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Comparing Full and Reduced Experimental Design GLMs; 2.8.3 Regression GLMs
2.8.4 Schemes for Coding Experimental Conditions 2.8.4.1 Dummy Coding; 2.8.4.2 Why Only (p - 1) Variables Are Used to Represent All Experimental Conditions?; 2.8.4.3 Effect Coding; 2.8.5 Coding Scheme Solutions to the Overparameterization Problem; 2.8.6 Cell Mean GLMs; 2.8.7 Experimental Design Regression and Cell Mean GLMs; 3 Comparing Experimental Condition Means, Multiple Hypothesis Testing, Type 1 Error, and a Basic Data Analysis Strategy; 3.1 Introduction; 3.2 Comparisons Between Experimental Condition Means; 3.3 Linear Contrasts; 3.4 Comparison Sum of Squares; 3.5 Orthogonal Contrasts 3.6 Testing Multiple Hypotheses 3.6.1 Type 1 and Type 2 Errors; 3.6.2 Type 1 Error Rate Inflation with Multiple Hypothesis Testing; 3.6.3 Type 1 Error Rate Control and Analysis Power; 3.6.4 Different Conceptions of Type 1 Error Rate; 3.6.4.1 Test wise Type 1 Error Rate; 3.6.4.2 Family wise Type 1 Error Rate; 3.6.4.3 Experiment wise Type 1 Error Rate; 3.6.4.4 False Discovery Rate; 3.6.5 Identifying the ""Family"" in Family wise Type 1 Error Rate Control; 3.6.6 Logical and Empirical Relations; 3.6.6.1 Logical Relations; 3.6.6.2 Empirical Relations; 3.7 Planned and Unplanned Comparisons
3.7.1 Direct Assessment of Planned Comparisons 3.7.2 Contradictory Results with ANOVA Omnibus F-tests and Direct Planned Comparisons; 3.8 A Basic Data Analysis Strategy; 3.8.1 ANOVA First?; 3.8.2 Strong and Weak Type 1 Error Control; 3.8.3 Step wise Tests; 3.8.4 Test Power; 3.9 The Three Basic Stages of Data Analysis; 3.9.1 Stage 1; 3.9.2 Stage 2; 3.9.2.1 Rom's Test; 3.9.2.2 Shaffer's R Test; 3.9.2.3 Applying Shaffer's R Test After a Significant F-test; 3.9.3 Stage 3; 3.10 The Role of the Omnibus F-Test; 4 Measures of Effect Size and Strength of Association, Power, and Sample Size
4.1 Introduction

Sommario/riassunto

Provides an in-depth treatment of ANOVA and ANCOVA techniques from a linear model perspective ANOVA and ANCOVA: A GLM Approach provides a contemporary look at the general linear model (GLM) approach to the analysis of variance (ANOVA) of one- and two-factor psychological experiments. With its organized and comprehensive presentation, the book successfully guides readers through conventional statistical concepts and how to interpret them in GLM terms, treating the main single- and multi-factor designs as they relate to ANOVA and ANCOVA. The book begins with a brief history of