

## CHAPTER OVERVIEW

### 16: Hypothesis Testing

#### Learning Objectives

- Identify the components of a hypothesis test, including the parameter of interest, the null and alternative hypotheses, and the test statistic.
- Describe the proper interpretations of a p-value as well as common misinterpretations
- Distinguish between the two types of error in hypothesis testing, and the factors that determine them.
- Describe how resampling can be used to compute a p-value.
- Define the concept of statistical power, and compute statistical power for a given statistical test.
- Describe the main criticisms of null hypothesis statistical testing

In the first chapter we discussed the three major goals of statistics:

- Describe
- Decide
- Predict

In this chapter we will introduce the ideas behind the use of statistics to make decisions – in particular, decisions about whether a particular hypothesis is supported by the data.

[16.1: Null Hypothesis Statistical Testing \(NHST\)](#)

[16.2: Null Hypothesis Statistical Testing- An Example](#)

[16.3: The Process of Null Hypothesis Testing](#)

[16.4: NHST in a Modern Context- Multiple Testing](#)

[16.5: Suggested Readings](#)

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