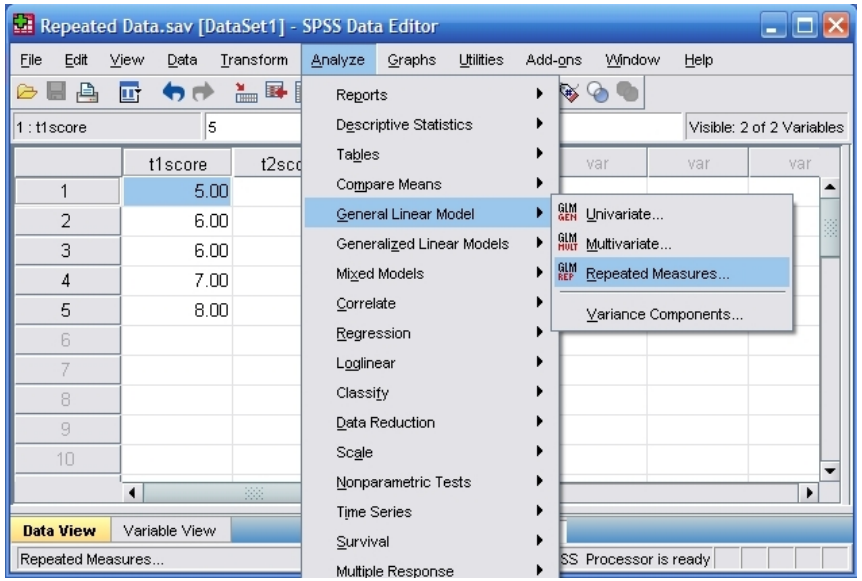
SPSS LESSON: REPEATED MEASURES ANALYSIS OF VARIANCE

Steps for Obtaining Repeated Measures Inferential Statistics

1. First, enter the repeated measures data. This is described elsewhere.

2. After the data is entered, select the "Analyze → General Linear Model → Repeated Measures" option from the main menu.

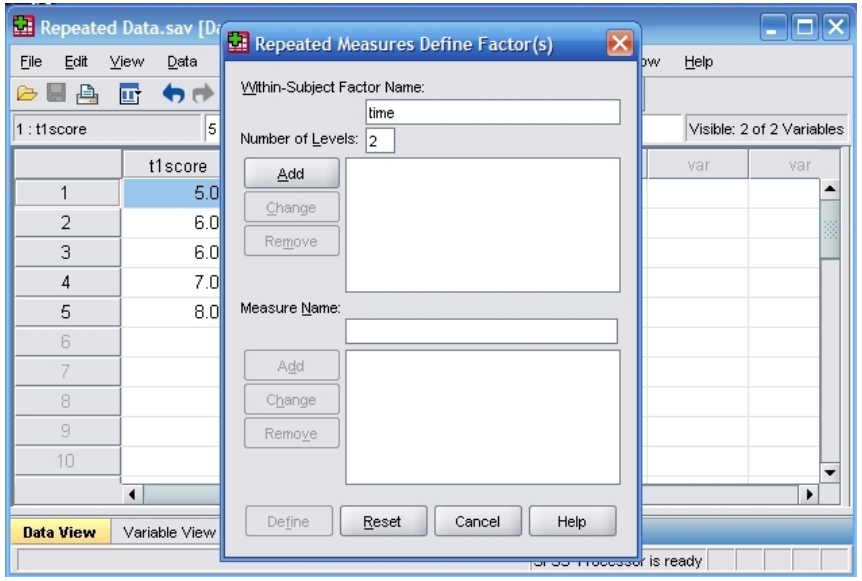


Steps for Labeling the Within-Subjects Variable/Factor

3. A dialogue box will then appear for you to create the repeated measures factor. This box is necessary because SPSS does not yet know which columns you wish to identify as repeated measurements of the same underlying factor.

4. In the "Within-Subject Factor Name" box, type in the name you wish to give to the repeated measures factor. In this example, since the measurements/columns reflect quizzes at two different times, "Time" is used as the name.

5. In the "Number of Levels" box, indicate the number of levels of the within-subjects factor. In this example, the quiz was given twice, so there were 2 levels of the factor.

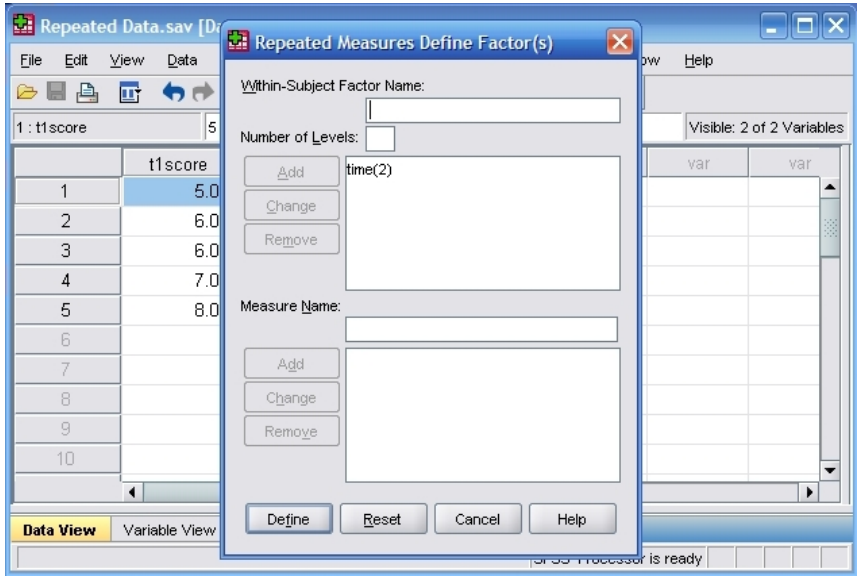


Steps for Creating the Within-Subjects Factor

6. It is then important that you finalize the creation of the within-subjects factor by clicking on the "Add" button. This officially declares the new factor in SPSS.

7. Note that this factor only exists in the computer's memory. For examples, no where in the data set will you see a variable called "Time."

8. When you have done this, click on "Define." This will take you to the next step in setting up the analysis.

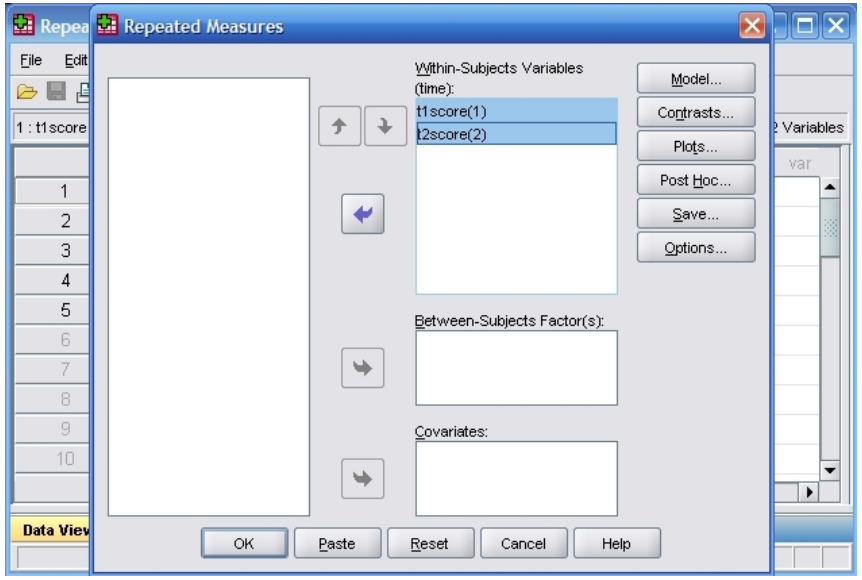


Steps for Obtaining the Significance Test

9. A dialogue box will then appear for you to define which columns/variables reflect the levels of the within-subjects factor.

10. Select the outcome variables you wish to analyze by clicking on them and hitting the arrow to move them into the "Within-Subjects Variable" box. In this example, "t1score" reflects the first level of the factor and "t2score" reflects the second level of the factor.

11. If all you wish is are ANOVA source tables (with no descriptive statistics or comparisons), click "OK." A separate window with the output will appear. You will note that this matches the types of output used in class.



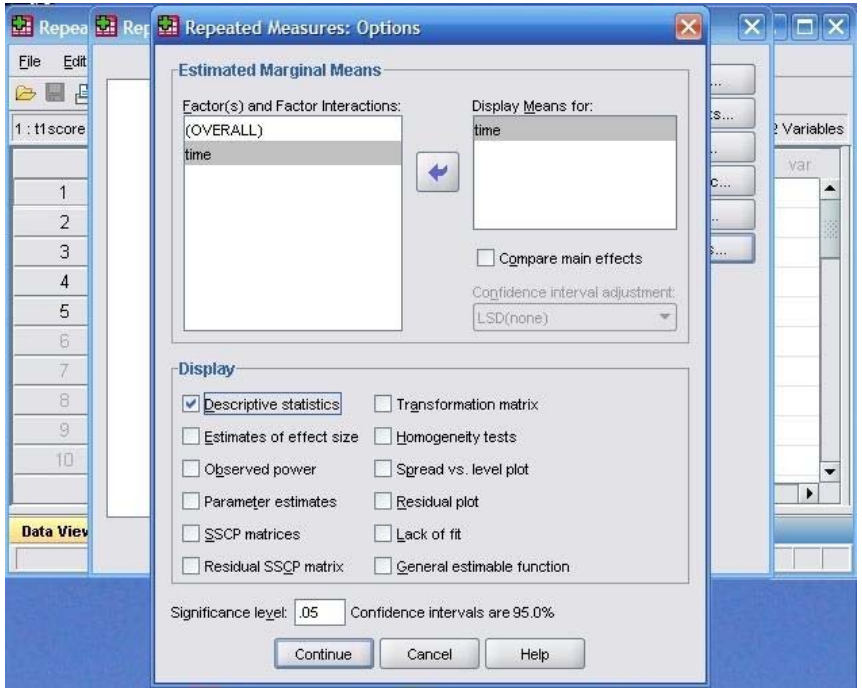
Steps for Obtaining Descriptive Statistics

12. If you wish to get the means, standard deviations, standard errors, and 95% confidence intervals for each group, select the “Options” button.

13. Another dialogue box will appear where you can choose various statistics. For means and standard deviations, select “Descriptive.” If you wish standard errors and confidence intervals, select and move the variable to the “Display Means” box. When you are done, click “Continue.” This will return you to the original dialogue box.

14. If you wish to alter the width of the confidence interval, change the alpha value in the “Significance Level” box to your new value. When you are done, click “Continue.” This will return you to the original dialogue box.

15. After clicking on “OK” in the original dialogue box, a separate window with the output will appear. You will note that this matches the types of output used in class.



Your data have now been analyzed!