Results

Descriptives

Descriptives

	Dose
N	30
Missing	0

Frequencies

Frequencies of Dose

Levels	Counts	% of Total	Cumulative %
Control	9	30.0 %	30.0 %
15 mins	8	26.7 %	56.7 %
30 mins	13	43.3 %	100.0 %

Plots

Dose
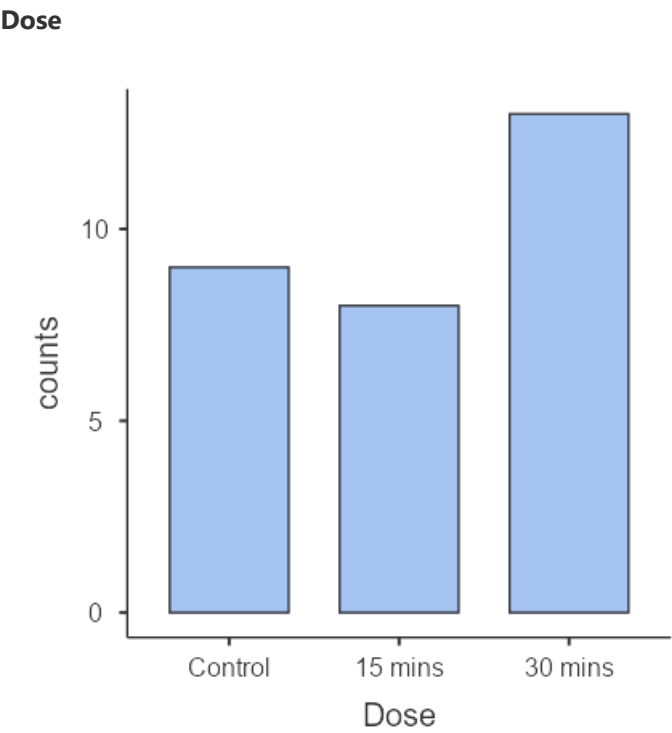
Descriptives

Descriptives

	Happiness	Puppy_love
N	30	30
Missing	0	0
Mean	4.37	2.73
Median	4.00	2.50
Standard deviation	1.96	1.86
IQR	2.75	3.00
Range	7.00	7.00
Minimum	2.00	0.00
Maximum	9.00	7.00

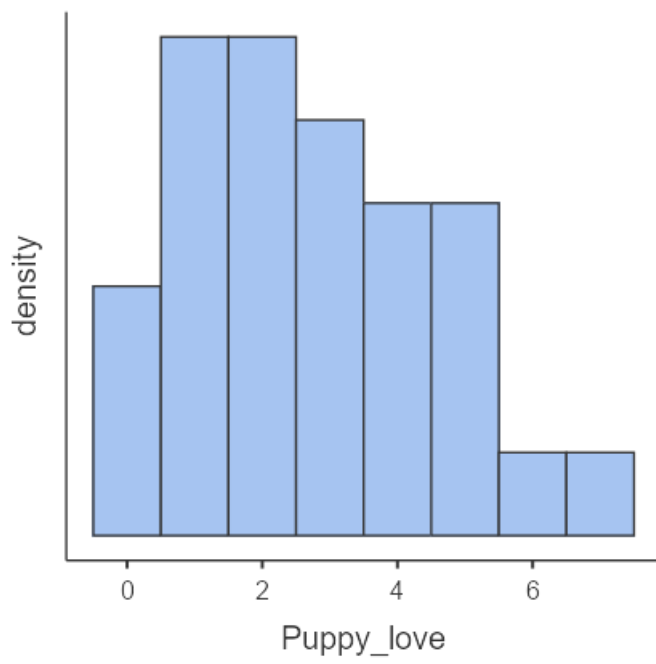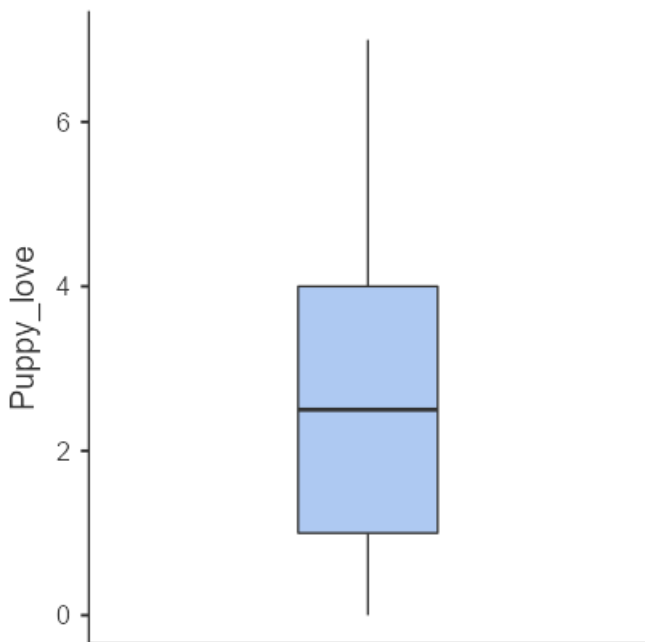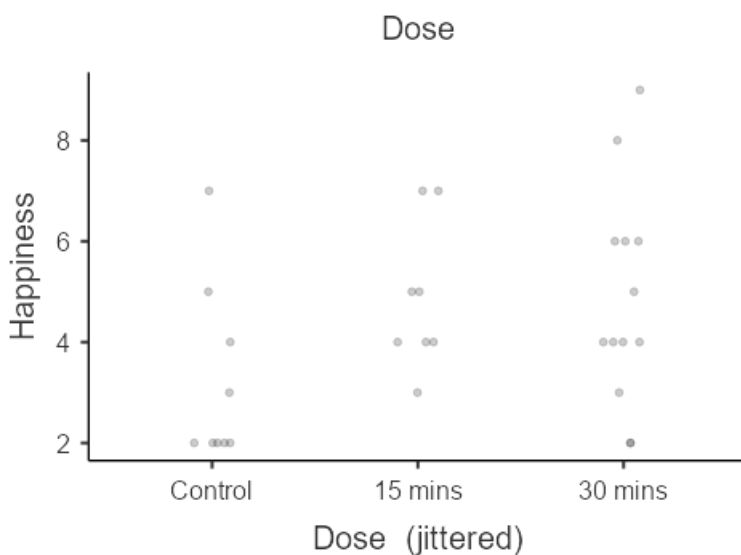## Plots

Happiness
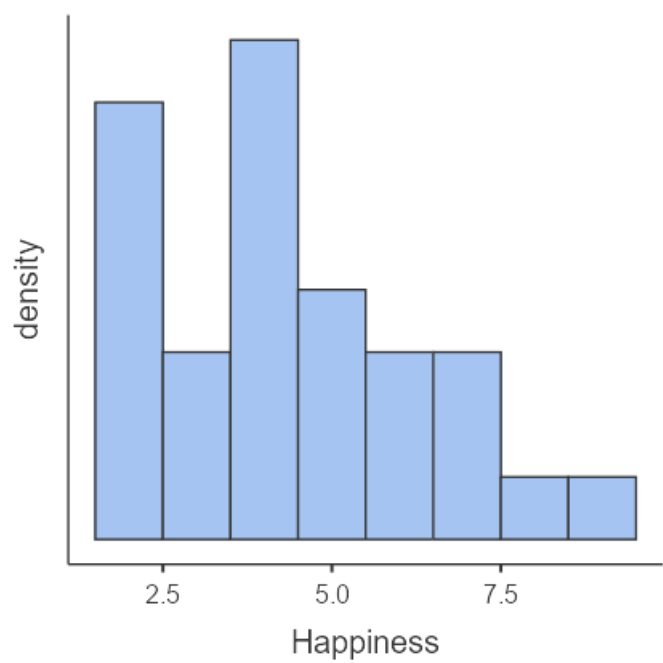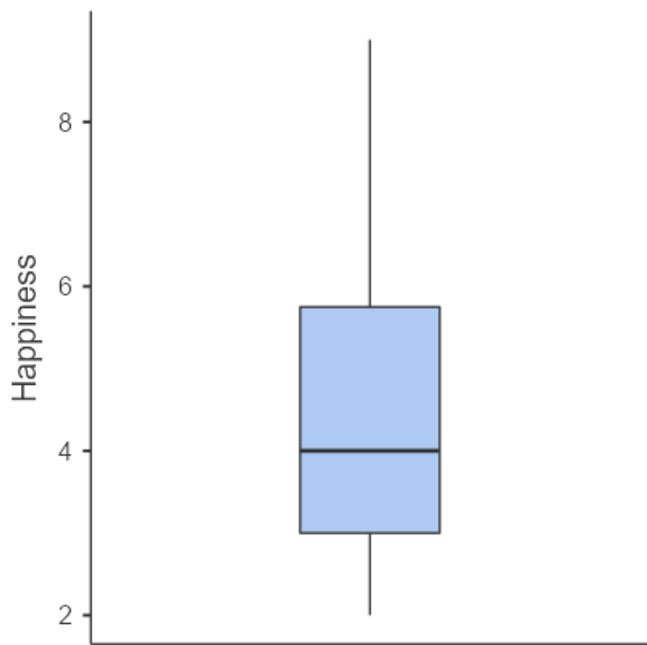
Puppy_love

# Relationships, Prediction, and Group Comparisons

You have entered a numeric dependent variable, one or more categorical (nominal/ordinal) independent variables, and one or more numeric control variables. Hence, an ANCOVA seems to be a good option for you! In order to run this analysis in jamovi, go to: ANOVA > ANCOVA

- Drop your numeric dependent variable in the box below Dependent Variable
- Drop your nominal/ordinal independent variables in the box below Fixed Factors
- Drop your numeric control variables in the box below Covariates

Scatter Plots of Bivariate Relationships - Dependent/Independent Variables

Scatter Plots of Bivariate Relationships - Dependent/Control Variables
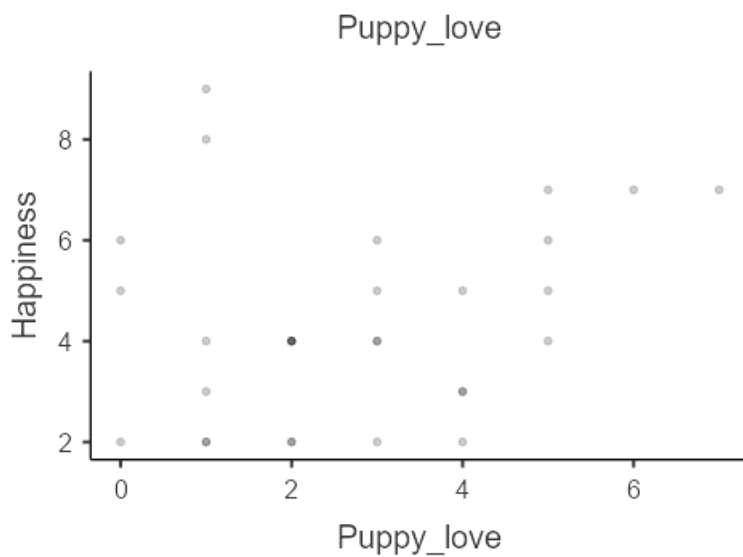
Puppy_love

ANOVA

ANOVA - Puppy_love

	Sum of Squares	df	Mean Square	F	p	ω²
Dose	12.8	2	6.38	1.98	0.158	0.061
Residuals	87.1	27	3.23			

[3]

Assumption Checks

Homogeneity of Variances Tests

	Statistic	df	df2	p
Levene's	0.493	2	27	0.616
Bartlett's	0.547	2		0.761

Note. Additional results provided by *moretests*

Normality tests

	statistic	p
Shapiro-Wilk	0.942	0.102
Kolmogorov-Smirnov	0.182	0.273
Anderson-Darling	0.616	0.099

Note. Additional results provided by *moretests*

Q-Q Plot
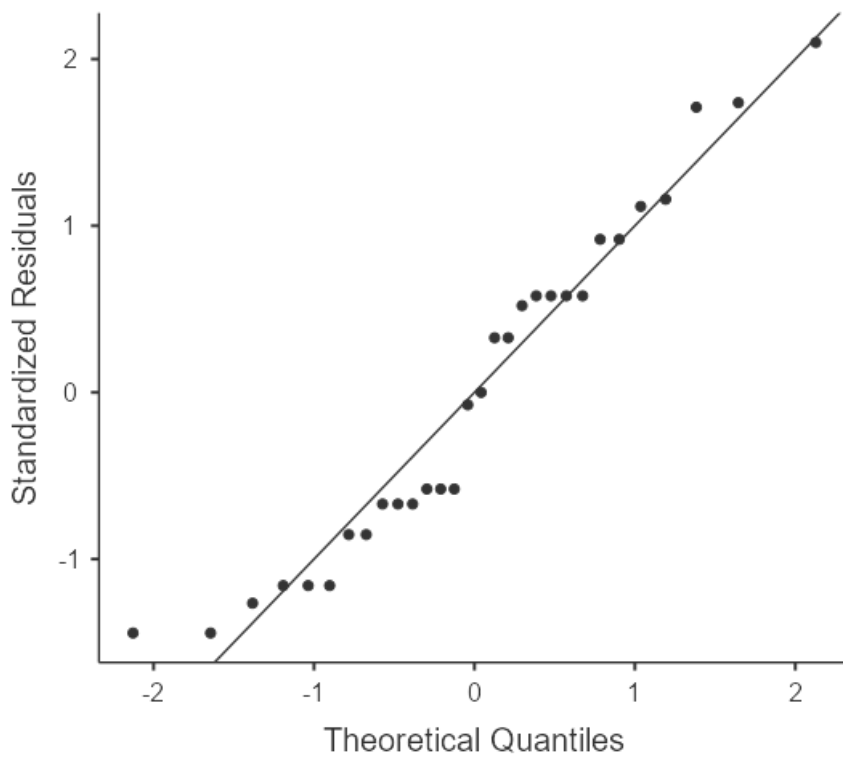
Post Hoc Tests

Post Hoc Comparisons - Dose

Comparison			Mean Difference	SE	df	t	p_{tukey}	Cohen's d
Dose		Dose						
Control	-	15 mins	0.319	0.873	27.0	0.366	0.929	0.178
	-	30 mins	1.444	0.779	27.0	1.855	0.171	0.804
15 mins	-	30 mins	1.125	0.807	27.0	1.394	0.358	0.626

Note. Comparisons are based on estimated marginal means

[4]

Estimated Marginal Means

Dose

Scatterplot

ANCOVA

ANCOVA - Happiness
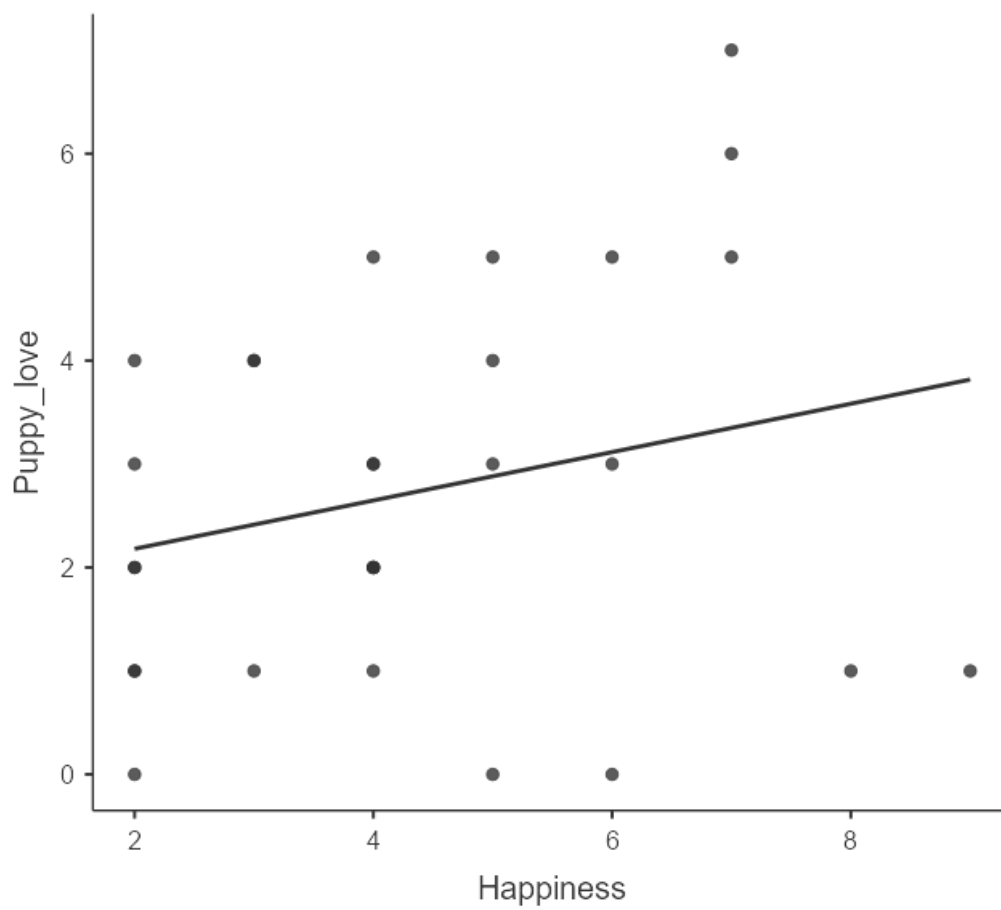
	Sum of Squares	df	Mean Square	F	p
Dose	36.6	2	18.28	7.48	0.003
Puppy_love	17.2	1	17.18	7.03	0.014
Dose ✻ Puppy_love	20.4	2	10.21	4.18	0.028
Residuals	58.6	24	2.44		

[3]

Assumption Checks

Normality tests

	statistic	p
Shapiro-Wilk	0.955	0.228
Kolmogorov-Smirnov	0.141	0.592
Anderson-Darling	0.641	0.086

Note. Additional results provided by *moretests*

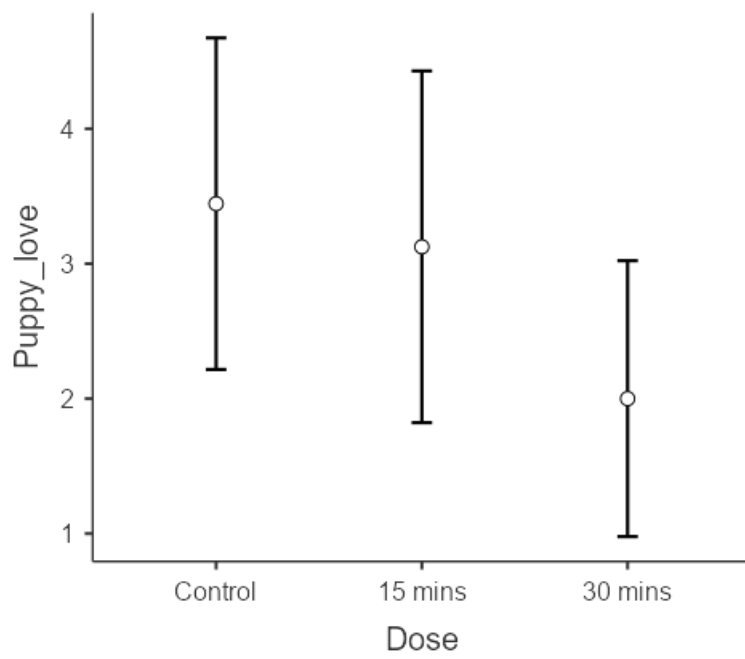**Q-Q Plot**

Post Hoc Tests

Post Hoc Comparisons - Dose

Comparison						
Dose		Dose	Mean Difference	SE	df	t
Control	-	15 mins	-1.874	0.794	24.0	-2.360
	-	30 mins	-2.006	0.732	24.0	-2.739
15 mins	-	30 mins	-0.132	0.743	24.0	-0.178

Note. Comparisons are based on estimated marginal means

[4]

ANCOVA

ANCOVA - Happiness

	Sum of Squares	df	Mean Square	F	p	ω²
Dose	25.2	2	12.59	4.14	0.027	0.156
Puppy_love	15.1	1	15.08	4.96	0.035	0.098
Residuals	79.0	26	3.04			

[3]

Assumption Checks

Normality tests

	statistic	p
Shapiro-Wilk	0.945	0.121
Kolmogorov-Smirnov	0.159	0.436
Anderson-Darling	0.742	0.048

Note. Additional results provided by *moretests*

Q-Q Plot
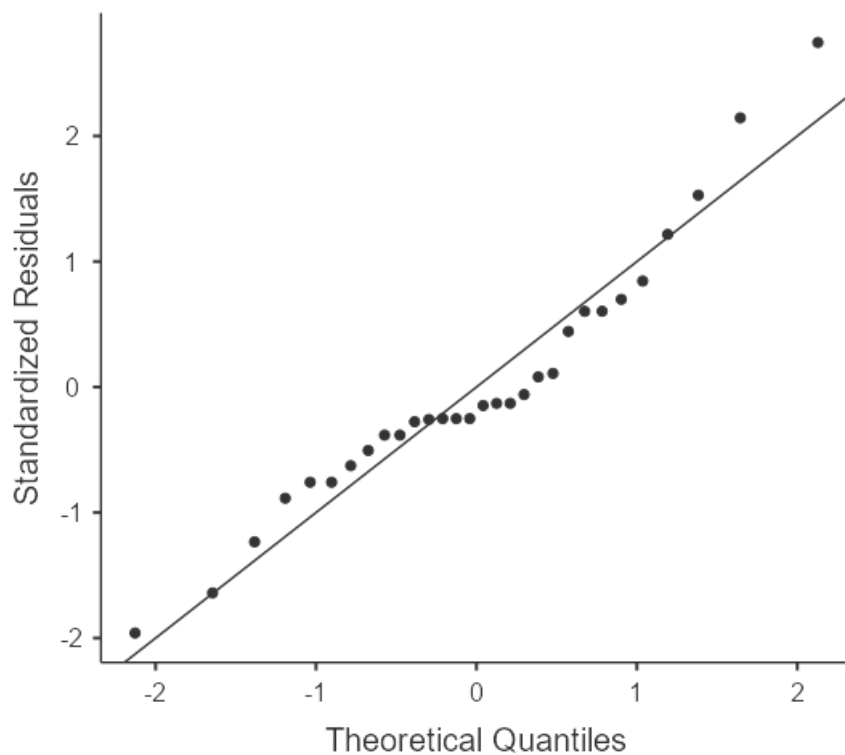
Contrasts

Contrasts - Dose

	Estimate	SE	t	p
15 mins - Control	1.79	0.849	2.10	0.045
30 mins - Control	2.22	0.803	2.77	0.010

Post Hoc Tests

Post Hoc Comparisons - Dose

Comparison								
Dose		Dose	Mean Difference	SE	df	t	$p_{bonferroni}$	Cohen's d
Control	-	15 mins	-1.786	0.849	26.0	-2.102	0.136	-1.024
	-	30 mins	-2.225	0.803	26.0	-2.771	0.031	-1.276
15 mins	-	30 mins	-0.439	0.811	26.0	-0.541	1.000	-0.252

Note. Comparisons are based on estimated marginal means

[4]
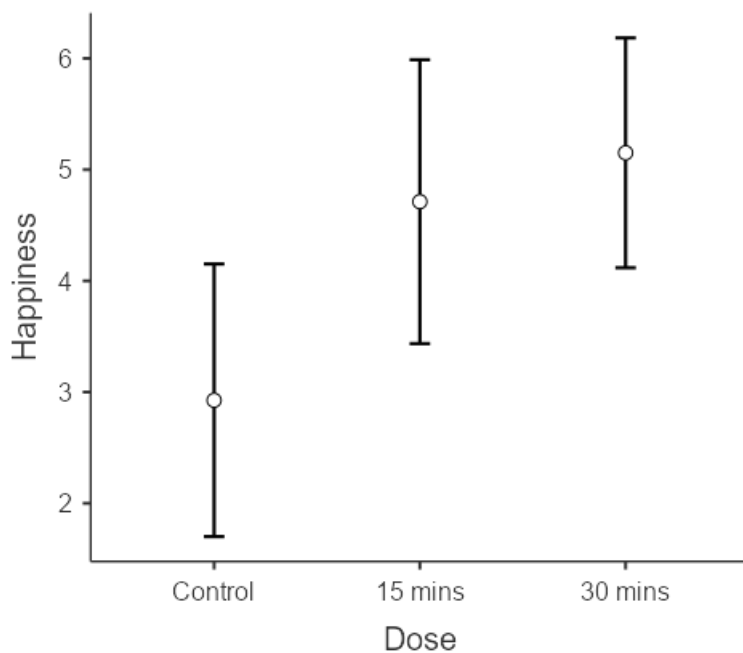
Estimated Marginal Means

Dose

Estimated Marginal Means - Dose

			95% Confidence Interval	
Dose	**Mean**	**SE**	**Lower**	**Upper**
Control	2.93	0.596	1.70	4.15
15 mins	4.71	0.621	3.44	5.99
30 mins	5.15	0.503	4.12	6.18

[4]

References

[1] The jamovi project (2021). *jamovi*. (Version 1.6) [Computer Software]. Retrieved from https://www.jamovi.org.

[2] R Core Team (2020). *R: A Language and environment for statistical computing*. (Version 4.0) [Computer software]. Retrieved from https://cran.r-project.org. (R packages retrieved from MRAN snapshot 2020-08-24).

[3] Fox, J., & Weisberg, S. (2020). *car: Companion to Applied Regression*. [R package]. Retrieved from https://cran.r-project.org/package=car.

[4] Lenth, R. (2020). *emmeans: Estimated Marginal Means, aka Least-Squares Means*. [R package]. Retrieved from https://cran.r-project.org/package=emmeans.