

Sampling

Sampling is a process used in statistical analysis in which a predetermined number of observations are taken from larger population.

- The methodology used to sample from a larger population depends on the type of analysis being performed, but it may include simple random sampling or systematic sampling.

Types of sampling techniques-

- There are two basic types of sampling techniques-

1. Probability sampling

2. Non probability sampling

1. Probability sampling-

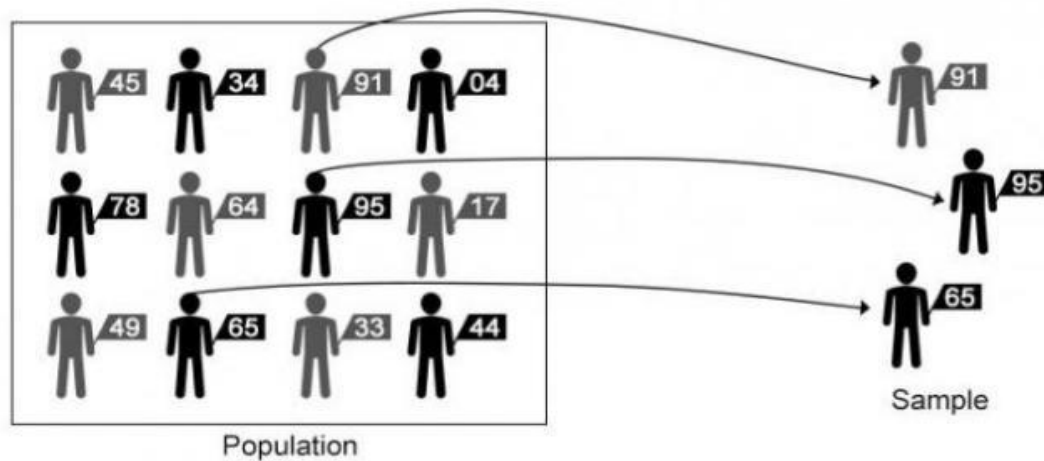
- Probability sampling is a method that select random number of a population by setting a few selection criteria.
- These selection parameters allow every member to have equal opportunities to be a part of various samples.

Types of probability sampling techniques-

- ***Simple random sampling***
- ***Stratified random sampling***
- ***Cluster sampling***
- ***Systematic random sampling***

1. Simple random sampling-

- In simple random sampling, the members of the sample are selected randomly and purely by chance.

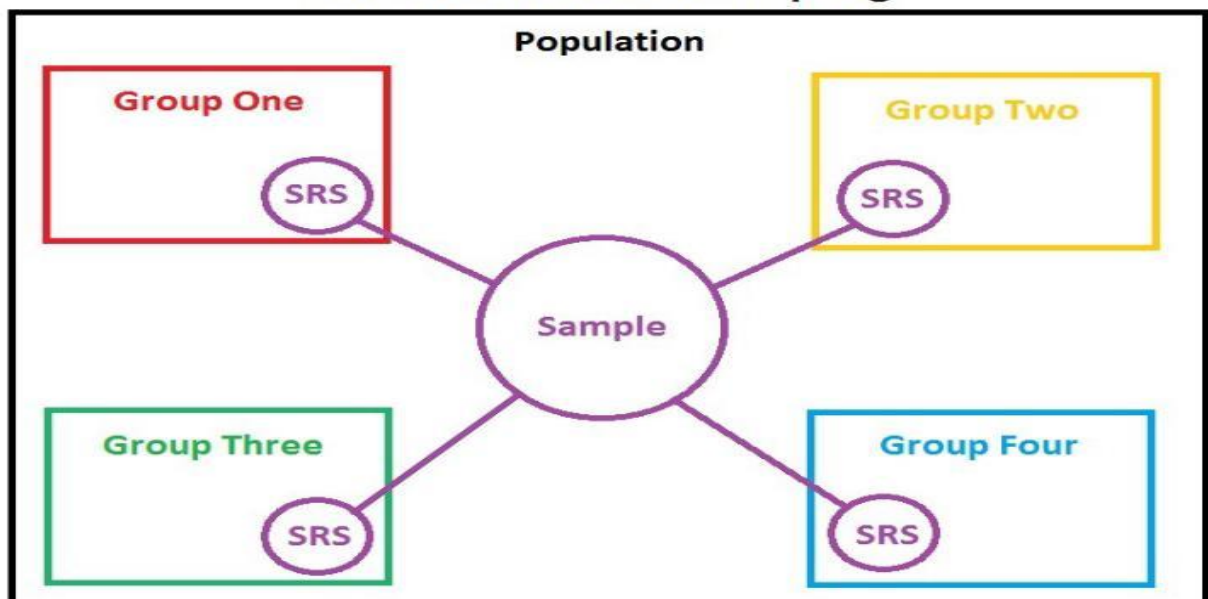


Simple Random Sampling

2. Stratified random sampling-

- In stratified random sampling, first the population is divided into sub group (known as strata) and then members from each sub group are selected randomly.
- This technique is used when the population is not highly homogeneous.

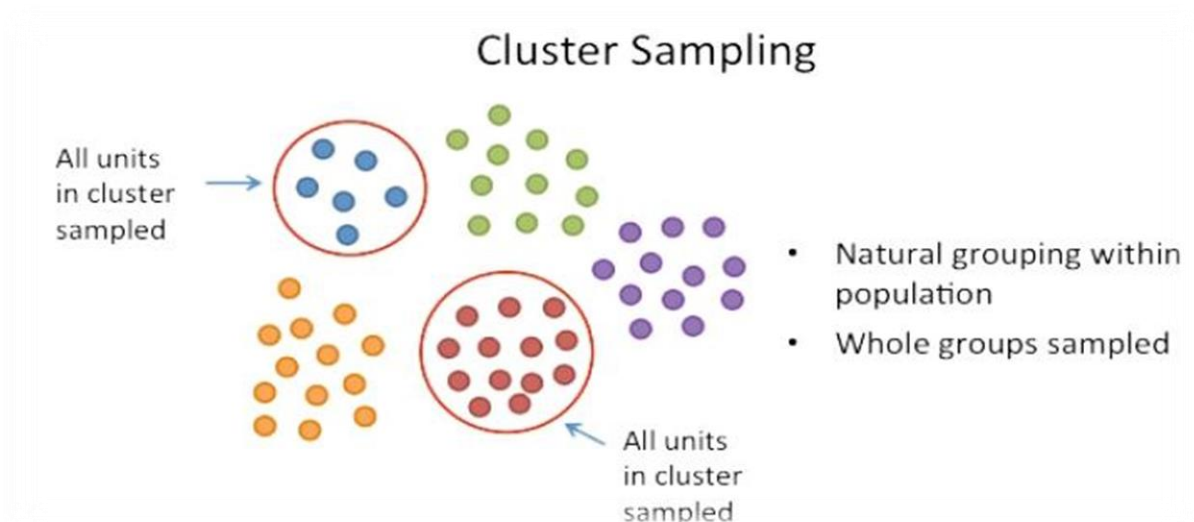
Stratified Random Sampling



3. Cluster sampling –

In cluster sampling, various segments of a population are treated as clusters and member from each cluster are selected randomly.

- Though it seems similar to stratified sampling there is a difference in both.
- In stratified sampling the researchers divide the population into homogeneous sub group on the basis of similar characteristics, examples- age, sex and so on.

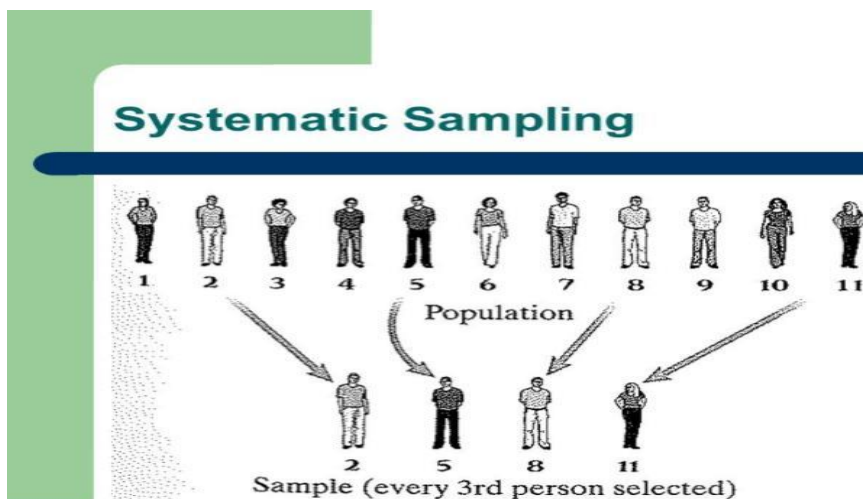


- On the other hand, in cluster sampling, they do not divide the population into sub group or cluster but randomly select from already existing or naturally occurring sub group (cluster) of the population.

4. Systematic random sampling-

In systematic sampling a member occurring after a fixed interval is selected.

- The member occurring after a fixed interval is known as kth element, for instance, if researcher wants to select member occurring after every ten members, the kth element becomes 10th elements.



2. Non probability sampling-

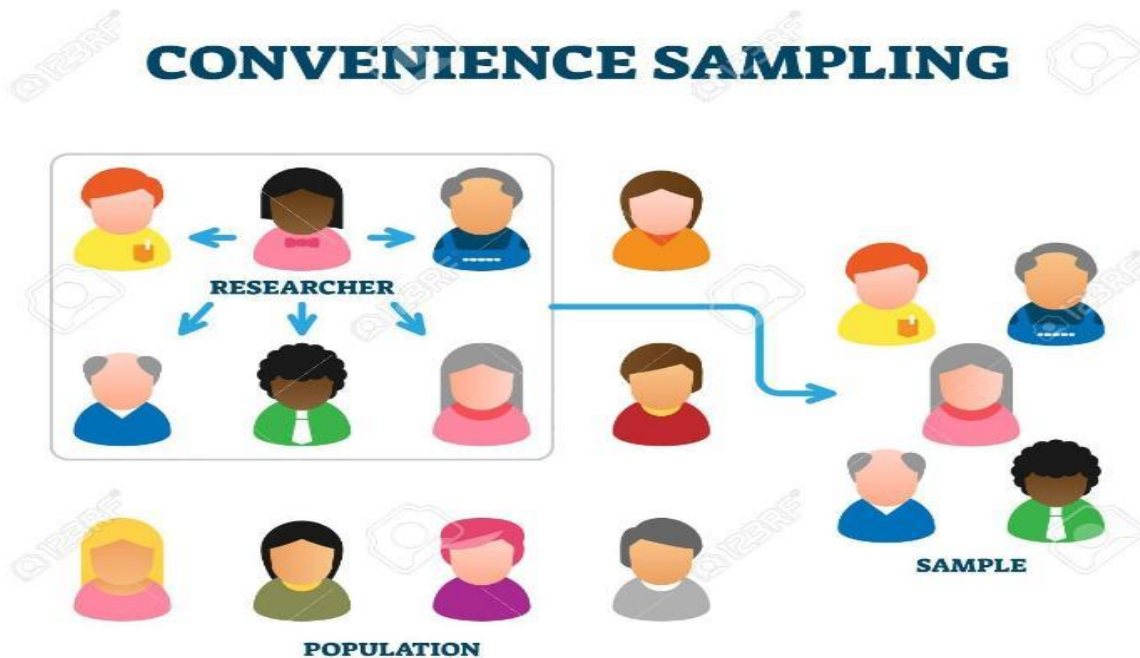
- Non probability sampling method is reliant on a researcher ability to select members at random.
- This sampling method is not a fixed or pre-defined selection process which makes it difficult for all elements of a population to have equal opportunities to be included in a sample.

Types of non-probability sampling-

- *Convenience sampling.*
- *Judgemental sampling.*
- *Snowball sampling.*
- *Quota sampling.*
- *Dimensional sampling.*

1. Convenience sampling-

- It is a type of sampling where the members of the sample are selected on the basis of their convenient accessibility.
- Only those members selected which are easily accessible to the researchers.

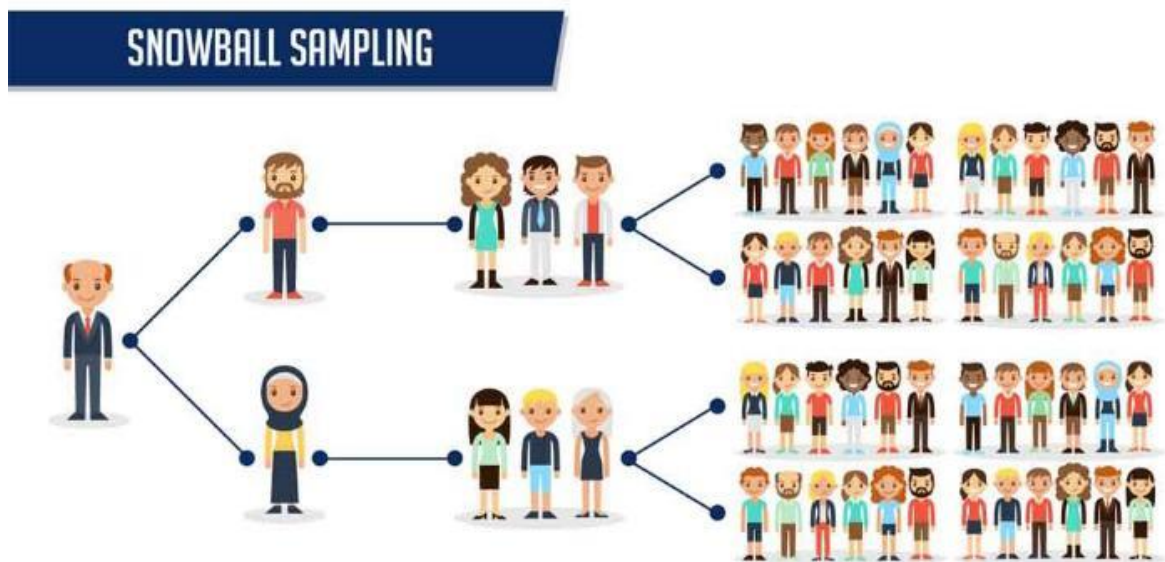


2. Judgemental sampling-

- In this sampling, where the members for a sample are selected according to the purpose of the study.

3. Snowball sampling-

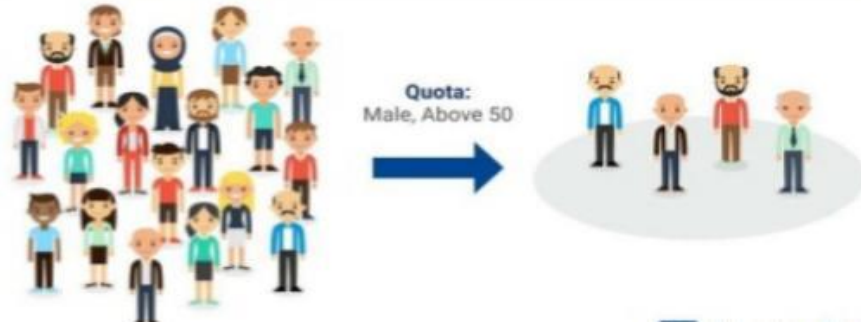
- snowball sampling is also called chain sampling.
- It is a type of sampling where one respondent identifies other respondents (from their friends or relatives) in the study.
- Snowball sampling is adopted in situations where it is difficult to identify the members of the sample.



4. Quota sampling-

- In this type of sampling, the members are selected according to some specific characteristics chosen by the researchers.
- These specific characteristics serve as a quota for the selection of members of the sample.
- Hence, the members are selected on the basis of these specific characteristics.

Quota Sampling



5. Dimensional sampling-

It is an extension to quota sampling, the researcher takes into account several characteristics (eg- gender, income, residence, and education).

The researcher must ensure that there is at least one person in the study representing each of the chosen characteristics.