, $p = 0.075$, $\widehat{g} = 0.55$, $CI_{95\%}$ [−0.06, 1.29], $n$



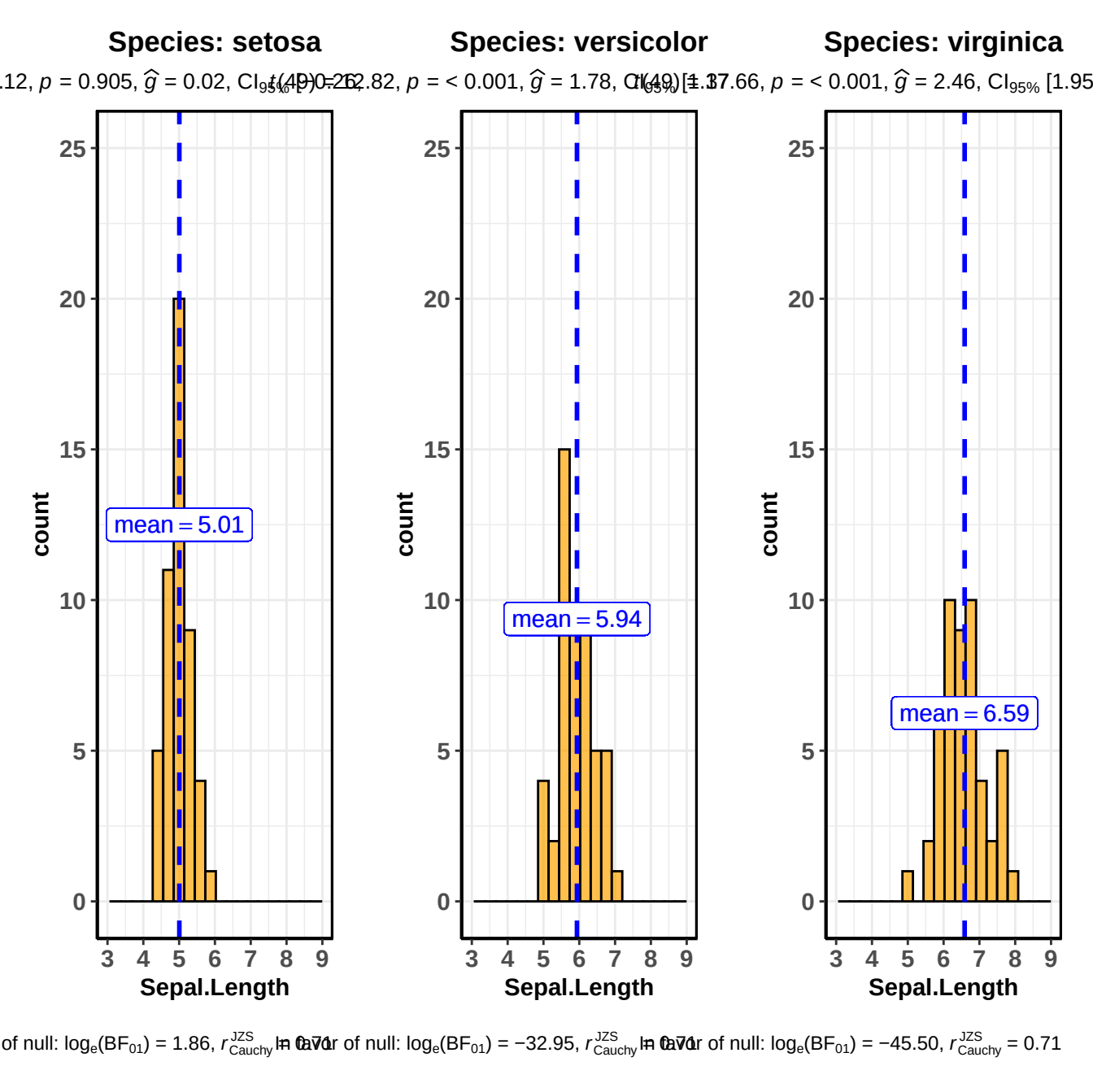

In favor of null: $\log_e(BF_{01}) = -0.23$, $r^{JZS}_{Cauchy} = 0.71$

## cylinder count: 8

(10) = −5.01, $p = 0.001$, $\widehat{g} = -1.38$, $CI_{95\%}$ [−2.49, −0.64], $n_{obs} = 11$

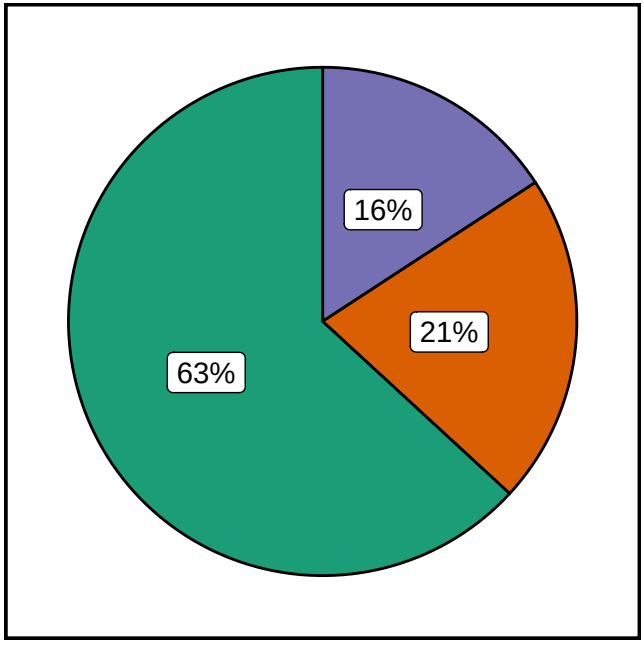



In favor of null: $\log_e(BF_{01}) = -4.24$, $r^{JZS}_{Cauchy} = 0.71$


Species: setosa
Species: versicolor
Species: virginica
.12, p = 0.905, ĝ = 0.02, CI95% [?, ?], t(49) = 2.82, p = < 0.001, ĝ = 1.78, CI95% [1.37
t(49) = 7.66, p = < 0.001, ĝ = 2.46, CI95% [1.95
count
Sepal.Length
mean = 5.01
mean = 5.94
mean = 6.59
of null: log_e(BF01) = 1.86, r_Cauchy^JZS = 0.71
of null: log_e(BF01) = −32.95, r_Cauchy^JZS = 0.71
of null: log_e(BF01) = −45.50, r_Cauchy^JZS = 0.71

**am: 0**

) = 7.68, $p$ = 0.021, $\widehat{V}_{\text{Cramer}}$ = 0.45, $\text{CI}_{95\%}$ [0.11, 0.76], $n_{\text{obs}}$

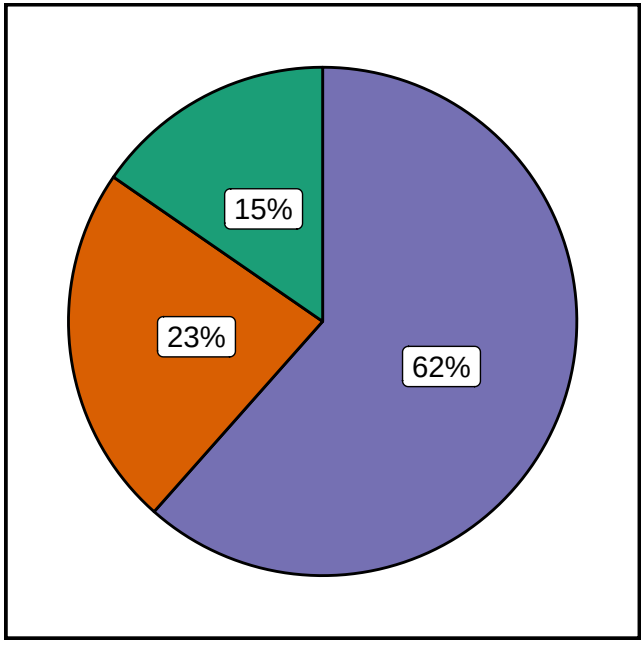



**cyl** 8 6 4

In favor of null: $\log_e(\text{BF}_{01})$ = −0.16, $a$ = 1.00

**am: 1**

$\chi^2_{\text{gof}}(2)$ = 4.77, $p$ = 0.092, $\widehat{V}_{\text{Cramer}}$ = 0.43, $\text{CI}_{95\%}$ [0.12, 0.72], $n_{\text{ob}}$

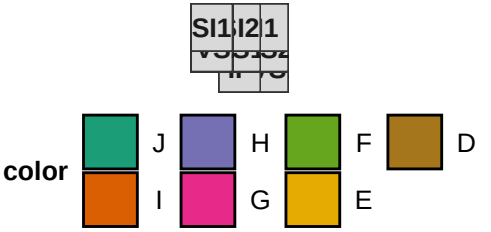



**cyl** 8 6 4

In favor of null: $\log_e(\text{BF}_{01})$ = 0.85, $a$ = 1.00

**Quality: Fair**

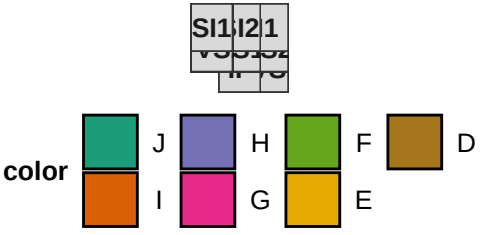
$\chi^2_{\text{Pearson}}(42) = 55.71$, $p = 0.076$, $\widehat{V}_{\text{Cramer}} = 0.12$, $\text{CI}_{95\%}$ [−0.05, 0.07], $n_{\text{obs}} = 172$




vor of null: $\log_e(\text{BF}_{01}) = -7.86$, sampling = poisson, $a = 1.00$

**Quality: Very Good**

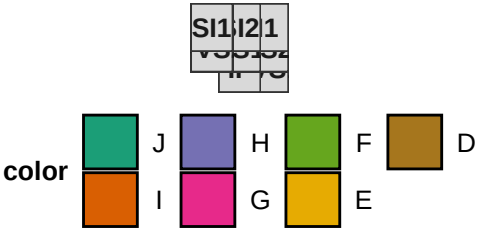
$\chi^2_{\text{Pearson}}(42) = 64.05$, $p = 0.016$, $\widehat{V}_{\text{Cramer}} = 0.06$, $\text{CI}_{95\%}$ [−0.01, 0.04], $n_{\text{obs}} = 1187$



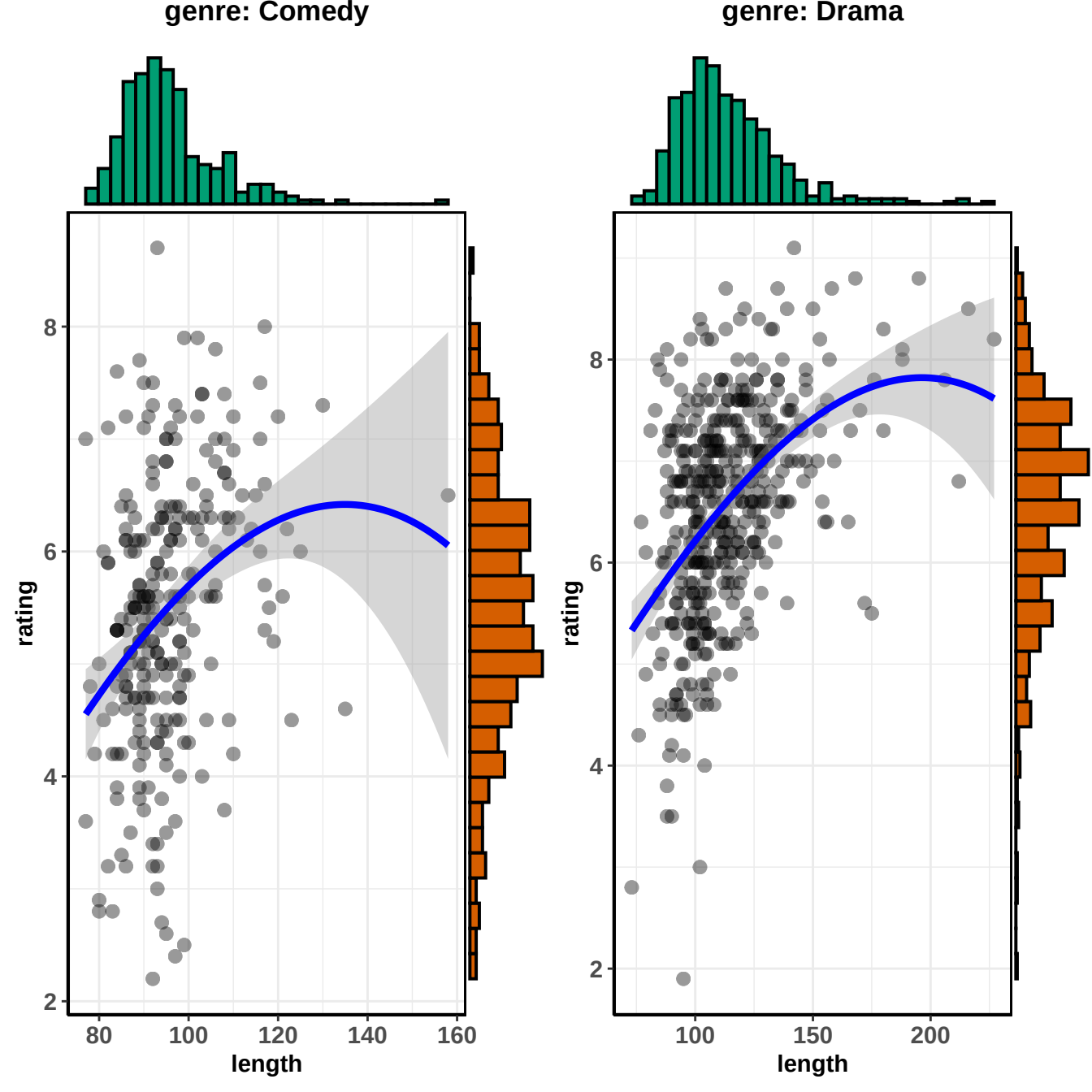

vor of null: $\log_e(\text{BF}_{01}) = 14.79$, sampling = poisson, $a = 1.00$

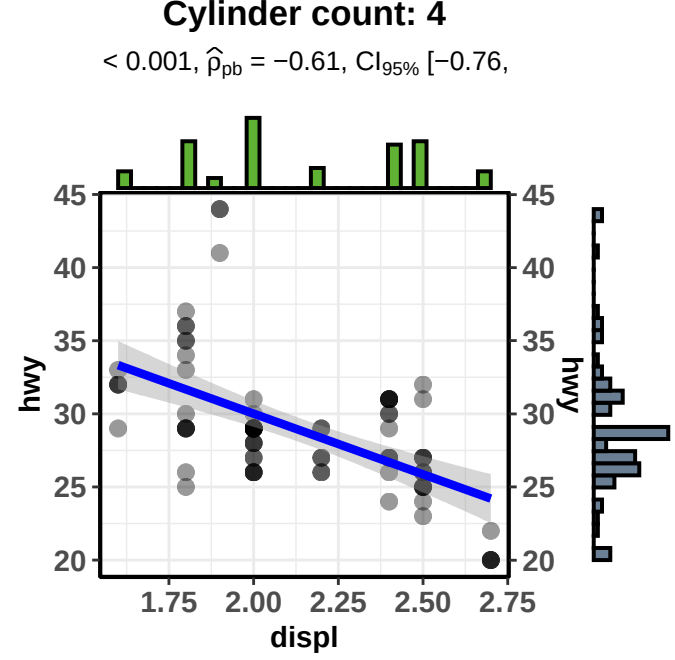
**Quality: Ideal**

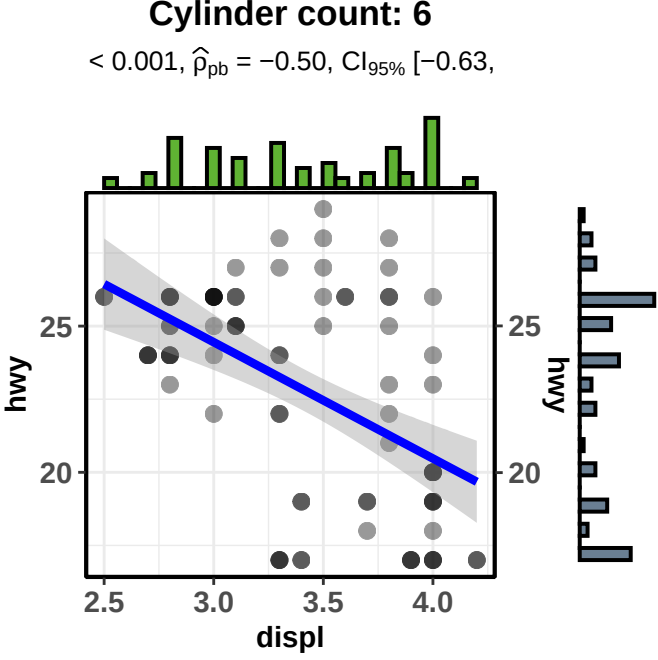
$\chi^2_{\text{Pearson}}(42) = 153.32$, $p = < 0.001$, $\widehat{V}_{\text{Cramer}} = 0.09$, $\text{CI}_{95\%}$ [0.06, 0.10], $n_{\text{obs}} = 2165$

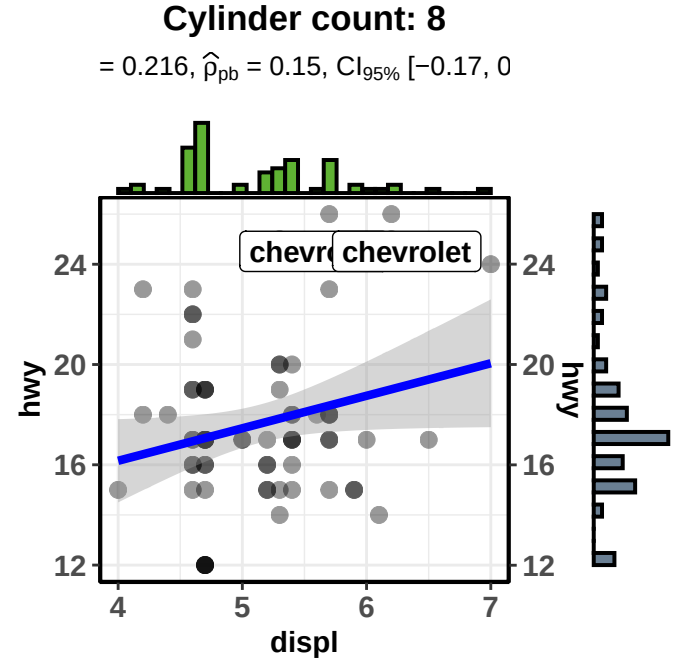


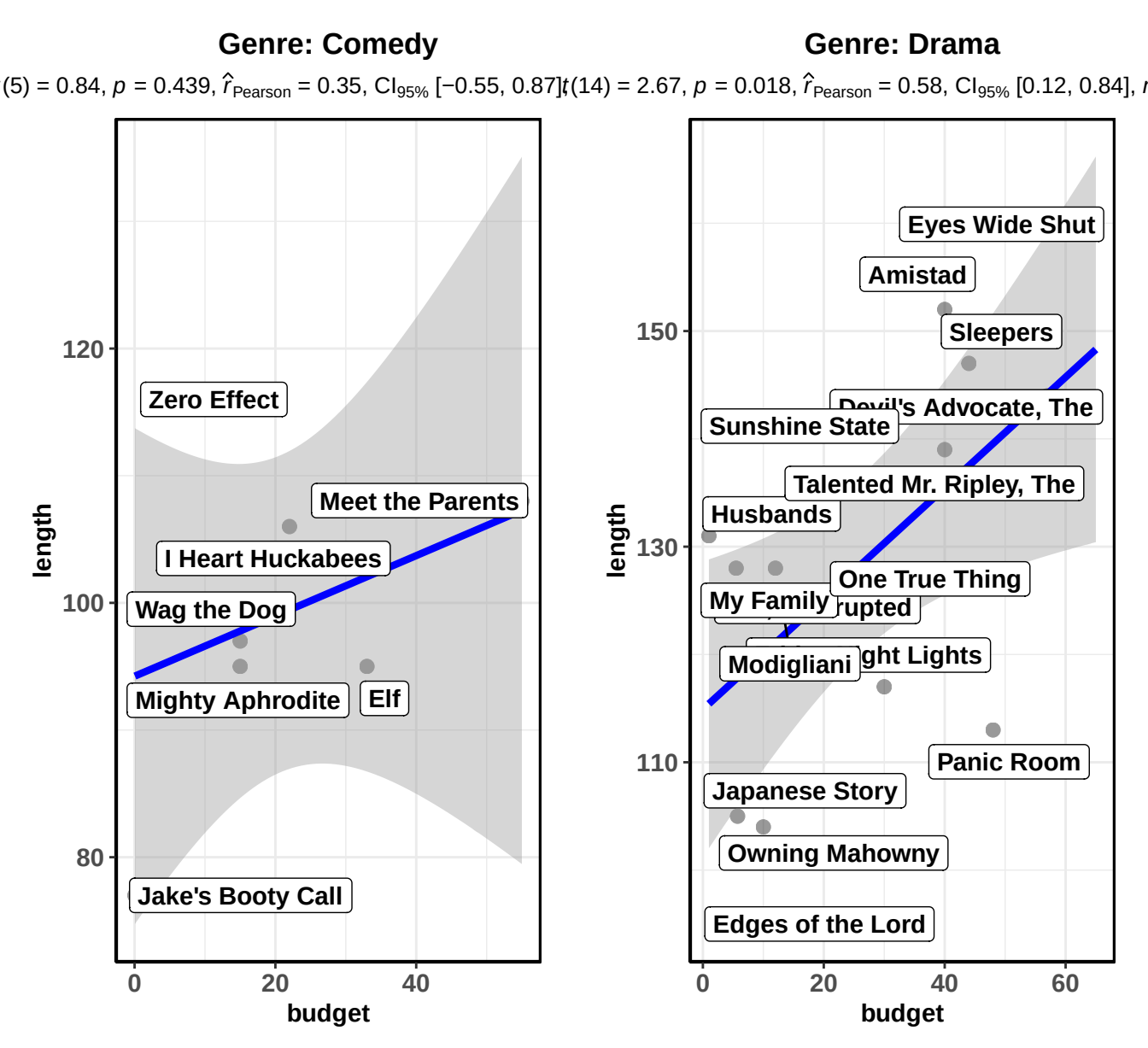

or of null: $\log_e(\text{BF}_{01}) = -25.04$, sampling = poisson, $a = 1.00$


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

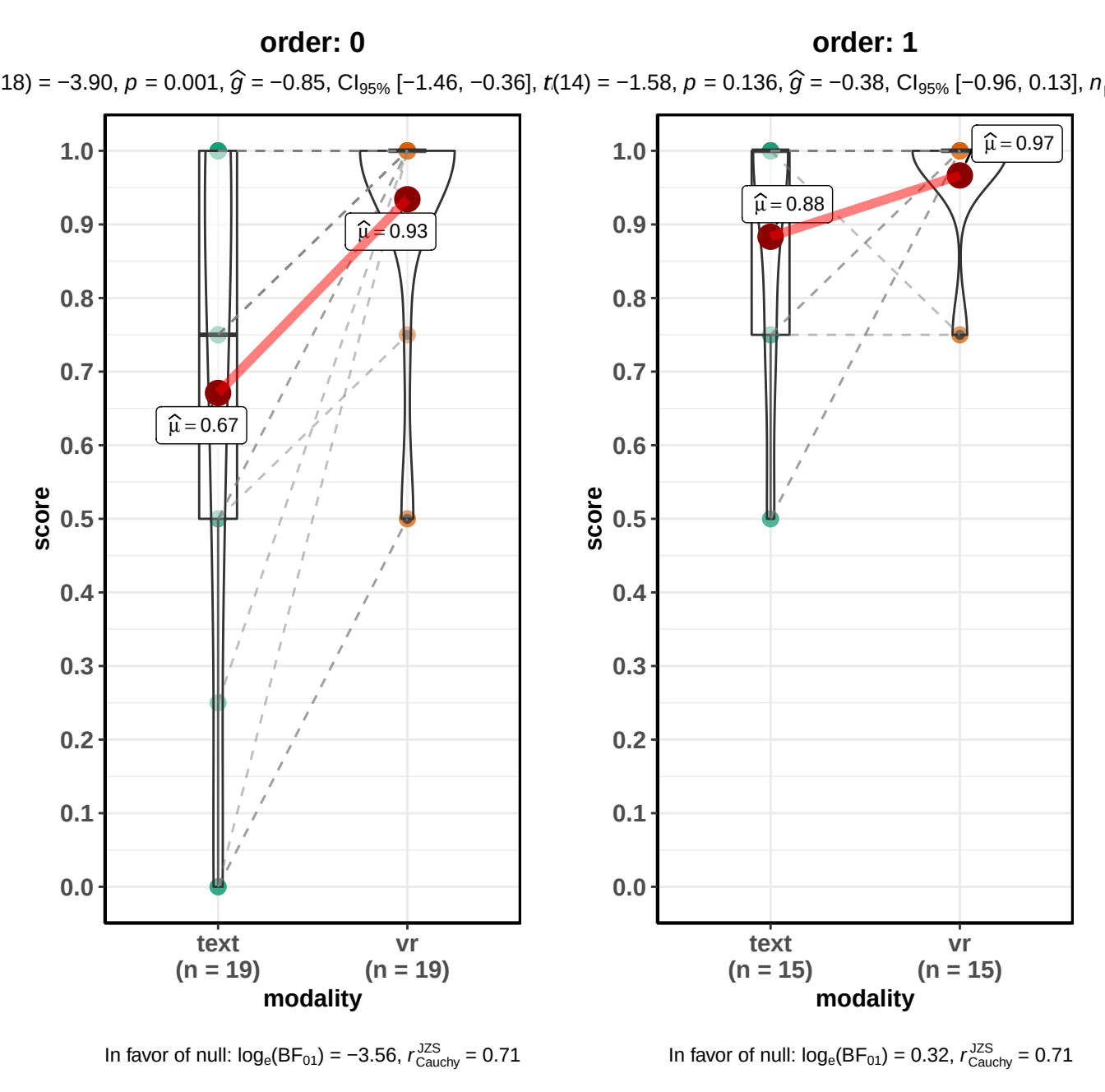

Cylinder count: 4
< 0.001, $\hat{\rho}_{pb}$ = −0.61, $CI_{95\%}$ [−0.76,
hwy
displ
45
40
35
30
25
20
1.75
2.00
2.25
2.50
2.75

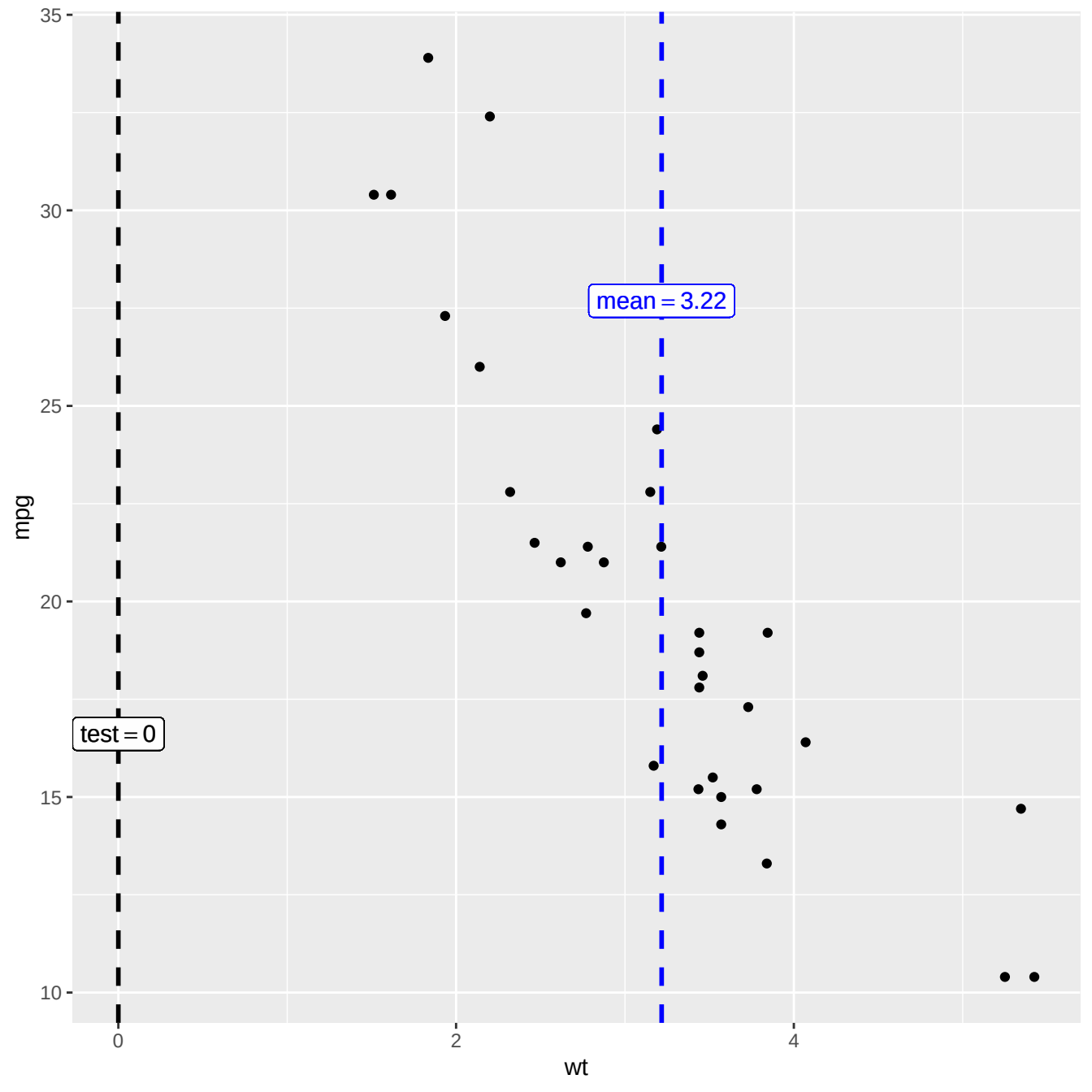

Cylinder count: 6
< 0.001, $\hat{\rho}_{pb}$ = −0.50, $CI_{95\%}$ [−0.63,
hwy
displ
25
20
2.5
3.0
3.5
4.0

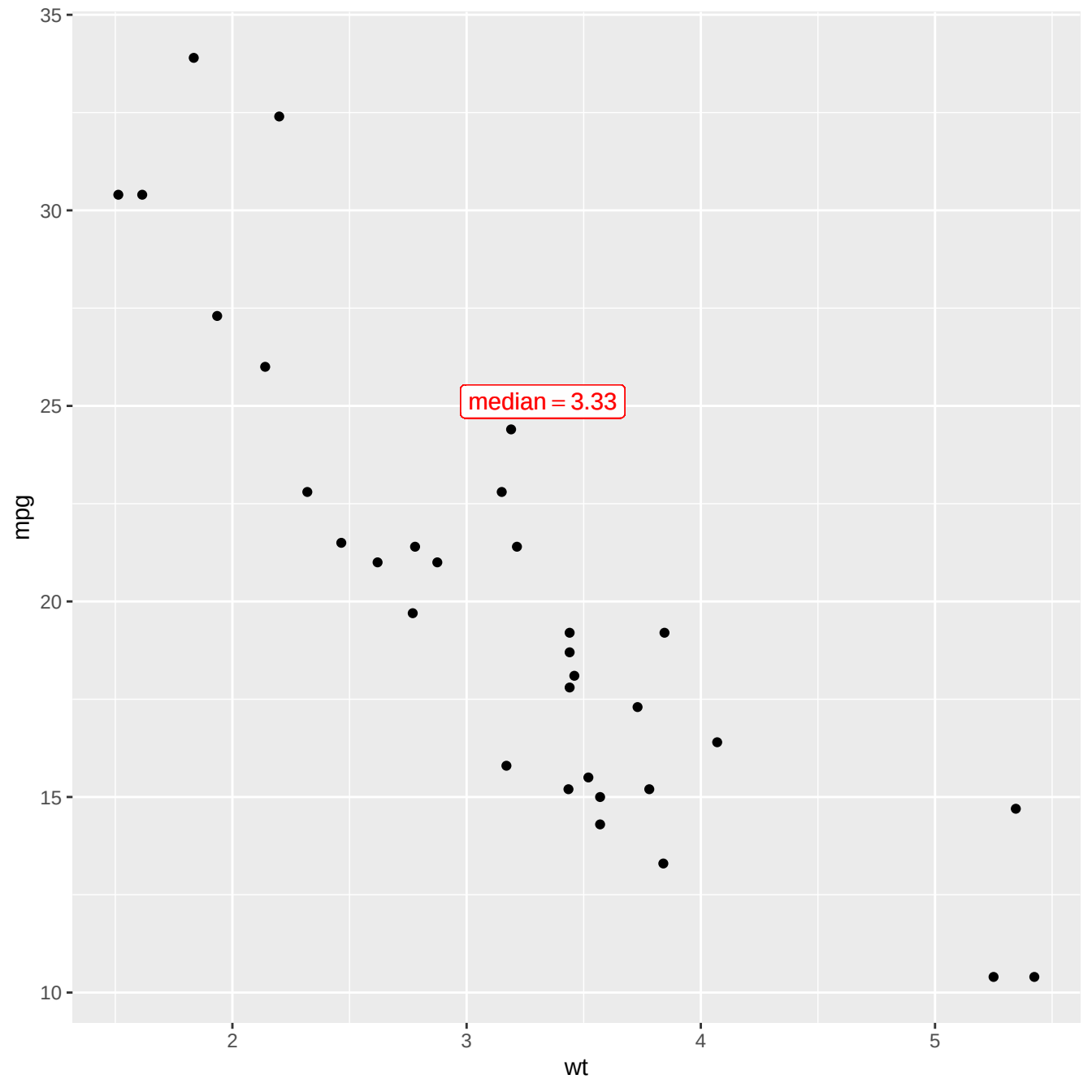

Cylinder count: 8
= 0.216, $\hat{\rho}_{pb}$ = 0.15, $CI_{95\%}$ [−0.17, 0
chevr
chevrolet
hwy
displ
24
20
16
12
4
5
6
7

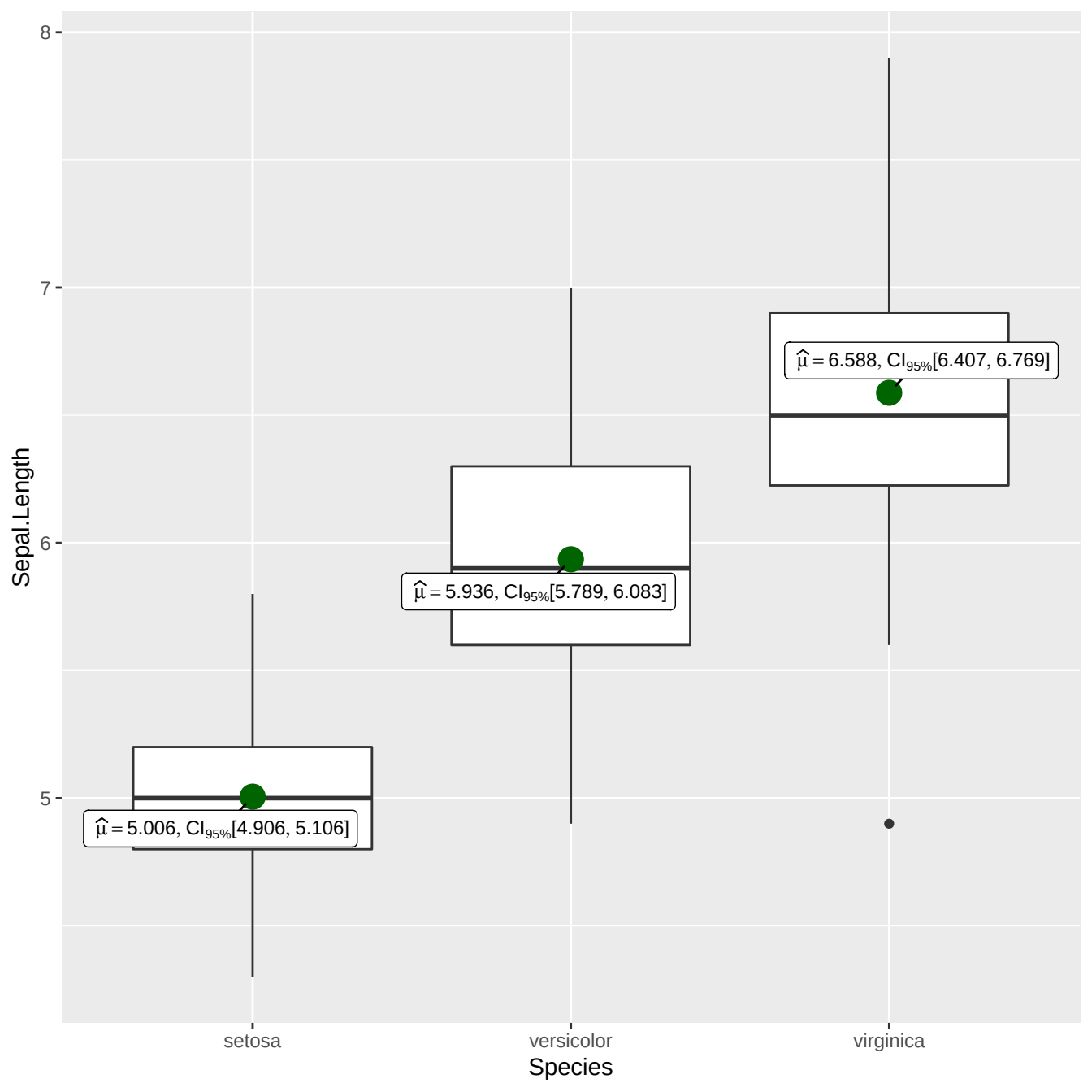



All movies have IMDB rating equal to 7.


order: 0
18) = −3.90, p = 0.001, ĝ = −0.85, CI95% [−1.46, −0.36], t(14) = −1.58, p = 0.136, ĝ = −0.38, CI95% [−0.96, 0.13], n
order: 1
μ̂ = 0.93
μ̂ = 0.67
μ̂ = 0.88
μ̂ = 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(BF01) = −3.56, r^JZS_Cauchy = 0.71
In favor of null: log_e(BF01) = 0.32, r^JZS_Cauchy = 0.71


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


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


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