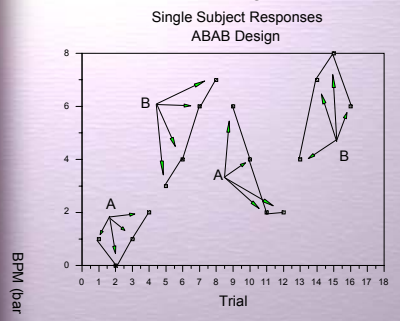
Alternative Approaches

Specialized Designs

1. Single Subject Designs

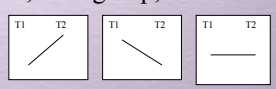
A is baseline. B is treatment. Add and remove treatment to find effect. Common designs: A-B, A-B-A, A-B-A-B



2. Quasi-experimental Designs

- Quasi-experiments have treatment groups, but non-random assignment to treatment. E.g., classroom as group assignment in ed study.
- Non-experimental or pre-experimental study: Single group pre-post study. Measure at T1, treat group, measure at T2. Effect?

No causal conclusion is possible here.

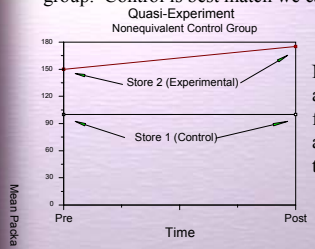


Quasi-experimental Design (2)

- Pre-experimental design lacks a control group. Toothpaste & tooth loss.
- Other examples?
  - Corporate training.

Quasi-Experiment (3)

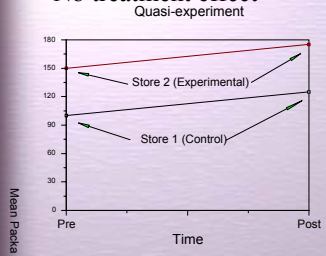
- Nonequivalent control group design. Have pre-post measures for 2 groups, but no random assignment to group. Control is best match we can do.



Note. Pretest means are different. Look for what would be an interaction in a true experiment.

Quasi-experiment (4)

- No treatment effect



Means for both groups increase similarly.

Review

- How do you show an effect with a single-subject design?
- How do you show an effect with a quasi-experiment?
- What is the major design difference between a true experiment and a quasi experiment?
- What is the difference in what you can infer between the true experiment and the quasi-experiment?