**Hoerger’s Statistical Analysis Guide (03/18/2017)**

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| --- | --- | --- | --- | --- | --- |
| **Exam 2** | **Independent Variable** | **Dependent Variable** | **Covariates** | **Preferred Analysis**  | **Alternative Analysis** |
| X | 1 Continuous Variable | 1 Continuous Variable |  | Correlation (*r*) |  |
| X | ≥2 Continuous Variables (or Combination of Continuous and Categorical Variables) | 1 Continuous Variable | *Optional* | Multiple Regression (*R*) |  |
| X | 1 Dichotomous Categorical Variable | 1 Continuous Variable |  | *t*-test with Cohen’s *d* | Correlation (*r*) |
| X | 1 Continuous Variable | 1 Dichotomous Categorical Variable |  | *t*-test with Cohen’s *d* | Correlation (*r*), Logistic Regression (Odds Ratio) |
|  | 1 Continuous Variable | 1 Dichotomous Categorical Variable | *Yes* | Logistic Regression (Odds Ratio) |  |
| X | 1 Polytomous (Multicategory) Categorical Variable | 1 Continuous Variable |  | ANOVA (*F*) with Cohen’s *d* |  |
| X | ≥2 Categorical Variables | 1 Continuous Variable |  | ANOVA (*F*) with Cohen’s *d* |  |
|  | ≥1 Categorical Variable | 1 Continuous Variable | *Yes* | ANCOVA (*F*) with Cohen’s *d* |  |
|  | 1 Dichotomous Categorical Variable | 1 Dichotomous Categorical Variable |  | Chi-square (χ2) | Correlation (*r*), Logistic Regression (Odds Ratio) |
|  | 1 Polytomous (Multicategory) Categorical Variable | 1 Polytomous (Multicategory) Categorical Variable |  | Chi-square (χ2) |  |



**Effect Size Descriptors:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Effect** | ***r*** | ***r2*** | ***d*** |
| **Small** | ≥ .1 | ≥ .01 | ≥ 0.2 |
| **Medium** | ≥ .3 | ≥ .09 | ≥ 0.5 |
| **Large** | ≥ .5 | ≥ .25 | ≥ 0.8 |

**Power Calculations:**

