PSY 653: Orthogonal Contrasts Optional Practice Activity

Module 2: Contrasts, Interactions, and Moderator Variables

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**Note: This activity is optional and is intended to provide you with extra practice for Exam 1. We’ll provide feedback on your answers if you choose to turn it in.**

Use this ANOVA example from the Module 2 Lecture slides to complete the following steps:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Mean | Contrast 1 | Contrast 2 |
| Group 1 | 35 | -1 | 1 |
| Group 2 | 40 | -1 | -1 |
| Group 3 | 45 | 2 | 0 |

N/cell = 30

SStotal = 5000

1. What specific hypothesis does Contrast 1 test? What about Contrast 2?
2. Are the contrasts orthogonal? How do you know?
3. Calculate the Sums of Squares for each contrast
4. Calculate the eta-squared for each contrast
5. Calculate the F statistic for each contrast
6. Identify the critical F value for this ANOVA (use Field, Miles, & Field (2012) Table A.3 “Critical values of the F distribution” pp. 936-939)
7. Do the F statistics for each contrast exceed the critical value of F? Interpret the significance and the implications of each contrast.