

Significance & Errors

Psychology

What $p < 0.05$ means, and the two kinds of mistake.

The decision against the truth.

	Null is true	Null is false
Reject null	Type I error (α)	Correct — power
Retain null	Correct	Type II error (β)

Power = $1 - \beta$, conventionally targeted at 0.80. Underpowered studies are the main reason findings fail to replicate.