Chapter 10: Sampling Methods in Quantitative and Qualitative Research

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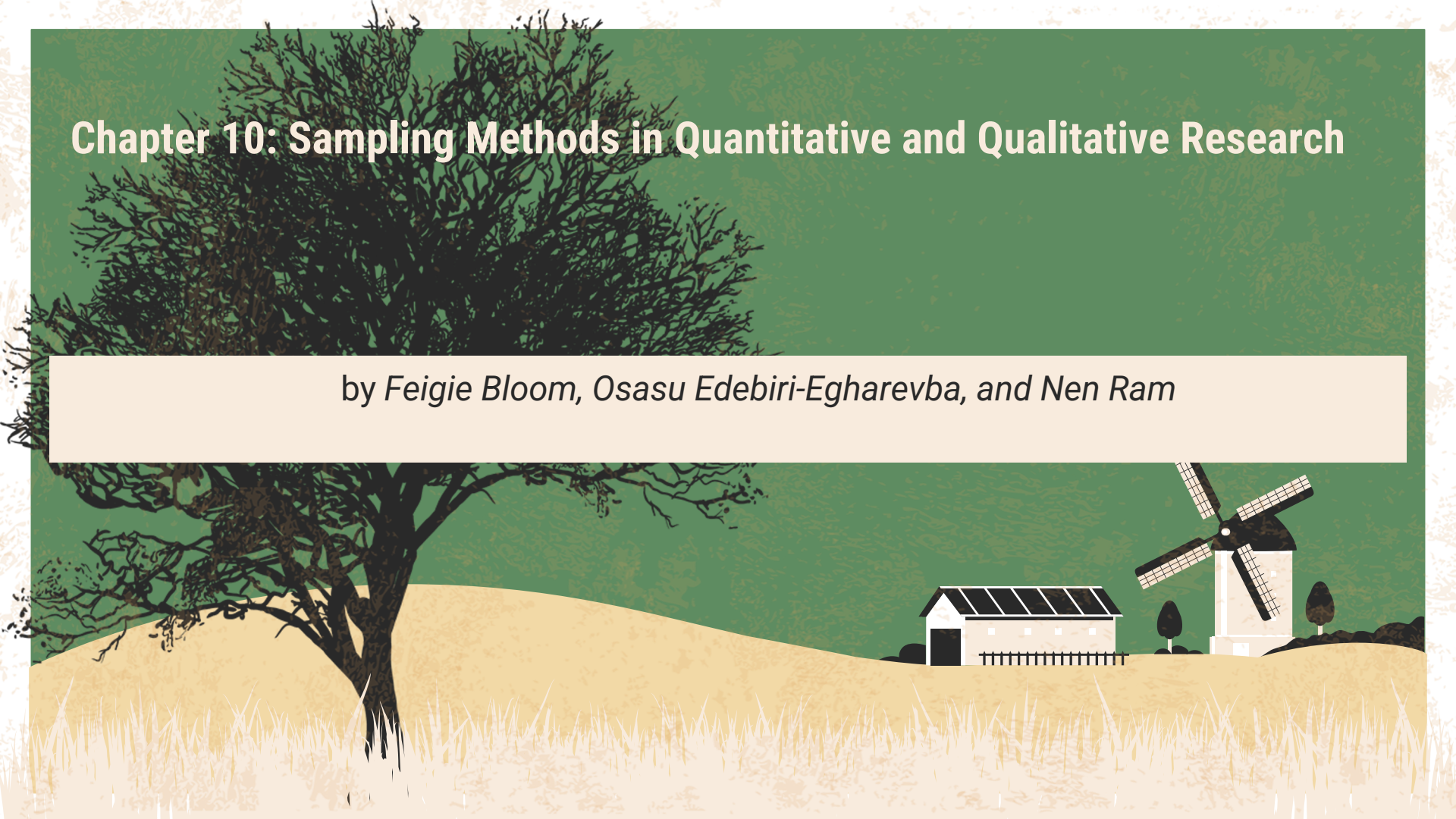
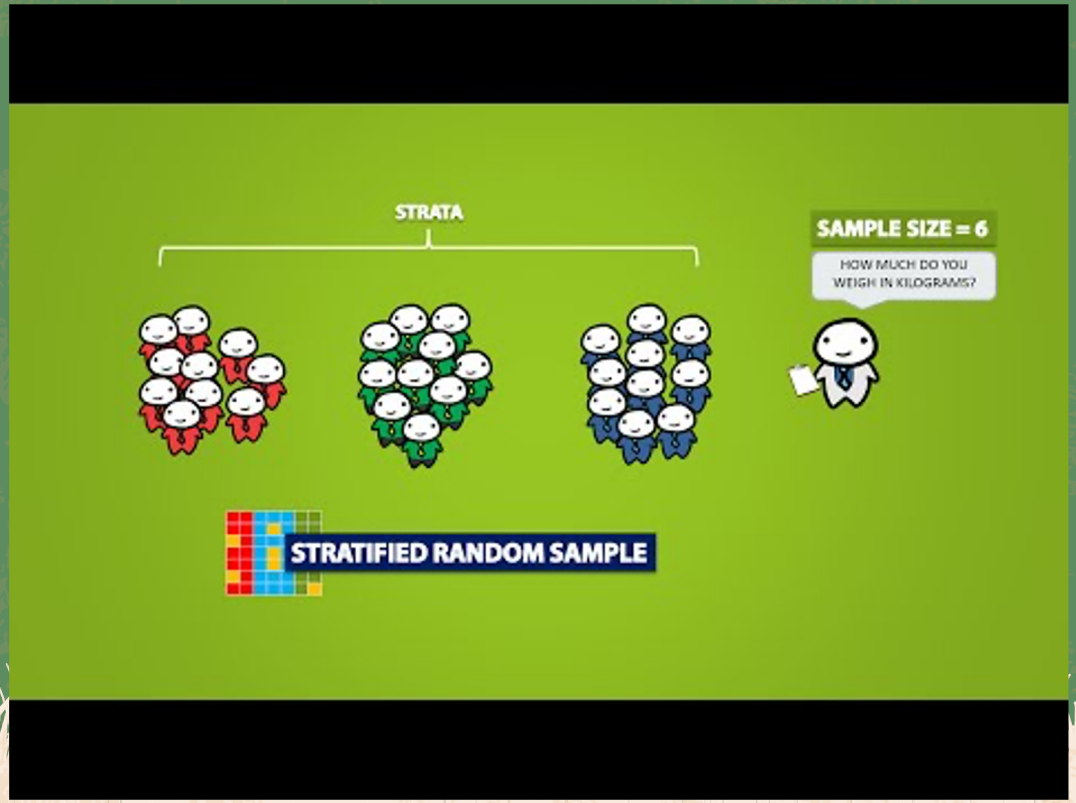


Chapter Outline

- **Basic concepts of sampling** - *Osasu*
- **Sampling in qualitative research** - *Nen*
- **Sampling in quantitative research** - *Feigie*
- **A word of caution: Questions to ask about samples**

Watch this video on sampling methods



Sampling

A population is a group that researchers are looking for information about. A sample is part of a population that is taken out to examine and draw conclusions about the examinations from. There are different ways to obtain a sample of a population, some are biased and some are not biased.

Biased samples

Biased samples happen when there are certain members of a population that are either advertently or inadvertently favored over the other people within the population. There is the convenience sample, in which researchers reach the members of the population that are easiest for them to get to, leaving the rest of the population out.

Quality Samples

Quality samples will give everyone in the population a chance to be chosen for the study, and it is a true representation of the entire population. These types of samples are considered to be unbiased. The three types of unbiased samples include stratified random sampling, multistage sampling, and simple random sampling.

Stratified random sample

A stratified random sample divides the population into the amount of groups that the study is going to be about, and then takes an even number of people randomly from each group.

Multistage sampling

Multistage sampling involves going through multiple stages in order to obtain a sample. If there are the five groups mentioned in the previous slide, stage one of the sampling could involve selecting which group will be picked using random selection.

Sampling in Qualitative Research

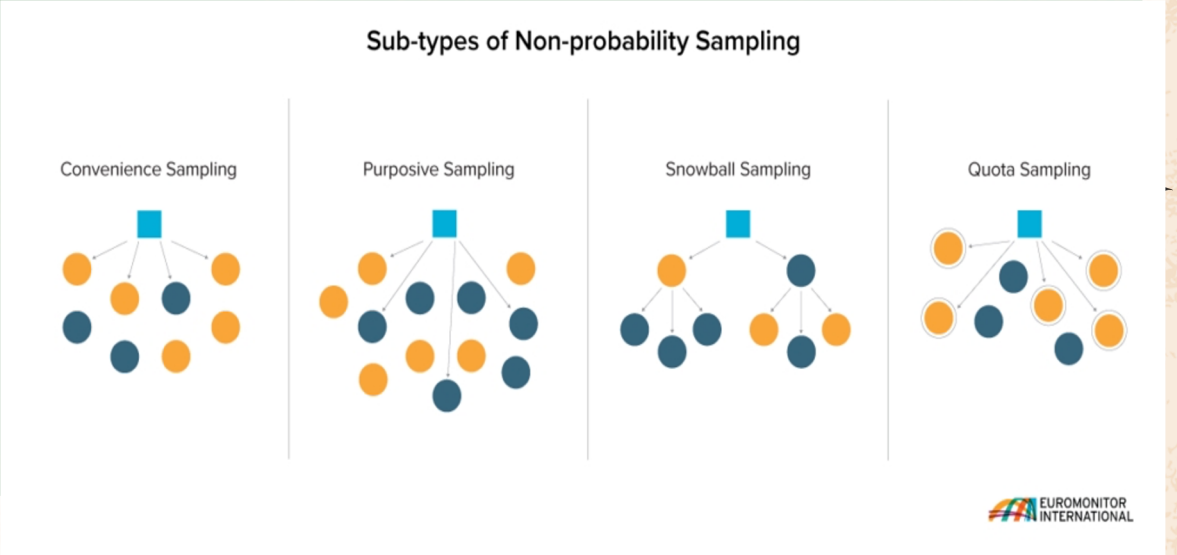
Nonprobability sampling refers to sampling techniques for which a person's likelihood of being selected for membership in the sample is unknown.

Purposive samples

Snowball samples

Quota samples

Convenience samples.



Several Types of Nonprobability Samples

- Purposive or Judgement Samples

Ex: studying mental health supports on your campus

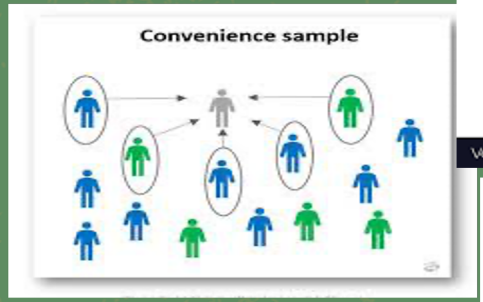
- Snowball Samples

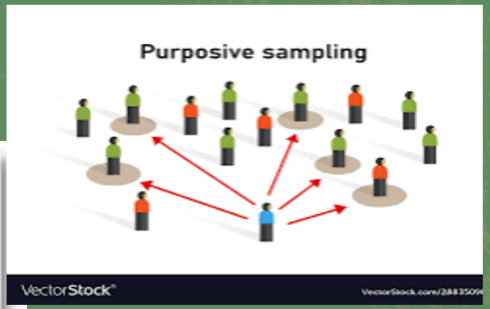
Ex: genital herpes cope with their medical condition

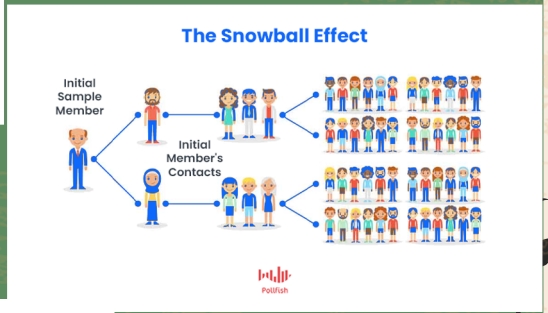
- Quota Samples

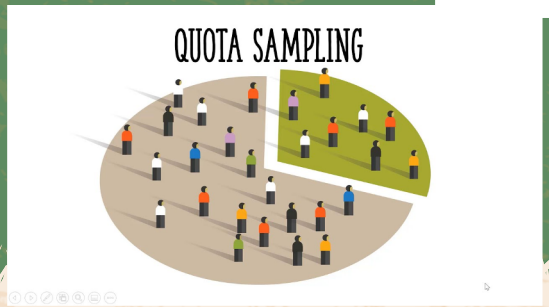
"A researcher identifies categories that are important to the study and for which there is likely to be some variation. Subgroups are created based on each category, and the researcher decides how many people to include from each subgroup and collects data from that number for each subgroup." (2018).

- Convenience Samples









Nonprobability Sampling- Positive and Negative effects

Negatives

The sample is not a proportion of the population.

The selection depends upon the situation.

No assurance is given that each item has a chance of being included as a sample.

Positives

Convenient

Sample could be chosen in many ways

Far less complicated to set up

Considerably less expensive

Easy to use when there is a very small population to work with

Summary of Subtypes of Non-Probability Sampling

Convenience	*use who is available and easy to reach*
Snowball	*get sampled people to refer others*
Purposive	*select the sample based on subjective judgement*
Quota	*has a certain % of the sample from each group/subgroup*

Sampling in Quantitative Research

Table 10.4 Types of probability samples

Sample type	Description
Simple random	Researcher randomly selects elements from sampling frame.
Systematic	Researcher selects every *k*th element from sampling frame.
Stratified	Researcher creates subgroups then randomly selects elements from each subgroup.
Cluster	Researcher randomly selects clusters then randomly selects elements from selected clusters.

Simple random

Simple random sampling involves choosing random participants from a list

Random.org (1998-2021) referenced in the textbook (2018).

“RANDOM.ORG offers true random numbers to anyone on the Internet. The randomness comes from atmospheric noise, which for many purposes is better than the pseudo-random number algorithms typically used in computer programs.” (1998-2021).

Systematic

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

k is then used to select the sample.

First, pick a number between 1 and *k*.

Second, select every *k*th element.

Number	Name	Include in study?
1	Jacob	
2	Ethan	
3	Michael	Yes
4	Jayden	
5	William	
6	Alexander	
7	Noah	Yes
8	Daniel	
9	Aiden	
10	Anthony	
11	Joshua	Yes
12	Mason	
13	Christopher	
14	Andrew	
15	David	Yes
16	Logan	
17	James	
18	Gabriel	
19	Ryan	Yes
20	Jackson	
21	Nathan	
22	Christian	
23	Dylan	Yes
24	Caleb	
25	Lucas	
26	Gavin	
27	Isaac	Yes
28	Luke	
29	Brandon	
30	Isaiah	
31	Owen	Yes
32	Conner	
33	Jose	
34	Julian	
35	Aaron	Yes
36	Wyatt	
37	Hunter	
38	Zachary	
39	Charles	Yes
40	Eli	
41	Henry	
42	Jason	
43	Xavier	Yes
44	Colton	
45	Juan	
46	Josiah	
47	Ayden	Yes
48	Adam	
49	Brody	
50	Diego	
51	Blake	Yes
52	Oliver	
53	Cole	
54	Carlos	
55	Jaden	Yes
56	Jesus	
57	Alex	
58	Aiden	
59	Eric	Yes
60	Hayden	
61	Brian	
62	Max	
63	Jaxon	Yes
64	Brian	
65	Mathew	
66	Elijah	
67	Joseph	Yes
68	Benjamin	
69	Samuel	
70	John	
71	Jonathan	Yes
72	Liam	
73	Landon	
74	Tyler	
75	Evan	Yes
76	Nicholas	
77	Braden	
78	Angel	
79	Jack	
80	Jordan	
81	Carter	
82	Justin	
83	Jeremiah	Yes
84	Robert	
85	Adrian	
86	Kevin	
87	Cameron	Yes
88	Thomas	
89	Austin	
90	Chase	
91	Sebastian	Yes
92	Levi	
93	Ian	
94	Dominic	
95	Cooper	Yes
96	Luis	
97	Carson	
98	Nathaniel	
99	Tristan	Yes
100	Parker	

Table 10.3 Systematic sample of observation days

Day #	Day	Drinking	Observe?	Day #	Day	Drinking	Observe?
1	Monday	Low		15	Monday	Low	
2	Tuesday	Low	Yes	16	Tuesday	Low	Yes
3	Wednesday	Low		17	Wednesday	Low	
4	Thursday	High		18	Thursday	High	
5	Friday	High		19	Friday	High	
6	Saturday	High		20	Saturday	High	
7	Sunday	Low		21	Sunday	Low	
8	Monday	Low		22	Monday	Low	
9	Tuesday	Low	Yes	23	Tuesday	Low	Yes
10	Wednesday	Low		24	Wednesday	Low	
11	Thursday	High		25	Thursday	High	
12	Friday	High		26	Friday	High	
13	Saturday	High		27	Saturday	High	
14	Sunday	Low		28	Sunday	Low	

Stratified

Stratified sampling involves choosing subgroups within a population and selecting a sample from within each subgroup

Ex: Days of the week when binge drinking occurs at a University

(1) Choosing weekends and weekdays as subgroups
(2) Selecting a sample of weekends
(3) Selecting a sample of weekdays

Cluster

Selecting groups, and then selecting parts within the groups

Ex: Binge drinking in college fraternities within a State

Population: fraternity members within the State

Randomly selecting:

(1) Specific universities within a certain State
(2) Specific fraternities
(3) Members of the fraternity

A word of caution: Questions to ask about samples

-There is a chance that even if people are selected that they will not want to participate in the survey. Does this imply that there can never truly be a lack of bias in research?

-Does providing financial incentive for participating in studies increase or decrease the risk of bias?

Studies are often drawn from “WEIRD (Western, Educated, Industrialized, Rich, and Democratic)” societies.

A study found that 68% of participants in studies in top academic journals were from the United States (Arnett, 2008).

Citations

Slideshare a Scribd company. (2010). *Non-Probability Sampling*. Retrieved from https://www.slideshare.net/danilojrolaer99/nonprobability-sampling

DeCarlo, M. (2018). Scientific inquiry in social work. Open Textbook Library.

Thank You!