**Transcript: Interpreting Paired Samples *t* Test Output**

In this video we are going to cover how to interpret the output from a paired samples *t* test that we conducted in R Commander and SPSS. The first thing we can look at is our descriptive statistics. In R Commander, this is produced here. We have our mean and our standard deviation for the difference between participants’ self-reported and actual or measured height. In SPSS, this is produced here, under “Descriptive Statistics”, and you can also see it under “Paired Samples Test”, right here. These values indicate that on average, participants are underreporting their height by 1.48 cm. However, there is a lot of variability, with the standard deviation being 8.25 cm.

Next, we can look at the results of our paired samples *t* test. Our *t* statistic is here in R Commander. This the output looks very similar to the one-sample and independent samples *t* tests. Our *t* value is -2.43. In SPSS, we can find this value under “t”, and again, it's -2.43.

Next to our *t* statistic, we can see our degrees of freedom, which is 182, here in R Commander and here in SPSS.

The last thing we'll look at is our *p* value. In R Commander, our *p* value is displayed here and it has a value of .016. In APA style, you round your *p* value to the nearest two digits, so this would round to *p* = .02. In SPSS, we have both a one-sided and a two-sided *p* value. Because our hypothesis was two-sided, we want to look at the two-sided *p* value, and we can see here that it's reported as .016.

Since we've reached a *p* value of less than .05, we can reject the null hypothesis that participants’ self-reported and measured heights are equal to one another. We can also say that participants tended to under-report their height, since the mean was negative, indicating that participants’ self-reported heights were less than their measured heights. This shows how you can interpret the results of the paired sample *t* test in both SPSS and R Commander.