CHAPTER OVERVIEW

2: Test Statistics, p Values, Confidence Intervals and Effect Sizes

Hello everyone, and welcome to the second chapter of the University of Southern Queensland's online, open access textbook.

The aim of this second chapter is to discuss three statistical tools that allow us to quickly determine if a given estimate of effect (or "effect size") is statistically significant and if it may be of practical use: These tools are p Values and Confidence Intervals as well as the Effect Size itself. A p value is a statement of probability about how often a real association between variables would occur, and it is at the heart of the family of statistics based on frequencies of a particular event or outcome (in this case a real association between variables). Confidence intervals are another way of showing how useful an effect size estimate is, based on how much error has been added into making the estimate. Confidence intervals are important because they provide both an indication of statistical significance (that is, a real association between variables) for an effect as well as an indication of error in its estimation. Effect size estimates are important because they provide an indication of the magnitude of an effect, or how strong an association is between variables.

There are some slides that appear via links within Chapter Two. Please look for these as you work your way through the current chapter.
