

02: PERMUTATION TESTS

Reference: MSwRR Ch 3

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1 Example: Motivation Experiment



| Treatment | min | Q1 | median | Q3 | max | mean | sd | n | missing |
|-----------|-----|------|--------|------|------|------|-----|----|---------|
| Extrinsic | 5 | 12.2 | 17.2 | 19.0 | 24.0 | 15.7 | 5.3 | 23 | 0 |
| Intrinsic | 12 | 17.4 | 20.4 | 22.3 | 29.7 | 19.9 | 4.4 | 24 | 0 |

2 Logic of Hypothesis Testing

1. Formulate two competing _____ about the _____
2. Calculate a _____ summarizing the relevant information to the claims
3. Look at the _____ assuming that the initial claim is true
4. _____ the observed test statistic to the expected behavior (the distribution created in step 3).

Example: Write down the competing hypotheses being tested by the researchers, both in words and using proper notation.

P-value

Distribution of difference in means

Assuming equal means, based on 1,999 trials



3 R Code

Use this space to jot down any notes about the R code we talked through