IDEAL

Impact Data and Evidence Aggregation Library

Session 1: RCT Design Concept Review

Eva Vivalt

June 9, 2025

Agenda

1. Experiment vs. Intervention
2. Intervention Assignment Strategies
3. Study Arms
4. Rounds

1. Experiment vs. intervention

- **Experiment:** principally defined by the study population and unit(s) of randomization, the intervention(s), and the randomization used to create comparable treatment arms.
- **Intervention:** the treatment, strategy, or program being tested in the experiment.

Why do we want to know?

- **Experiment**
  - Some papers have multiple experiments, which affects how we collect the data from each paper and the structure of the survey
    - Multiple countries
    - Different study populations, set of interventions, within the same country
- **Intervention**
  - We collect the number of interventions to help us identify:
    - Study arms - what does each arm receive? What is being evaluated?
    - Quality, cost, and ethics of the experiment being evaluated

2. Intervention Assignment Strategies

- **Intervention assignment strategy:** The strategy used for assigning interventions to study arms
  - Types of strategies we include:
    - Parallel
    - Factorial
    - Crossover

What are the strategies?

Parallel

Each intervention is assigned **to only one arm**

Factorial

At least one intervention is assigned to **more than one study arm**

Crossover

Each study arm receives a different intervention in **different phases** of the study

Adaptive

The rule by which units are assigned interventions changes.

We will not code these!

Why do we want to know?

- **Different assignment strategy answers different questions.**

- **Parallel vs. Factorial vs. Crossover**
  - Helpful for identifying what is being evaluated when we code treatment effects

- **Crossover designs** affect how we collect data from the paper and the structure of the survey
  - We view each roll-out of an intervention as a separate intervention (for data extraction)

3. Study arms

- **Study arm:** a subgroup of participants that receives none, one, or several specific interventions
  - A subgroup receives the **same** set of interventions
  - The terminology of “study arm” avoids inconsistent definition of “treatment” and “control” arms across studies
- **Why we want to know:** this helps us to identify what is being compared when we collect treatment effects
  - What subgroup is being compared to another subgroup?

4. Rounds

- **Round:** Collects data from the same **data source** at a **given time**
  - **Data source:** data type (e.g., survey, administrative data, etc.)
- **Why we want to know:** we want to know when and how different outcomes are measured
  - Papers often measure outcomes at different times or using different types of data, but sometimes they collapse these when estimating treatment effects.

Thank you for listening

Eva Vivalt
eva.vivalt@utoronto.ca

IDEAL
Impact Data and Evidence Aggregation Library