Exam Week 6

Quiz, 5 questions

5/5 points (100%)

✔ Congratulations! You passed!

Next Item

✔ 1 / 1 points

1.
An equivalence test using the TOST procedure indicates the observed effect is significantly smaller than the upper equivalence bound, and significantly larger than the lower equivalence bound. Traditional NHST also shows the effect is statistically significant. Which conclusion can you draw?

✔ 1 / 1 points

2.
Open the TOST t-test spreadsheet. Researchers examined how much fun students found lectures when they only saw the teacher in videos, compared to how much fun the lectures were when they saw the teacher in real life. They found doing the course was about as much fun when the students saw the lecturer in real life (M_1 = 4.88, SD_1 = 1.35, n_1 = 180) as when they saw the lecturer in the videos (M_2 = 5.01, SD_2 = 1.21, n_2 = 190). The researchers considered an effect size of Cohen's d = 0.2 too small to be worthwhile. What can the researchers conclude?

✔ 1 / 1 points

3.

Exam Week 6

Quiz, 5 questions

5/5 points (100%)

A researcher wants to design a study where she has enough power to determine there is no worthwhile effect. She performs a power analysis for an equivalence test for an independent t-test. She desired 95% power, uses an alpha of 0.10, and sets the lower equivalence bound to d = -0.25 and the upper equivalence bound to 0.25. Assuming the true effect is 0, how many participants would she need in total?

1 / 1 points

4.

Open the Bayes-Factor One-Sided t-test.R script. A researcher named Chris compared whether students performed better on a quiz when they had to perform this quiz in the morning, or in the afternoon. The class consisted of 250 students, and the observed difference was Cohen's dz = 0.05. The researcher had a-priori expected a reasonable effect of time of day on grades, and had a prior for Cohen's dz of 0.3, and a prior on the sd of 0.2. Which conclusion can the researcher draw?

1 / 1 points

5.

Lisa, a colleague of researcher Chris in the previous question had a-priori predicted there would be a much smaller effect of time of day at all, having a prior for Cohen's dz of 0.1. Given a prior on the sd of 0.2, and the observed data (a Cohen's dz of 0.05 in a sample size of 250 students) what would Lisa conclude?