

What's the Null?

The **null hypothesis** states that there is no relationship between the independent and dependent variables—that any observed effect is due to chance. It is important because it gives researchers a baseline to test against, helping them determine whether their findings are meaningful or just random variation.

For example, if a new memory pill is tested, the null hypothesis would state that people who take the pill will remember no more words on a test than people who take a placebo.

Sentence Frame for Null Hypothesis

"There will be no difference in (dependent variable) between (group 1) and (group 2)."

In each of the following examples, state the null hypothesis:

1. A hypnotist claims that he can end smoking addictions in two to three hypnosis sessions.
2. A politician believes that increased expenditure on campaign ads will improve voter impressions of her.
3. An educator argues that 10 minutes of non-stop repetition of word meanings will improve performance on vocabulary tests.
4. A school administrator contends that students will perform more pro-social behaviors if they are awarded with a token when they do so.
5. A therapist proposes that individuals who suffer from "seasonal affective disorder" will improve if systematically exposed to high levels of artificial light.

Warm-Up Answers: "What's the Null?"

1. Hypnotist & Smoking

- **Null Hypothesis:** Hypnosis has no effect on smoking addictions; participants receiving hypnosis will show no greater reduction in smoking than those not receiving hypnosis.

2. Politician & Campaign Ads

- **Null Hypothesis:** Campaign ad expenditures have no effect on voter impressions; voters' impressions of the candidate will not differ regardless of ad spending.

3. Educator & Vocabulary Practice

- **Null Hypothesis:** Ten minutes of nonstop repetition has no effect on vocabulary test performance; students who repeat definitions will not score differently than those who don't.

4. Administrator & Pro-Social Behavior

- **Null Hypothesis:** Awarding tokens has no effect on pro-social behavior; students given tokens will not perform more pro-social behaviors than those not given tokens.

5. Therapist & Light Therapy

- **Null Hypothesis:** Artificial light exposure has no effect on seasonal affective disorder; individuals exposed to high levels of light will not improve more than those not exposed.