Mixed Treatment by Subjects ANOVA

MIXED TREATMENT BY SUBJECTS ANOVA command performs the analysis of variance with between-subjects factors. It can be used determine whether the group means are different while the test subjects are different in each group. The design partitions total variability into the between groups variability SS_b and the error variability SS_{error}, and so reduces the unexplained error variance when compared to the independent measures single factor ANOVA. It requires more subjects than the within subjects ANOVA, but also helps to deal with the problem of carryover effects.

How To

- ✓ Run: **STATISTICS->ANOVA -> MIXED TREATMENT BY SUBJECTS ANOVA...**
- ✓ Select **GROUP** variable containing the treatment group codes.
- ✓ Select variables with **REPEATED MEASURES**.
- ✓ **Casewise** deletion method is used for missing values removal.

Results

A report includes analysis of variance summary table and descriptive statistics for the treatments.

ANALYSIS OF VARIANCE TABLE

SOURCE OF VARIATION - the source of variation (term in the model).
SS (SUM OF SQUARES) - the sum of squares for the term.
DF (DEGREES OF FREEDOM) - the number of observations for the corresponding model term.
MS (MEAN SQUARE) - an estimate of the variation accounted for the term.
$MS = SS/DF$
F - the F-test statistic.
P-VALUE - p-value for a F-test. If the p-value is less than the significance level α - the null hypothesis is rejected, and we can conclude that not all of the group means are equal.

References

Coolican, H. (2009). Research methods and statistics in psychology, 5th edition. New York: Routledge.

Shaughnessy, J.J. (2006). Research Methods in Psychology. New York: McGraw-Hill.