Results

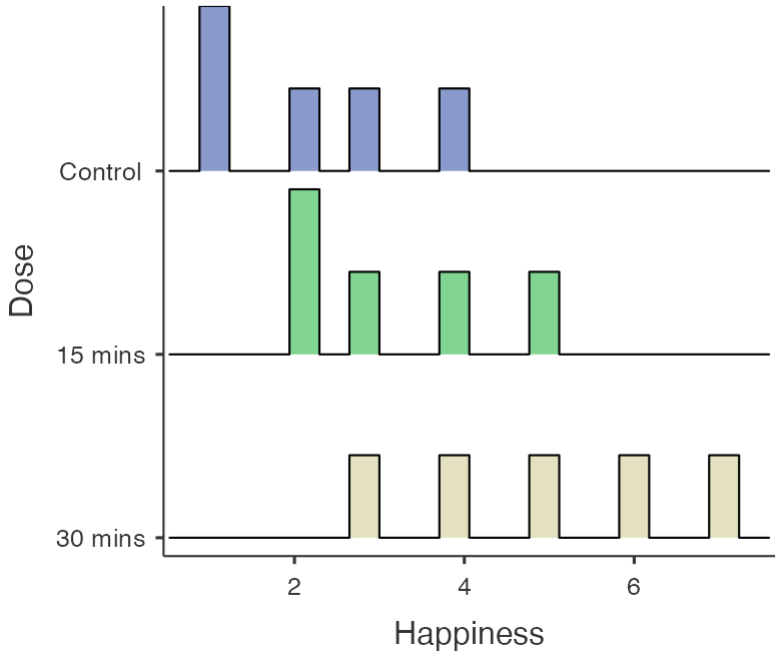
Descriptives

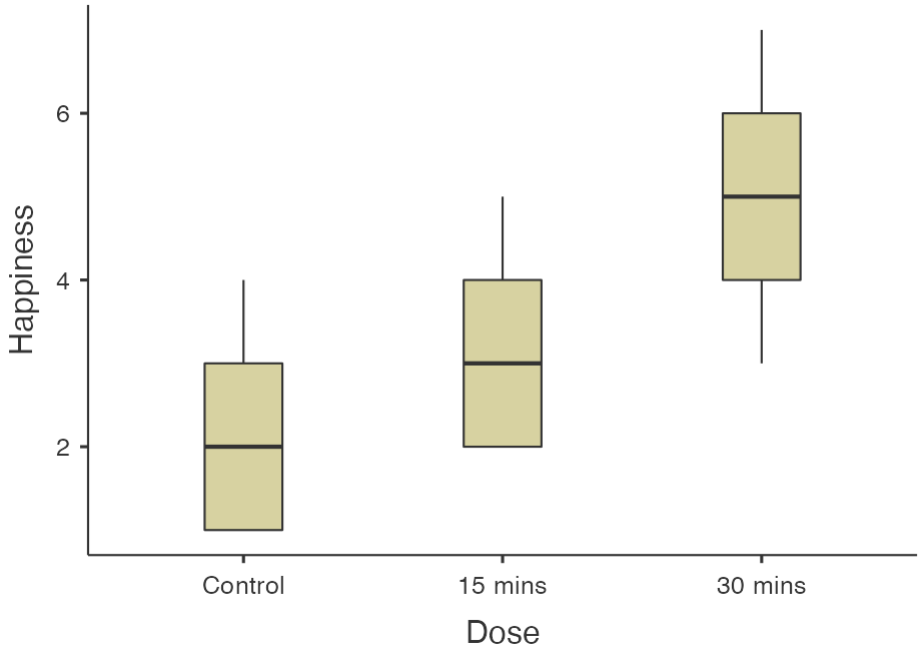
Descriptives

	Dose	Happiness
N	Control	5
	15 mins	5
	30 mins	5
Missing	Control	0
	15 mins	0
	30 mins	0
Mean	Control	2.20
	15 mins	3.20
	30 mins	5.00
Median	Control	2.00
	15 mins	3.00
	30 mins	5.00
Standard deviation	Control	1.30
	15 mins	1.30
	30 mins	1.58
Minimum	Control	1.00
	15 mins	2.00
	30 mins	3.00
Maximum	Control	4.00
	15 mins	5.00
	30 mins	7.00
Skewness	Control	0.541
	15 mins	0.541
	30 mins	0.00
Std. error skewness	Control	0.913
	15 mins	0.913
	30 mins	0.913
Kurtosis	Control	-1.49
	15 mins	-1.49
	30 mins	-1.20
Std. error kurtosis	Control	2.00
	15 mins	2.00
	30 mins	2.00
Shapiro-Wilk W	Control	0.902
	15 mins	0.902
	30 mins	0.987
Shapiro-Wilk p	Control	0.421
	15 mins	0.421
	30 mins	0.967

Plots

Happiness





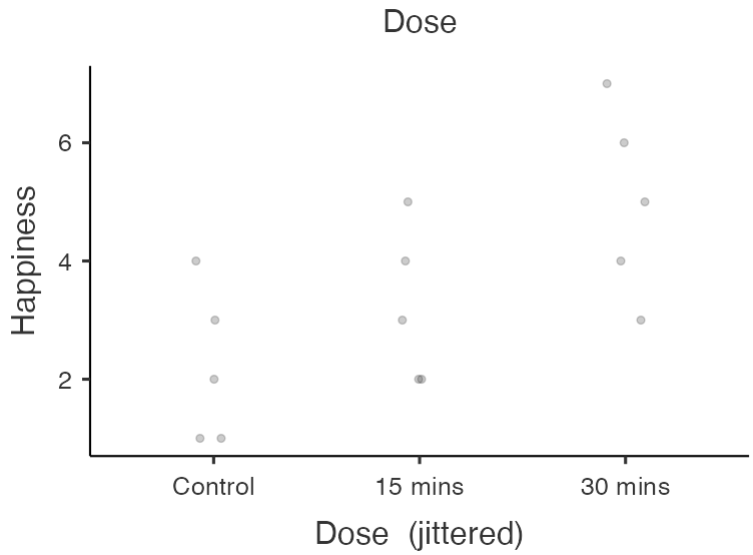
Relationships, Prediction, and Group Comparisons

You have entered a numeric variable for Variable 1 / Dependent Variable and a nominal variable for Variable 2 / Independent Variables. Hence, a one way ANOVA, which is is a test for the difference between several population means, seems to be a good option for you! In order to run this analysis in jamovi, go to: ANOVA > ANOVA

- Drop your dependent (numeric) variable in the box below Dependent Variable and your independent (grouping) variable in the box below Fixed Factors

If the normality or homoscedasticity assumption is violated, you could use the non-parametric Kruskal-Wallis test. Click on the links to learn more about these tests!

Scatter Plots of Bivariate Relationships - Dependent/Independent Variables



One-Way ANOVA

One-Way ANOVA

		F	df1	df2	p
Happiness	Welch's	4.32	2	7.94	0.054
	Fisher's	5.12	2	12	0.025

Group Descriptives

	Dose	N	Mean	SD	SE
Happiness	Control	5	2.20	1.30	0.583
	15 mins	5	3.20	1.30	0.583
	30 mins	5	5.00	1.58	0.707

Assumption Checks

Normality Test (Shapiro-Wilk)

	W	p
Happiness	0.917	0.171

Note. A low p-value suggests a violation of the assumption of normality

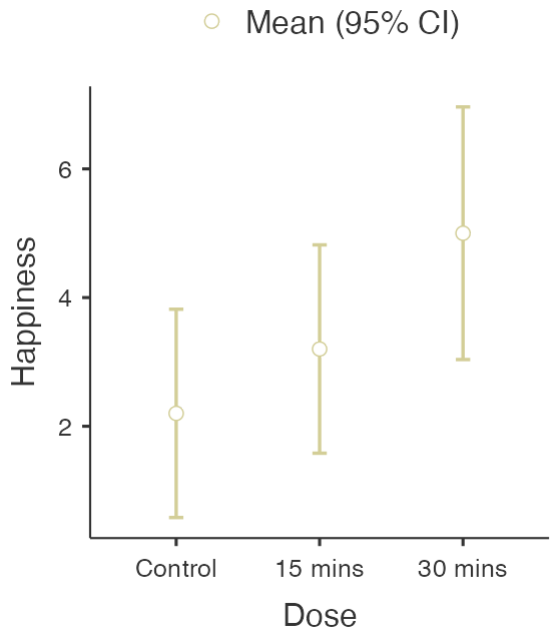
Homogeneity of Variances Test (Levene's)

	F	df1	df2	p
Happiness	0.0917	2	12	0.913

[3]

Plots

Happiness



Post Hoc Tests

Tukey Post-Hoc Test – Happiness

		Control	15 mins	30 mins
Control	Mean difference	—	-1.00	-2.80
	p-value	—	0.516	0.021
15 mins	Mean difference		—	-1.80
	p-value		—	0.147
30 mins	Mean difference			—
	p-value			—

ANOVA

ANOVA - Happiness

	Sum of Squares	df	Mean Square	F	p	ω^2
Dose	20.1	2	10.07	5.12	0.025	0.354
Residuals	23.6	12	1.97			

[3]

Assumption Checks

Homogeneity of Variances Test (Levene's)

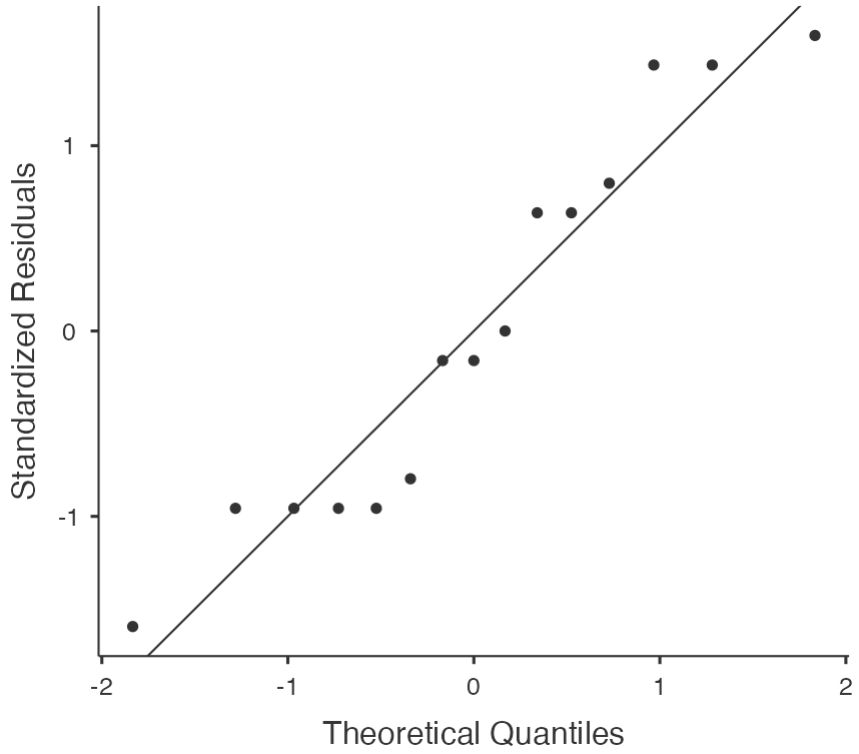
F	df1	df2	p
0.0917	2	12	0.913

[3]

Normality Test (Shapiro-Wilk)

Statistic	p
0.917	0.171

Q-Q Plot



Post Hoc Tests

Post Hoc Comparisons - Dose

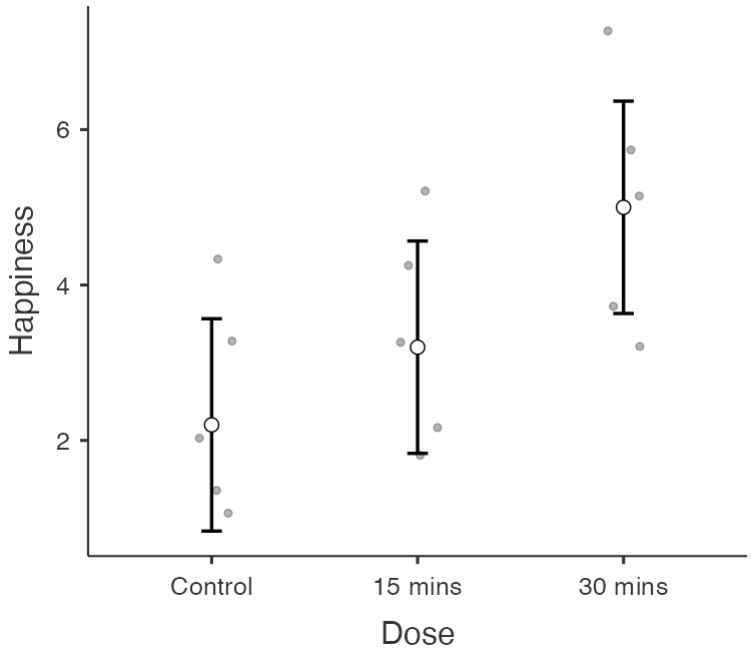
Comparison								
Dose		Dose	Mean Difference	SE	df	t	p_{tukey}	Cohen's d
Control	-	15 mins	-1.00	0.887	12.0	-1.13	0.516	-0.713
	-	30 mins	-2.80	0.887	12.0	-3.16	0.021	-1.997
15 mins	-	30 mins	-1.80	0.887	12.0	-2.03	0.147	-1.284

Note. Comparisons are based on estimated marginal means

[4]

Estimated Marginal Means

Dose



[4]

Robust ANOVA

Robust ANOVA

						Bootstrap CI	
	F	df1	df2	p	ES	Lower	Upper
Dose	3.00	2.00	4.00	0.160	0.789	0.421	1.43

Note. Method of trimmed means (level 0.2).

Note. For effect size CI computation (samples 599)

Post Hoc Tests

Post Hoc Tests - Dose

				95% Confidence interval	
		psi-hat	p	Lower	Upper
Control	15 mins	-1.00	0.435	-5.32 [a]	3.32 [a]
	30 mins	-3.00	0.181	-7.32 [a]	1.32 [a]
15 mins	30 mins	-2.00	0.317	-6.32 [a]	2.32 [a]

[a] CI are adjusted to control FWE, but not p-values.

References

[1] The jamovi project (2022). *jamovi*. (Version 2.3) [Computer Software]. Retrieved from https://www.jamovi.org.

[2] R Core Team (2021). *R: A Language and environment for statistical computing*. (Version 4.1) [Computer software]. Retrieved from https://cran.r-project.org. (R packages retrieved from MRAN snapshot 2022-01-01).

[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.