

Sampling

A presentation by Jean Franco, Leigh, and Maya

An introduction to sampling....

Population:

Population: In social science research your population is the group of people that you are interested in. A population could be as big as “New Yorkers” or as small as “New Yorkers who live in Brooklyn and were born on November 9th at 3:00 PM in 1995”. Either way, you probably can’t gather data from your entire population of interest. Enter...

Sampling frame:

Sampling frame: A sampling frame is the list of people in your population from which you will choose your sample of people. To find your sampling frame go to where your population is! For example, if you want to do research on high school students, you may go to your local high school and get a list of every student at that school from the admin office. Then, you can choose students based on that list. This is a physical list. Sometimes, however, a list might be hypothetical, such as the people that decided to show up on the given day that you arrived. Then, those people may be your imaginary sampling frame. In conclusion, a sampling frame creates a sense of order between the general population and the sample that you end up with. It helps you focus on a smaller group than the whole population that interests you.

Recruitment:

Recruitment: Recruitment is the process of informing potential participants in the population that interests you about the study to gauge interest and attempt to get them to participate. Recruitment comes in many different forms depending on the study - from a phone call to a flyer. The question is, are there specific criteria or characteristics that someone must have to participate in your study? Enter inclusion and exclusion criteria...

Inclusion and Exclusion Criteria:

Inclusion criteria: The characteristics an individual must have to be included in the sample.

Exclusion criteria: The characteristics that disqualify a person from being a part of the sample and participating in the study.

Sample:

Sample: A sample is the group of people that you are able to recruit from your sampling frame to participate in your study. Remember, a sample doesn't have to be people - it could be documents, client records, tv shows, or blog posts.

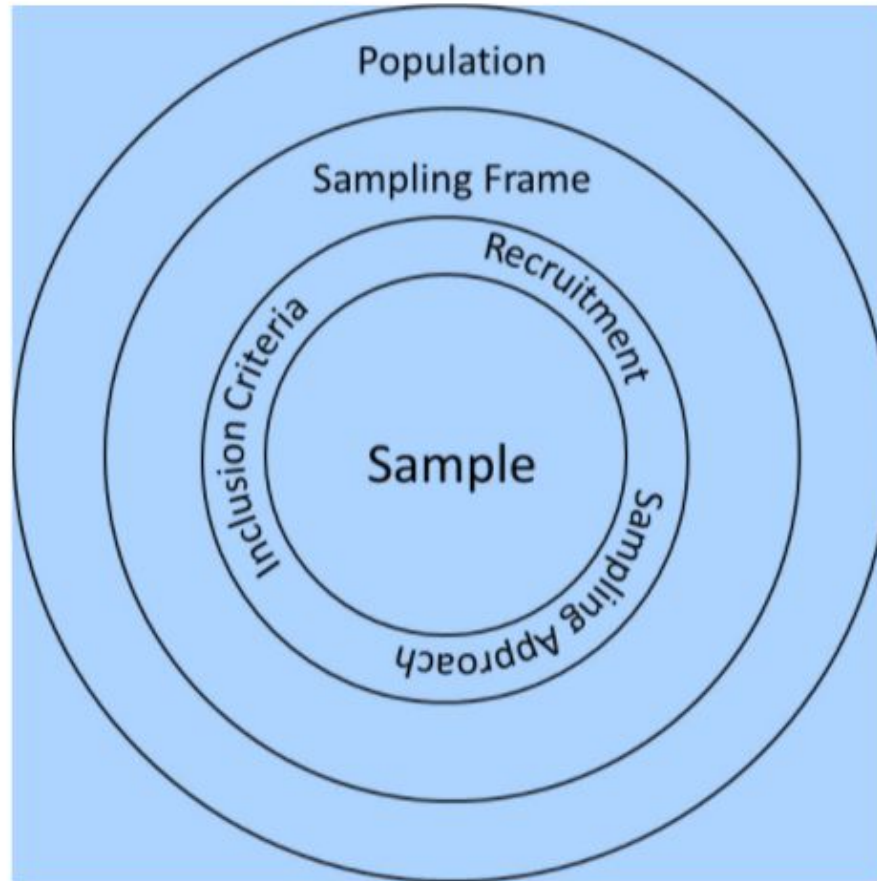


Figure 10.1 Sampling terms by size

Decarlo, M. (2018). *Figure 10.1 Sampling terms by size* [Image]. Scientific Inquiry in Social Work.

Sampling and Qualitative Research

Nonprobability Sampling

- Sampling techniques in which one's likelihood for being selected to participate as sample is unknown.
- Though not used to generalize to a larger population, nonprobability samples are not arbitrary or without a specific purpose in mind.
 - Can be used when administering drafts of surveys or conducting pilot studies and exploratory research.
 - Can also be helpful in setting up, framing, or beginning research.

Nonprobability Sampling

Table 10.1 Types of nonprobability samples

Sample type	Description
Purposive	Researcher seeks out participants with specific characteristics.
Snowball	Researcher relies on participant referrals to recruit new participants.
Quota	Researcher selects cases from within several different subgroups.
Convenience	Researcher gathers data from whatever cases happen to be convenient.

Types of Nonprobability Sampling

- Purposive Samples
 - Selecting participants because they have characteristics that the researcher desires.
 - Participants are selected on purpose because you know they have characteristics you need in your sample.
 - Requires you to have prior information about your participants before recruiting them

Types of Nonprobability Sampling

- Snowball Samples (Chain Referral Sampling)
 - Researcher identifies one of two people they'd like to include and relies on those individuals to identify additional study participants
 - Relying on networks for study participants
 - Think of a snowball rolling through the snow
 - Useful when studying a stigmatized group or behavior

Types of Nonprobability Sampling

- Quota Sampling
 - Researcher identifies categories that are important to the study and for which there is likely to be some variation. Subgroups are created based on categories and the researcher decides how many people to include from each subgroup and collects data from that number for each subgroup.
 - We should avoid making statistical generalizations from data collected using quota sampling - it would be a mistake to think of this strategy as yielding statistically representative findings.

Types of Nonprobability Sampling

- Convenience Sampling (Availability Sampling)
 - Can be used by both qualitative and quantitative researchers
 - Collects data from people or other relevant elements that they have most convenient access.
 - Useful for exploratory research or projects when probability sampling is too costly or difficult

Sampling and Quantitative Research

Probability Sampling

- *Sampling techniques for which a person's likelihood of being selected from the sampling frame is known*
 - Because we want to get a...
- Representative sample
 - Resembles the population from which it was drawn in all the ways that are important for the research to be conducted
 - If your population varies in some way that is important to the study, the sample should contain that same type of variation
- Generalizability
 - The idea that a study's results will tell us something about a group larger than the sample from which the findings were generated

Probability Sampling (cont'd)

- Random selection
 - Elements in a sampling frame have an equal chance of being selected for inclusion
 - Researchers typically use a computer's random number generator to determine who from the sampling frame gets recruited into the sample
- Sampling error
 - Statistical calculation of the difference between results from a sample and the actual parameters of a population
 - Generalizing from a sample to a population always contains some degree of error

Types of Probability Samples

- Simple random samples
 - An actual list of each person in the sampling frame
 - Truly randomly selected elements must be computer-generated
 - Heuristics: the patterns humans fall into in selecting things seemingly at random
- Systematic sampling
 - Must possess a list of everyone in the sampling frame
 - Less tedious and provide benefits of random sampling
 - Decide on the interval in which participants will be selected, n^{th}
 - How many elements do you wish to include in your sample?
 - Where do you wanna start selecting elements?
 - Should not be employed if sampling frame has any pattern to it
 - *Periodicity: the tendency for a pattern to occur at regular intervals*

Determining your selection interval

$$\frac{100 \text{ fraternity members (population size)}}{25 \text{ fraternity members (sample size)}} = 4 (k, \text{ our selection interval})$$

Types of Probability Samples (cont'd)

- Stratified sampling
 - Dividing the study population into relevant subgroups and then drawing a sample from each subgroup
 - Good to use when a subgroup of interest makes up a small portion of the overall sample
 - Ensure that smaller subgroups are included in the sample and are more representative of the overall population
- Cluster sampling
 - When a researcher begins by sampling groups of population elements and then selects elements from within those groups
 - Sampling in multiple stages introduces the possibility of greater error

Types of Probability Samples (again)

- Probability proportionate to size (PPS)
 - Giving clusters different chances of being selected based on their size so that each element within those clusters winds up having an equal chance of being selected

Don't forget to ask questions...

Issues that may arise when sampling:

- **Who is sampled and why?** Multiple studies show that oftentimes research focuses on predominantly undergraduate students in the United States, as undergraduate psychology students are more than willing to participate in their peers' and professors research. This does not provide a very diverse sample when asking larger questions about human nature.
- **Bias** can arise at any point during the research process, especially when choosing a sample. Some examples of bias are when the inclusion criteria do not actually represent the population as a whole. Additionally, conscious or unconscious bias on the part of the researcher may also come up at this time - for example, the researcher may choose to recruit people who "look like a good research participant" to them.
- In conclusion, researchers run the risk of making claims about groups of people other than those that were in their study. Additionally, researchers could also make statements about a population based on a sample that they chose that is not actually representative of the population of interest.
- By asking ourselves questions like who was sampled, why, and how we can more responsibly read a research study.

(Time/access permitting)

KAHOOT

**Please pair up with another partner
for this activity**