**Transcript: Conducting Factorial ANOVA in R Commander**

In this video, we will go over how to conduct factorial ANOVA in R Commander. We have our “ANOVA\_data” data set loaded into R Commander, and we can see here the same variables that we had in the one-way ANOVA video. In this analysis, we are going to test whether “substance” and “condition” predict BAM scores. “Substance” refers to the substance participants are seeking treatment for, and “condition” refers to whether they were randomly assigned to the treatment condition or the control condition.

In order to conduct our factorial ANOVA, we will navigate to “Statistics”, “Means”, and “Multi-way ANOVA”. This will bring up a window that will allow us to select our variables. Because we are conducting a factorial ANOVA with two predictors, we will select two factors from the first field. If you hold down the control key on your keyboard, you can select both “condition” and “substance”. Next, we will select our “Response Variable”, which is “bam”. Once you've selected your variables, you can click “OK”, and R Commander will run our models.

The thing we're going to do to get all of the results for our factorial ANOVA is create a plot that shows the interaction between “condition” and “substance”. To create this plot, we can navigate to “Graphs” and “Plot of means”. Under the “Factors” field, we can select both “condition” and “substance”. Again, if you hold down the control key on your keyboard, you will be able to select both of these. You can also select “bam” as our response variable. Once you click “OK”, R Commander will produce our plot.

We will go over how to interpret both the plot and the other output from our factorial ANOVA in a subsequent video.