

Blinding

by Sophia



WHAT'S COVERED

This tutorial is going to teach you about blinding and will explain the following topics:

1. **Blinding**
2. **Double-Blind and Single-Blind Experiments**

1. Blinding

Blinding is one of those principles of experimental design whereby the subjects don't know what treatments they're going to receive.

When you randomize an experiment, it is done to reduce bias. However, it's possible to give subtle clues regarding what treatment they're receiving; it's important that the people don't know what they're receiving.

Why is this? Because it might be an incentive for them to either stay on the treatment if it's a drug or go off the treatment if they think they're not getting the real drug.

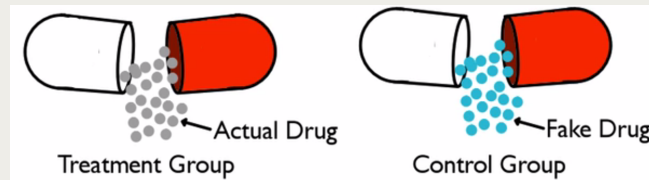
Also, it may be true that people with an agenda might want to bend the results in their favor. They might want to make the results of an experiment seem more positive than they really are. This idea of the experimenter wanting to bend the results in their favor is called the “experimenter effect”.

To counteract both of those two ideas, we implement a strategy called blinding. Only people who are behind the scenes will know who is getting what. No one, either directly involved in the experiment or taking any of the treatments, knows what treatments they're receiving.

IN CONTEXT

If subjects know which treatment group they are assigned to, it may influence behavior. So the treatment group will receive a pill, and the control group will receive a pill. The only difference is that one pill has the active treatment in it and will be only given to those in the treatment group.

Ideally, when you open the pills up, they would look the same on the inside, too. The idea is that no one knows which pill is fake and which one has the tested drug.



The fake drug is usually some kind of a sugar or something that makes the person in the control group feel like they're actually taking something when they're really not.



TERM TO KNOW

Blinding

The practice of making sure that certain individuals do not know which subjects are receiving which treatment.

2. Double-Blind and Single-Blind Experiments

A lot of the times, experiments are what we call double-blind. **Double-blind experiments** means that the subjects don't know what treatment they're receiving, nor does anyone who has any contact with them. This can eliminate bias, due to a subject thinking they know what group they're in. It also reduces the experimenter effect of someone trying to bend the results.

Single-blind experiments, on the other hand, can have subjects blinded, but the researchers are not.

IN CONTEXT

A double-blind study is ideal, but sometimes it is just not feasible. Suppose there is an exercise study--whether or not exercise is effective for weight loss. People are going to know if they're exercising or not. It's impossible to assign people to exercise--the treatment in this case--and have them not know they're receiving the treatment.

However, the experimenters don't need to know who was assigned not to exercise. This is single-blind because the experimenters don't know. The experimenters were blinded, but the subjects were not.



BRAINSTORM

Can you think of a single-blind experiment that would be set up to have the researchers know group assignments, but the participants do not?



TERMS TO KNOW

Double-Blind Experiment

An experiment where neither the subjects nor anyone in contact with them has any knowledge of which subjects are receiving which treatment.

Single-Blind Experiment

An experiment where either the subjects have no knowledge of which subjects are receiving which treatment or people in contact with the subjects have no knowledge of which subjects are receiving which treatment, but not both.



SUMMARY

Blinding is a powerful tool for preventing different types of biases, such as the experimenter effect. Different studies allow for different levels of blinding. Ideally, double-blind is best since both participants and the people with direct contact with the participants are not aware of group assignment. As you saw in the exercise example, sometimes double-blind just is not realistic. Participants will know if they are exercising or not. In that case, single-blind experiments are the next best thing, which means that either the subjects or the researcher are aware of group assignments; but not both.

Good luck!

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