Alternatives to Random Assignment for Outcome Evaluations

Outcome evaluations of reentry programs compare the outcomes of program participants with a comparison group of individuals who did not receive the intervention. There are a number of ways to choose a comparison group:

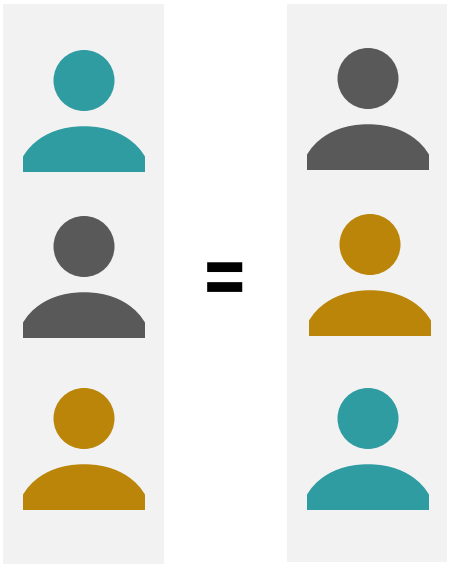
To learn more, see our Alternatives to Random Assignment video

Method 1: **Random Assignment**

Random assignment involves taking the pool of eligible individuals and randomly assigning them to either receive reentry programming ("treatment group") or to not receive programming ("control group").

Randomly assigning individuals ensures that the two groups for which you are comparing outcomes are as similar to one another as possible. Factors that might otherwise influence outcomes - such as *participant motivation for treatment* or *criminal history* - are evenly distributed across the two groups.

For this reason, random assignment is considered to be the gold standard approach.

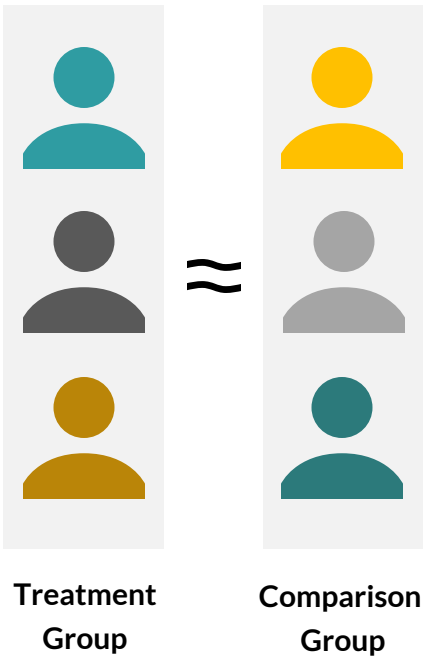


Method 2: **Nonequivalent Comparison Group Design**

If random assignment is not feasible, the best alternative is to select a **non-equivalent comparison group** of individuals who are as similar as possible to the treatment group. The goal of this method is to limit systematic differences between the groups. Two common designs are:

1) **Wait List Design** - individuals who express interest in the program, but are put on a wait list and do not receive the programming, make up the comparison group.

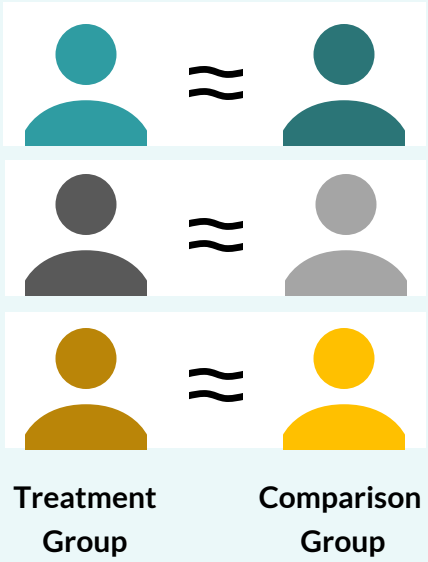
2) **Matched Comparison Group Design** - individuals who would be eligible for the program but - for one reason or another (e.g., program not offered in a facility) - were not offered programming, make up the comparison group.



Featured Nonequivalent Comparison Group Design: *Ex Post-Facto Matching*

Ex post-facto matching builds treatment and comparison groups that are as equivalent as possible by matching individuals using available data. Two common techniques are:

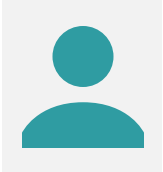
1) **Precision or Exact Matching** - creating a one-to-one matched sample of treatment and control cases using a specific set of variables. If matching is based on gender and criminal history, then a treatment group member who is female and has no criminal history would be matched with a comparison group member who is female and has no criminal history.



2) **Propensity Score Analysis** - creating a matched sample of treatment and control cases using statistical modeling. Each individual is assigned a score that represents the likelihood that they will participate in the intervention. The scores are used to either 1) identify pairs of treatment and comparison group members with the closest scores (and then comparing outcomes for the matched pairs) or 2) develop weights (which make the treatment and comparison group members equivalent) to apply in your outcome analyses.

Method 3: **One Group Pre-Test/ Post-Test Design**

Before Intervention
Control Group



After Intervention
Treatment Group

If available data is not sufficient to allow for matching, a third approach is to use a **one group pre-test/post-test design**. In this design, outcomes for individuals who receive programming are measured and compared before and after the intervention. In other words, those who receive the treatment serve as their own controls.

This design is **not recommended** as the primary approach for evaluating a reentry program because it does not control for a number of factors that may influence outcomes independent of the intervention, such as maturation and testing effects. However, it can be used as a supplemental analysis in cases where some data elements are only available for the treatment group.

Design Options for Outcome Evaluations

Random Assignment

Random assignment is the strongest design for an outcome evaluation. However, it is not always feasible in real-world settings. If concerns with this design cannot be addressed, an alternative method may be required.

Nonequivalent Comparison Group Design

Barring random assignment, nonequivalent comparison group design is the next best approach. This method does not account for all differences between the treatment and comparison groups, but it can minimize them and offer a meaningful analysis of intervention outcomes.

One Group Pre-Test/ Post-Test Design

If matching of treatment and comparison group members is not possible, one group pre-test/post-test designs are an alternative. This less rigorous approach is best used for supplemental analyses.

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