Results

Descriptives

Descriptives

	Person	Happiness	Puppy_love
N	30	30	30
Missing	0	0	0
Standard deviation	8.80	1.96	1.86
Minimum	1.00	2.00	0.00
Maximum	30.0	9.00	7.00

Plots

Person
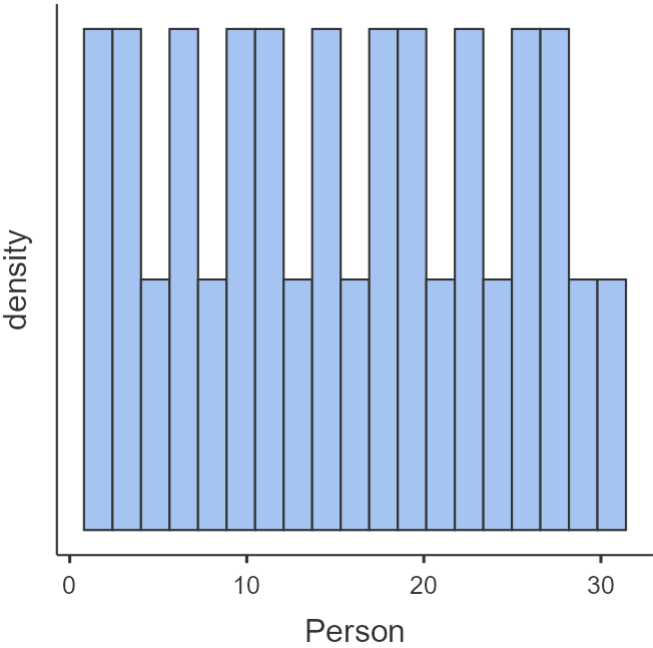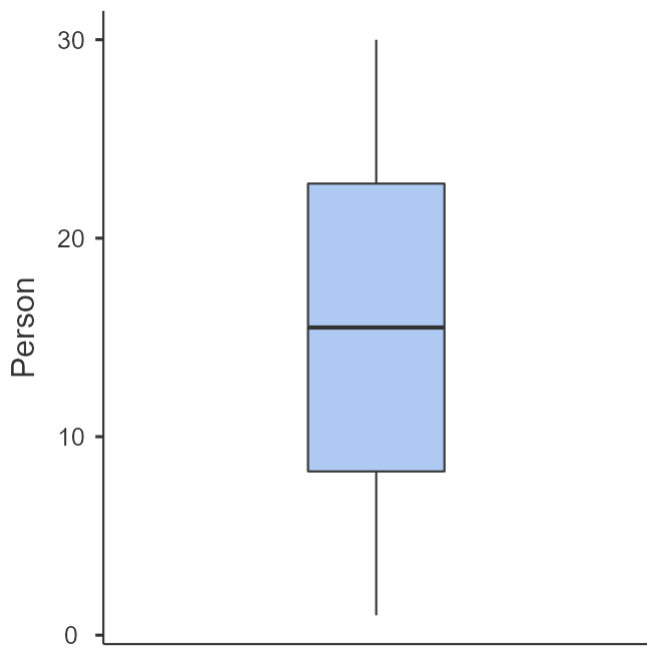
Happiness
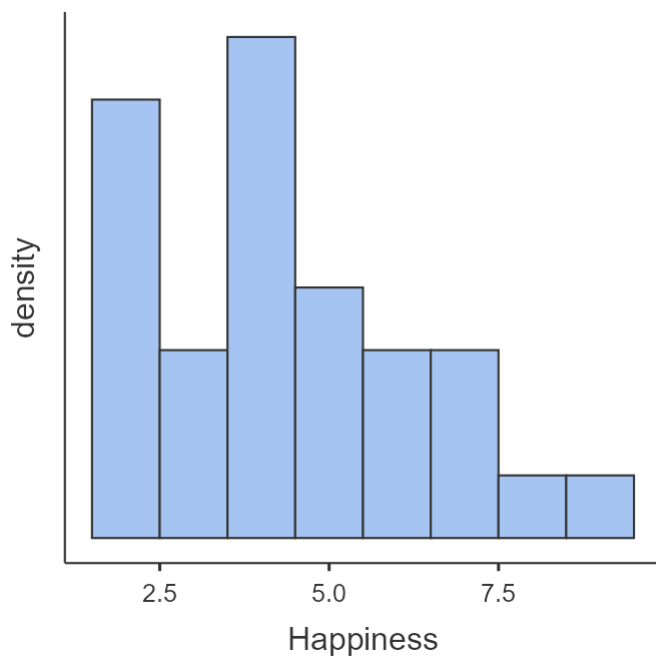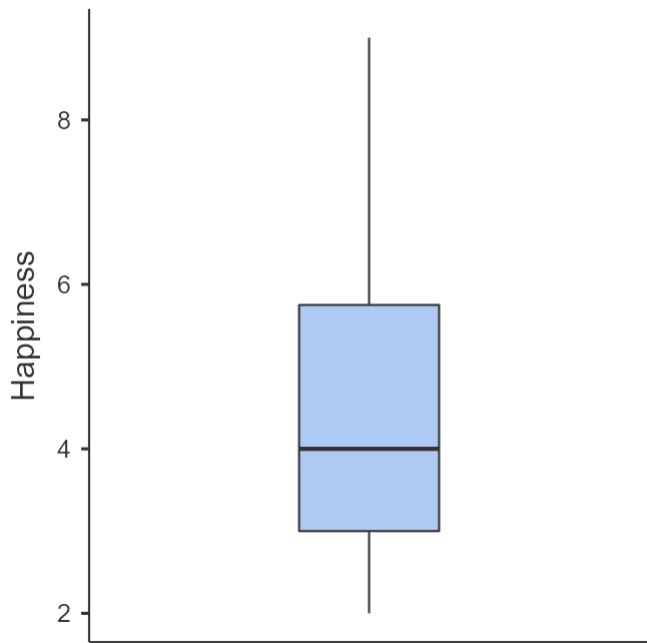
Puppy_love
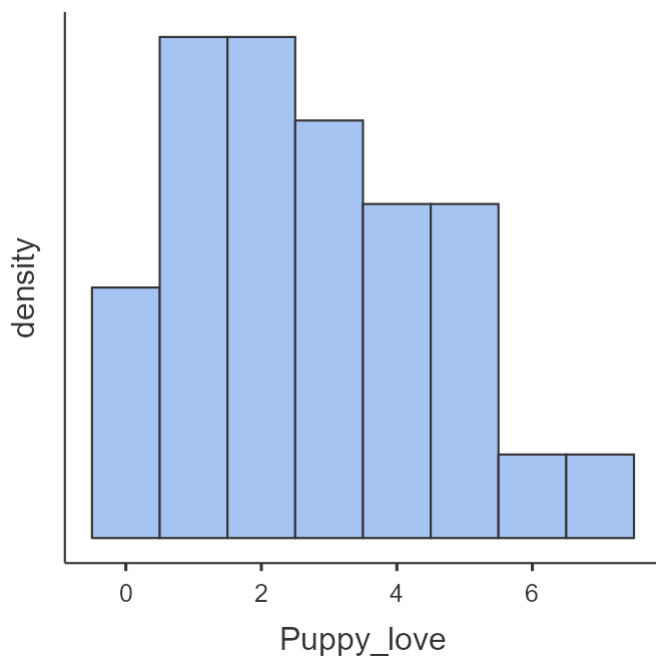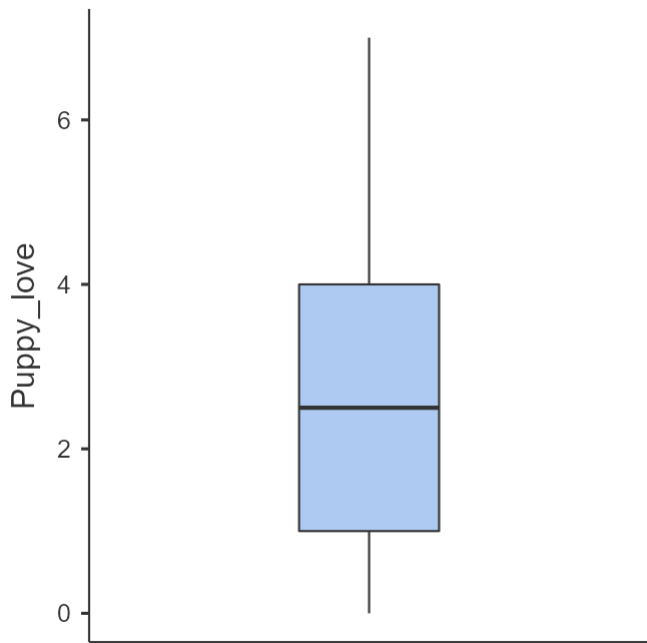
Descriptives

Descriptives

	Dose
N	30
Missing	0
Mean	2.13
Median	2.00
Standard deviation	0.860
Minimum	1
Maximum	3
Skewness	-0.270
Std. error skewness	0.427
Kurtosis	-1.62
Std. error kurtosis	0.833
Shapiro-Wilk W	0.770
Shapiro-Wilk p	< .001

Plots

Dose
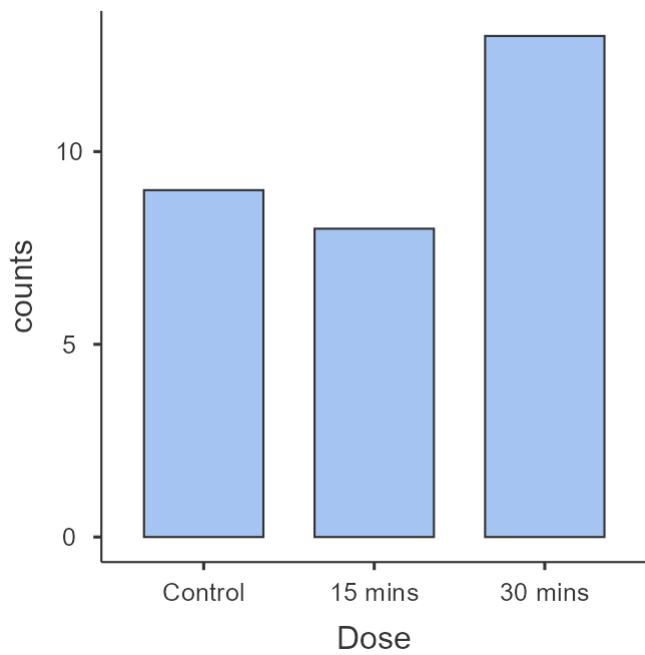
ANOVA

ANOVA - Puppy_love

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

[3]

Assumption Checks

Homogeneity of Variances Test (Levene's)

F	df1	df2	p
0.493	2	27	0.616

[3]

Normality Test (Shapiro-Wilk)

Statistic	p
0.941	0.096

Q-Q Plot

Standardized Residuals

Theoretical Quantiles

Post Hoc Tests

Post Hoc Comparisons - Dose

Comparison								
Dose		Dose	Mean Difference	SE	df	t	p_{tukey}	$p_{bonferroni}$
Control	-	15 mins	0.319	0.873	27.0	0.366	0.929	1.000
	-	30 mins	1.444	0.779	27.0	1.855	0.171	0.224
15 mins	-	30 mins	1.125	0.807	27.0	1.394	0.358	0.524

Note. Comparisons are based on estimated marginal means

[4]

Scatterplot
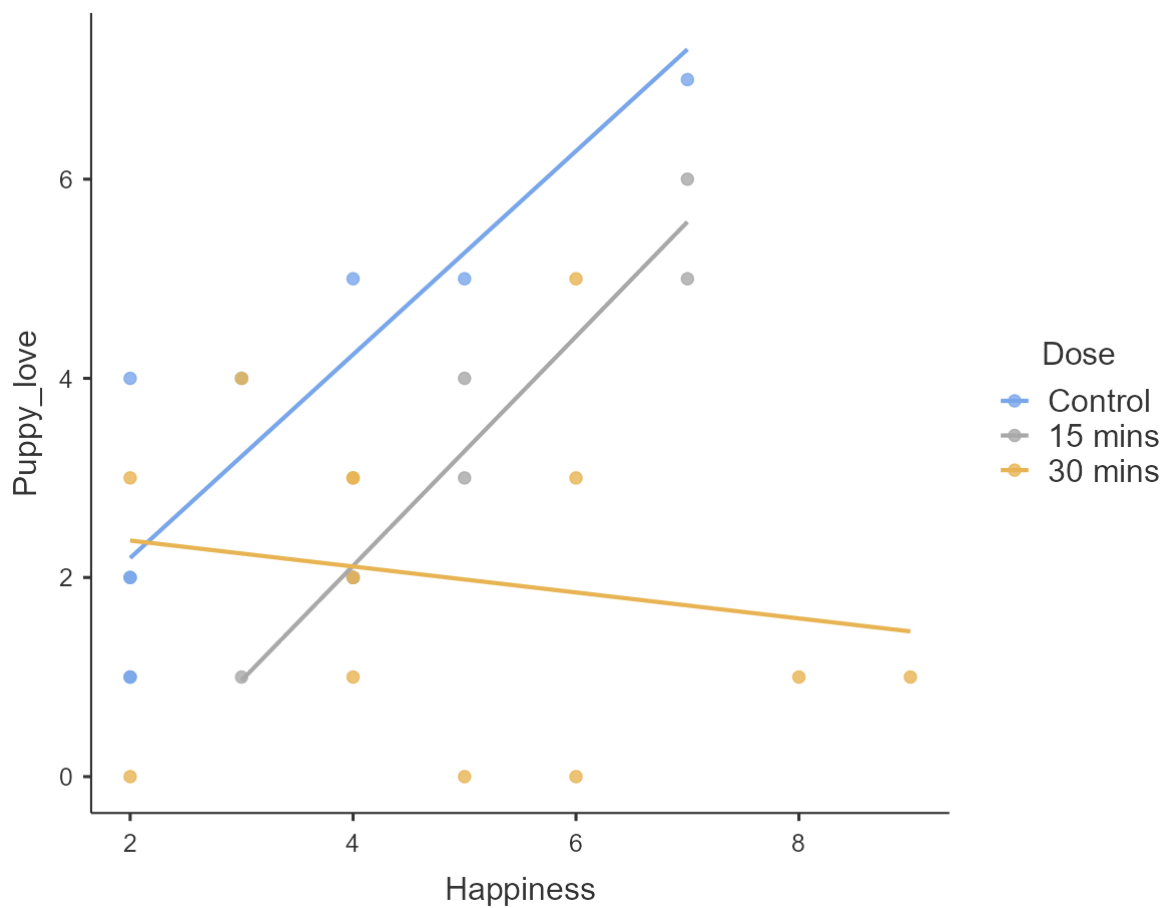
ANCOVA

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]

ANCOVA

ANCOVA - Happiness

	Sum of Squares	df	Mean Square	F	p	ω^2
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

Homogeneity of Variances Test (Levene's)

F	df1	df2	p
4.62	2	27	0.019

[3]

Normality Test (Shapiro-Wilk)

Statistic	p
0.943	0.111

Q-Q Plot
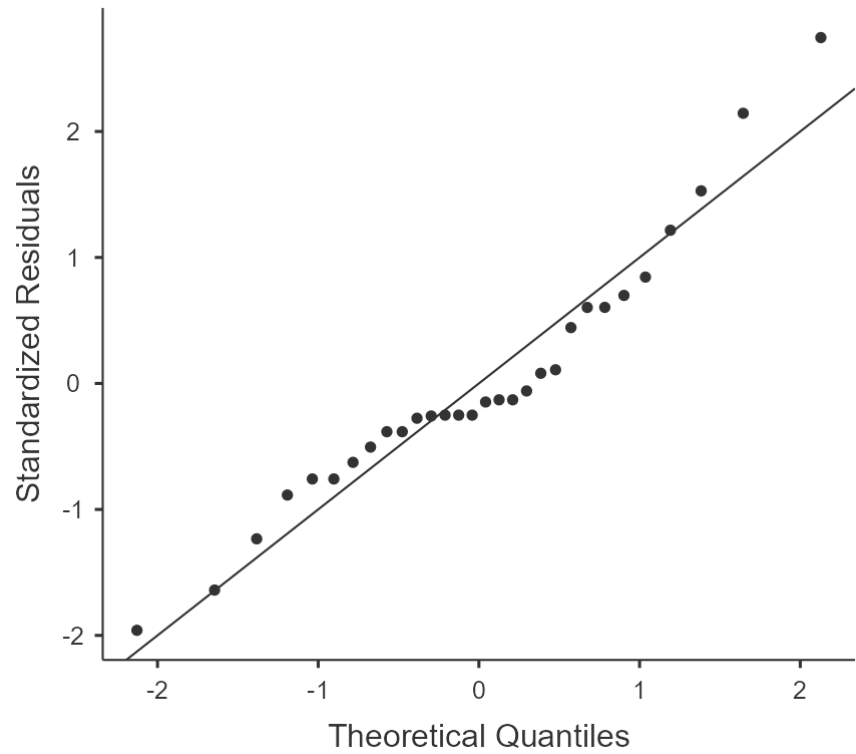
Contrasts

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			Mean Difference	SE	df	t	p_{tukey}	$p_{bonferroni}$
Dose		Dose						
Control	-	15 mins	-1.786	0.849	26.0	-2.102	0.109	0.136
	-	30 mins	-2.225	0.803	26.0	-2.771	0.027	0.031
15 mins	-	30 mins	-0.439	0.811	26.0	-0.541	0.852	1.000

Note. Comparisons are based on estimated marginal means

[4]

Estimated Marginal Means
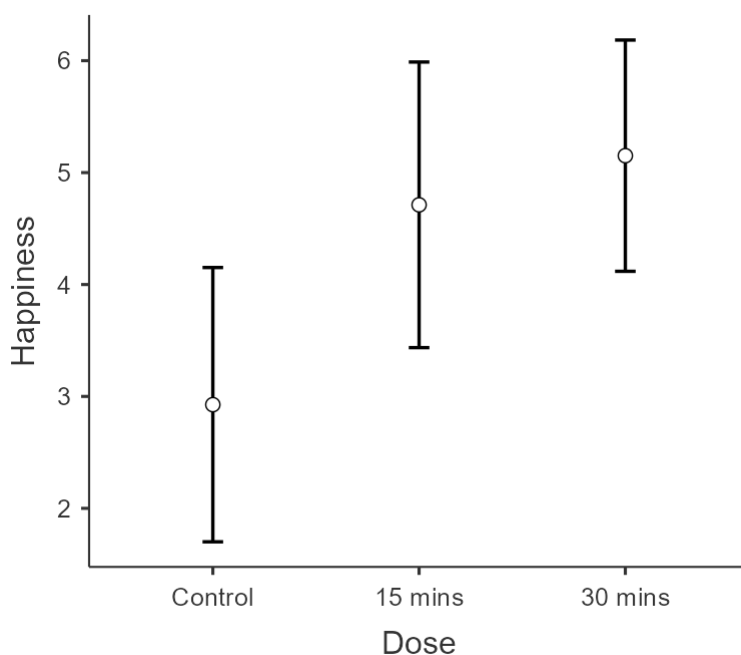
Dose

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 2.2) [Computer Software]. Retrieved from https://www.jamovi.org.

[2] R Core Team (2021). *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 2021-04-01).

[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.