# Implementation Science and Evaluation #19: PROGRAMME EVALUATION DESIGN (III): RANDOMISED CONTROLLED TRIAL

## WHAT is a randomised controlled trial (RCT)?

Compares outcomes between treatment and comparison groups **through** <u>random assignment</u> (which minimises the differences between the groups that may influence the outcome)

Group of participants

Randomly assigned to:

#### **Treatment group**

**Comparison group** 

• To receive an intervention/programme

Randomly placing participants into treatment versus comparison groups

To receive an alternative intervention/programme, or nothing.

### WHY do we use RCT design?

### **RCT results in the strongest type of evidence!\***



#### Back to our scenario:

Exercise Class

Eva, I did what you suggested and my results showed that the participants in the treatment group showed improvements while the comparison group had no change. The improvement must have been caused by my exercise programme.

Hold that thought! In your previous study, other factors may have affected the results as **the participants were** not randomly assigned into the 2 groups. If you want to establish a **causal link**, you need to do a Randomised Controlled Trial (RCT). Let me show you how!



Randomly assign your participants into 2 groups by drawing lots

**ISter** 

Treatment group



Comparison group

Random assignment will

The steps after random assignment







Able to establish causal link Controlled for population bias and practice effect

Provides strong evidence of the effectiveness of the programme

### Cons

- Require a lot more resources to run the study as compared to pre-experimental design
- For some studies, it is not possible to randomly assign clients into the 2 groups
  - E.g. Unethical to withhold intervention from client

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#### **Reference**:

National Research Council (US) (1991). Design and Implementation of Evaluation Research. In Coyle, S.L., Boruch, R.F., Turner, C.F. (Ed.). Evaluation AIDS Prevention Programs: Expanded Edition. Washington (DC): National Academies Press (US). DOI: 10.17226/1535



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