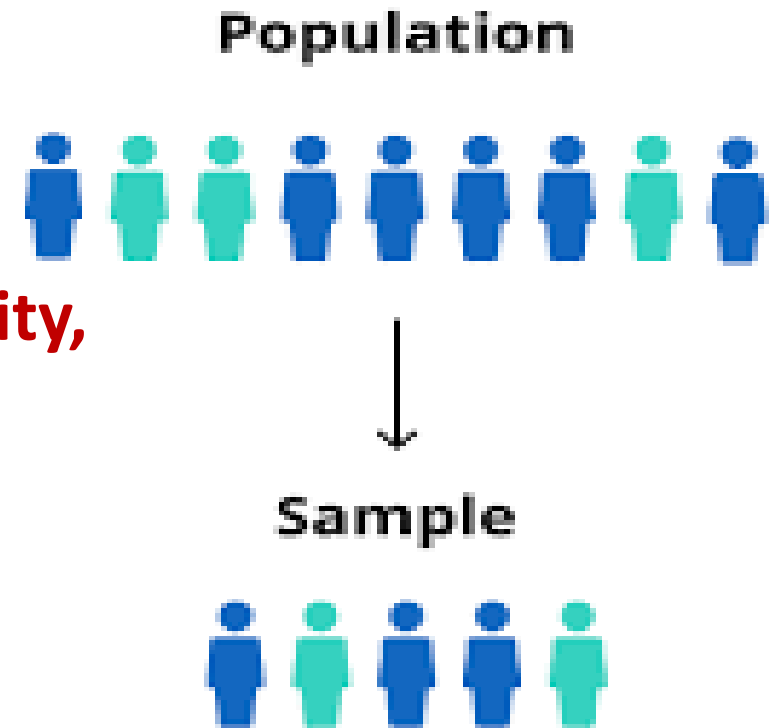


SWRK5001

Unit-III, Research Sampling

Dr. Anupam Kumar Verma,
Assistant Professor,
Department of Social Work,
Mahatma Gandhi Central University,
Motihari, Bihar– 848401.



SWRK5001

Unit-III, Research Design & Sampling

Topic- Census & Sampling

Population/Universe:

- The aggregate of all the units pertaining to a study is called population or universe.
- In a statistical investigation, the set of all the items or observations related with the investigation is called the universe or population.
- The collection of all individuals, families, groups, organizations, communities, or events that we are interested in studying.
- Population is the target group to be studied.
- It is the total collection of element about which we wish to make inferences.

Types Of Universe/Population:

- Finite
- Infinite
- Hypothetical

- *Finite Population/Universe:*
 - the population of a city
 - the no. of workers in a factory
 - the no. of student in the I and II MSW
 - Homogeneous population for e.g. Student, youth, i.e. particular age, particular character
 - Heterogeneous population for e.g. different types of people live together, students, staff

- Infinite Population/Universe:
 - The no. Stars in the sky
 - Listeners of a specific radio programmes
 - Watching of a specific T.V. programme.
- *Hypothetical population:*
 - Throwing of dices

Census

- A complete enumeration of all the items in the population is known as the census method of collecting data.
- A study of all the elements in the population/universe is called census study or census method.
- i.e. Every item is included not even a single unit is left out.

- A **census** is the procedure of systematically acquiring and recording information about the members of a given population.
- Census method is the method of statistical enumeration where **all members of the population** are studied.
- A population refers to the set of all observations under concern.

Sample

- A small part of a population is called a sample.
- A portion of a population selected for study is called sample.
- A part of the population is known as a sample.
- Sampling is quite often used in our day to day life in a shop we assess the quality of rice or quality of wheat or blood test to find the disease.

Sampling

- The method or the process of selection a sample from a population is called 'sampling'.
- Choosing form a large quantity is called sampling .
- Choosing form a population/Universe is called sampling
- The process of drawing a sample form a larger population is called sampling.
- **Sampling** is a statistical procedure that is concerned with the selection of the individual observation; it helps us to make statistical inferences about the population.

Types of sampling:

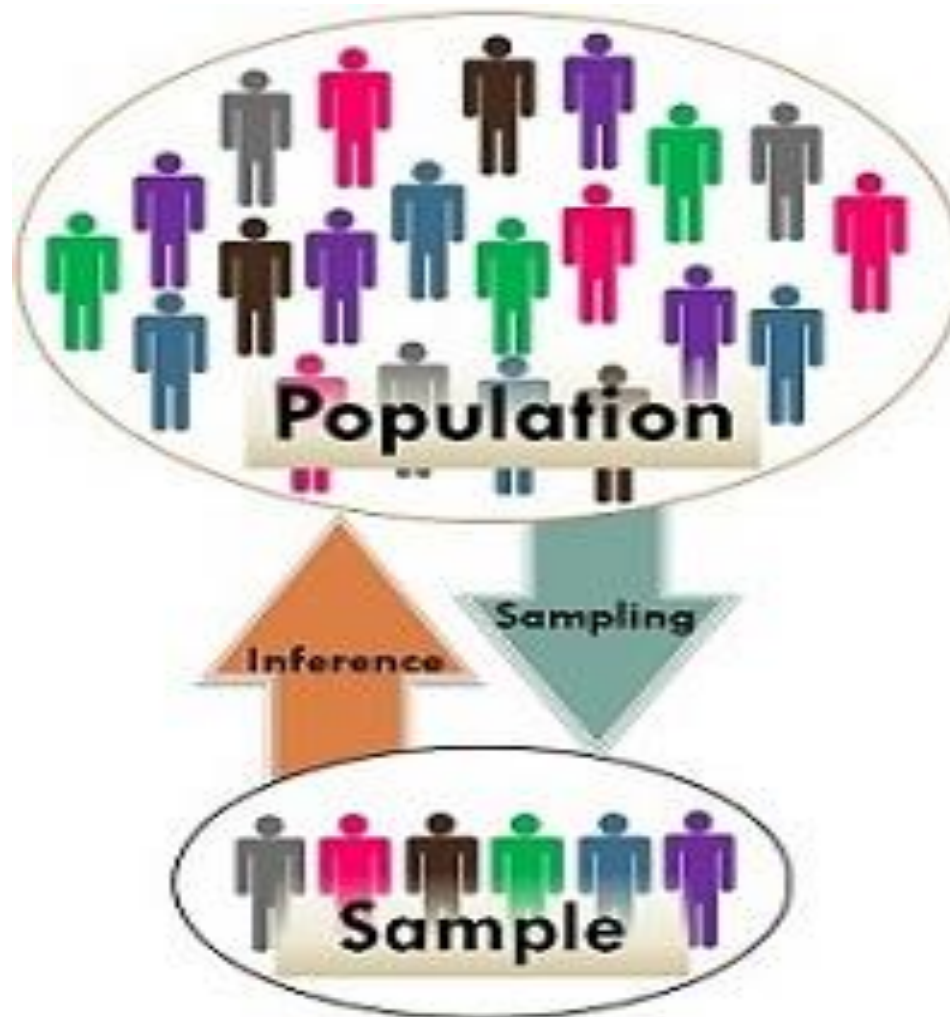
We can divide the sampling into three types.

- Probability Sampling
- Non-Probability sampling
- Mixed Sampling

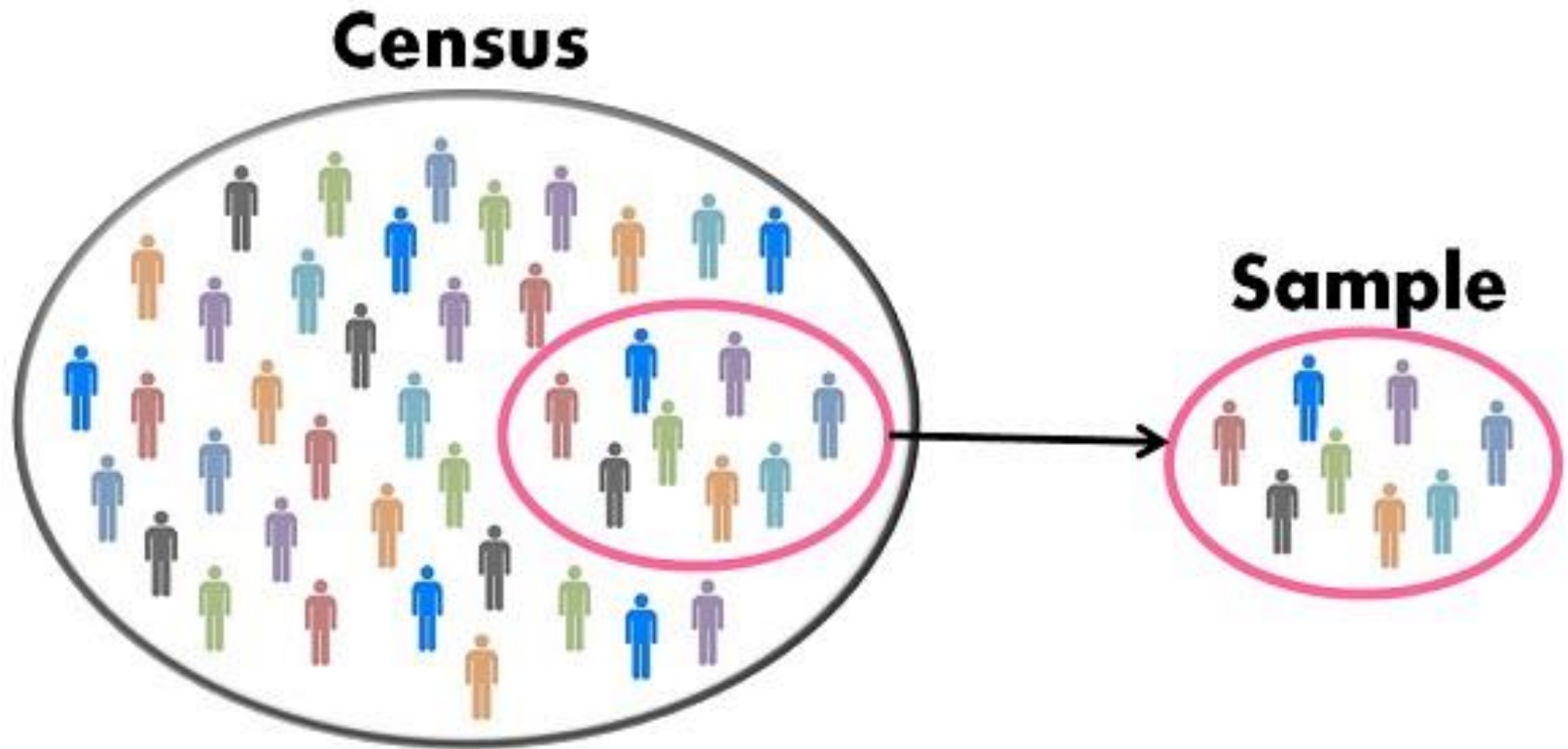
Population vs Sample

- The **population** is the entire group that you want to draw conclusions about.
- The population can be defined in terms of geographical location, age, income, and many other characteristics.
- The **sample** is the specific group of individuals that you will collect data from.

Population vs Sample



Census Vs Sample



Census vs Survey

Census collects information about every member of the population.

Census is more detailed and accurate.

Census takes a long time to complete.

Census is generally conducted by the government.

Census are not conducted frequently.

Survey collects information from a sample of the population.

Survey is not accurate or reliable as a census.

Surveys can be done in a shorter period of time compared to a census.

Surveys can be conducted by anyone.

Surveys can be conducted more frequently.

Sampling Unit

- A decision has to be taken concerning a sampling unit before selecting sample.
- Sampling unit may be geographical one such as state, district, block village etc. Or construction units such as or house flat or social units such as family, club school etc or may be an individual.
- The researcher will have to study such units for his study.

Source List/ Sample Frame:

- The sampling frame is the actual list of individuals that the sample will be drawn from. Ideally, it should include the entire target population .
- The list of sampling units from which a sample is taken is called the sampling frame. For e.g. a map, a telephone directory, a list of car license etc.
- Sample frame consist of base line information with regard the selection of population.

Example

- You are doing research on working conditions at Company X. Your population is all 1000 employees of the company. Your sampling frame is the company's HR database which lists the names and contact details of every employee.

Illustration:

- A researcher desires to study the attitude of students of Master of Social Work of a College towards semester system.
- A student of that course is a **unit of study**. The total of all Master of Social Work students of that particular unit is the **population**. The list of MSW students from which a sample will be drawn is the **sample frame**.

Population

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graph TD; Population[Population] --> SamplingFrame[Sampling Frame]; SamplingFrame --> Sample[Sample]; Sample -- "Use observed sample characteristics to estimate population characteristics" --> Population;
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Sampling Frame

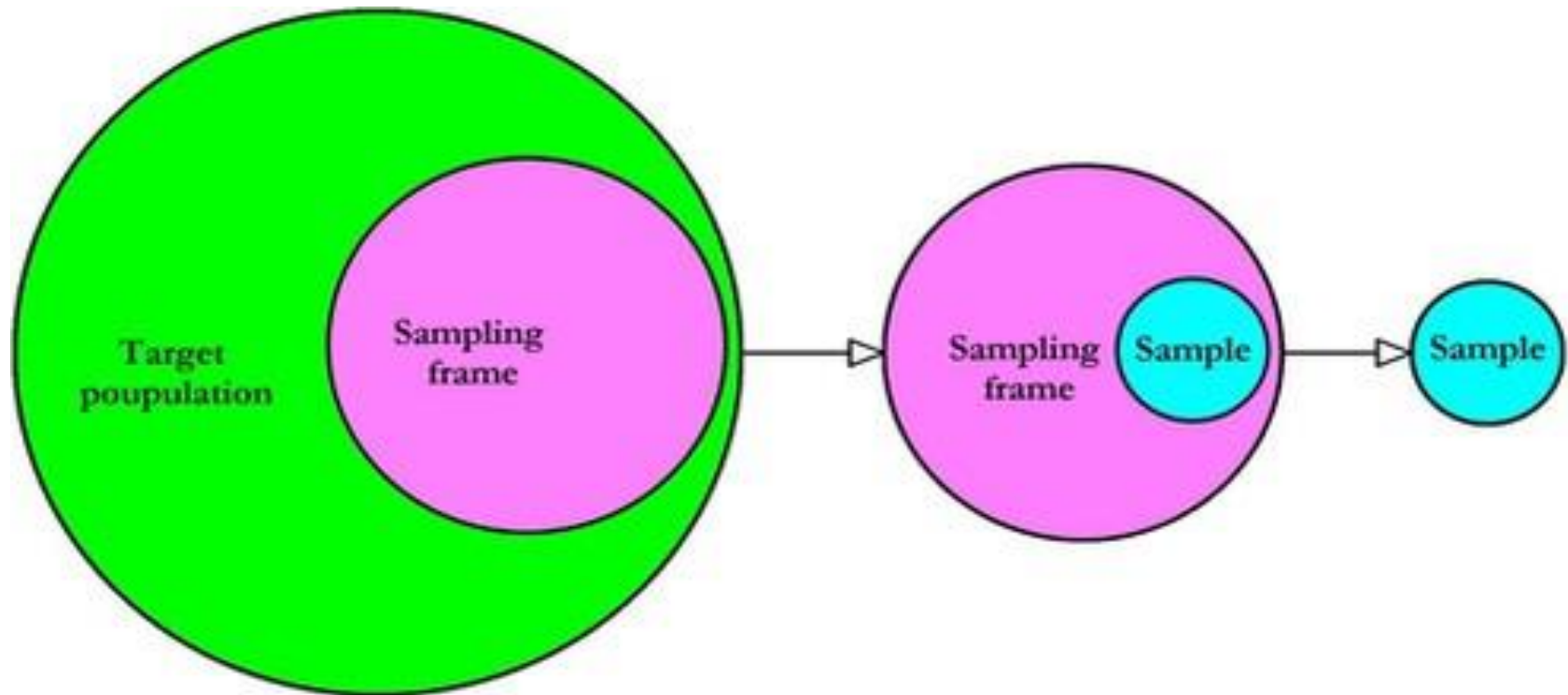
Sample

**Use observed sample
characteristics to
estimate population
characteristics**

Sample size

- The number of individuals in your sample depends on the size of the population, and on how precisely you want the results to represent the population as a whole.
- You can use a [sample size calculator](#) to determine how big your sample should be. In general, the larger the sample size, the more accurately and confidently you can make inferences about the whole population.

Sampling frame vs sample



Target population -
Population of interest in which the researcher wants to generalize the results of study

Sampling frame -
Part of accessible target population for study (the sample can be taken from accessible target population and not from the entire target population unless researcher has access to entire target population)

Sample -
Actual units selected for the study

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Thank You