

The Value of Accepting the Null Hypothesis

Important Substantive Cases

Andy Grogan-Kaylor

2019-11-14

The Value of Accepting the Null Hypothesis (H_0)

case	description	statistic	example
Equivalence Testing	Equivalence of 2 Treatments or Interventions	$\beta_1 = \beta_2$	One treatment is much more expensive, or time consuming than another
Retiring Interventions	There is No Evidence That Intervention X is Effective	$\beta_{intervention} = 0$	Evidence consistently suggests that a particular treatment has near zero effect
Contextual Equivalence	Equivalence of a Predictor Across Contexts (Moderation)	$\beta_{interaction} = 0$	(1) Warm and supportive parenting is equally beneficial across different contexts or countries. (2) Men and women are more similar than different wrt psychological processes (Hyde)
Full Mediation	$x \rightarrow y$ Association is Completely Mediated; No Direct Effect	$\beta_{xmy} \neq 0; \beta_{xy} = 0$	The relationship of the treatment and the outcome is completely mediated by mechanism m
Theory Simplification	Removing an Association From A Theory	$\beta_x = 0$	There is no evidence that x is associated with y