**LAB II Assignment:**

**\*\* Mac OS users \*\* - if you are running anything older than 10.9 (maverick), please use Jasp instead of Jamovi \*\***

[**https://jasp-stats.org/download/**](https://jasp-stats.org/download/)

**\*\* NEW DATA HAS BEEN UPLOADED -- ALL READY FOR YOU TO DO THIS LAB \*\***

**Instructions**: Load [Jamovi](https://www.jamovi.org/" \t "_blank)onto your Mac, PC, or Chromebook.  Open the FILE (Digit Span S2021.omv) using Jamovi, not Excel.  Answer the following questions and create a one page results section. Please add this to the manuscript you are already writing. Your grade will be based on the results section that you write and submit. See the two handouts for how to run the t tests: [single sample t test lab.pdf](https://elearn.mtsu.edu/d2l/common/dialogs/quickLink/quickLink.d2l?ou=8413961&type=coursefile&fileId=single+sample+t+test+lab.pdf) and [Two Group t Tests.pdf](https://elearn.mtsu.edu/d2l/common/dialogs/quickLink/quickLink.d2l?ou=8413961&type=coursefile&fileId=Two+Group+t+Tests.pdf).

You will compare the performance of our classes with the normative sample from the WAIS-IV (Wechsler, 2008). The statistics for the normative sample, from the WAIS test manual, ages 20-24, are as follows: Digits Forward (*M* = 6), Digits Backwards (*M* = 5).  Note that reading the WAIS-IV norms (Wechsler, 2008) is a bit tricky -- see my notes at the bottom of the score table. FYI, your own data set includes data from many semesters -- all students from research methods classes who completed this as an assignment.

1. **Methods revision.**Go back to your methods section, finish the participants section. Now that you have a data file, you can calculate n, count the number of males and females, and fill in min, max, M and SD for age. How many different semesters of classes were tested? That is, use Jamovi to compute descriptive stats, in the explore menu, for all the demographic information, then include it in your method section.
2. ***t* tests**. Compare the following with t tests in JASP. Click the boxes for descriptives and for effect size. **You can find the results of these t tests below on page 2 -3.**
   1. Paired samples *t* test comparing digits forward vs. digits backward in our sample.
   2. A single sample *t* test comparing digits forward in our sample vs. the mean from the WAIS-IV (*M* = 6) manual.  Enter 6 as the "test value."
   3. A single sample *t* test comparing digits backward in our sample vs. the mean from the WAIS-IV (*M* = 5) manual. Enter 5 as the "test value."
3. **Results section in Word – see below on page 4**. Use a word processing program to create a single paragraph results section. Begin with a sentence that explains what data was summarized. That is, if the mean span was 6, what is that 6…a sum, a mean, a maximum value? (1 point). Next, present your three *t* tests, each in a single sentence, being sure to report the type of test and the value for *d* (3 points each). Finally, include a reference for the WAIS-IV, which is listed below.  Be consistent in your use of decimal places: 1 decimal place for the *M* and *SD*, three decimal places for values of *t*, *d*, and *p* Use leading zeros only when values can exceed 1.  Be careful with italics and spacing – spaces before and after the = and < signs.  Write in past tense, since all this happened in the past. See the sample t test results section file for an example of how a very different study was written. No need to mention using Jamovi. Writers only mention and cite a statistics package when doing very specialized statistics (not means and t tests).

**T test for “Results” section from Jamovi**

**First t-test results:**

# Paired Samples T-Test

| Paired Samples T-Test | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  | |  | | **statistic** | | **df** | | **p** | |  | | **Effect Size** | |
| digit\_fwd |  | digit\_bwd |  | Student's t |  | 7.68 |  | 81.0 |  | < .001 |  | Cohen's d |  | 0.848 |  |
|  | | | | | | | | | | | | | | | |

| Descriptives | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | | **N** | | **Mean** | | **Median** | | **SD** | | **SE** | |
| digit\_fwd |  | 82 |  | 6.94 |  | 7.00 |  | 1.33 |  | 0.147 |  |
| digit\_bwd |  | 82 |  | 5.68 |  | 6.00 |  | 1.34 |  | 0.148 |  |

**Second t-test results:**

**One Sample T-Test**

| One Sample T-Test | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  | | **Statistic** | | **df** | | **p** | |  | | **Effect Size** | |
| digit\_fwd |  | Student's t |  | 6.41 |  | 81.0 |  | < .001 |  | Cohen's d |  | 0.707 |  |
| Note. Hₐ μ ≠ 6 | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |

| Descriptives | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | | **N** | | **Mean** | | **Median** | | **SD** | | **SE** | |
| digit\_fwd |  | 82 |  | 6.94 |  | 7.00 |  | 1.33 |  | 0.147 |  |
|  | | | | | | | | | | | |

**Third t-test results:**

**One Sample T-Test**

| One Sample T-Test | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  | | **Statistic** | | **df** | | **p** | |  | | **Effect Size** | |
| digit\_bwd |  | Student's t |  | 4.61 |  | 81.0 |  | < .001 |  | Cohen's d |  | 0.509 |  |
| Note. Hₐ μ ≠ 5 | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |

| Descriptives | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | | **N** | | **Mean** | | **Median** | | **SD** | | **SE** | |
| digit\_bwd |  | 82 |  | 5.68 |  | 6.00 |  | 1.34 |  | 0.148 |  |

**Results Section**

**(Kindly write your interpretation of the provided data in the section below)**

Write your results section and put it here. In 7th edition APA style, your tables and figures can either appear in results or following references at the end of your paper. They will need captions regardless of where you put them. Tables should be in Word format, not pasted as pictures but figures/graphs can be picture format. Blah, blah, blah…