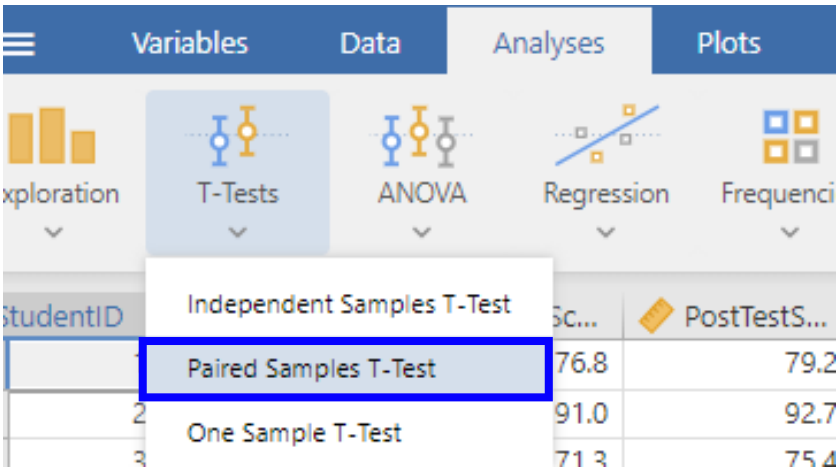
Paired Samples T-Tests in Jamovi

Step 1: Open the analysis

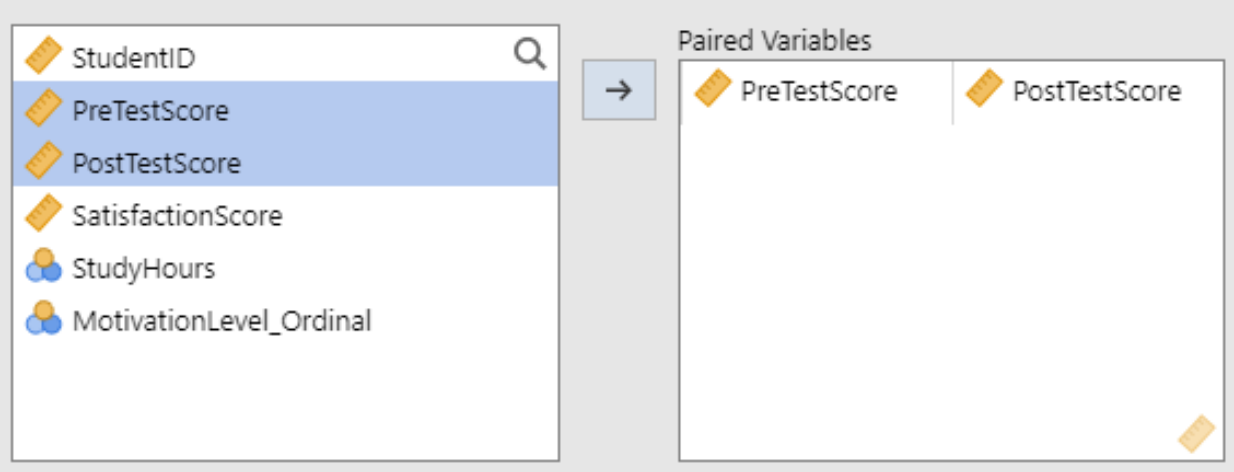
From the menu:

1. Analyses
2. T-Tests
3. Paired Samples T-Test



Step 2: Select variables

Select your two related variables (e.g., Pre, Post)

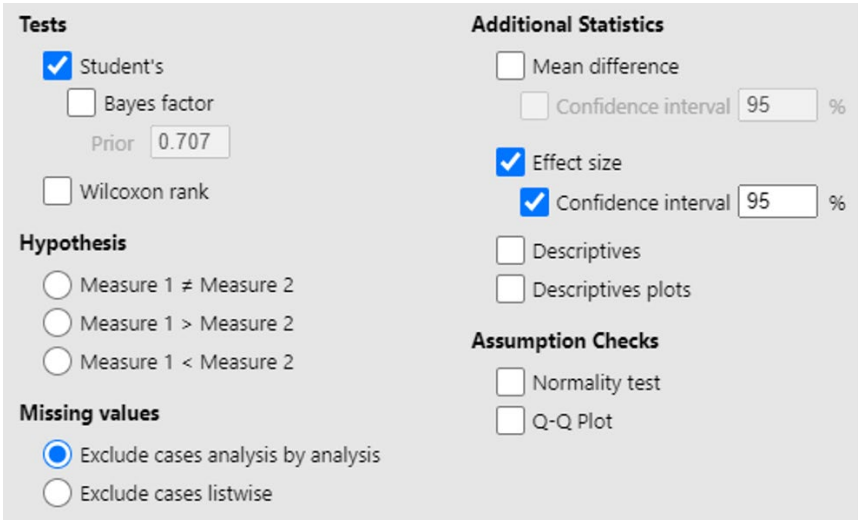


Step 3: Additional statistics

Select **Student's** t-test

Optional additional statistics:

- Mean difference
  - Confidence interval
- Effect size
  - Confidence interval
- Descriptives
- Assumption Checks:
  - Normality test
  - Q-Q Plot



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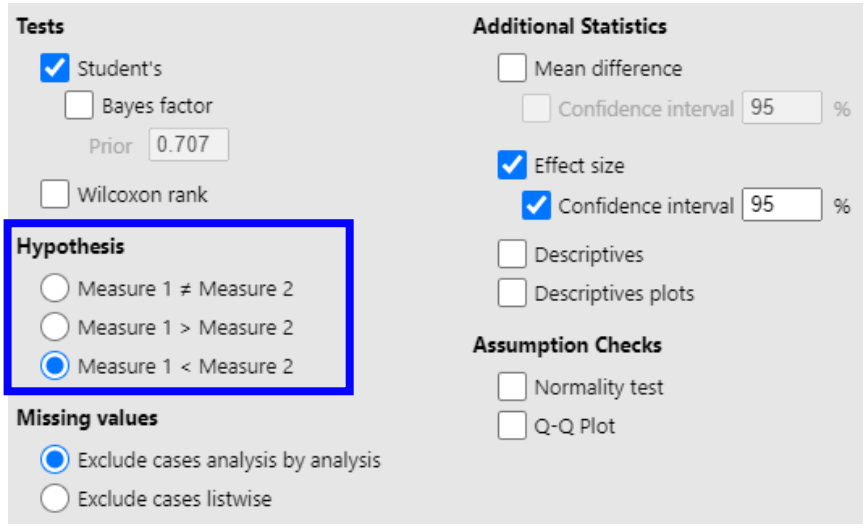
Step 4: Select a hypothesis

Select a hypothesis to specify the direction of the expected difference:

- **≠ (Two-sided):** tests for any difference (most common)
- **> (One-sided):** tests if the first measurement is greater
- **< (One-sided):** tests if the first measurement is smaller



Use a one-sided hypothesis only if you have a clear directional prediction before analysing the data. Otherwise, use the default two-sided (≠) test.

Paired Samples T-Test

							95% Confidence Interval	
			statistic	df	p	Effect Size	Lower	Upper
PreTestScore	PostTestScore	Student's t	-16.8	99.0	<.001	Cohen's d	-1.68	-1.98	-1.37

Note. H_a $\mu_{Measure\ 1\ -\ Measure\ 2} < 0$

Example interpretation and summary

The t-test showed that post-test scores were significantly higher than pre-test scores, t(99) = -16.8, p < .001, Cohen's d = -1.68, 95% CI [-1.98, -1.37].

Interpretation:

- p < .001 indicates a statistically significant difference
- The 95% confidence interval does not include 0, supporting the presence of a real difference
- Cohen's d = -1.68 indicates a large effect size, meaning the improvement was substantial

Conclusion:

Students scored significantly higher on the post-test than the pre-test, with a large effect size.

Related helpsheets

- Independent Sample T-Tests in Jamovi
- One Sample T-Tests in Jamovi

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