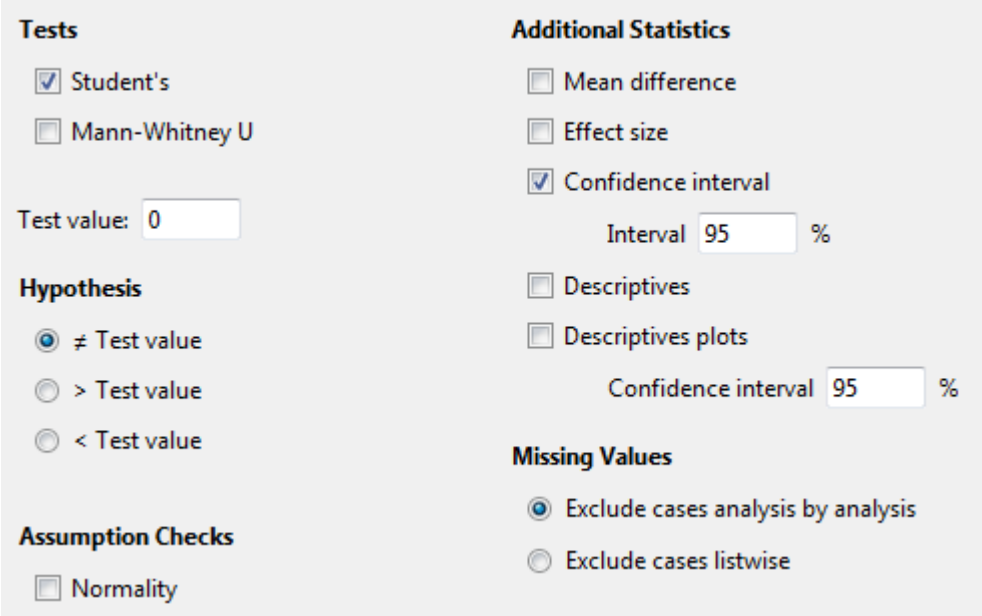
Supplementary to Figure 4 (Wiens & Nilsson)

The file "Figure4data.csv" contains hypothetical data for a single variable. Subjects were run in a 2 x 2 repeated-measures design and participated in each of four condition that were formed by combining alcohol or no alcohol with Antabuse or no Antabuse. The variable "EitherVScontrol" is the mean nausea rating across conditions of no alcohol-Antabuse and of alcohol-no Antabuse minus the nausea ratings for the no alcohol-no Antabuse condition.

≫ After the file is opened in *JASP*, a typical one-sample *t* test was conducted. We chose the following settings:



≫ The output was as follows:

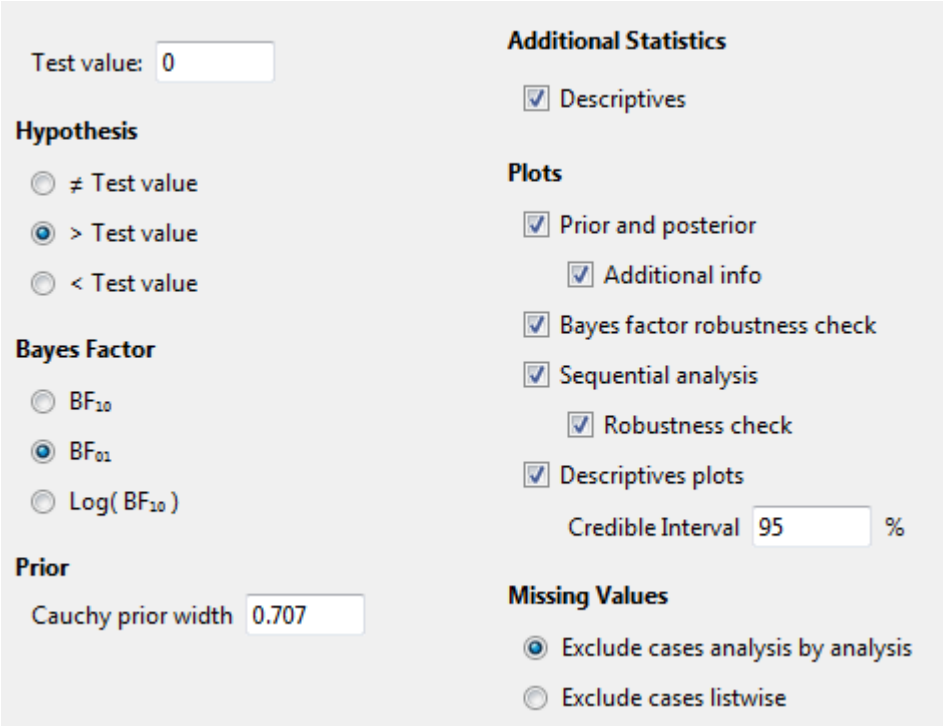
T-Test

One Sample T-Test

				95% Confidence Interval	
	t	**df**	**p**	**Lower**	**Upper**
EitherVScontrol	0.385	39	0.702	-0.469	0.689

Note. Student's T-Test.

≫ For the Bayesian one-sample t test, we chose the following settings:



≫ The output was as follows:

Bayesian T-Test

Bayesian One Sample T-Test

	BF_{0+}	error %
EitherVScontrol	4.241	~9.476e -8

Note. All tests, hypothesis is population mean is greater than 0

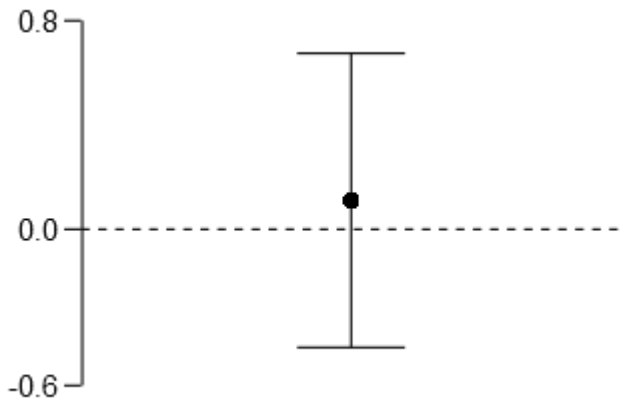
Descriptives

Descriptives

	N	Mean	SD	SE
EitherVScontrol	40	0.110	1.811	0.286

Descriptives Plot

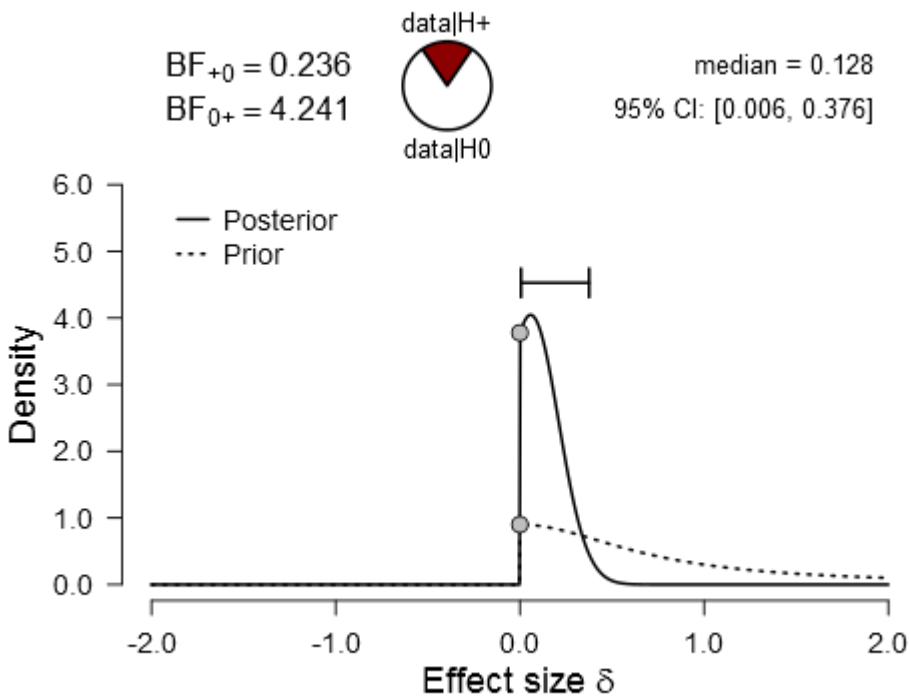
EitherVScontrol



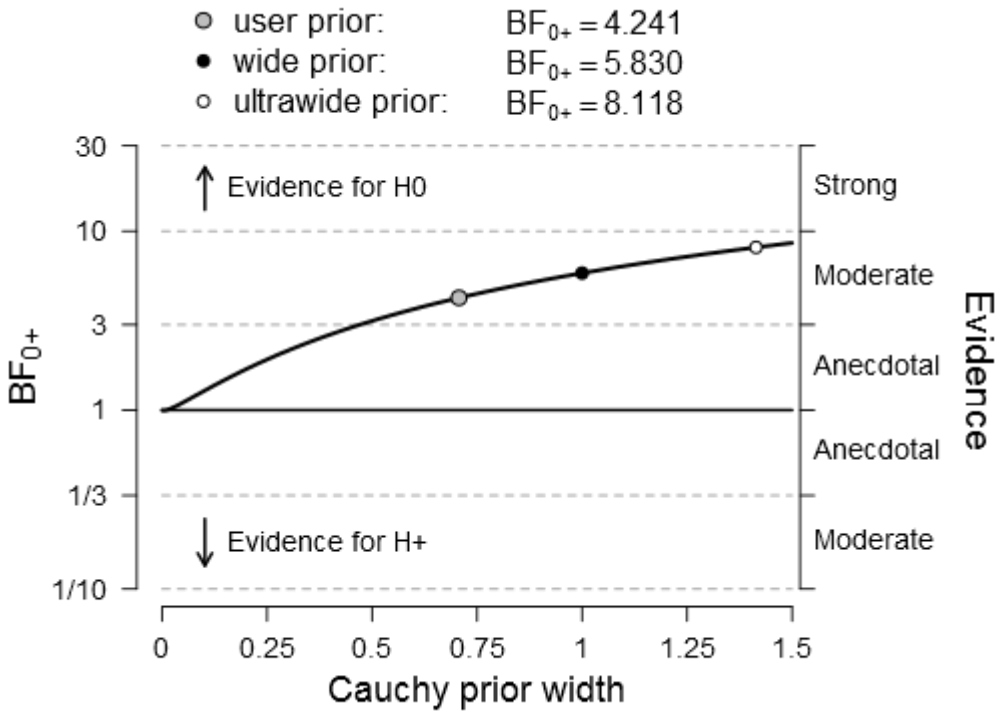
Inferential Plots

EitherVScontrol

Prior and Posterior

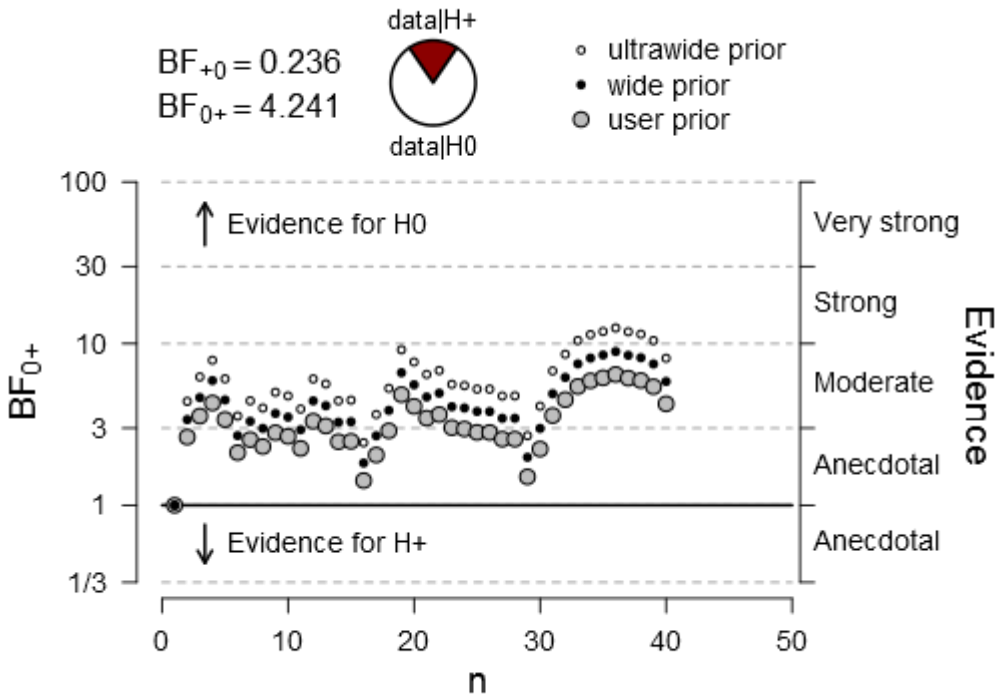


Bayes Factor Robustness Check



A wider prior means that larger effect sizes are probable. The figure suggests that a wider width does not change the results much.

Sequential Analysis



This shows how the evidence changes as subjects are added. There are slight variations as subjects are added, but the result does not change for the last 10 subjects. However, if you were not convinced by these results, it is completely fine to add more subjects until you perceive the results to be robust. Note that such a sequential analysis is problematic in NHST (Neyman-Pearson) because an important prerequisite is that the total number of subjects (sampling plan) is predetermined; otherwise, the alpha is not valid. Further, the order in which subjects are entered may change how the evidence develops. Nonetheless, the final results will be identical irrespective of the order.