Sampling for Statistical Analysis

Probability / Non-Probability sampling methods

Probability sampling	every member of the population has a chance of being selected for the study through random selection
Non-probability sampling	some members of the population are more likely than others to be selected for the study because of criteria such as convenience or voluntary self-selection.

Parametric / Non-Parametric tests

Parametric tests	can be used to make strong statistical inferences when data are collected using probability sampling. If you want to use parametric tests for non-probability samples, you have to make the case that:
	(1) your sample is representative of the population you're generalizing your findings to.
	(2) your sample lacks systematic bias.
Non-parametric tests	are more appropriate for non-probability samples, but they result in weaker inferences about the population.
	non-probability samples are more likely to be biased, they are much easier to recruit and collect data from

Calculate sufficient sample size

Before recruiting participants, decide on your sample size either by looking at other studies in your field or using statistics. A sample that's too small may be unrepresentative of the sample, while a sample that's too large will be more costly than necessary.

Significance level (alpha):	the risk of rejecting a true null hypothesis that you are willing to take, usually set at 5%.
Statistical power:	the probability of your study detecting an effect of a certain size if there is one, usually 80% or higher.
Expected effect size:	a standardized indication of how large the expected result of your study will be, usually based on other similar studies. tells you how meaningful the relationship between variables or the difference between groups is. It indicates the practical significance of a research outcome.
Population standard deviation:	an estimate of the population parameter based on a previous study or a pilot study of your own

Not published yet.
Last updated 14th April, 2022.
Page 1 of 1.