

Statistical Analysis with SPSS Statistics: An Introductory Course

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Methodology: The working sessions are theoretical-practical in nature. In the first part of the session, focus will be on the theoretical foundations of the statistical analysis. In the second part of the sessions, examples of the different statistical techniques will be solved with SPSS STATISTICS. Major examples of data analysis, namely descriptive and graphical analysis, hypothesis tests for group comparison and linear regression, will be addressed.

Course Sessions:

1. Introduction to SPSS, Database Creation and Manipulation
2. Descriptive and Graphical Statistics
3. Statistical Inference
 - 3.1. Introduction to statistical inference
 - 3.1.1. Confidence Intervals and Effect size
 - 3.2. Parametric tests
 - 3.2.1. Tests for comparison of two populations: t-student tests.
 - 3.2.2. Analysis of Variance and post-hoc tests
 - 3.2 Non-parametric tests
 - 3.2.1. Tests for comparison of qualitative variables (Chi-square/Fisher)
 - 3.2.2. Test for comparison of ordinal variables (Mann-Whitney and Wilcoxon)
 - 3.2.3. Kruskal-Wallis test and multiple comparison of mean ranks
 - 3.2.4. Friedman test and multiple comparison of mean ranks
4. Linear Regression
 - 4.1. Estimation of the Linear Regression model
 - 4.2. Significance of the model and tests on the regression coefficients
 - 4.3. Coefficient of Determination