

### Abstract

The chapter presents two of the most frequently used types of ANOVA with repeated measures: Lindquist Type I and Lindquist Type III. Specifically, attention is given to the interpretation of reported results on the possible research questions, follow-up analyses.

### Summary

ANOVA with repeated measures is appropriate for studies where the same subjects are measured more than twice. There are two broad categories for the studies using repeated measures: (1) studies in which there are several dependent variables, with the data from each of these variables being subjected to a separate analysis and (2) studies in which there is only one dependent variable, with subjects measured across all levels of one (or more) of the independent variables. This chapter focuses on the two types of ANOVA belonging to the latter category, namely, Lindquist Type I and Lindquist Type III.

#### 1. Lindquist Type I ANOVA's

This type always involves two factors and repeated measures across the levels of one of the two factors.

Research questions: The three research questions the Lindquist Type I ANOVA allows the researcher to answer are: (1) Is there a significant main effect of the factor that does not have repeated measures across its levels (the between-subjects factor) (2) Is there a significant main effect of the repeated measures (within-subject) factor and (3) Is there a significant interaction between the two factors.

Reporting the results: The summary table contains two major sources of variation, between-subjects and within-subjects. The between-subject part