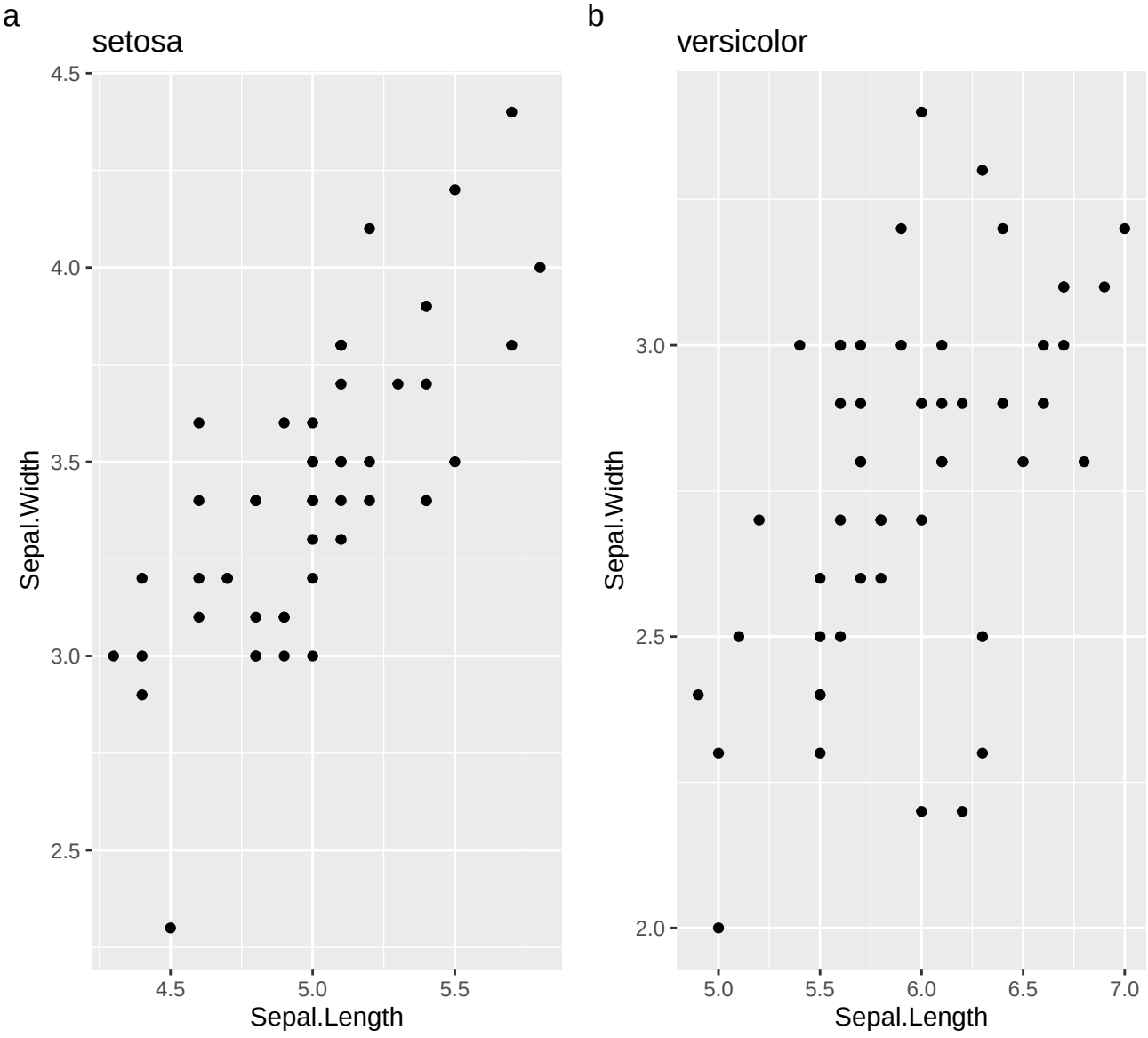
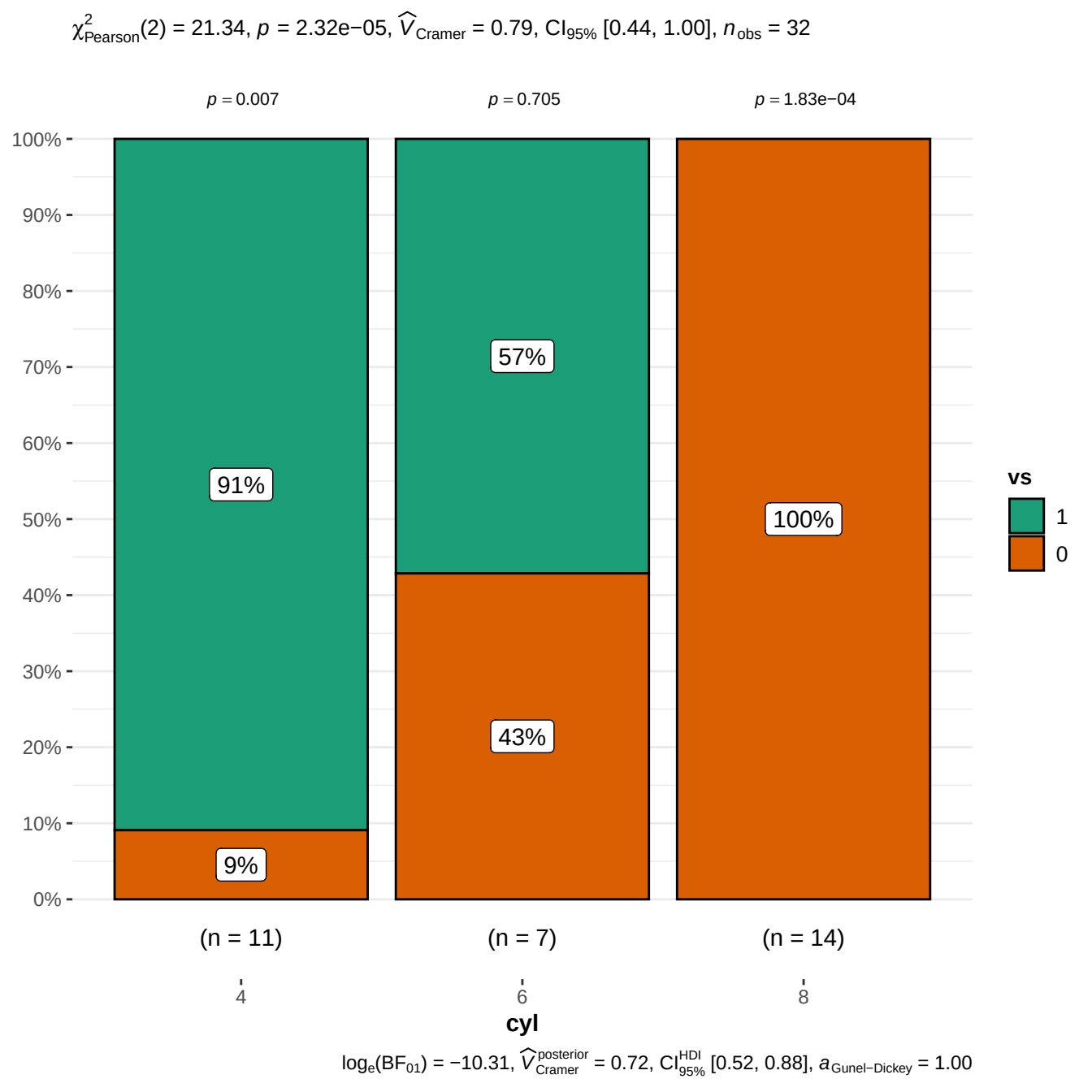
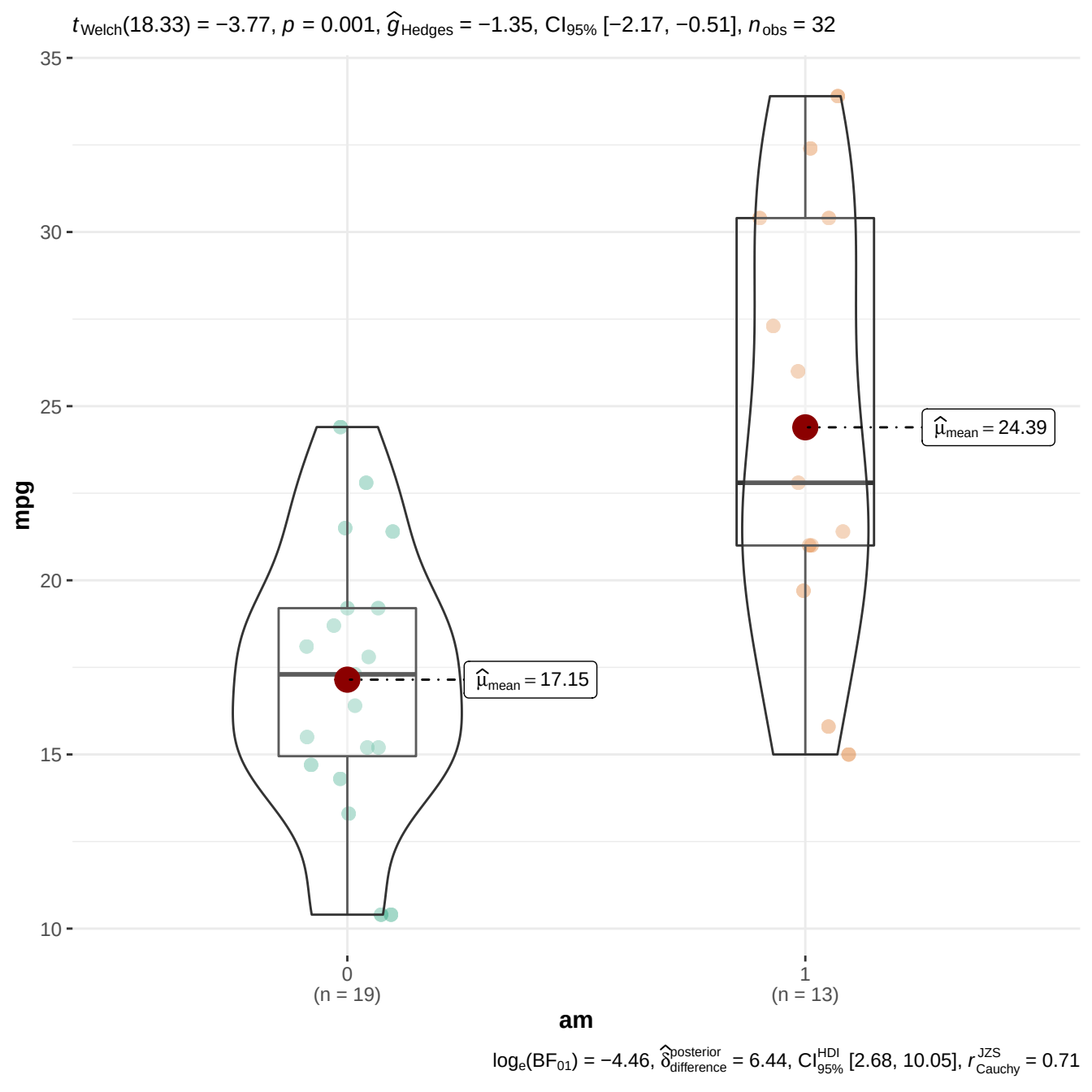
Dataset: Iris Flower dataset

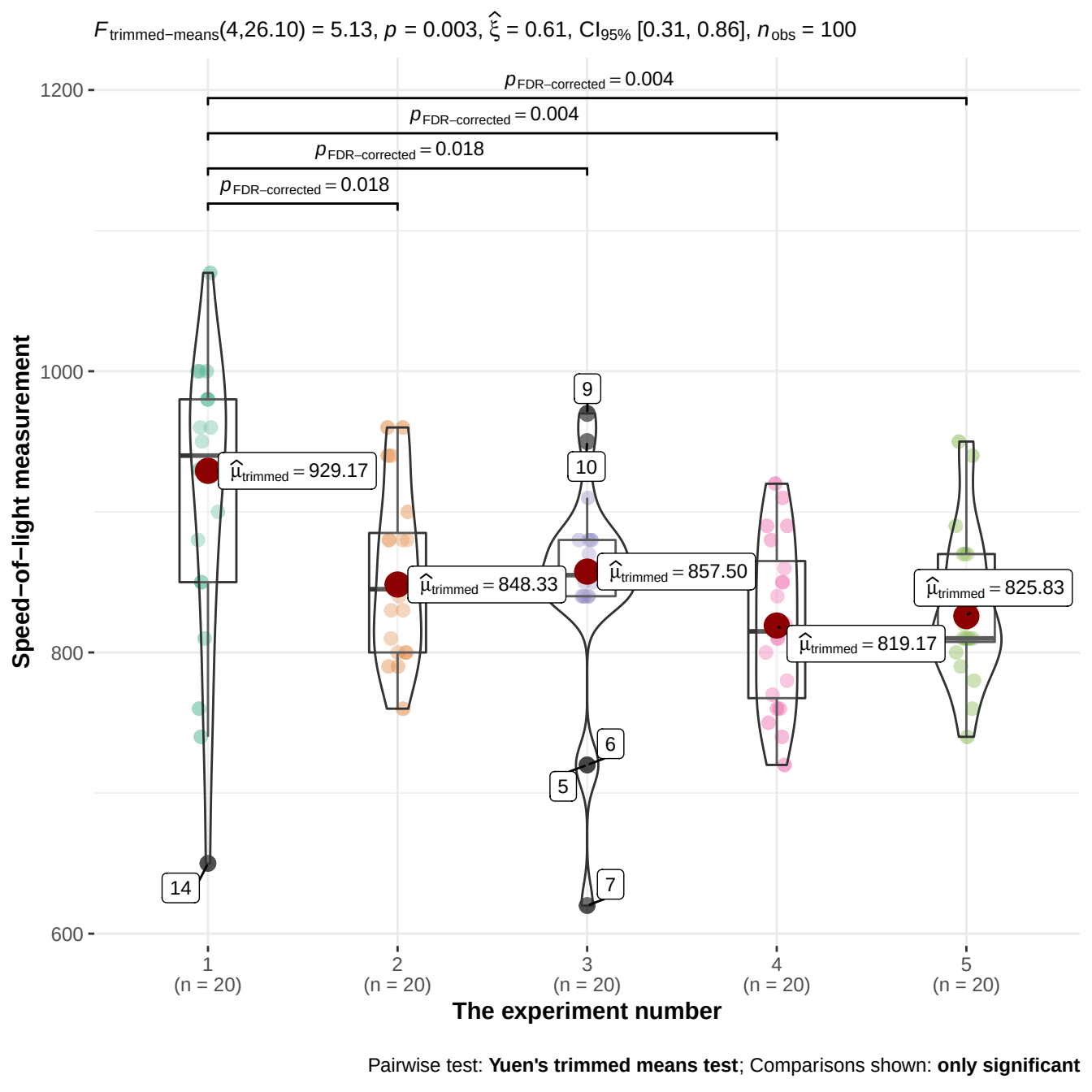
Edgar Anderson collected this data

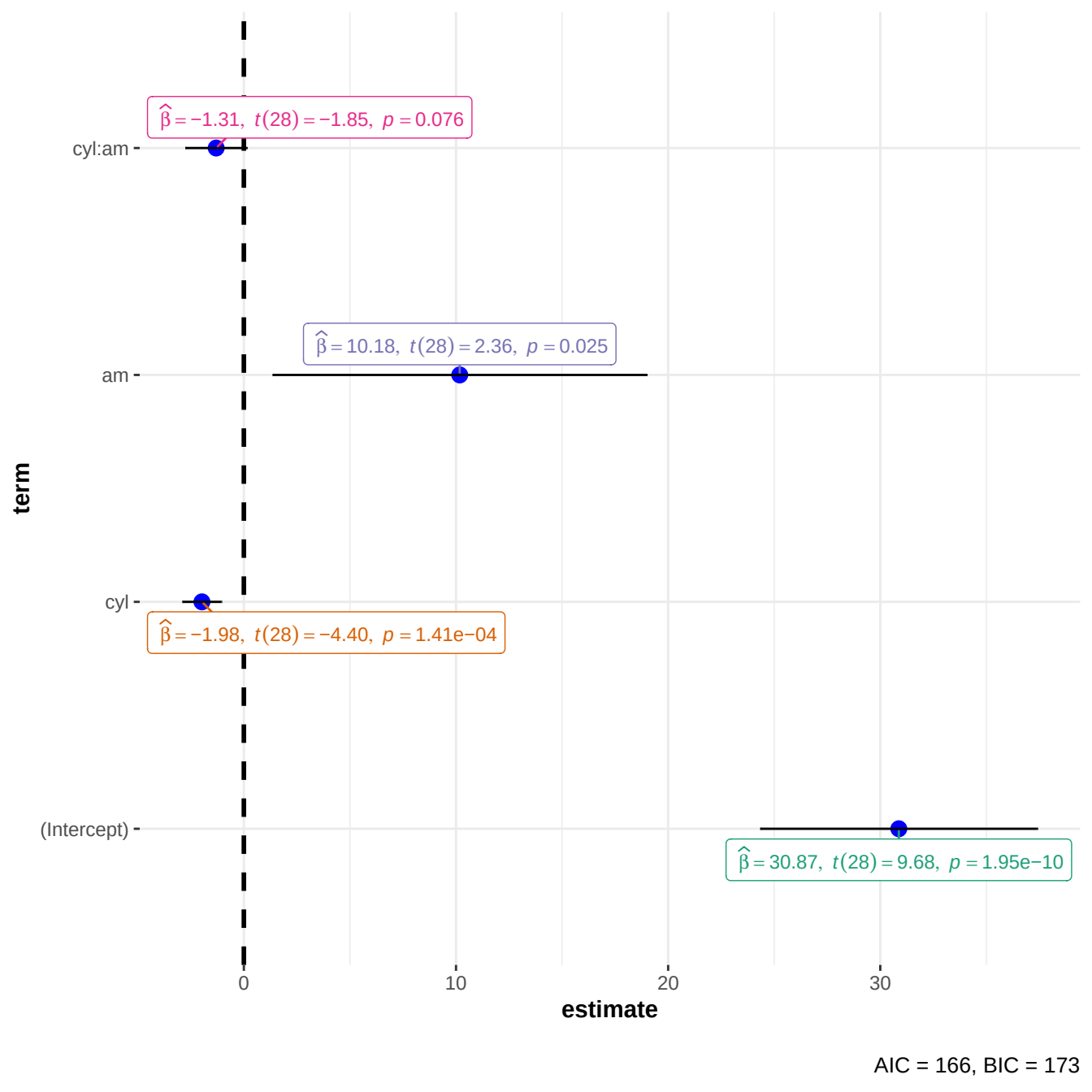


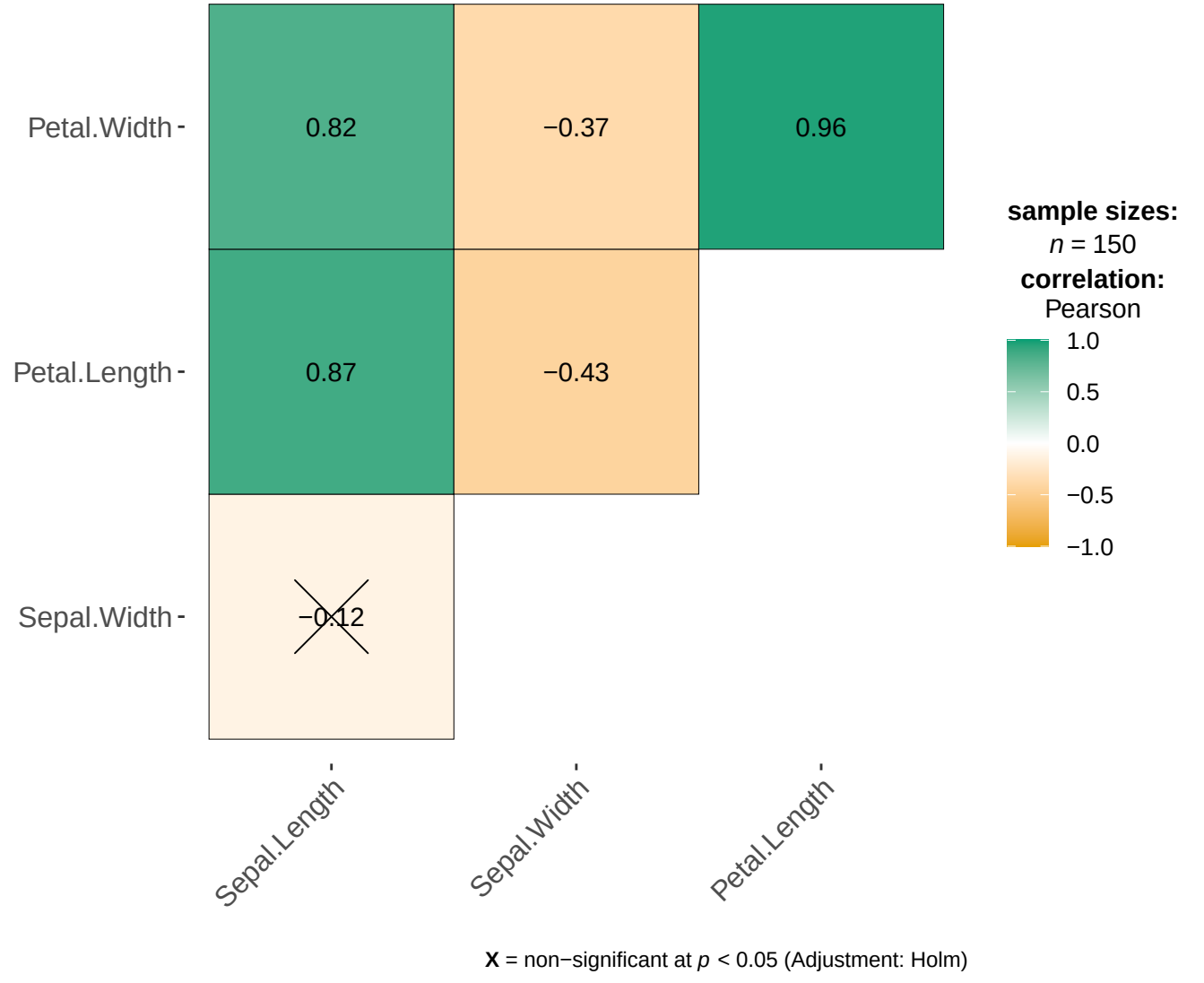
Note: Only two species of flower are displayed

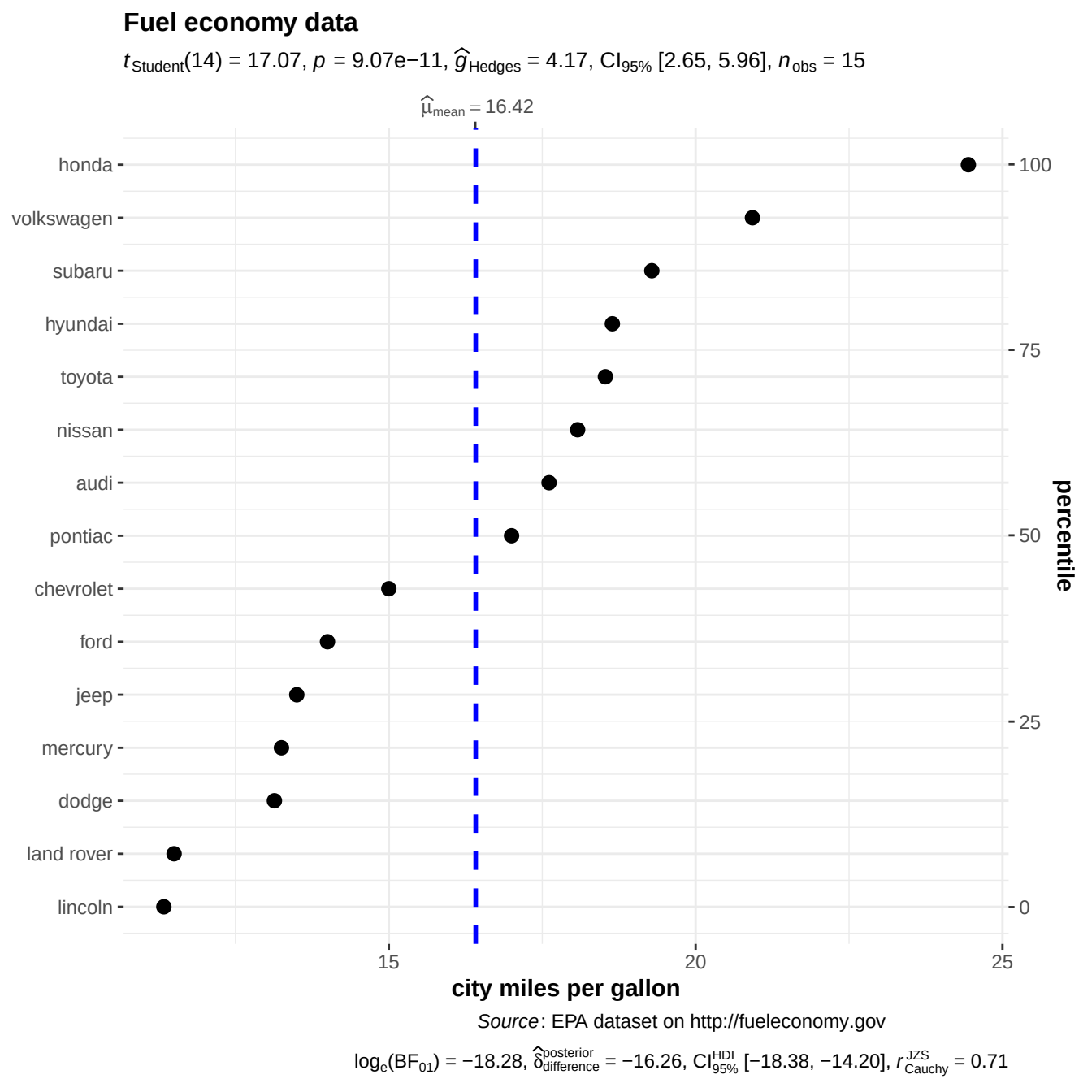

$\chi^2_{Pearson}(2) = 21.34$, $p = 2.32e{-}05$, $\widehat{V}_{Cramer} = 0.79$, $CI_{95\%}$ [0.44, 1.00], $n_{obs} = 32$
$p = 0.007$
$p = 0.705$
$p = 1.83e{-}04$
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
91%
9%
57%
43%
100%
vs
1
0
(n = 11)
(n = 7)
(n = 14)
4
6
8
cyl
$\log_e(BF_{01}) = -10.31$, $\widehat{V}^{posterior}_{Cramer} = 0.72$, $CI^{HDI}_{95\%}$ [0.52, 0.88], $a_{Gunel-Dickey} = 1.00$

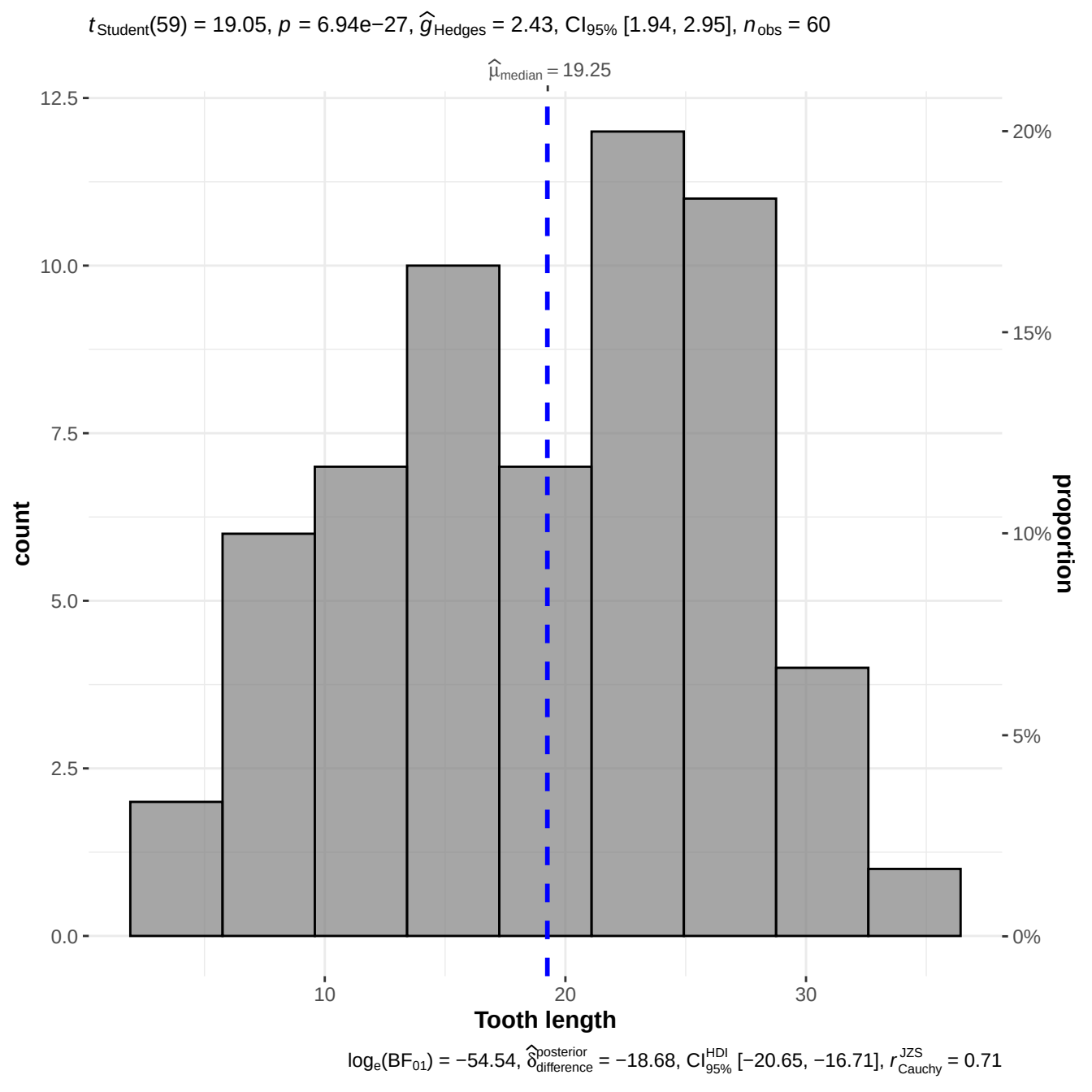

$t_{Welch}(18.33) = -3.77$, $p = 0.001$, $\hat{g}_{Hedges} = -1.35$, $CI_{95\%}$ [−2.17, −0.51], $n_{obs} = 32$
35
30
25
20
15
10
mpg
$\hat{\mu}_{mean} = 17.15$
$\hat{\mu}_{mean} = 24.39$
0
(n = 19)
1
(n = 13)
am
$\log_e(BF_{01}) = -4.46$, $\hat{\delta}^{posterior}_{difference} = 6.44$, $CI^{HDI}_{95\%}$ [2.68, 10.05], $r^{JZS}_{Cauchy} = 0.71$


$F_{trimmed-means}(4,26.10) = 5.13$, $p = 0.003$, $\hat{\xi} = 0.61$, $CI_{95\%}$ [0.31, 0.86], $n_{obs} = 100$
$p_{FDR-corrected} = 0.004$
$p_{FDR-corrected} = 0.004$
$p_{FDR-corrected} = 0.018$
$p_{FDR-corrected} = 0.018$
1200
1000
800
600
Speed−of−light measurement
$\hat{\mu}_{trimmed} = 929.17$
$\hat{\mu}_{trimmed} = 848.33$
$\hat{\mu}_{trimmed} = 857.50$
$\hat{\mu}_{trimmed} = 819.17$
$\hat{\mu}_{trimmed} = 825.83$
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 test: **Yuen's trimmed means test**; Comparisons shown: **only significant**

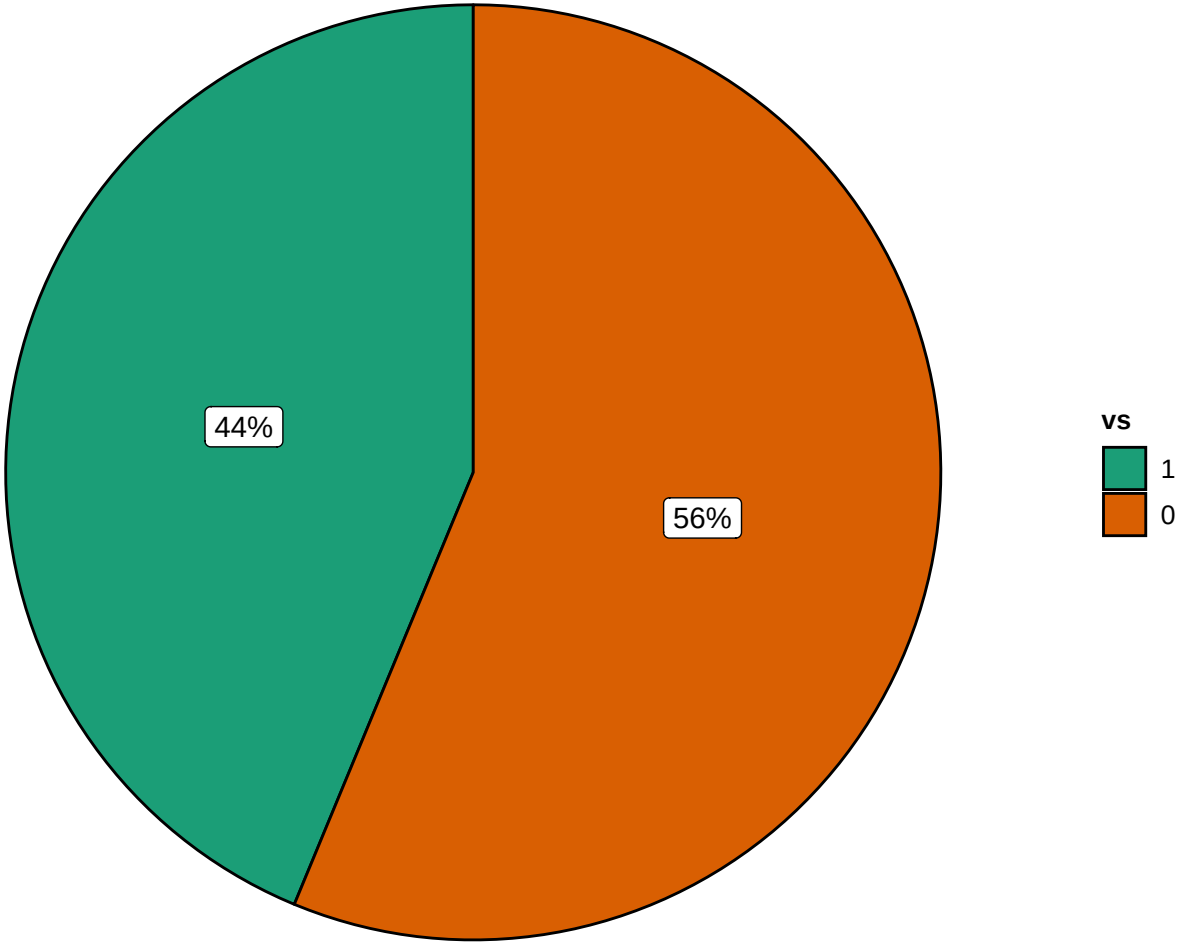

$\hat{\beta} = -1.31,\ t(28) = -1.85,\ p = 0.076$
cyl:am
$\hat{\beta} = 10.18,\ t(28) = 2.36,\ p = 0.025$
am
cyl
$\hat{\beta} = -1.98,\ t(28) = -4.40,\ p = 1.41e{-}04$
(Intercept)
$\hat{\beta} = 30.87,\ t(28) = 9.68,\ p = 1.95e{-}10$
term
0
10
20
30
estimate
AIC = 166, BIC = 173


Petal.Width
Petal.Length
Sepal.Width
0.82
−0.37
0.96
0.87
−0.43
−0.12
Sepal.Length
Sepal.Width
Petal.Length
sample sizes:
n = 150
correlation:
Pearson
1.0
0.5
0.0
−0.5
−1.0
X = non−significant at p < 0.05 (Adjustment: Holm)


Fuel economy data
$t_{Student}(14) = 17.07$, $p = 9.07e{-}11$, $\hat{g}_{Hedges} = 4.17$, $CI_{95\%}$ [2.65, 5.96], $n_{obs} = 15$
$\hat{\mu}_{mean} = 16.42$
honda
volkswagen
subaru
hyundai
toyota
nissan
audi
pontiac
chevrolet
ford
jeep
mercury
dodge
land rover
lincoln
100
75
50
25
0
percentile
15
20
25
city miles per gallon
Source: EPA dataset on http://fueleconomy.gov
$\log_e(BF_{01}) = -18.28$, $\hat{\delta}^{posterior}_{difference} = -16.26$, $CI^{HDI}_{95\%}$ [−18.38, −14.20], $r^{JZS}_{Cauchy} = 0.71$

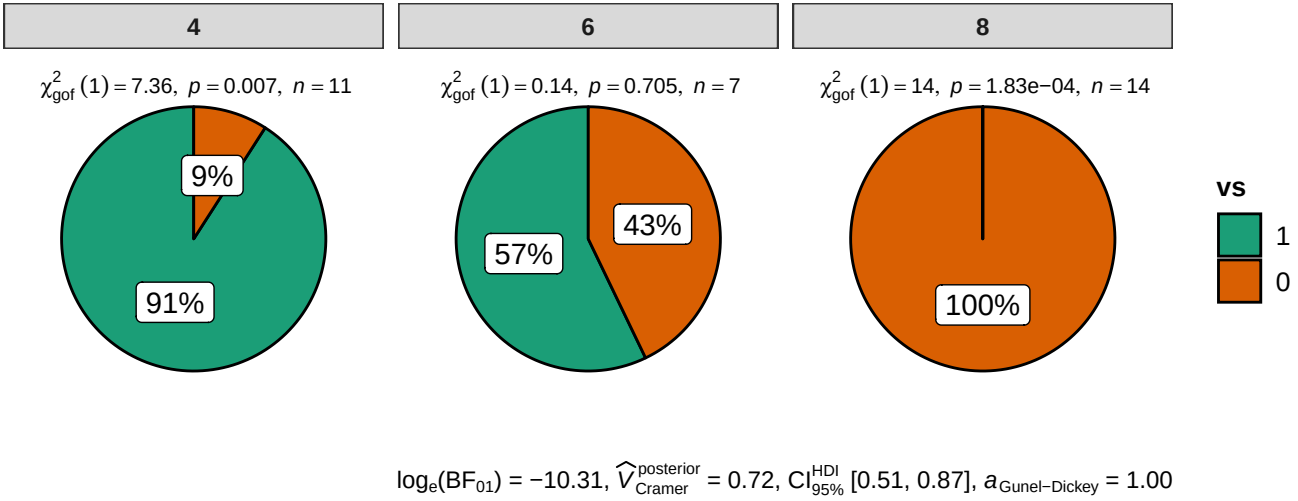

$t_{Student}(59) = 19.05$, $p = 6.94e{-}27$, $\widehat{g}_{Hedges} = 2.43$, $CI_{95\%}$ [1.94, 2.95], $n_{obs} = 60$
$\widehat{\mu}_{median} = 19.25$
12.5
10.0
7.5
5.0
2.5
0.0
count
20%
15%
10%
5%
0%
proportion
10
20
30
Tooth length
$\log_e(BF_{01}) = -54.54$, $\widehat{\delta}^{posterior}_{difference} = -18.68$, $CI^{HDI}_{95\%}$ [−20.65, −16.71], $r^{JZS}_{Cauchy} = 0.71$

$\chi^2_{gof}(1) = 0.50$, $p = 0.480$, $\widehat{C}_{Pearson} = 0.12$, $CI_{95\%}$ [0.00, 1.00], $n_{obs} = 32$

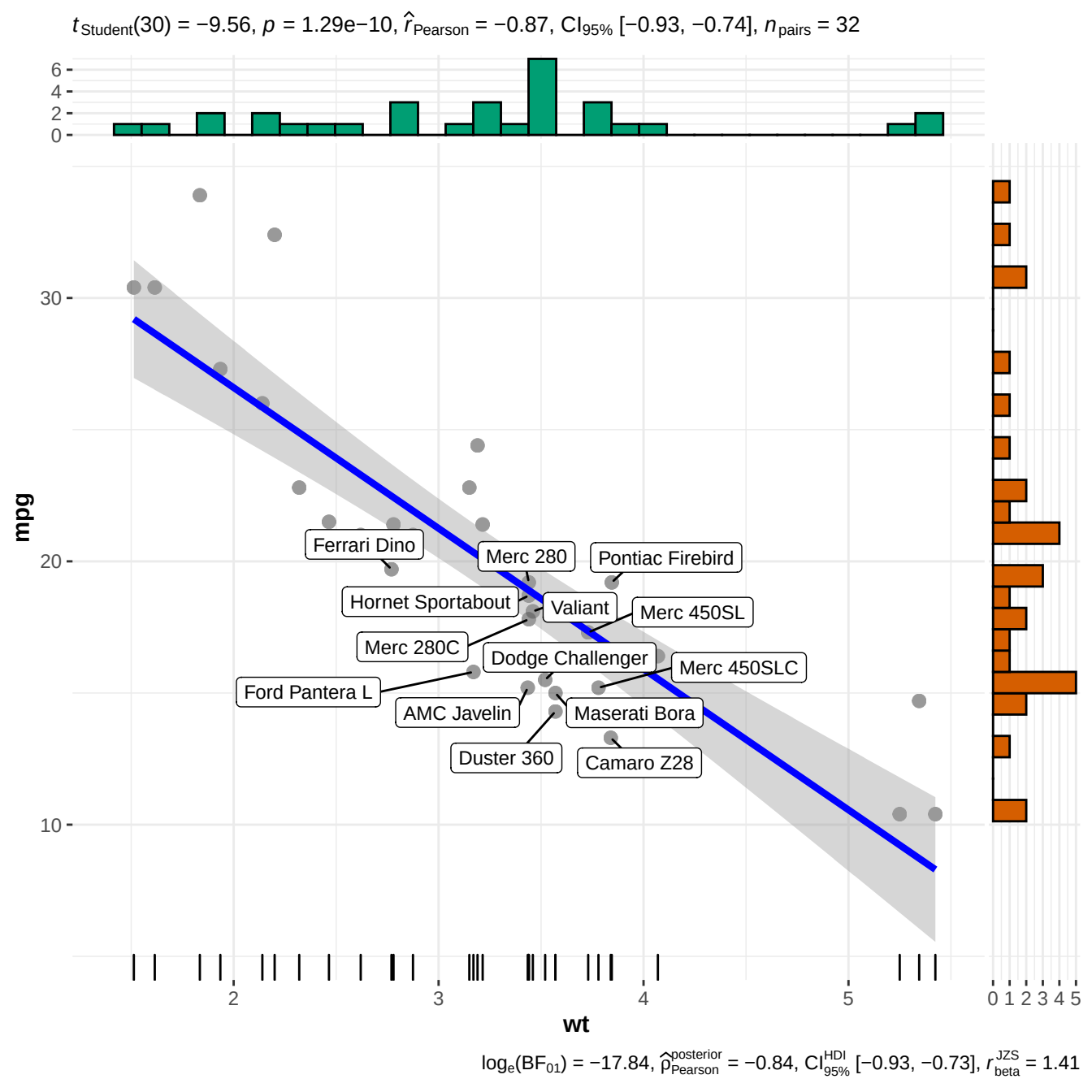


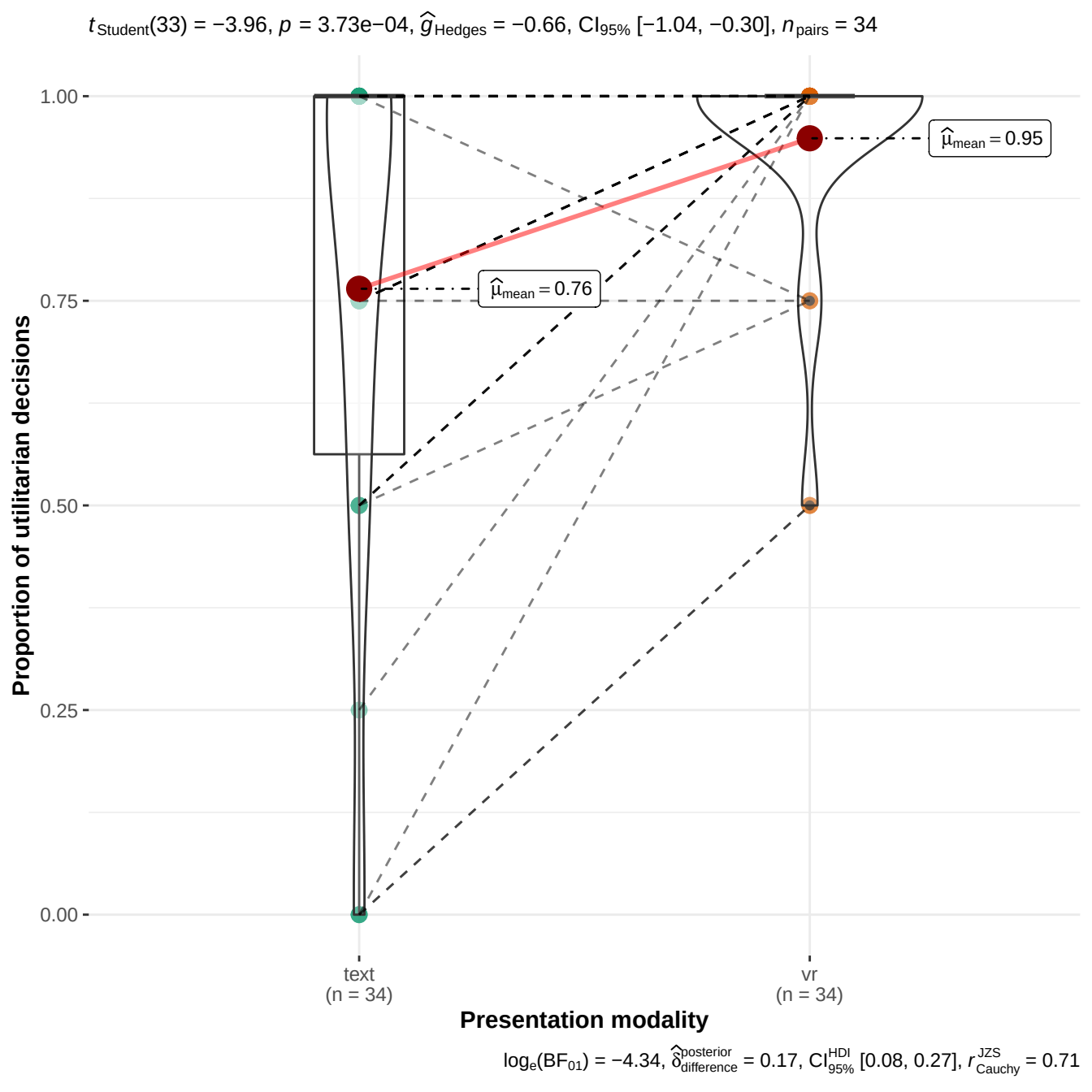
$\log_e(BF_{01}) = 1.72$, $a_{Gunel-Dickey} = 1.00$

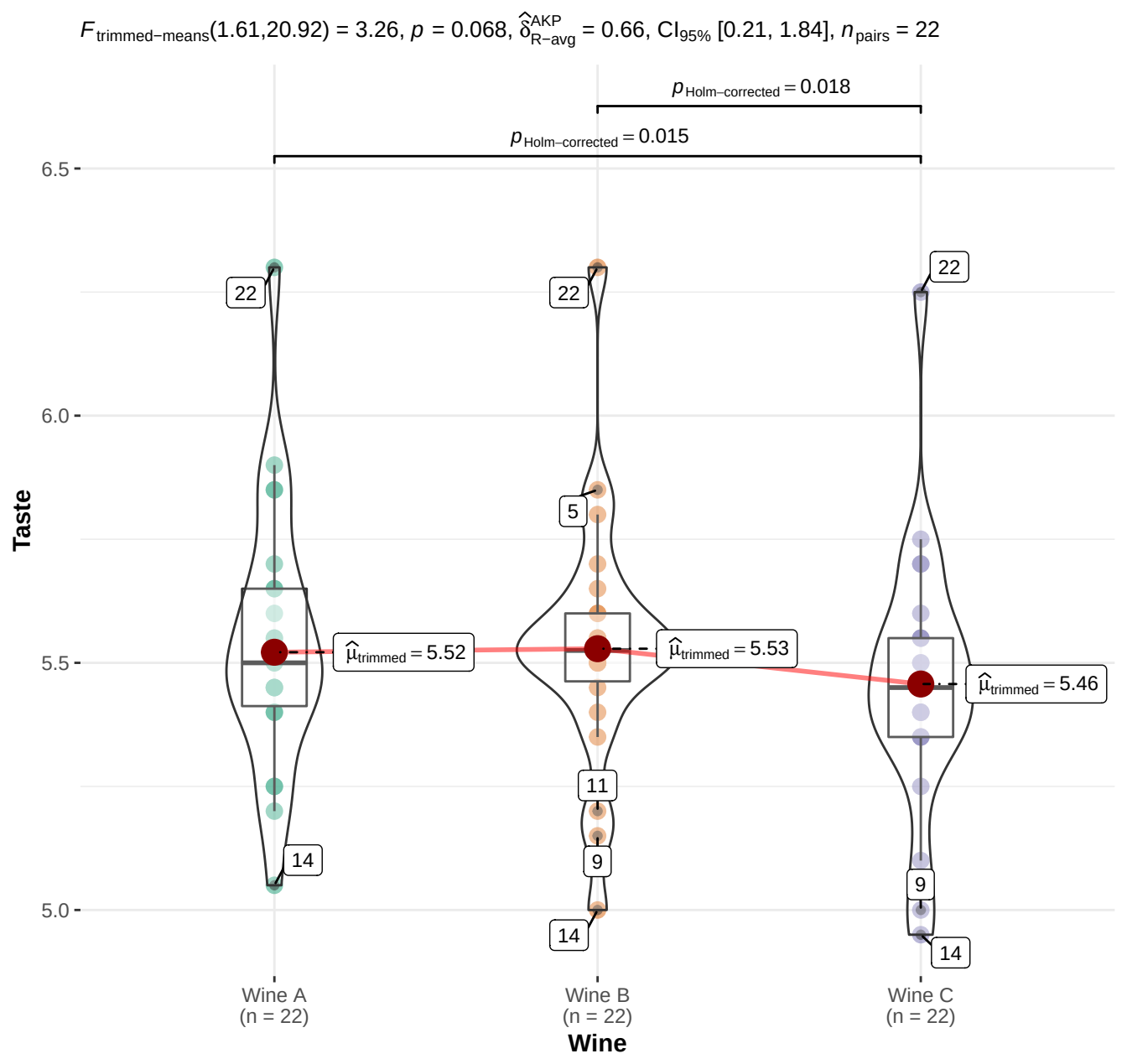
$\chi^2_{Pearson}(2) = 21.34,\ p = 2.32e{-}05,\ \widehat{V}_{Cramer} = 0.79,\ CI_{95\%}\ [0.44, 1.00],\ n_{obs} = 32$



$\log_e(BF_{01}) = -10.31,\ \widehat{V}^{posterior}_{Cramer} = 0.72,\ CI^{HDI}_{95\%}\ [0.51, 0.87],\ a_{Gunel-Dickey} = 1.00$

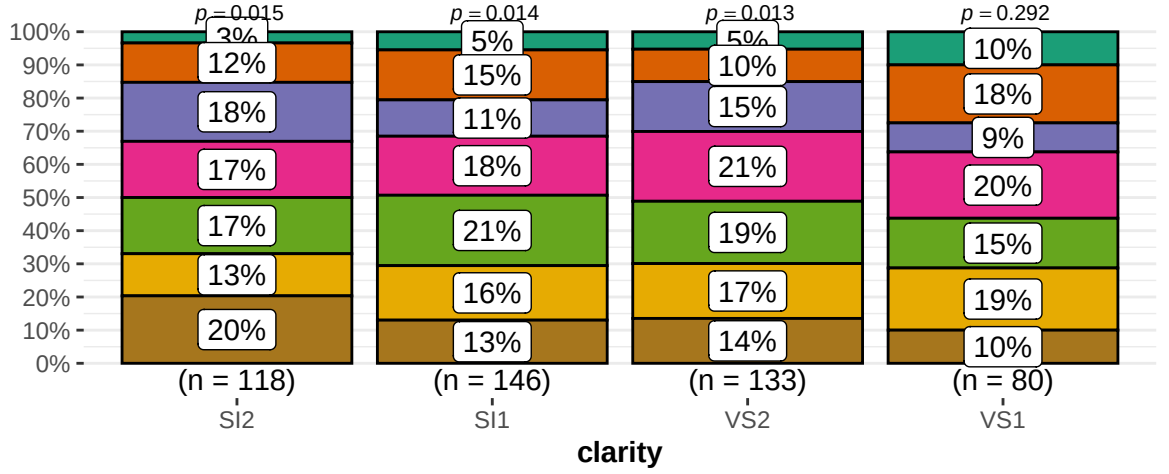

$t_{Student}(30) = -9.56$, $p = 1.29e{-}10$, $\hat{r}_{Pearson} = -0.87$, $CI_{95\%}$ [−0.93, −0.74], $n_{pairs} = 32$
mpg
wt
Ferrari Dino
Merc 280
Pontiac Firebird
Hornet Sportabout
Valiant
Merc 450SL
Merc 280C
Dodge Challenger
Merc 450SLC
Ford Pantera L
AMC Javelin
Maserati Bora
Duster 360
Camaro Z28
$\log_e(BF_{01}) = -17.84$, $\hat{\rho}^{posterior}_{Pearson} = -0.84$, $CI^{HDI}_{95\%}$ [−0.93, −0.73], $r^{JZS}_{beta} = 1.41$


$t_{Student}(33) = -3.96$, $p = 3.73e{-}04$, $\hat{g}_{Hedges} = -0.66$, $CI_{95\%}$ [−1.04, −0.30], $n_{pairs} = 34$
1.00
0.75
0.50
0.25
0.00
Proportion of utilitarian decisions
$\hat{\mu}_{mean} = 0.95$
$\hat{\mu}_{mean} = 0.76$
text
(n = 34)
vr
(n = 34)
Presentation modality
$\log_e(BF_{01}) = -4.34$, $\hat{\delta}^{posterior}_{difference} = 0.17$, $CI^{HDI}_{95\%}$ [0.08, 0.27], $r^{JZS}_{Cauchy} = 0.71$


$F_{\text{trimmed-means}}(1.61, 20.92) = 3.26$, $p = 0.068$, $\hat{\delta}^{\text{AKP}}_{\text{R-avg}} = 0.66$, $\text{CI}_{95\%}$ [0.21, 1.84], $n_{\text{pairs}} = 22$
$p_{\text{Holm-corrected}} = 0.018$
$p_{\text{Holm-corrected}} = 0.015$
Taste
6.5
6.0
5.5
5.0
22
22
22
5
11
9
14
14
9
14
$\hat{\mu}_{\text{trimmed}} = 5.52$
$\hat{\mu}_{\text{trimmed}} = 5.53$
$\hat{\mu}_{\text{trimmed}} = 5.46$
Wine A
(n = 22)
Wine B
(n = 22)
Wine C
(n = 22)
Wine
Pairwise test: **Yuen's trimmed means test**; Comparisons shown: **only significant**

Very Good

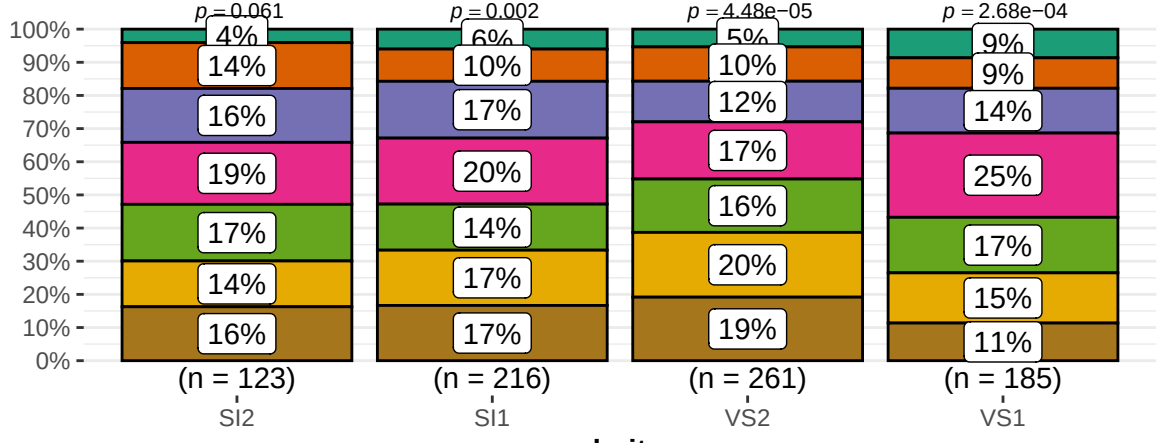
$\chi^2_{\text{Pearson}}(18) = 17.95$, $p = 0.459$, $\widehat{V}_{\text{Cramer}} = 0.00$, $\text{CI}_{95\%}$ [0.00, 1.00], $n_{\text{obs}} = 477$



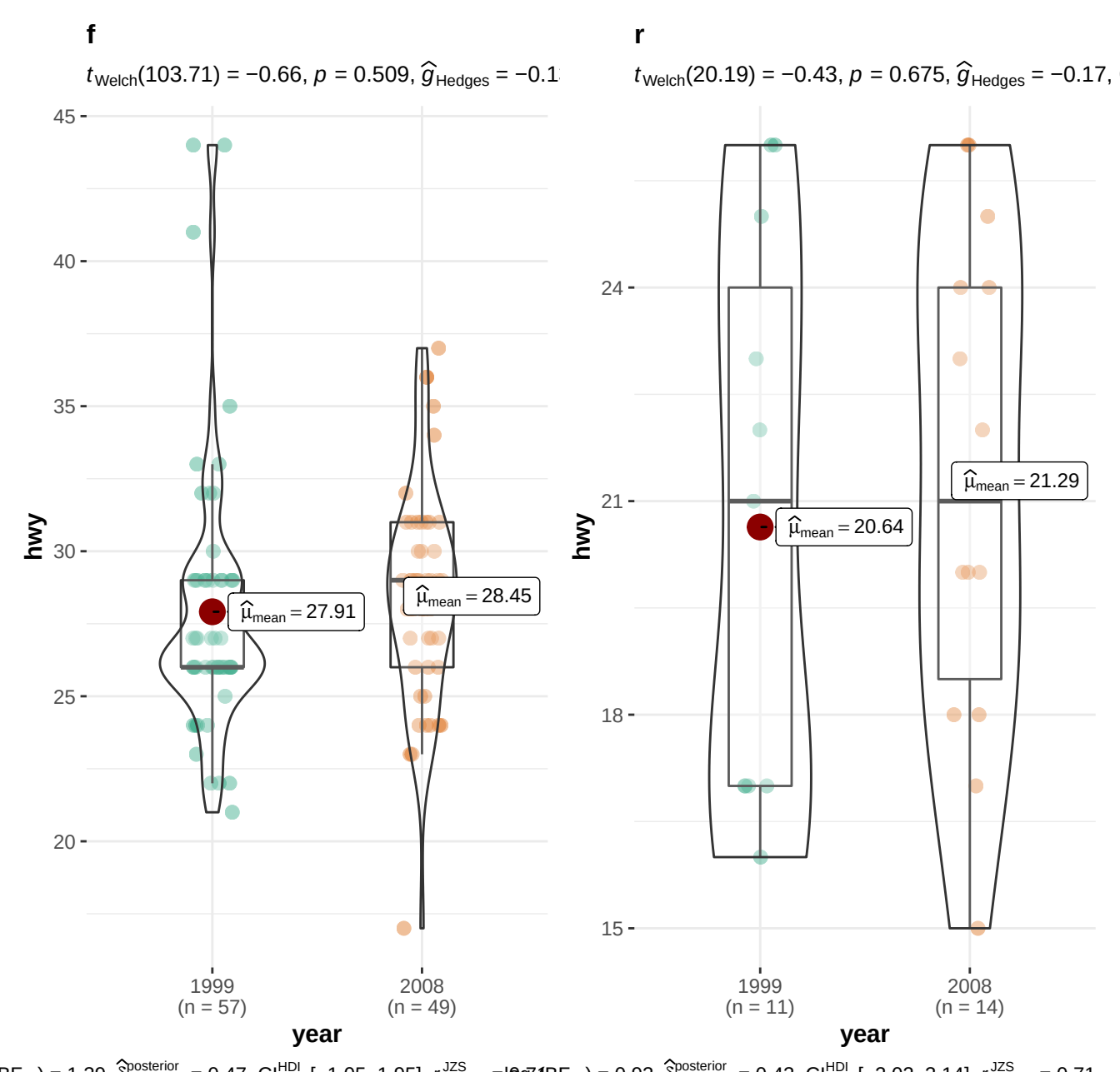
$\log_e(\text{BF}_{01}) = 16.13$, $\widehat{V}^{\text{posterior}}_{\text{Cramer}} = 0.15$, $\text{CI}^{\text{HDI}}_{95\%}$ [0.11, 0.19], $a_{\text{Gunel–Dickey}} = 1.00$

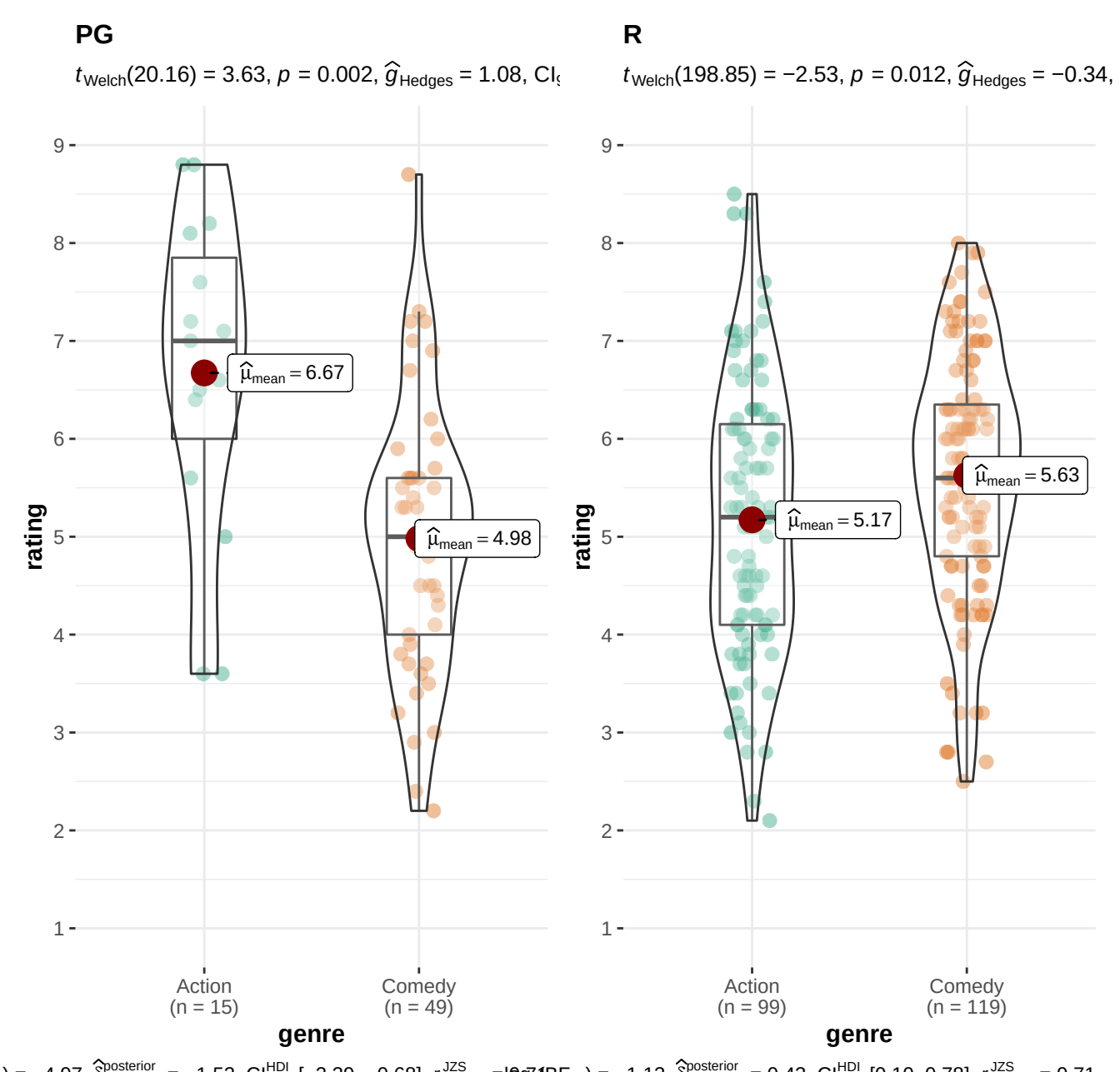
Ideal

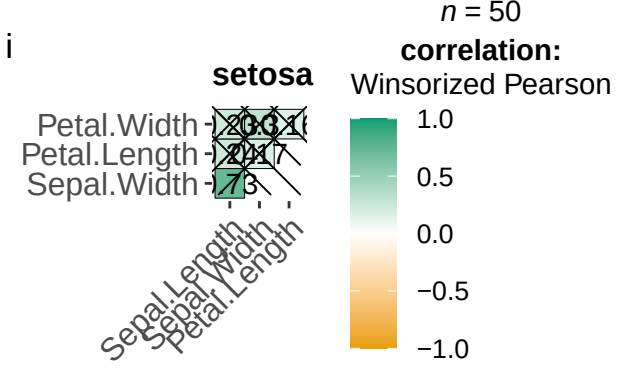
$\chi^2_{\text{Pearson}}(18) = 17.85$, $p = 0.466$, $\widehat{V}_{\text{Cramer}} = 0.00$, $\text{CI}_{95\%}$ [0.00, 1.00], $n_{\text{obs}} = 785$



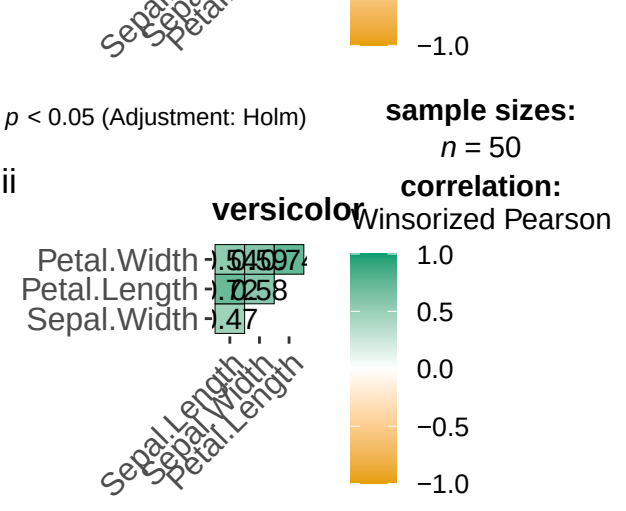
$\log_e(\text{BF}_{01}) = 20.36$, $\widehat{V}^{\text{posterior}}_{\text{Cramer}} = 0.12$, $\text{CI}^{\text{HDI}}_{95\%}$ [0.09, 0.15], $a_{\text{Gunel–Dickey}} = 1.00$


f
$t_{Welch}(103.71) = -0.66$, $p = 0.509$, $\hat{g}_{Hedges} = -0.1$
45
40
35
30
25
20
hwy
$\hat{\mu}_{mean} = 27.91$
$\hat{\mu}_{mean} = 28.45$
1999
(n = 57)
2008
(n = 49)
year
r
$t_{Welch}(20.19) = -0.43$, $p = 0.675$, $\hat{g}_{Hedges} = -0.17$,
24
21
18
15
hwy
$\hat{\mu}_{mean} = 20.64$
$\hat{\mu}_{mean} = 21.29$
1999
(n = 11)
2008
(n = 14)
year
$BF_{01}) = 1.39$, $\hat{\delta}^{posterior}_{difference} = 0.47$, $CI^{HDI}_{95\%}$ [−1.05, 1.95], r^{JZS}_{Cauchy} =
$\log_e(BF_{01}) = 0.93$, $\hat{\delta}^{posterior}_{difference} = 0.43$, $CI^{HDI}_{95\%}$ [−2.02, 3.14], $r^{JZS}_{Cauchy} = 0.71$

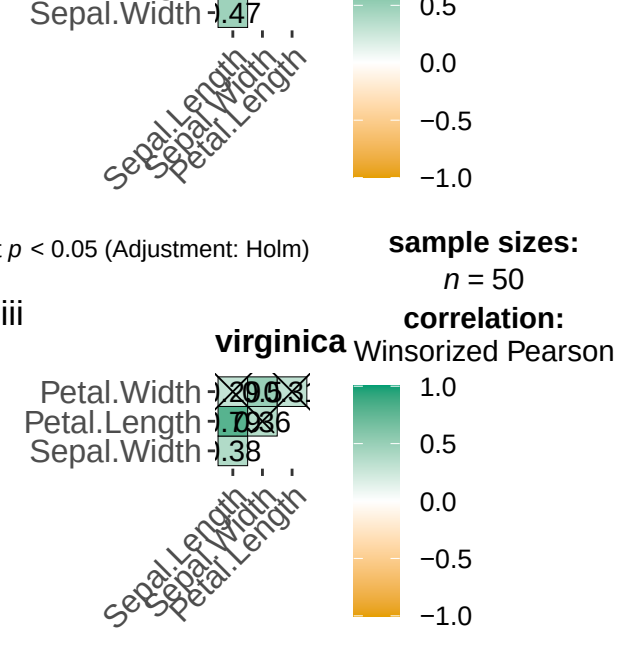

PG
$t_{Welch}(20.16) = 3.63$, $p = 0.002$, $\hat{g}_{Hedges} = 1.08$, CI
R
$t_{Welch}(198.85) = -2.53$, $p = 0.012$, $\hat{g}_{Hedges} = -0.34$,
rating
9
8
7
6
5
4
3
2
1
$\hat{\mu}_{mean} = 6.67$
$\hat{\mu}_{mean} = 4.98$
$\hat{\mu}_{mean} = 5.17$
$\hat{\mu}_{mean} = 5.63$
Action
(n = 15)
Comedy
(n = 49)
Action
(n = 99)
Comedy
(n = 119)
genre
genre
) = −4.97, $\hat{\delta}^{posterior}_{difference} = -1.52$, $CI^{HDI}_{95\%}$ [−2.39, −0.68], r^{JZS}_{Cauchy} = 0.71
$\log_e(BF_{01}) = -1.13$, $\hat{\delta}^{posterior}_{difference} = 0.43$, $CI^{HDI}_{95\%}$ [0.10, 0.78], $r^{JZS}_{Cauchy} = 0.71$



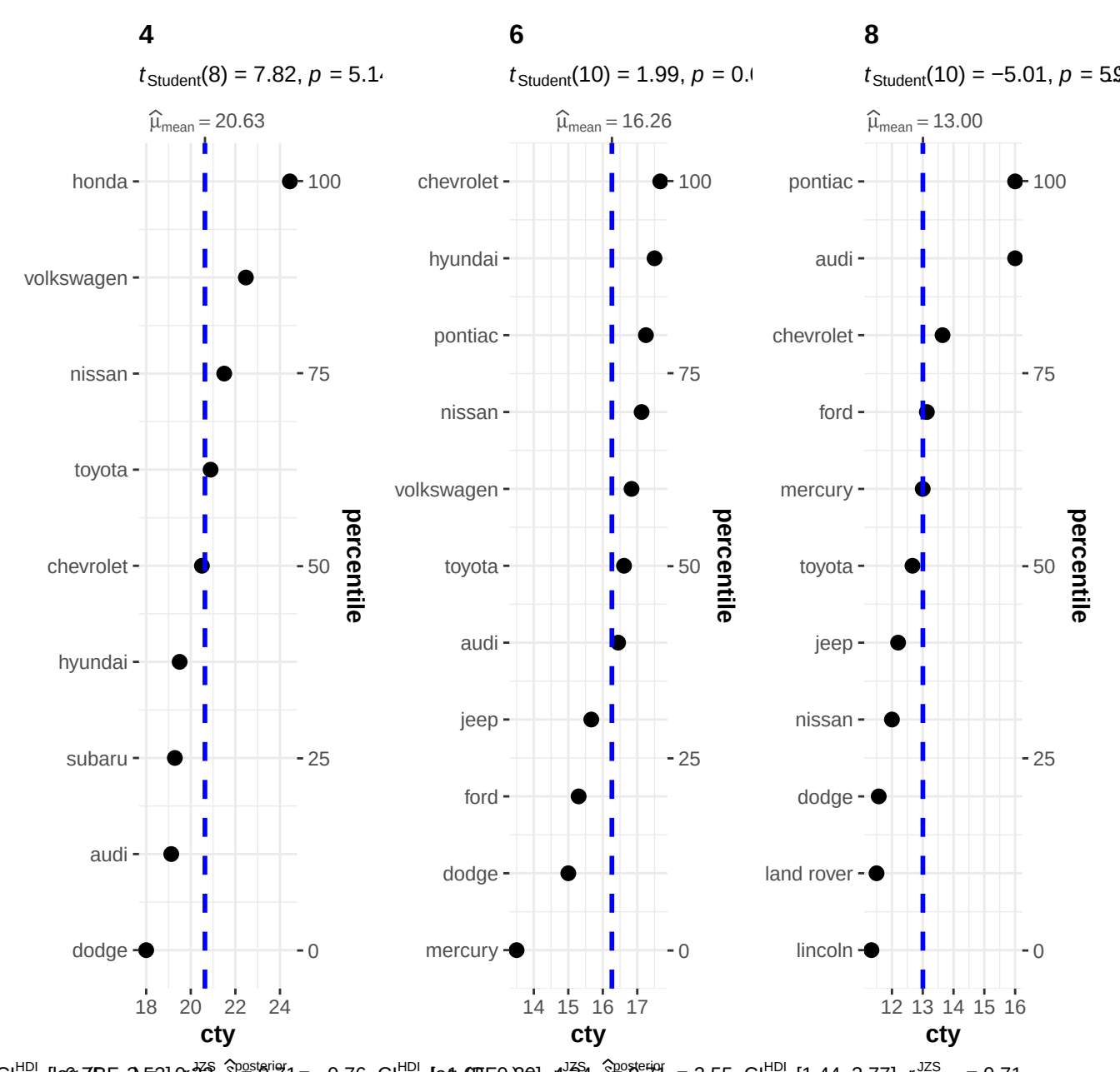
X = non−significant at $p < 0.05$ (Adjustment: Holm)



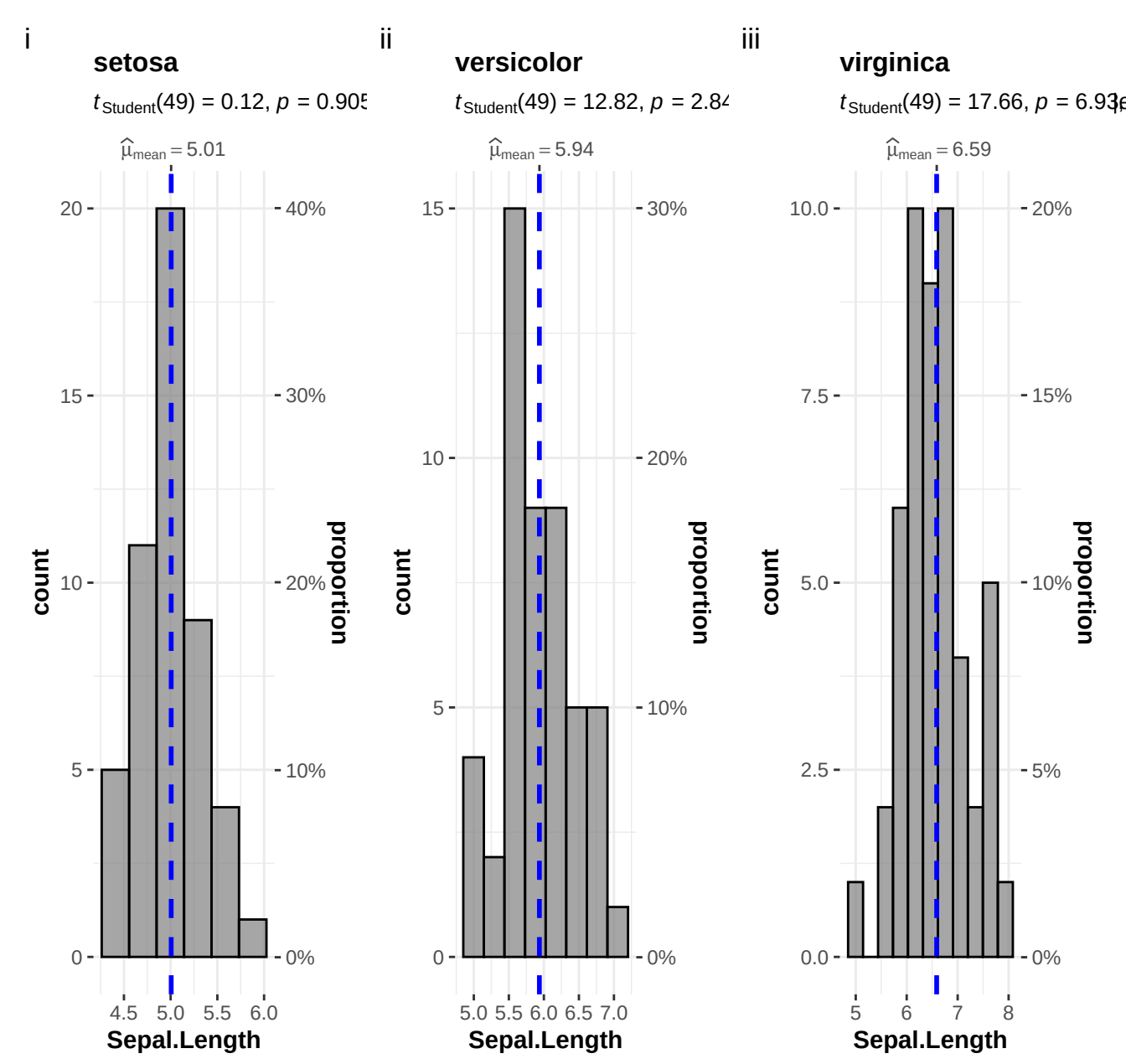
X = non−significant at $p < 0.05$ (Adjustment: Holm)



X = non−significant at $p < 0.05$ (Adjustment: Holm)



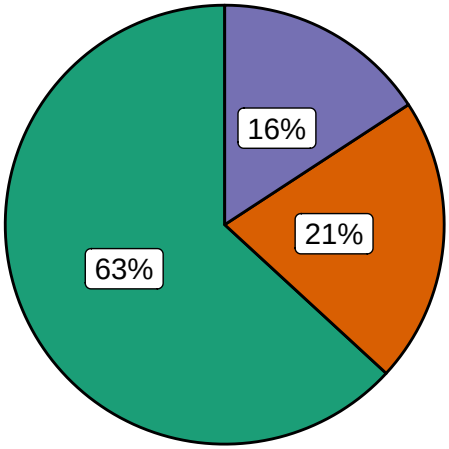
$CI^{HDI}_{95\%}$ [6.78, 9.53], $BF_{01} = 0.23$, $\hat{\delta}^{posterior}_{JZS\ Cauchy\ difference} = -0.71$ $CI^{HDI}_{95\%}$ [-1.65, 0.20], $BF_{01} = 4.24$, $\hat{\delta}^{posterior}_{JZS\ Cauchy\ difference} = 2.55$, $CI^{HDI}_{95\%}$ [1.44, 3.77], $r^{JZS}_{Cauchy} = 0.71$



$\log_e(BF_{10}) = 3.10$, $\hat{\delta}^{posterior}_{Cauchy\,difference} = 0.71$, $CI^{HDI}_{95\%}$ [0.10, 0.94], $\log_e(BF_{01}) = -7.94$, $\hat{\delta}^{posterior}_{Cauchy\,difference} = -1.58$, $CI^{HDI}_{95\%}$ [−1.77, −1.40], $r^{JZS}_{Cauchy} = 0.71$

0

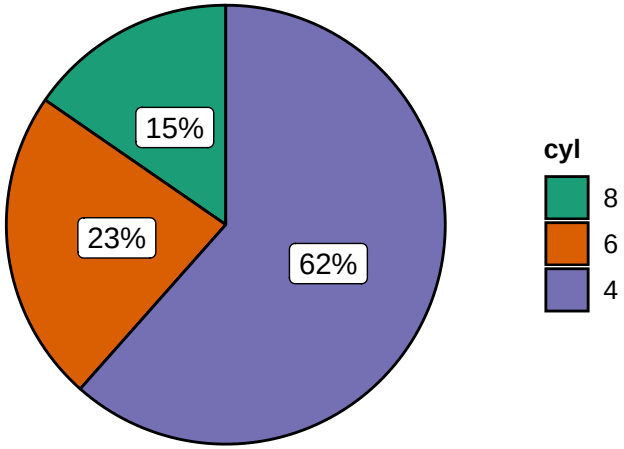
$\chi^2_{gof}(2) = 7.68$, $p = 0.021$, $\widehat{C}_{Pearson} = 0.54$, $CI_{95\%}$ |



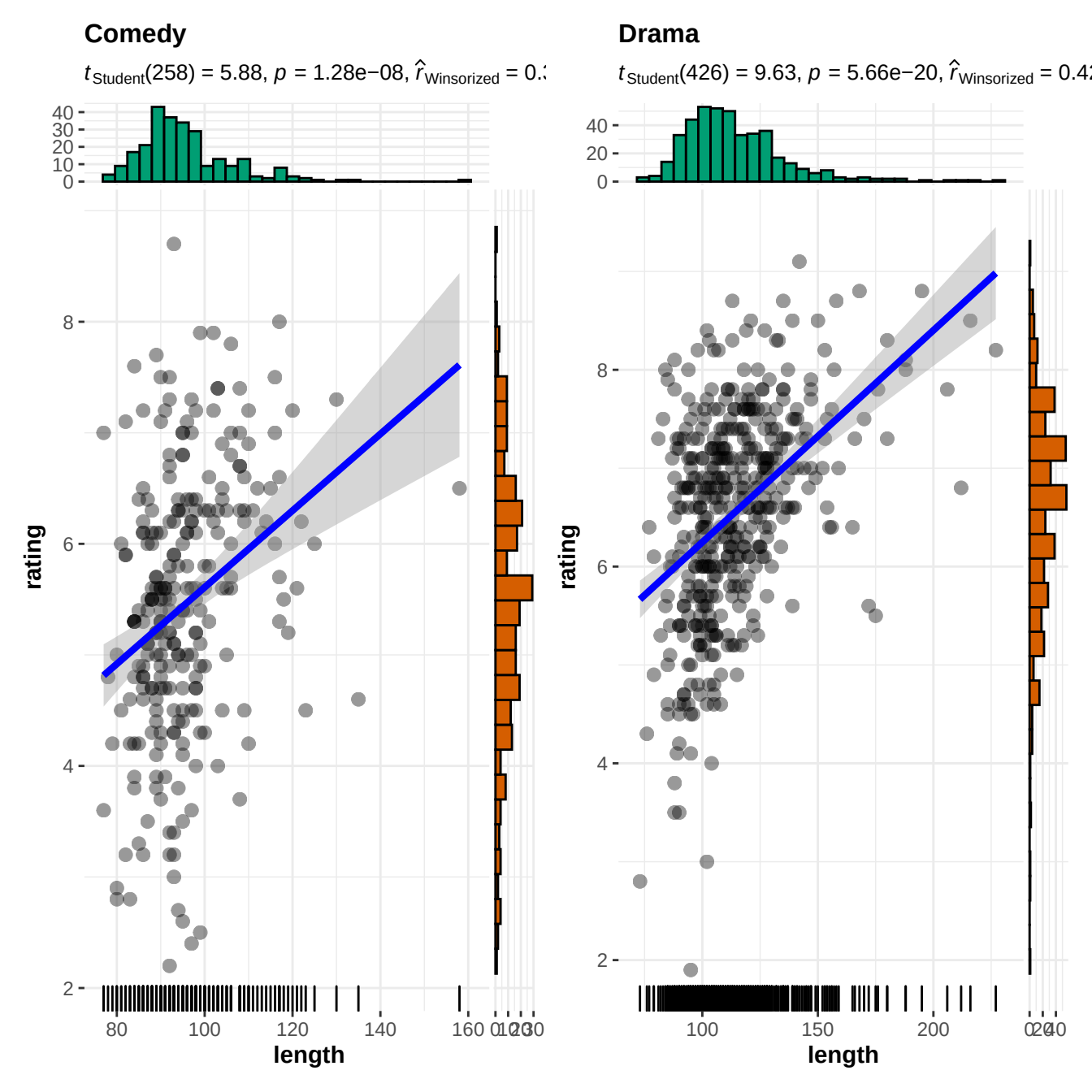
$\log_e(BF_{01}) = -0.16$, $a_{Gunel-Dickey} = 1.00$

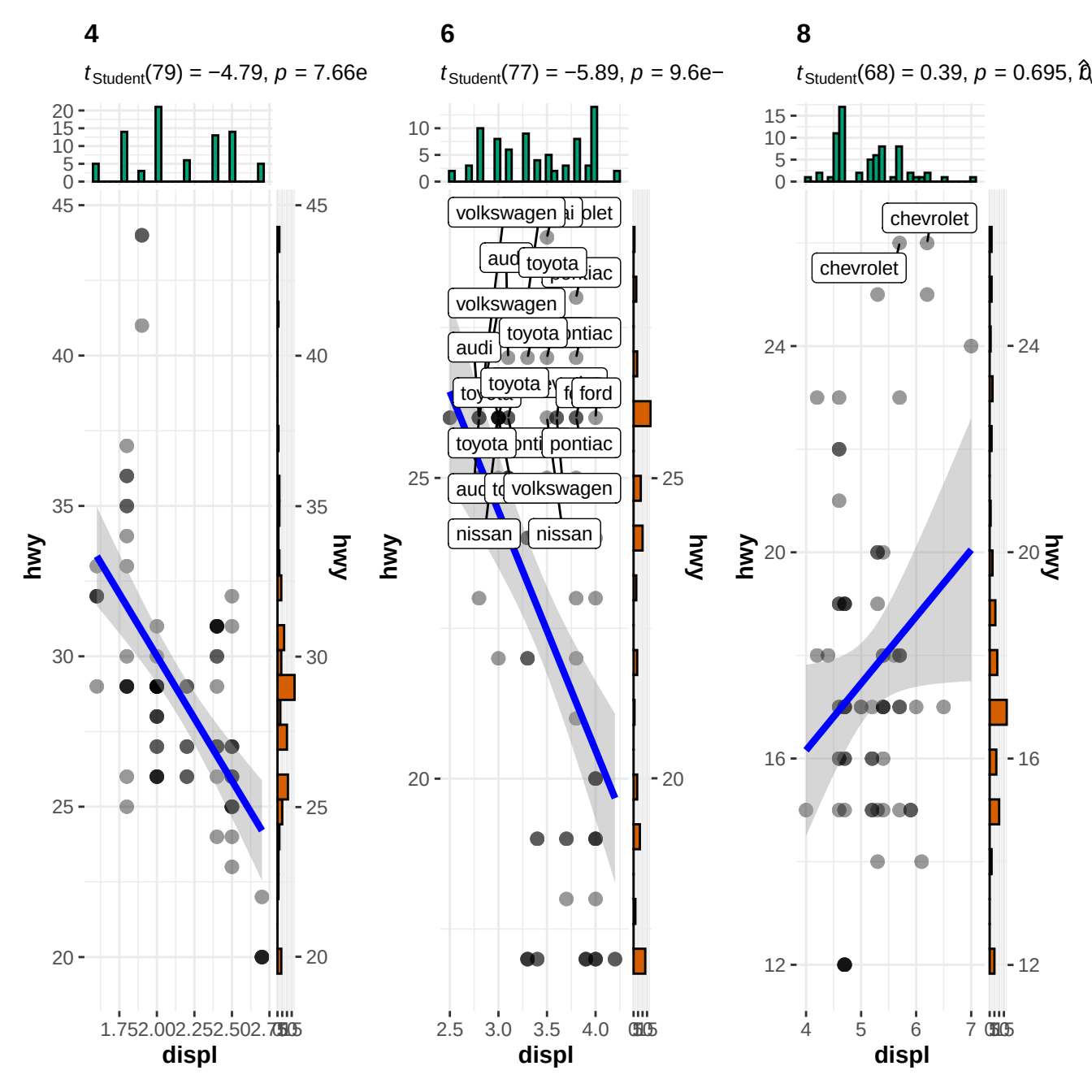
1

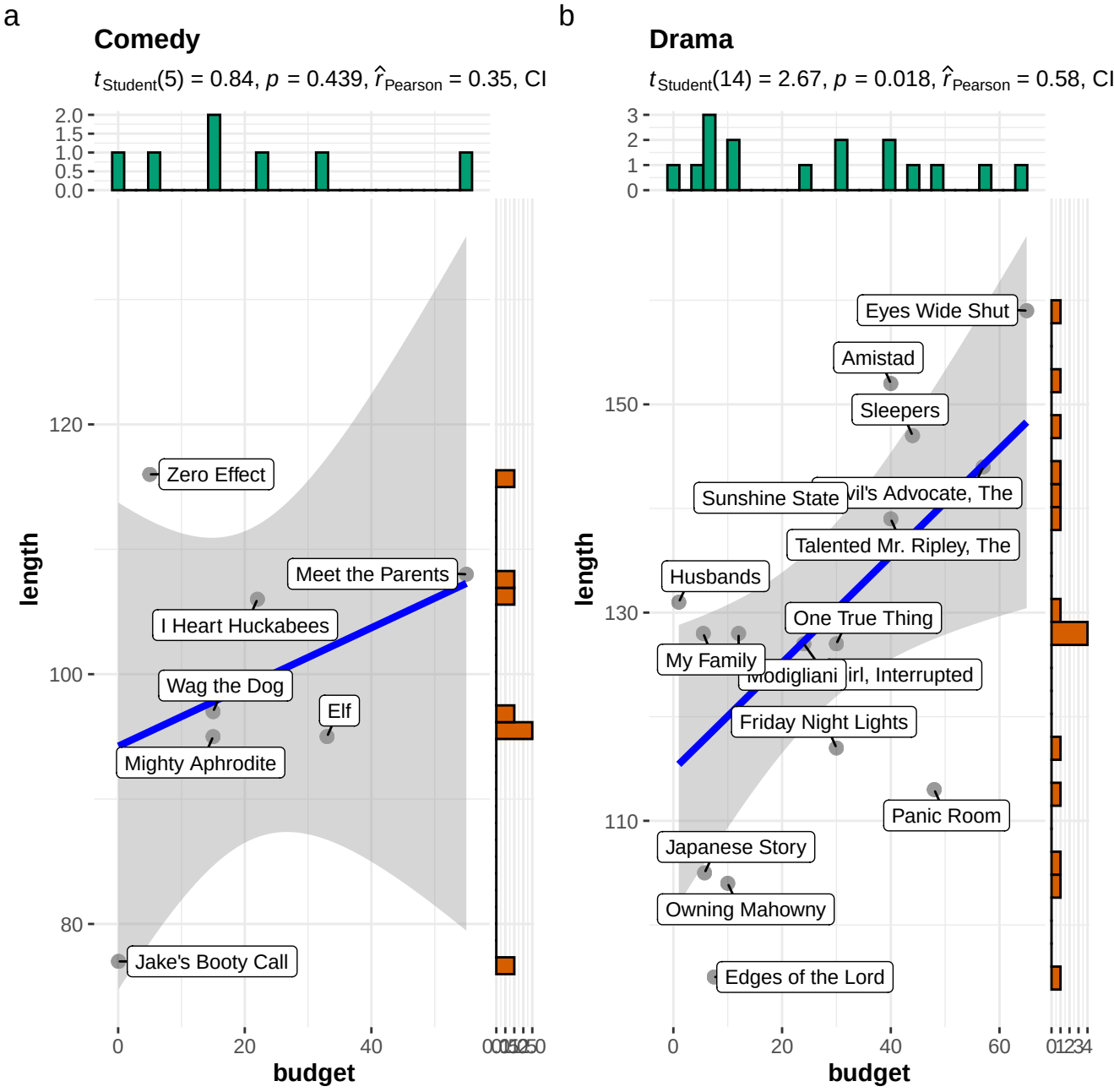
$\chi^2_{gof}(2) = 4.77$, $p = 0.092$, $\widehat{C}_{Pearson} = 0.52$, $CI_{95\%}$ [0.00, 1.00], r

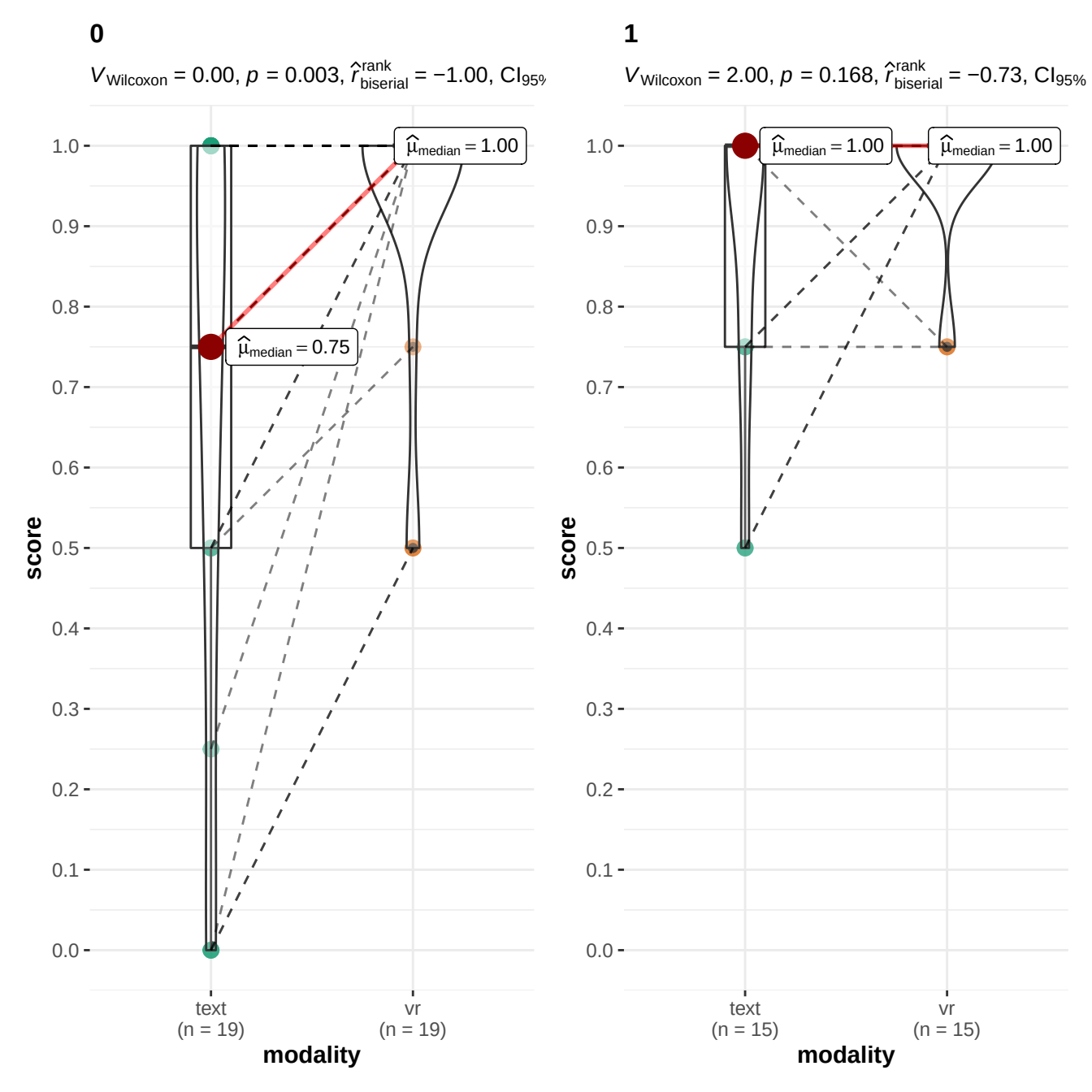


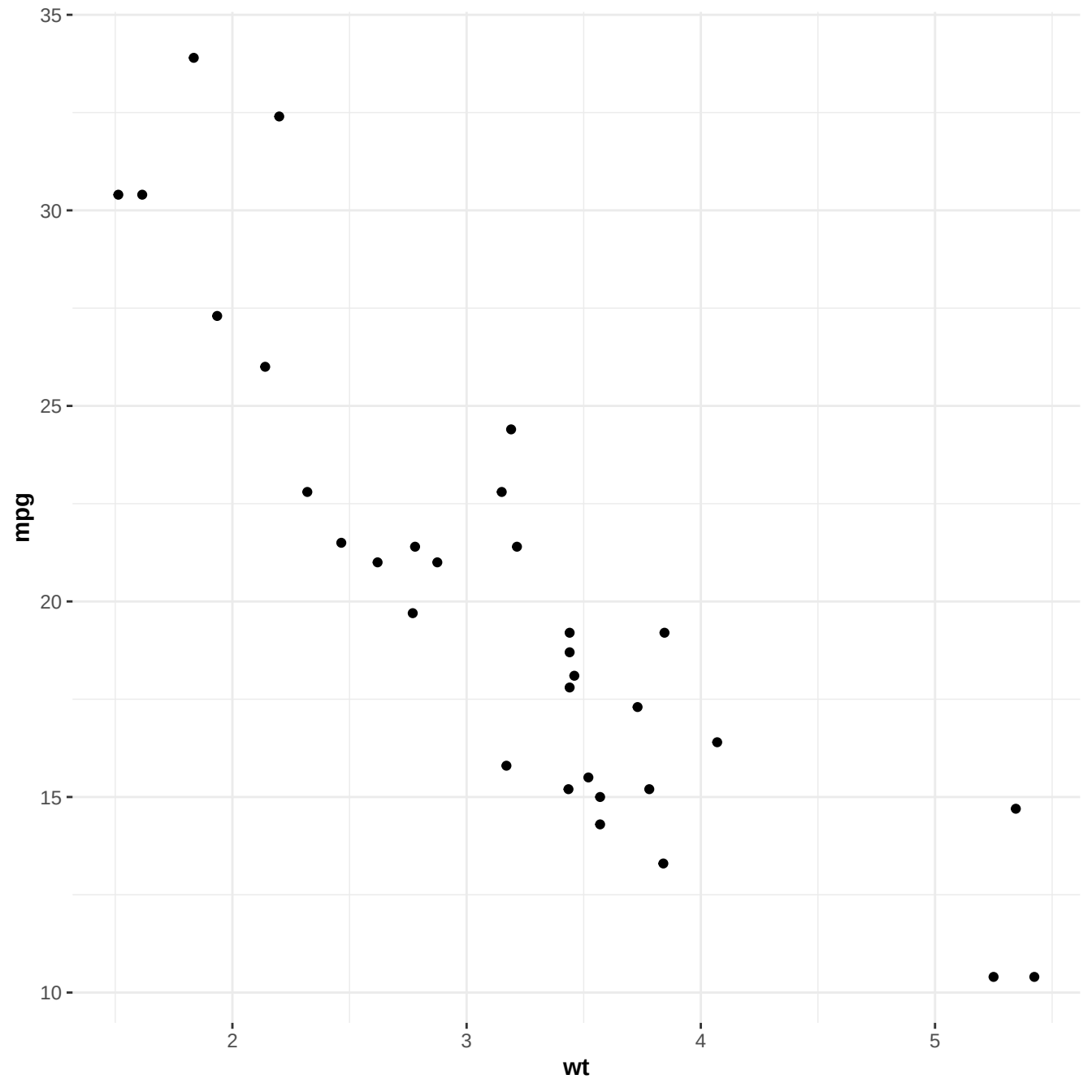
$\log_e(BF_{01}) = 0.82$, $a_{Gunel-Dickey} = 1.00$


Comedy
$t_{Student}(258) = 5.88, p = 1.28e{-}08, \hat{r}_{Winsorized} = 0.$
Drama
$t_{Student}(426) = 9.63, p = 5.66e{-}20, \hat{r}_{Winsorized} = 0.4$
rating
length
80
100
120
140
160
100
150
200


4
$t_{Student}(79) = -4.79, p = 7.66e$
6
$t_{Student}(77) = -5.89, p = 9.6e-$
8
$t_{Student}(68) = 0.39, p = 0.695, \hat{\beta}$
hwy
displ
volkswagen
toyota
audi
ford
pontiac
nissan
chevrolet


a
Comedy
$t_{Student}(5) = 0.84, p = 0.439, \hat{r}_{Pearson} = 0.35$, CI
2.0
1.5
1.0
0.5
0.0
120
100
80
length
Zero Effect
Meet the Parents
I Heart Huckabees
Wag the Dog
Elf
Mighty Aphrodite
Jake's Booty Call
0
20
40
budget
b
Drama
$t_{Student}(14) = 2.67, p = 0.018, \hat{r}_{Pearson} = 0.58$, CI
3
2
1
0
150
130
110
length
Eyes Wide Shut
Amistad
Sleepers
Sunshine State
Talented Mr. Ripley, The
Husbands
One True Thing
My Family
Friday Night Lights
Panic Room
Japanese Story
Owning Mahowny
Edges of the Lord
0
20
40
60
budget


0
$V_{\text{Wilcoxon}} = 0.00$, $p = 0.003$, $\hat{r}^{\text{rank}}_{\text{biserial}} = -1.00$, $\text{CI}_{95\%}$
$\hat{\mu}_{\text{median}} = 1.00$
$\hat{\mu}_{\text{median}} = 0.75$
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)
modality
1
$V_{\text{Wilcoxon}} = 2.00$, $p = 0.168$, $\hat{r}^{\text{rank}}_{\text{biserial}} = -0.73$, $\text{CI}_{95\%}$
$\hat{\mu}_{\text{median}} = 1.00$
$\hat{\mu}_{\text{median}} = 1.00$
score
text
(n = 15)
vr
(n = 15)
modality


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