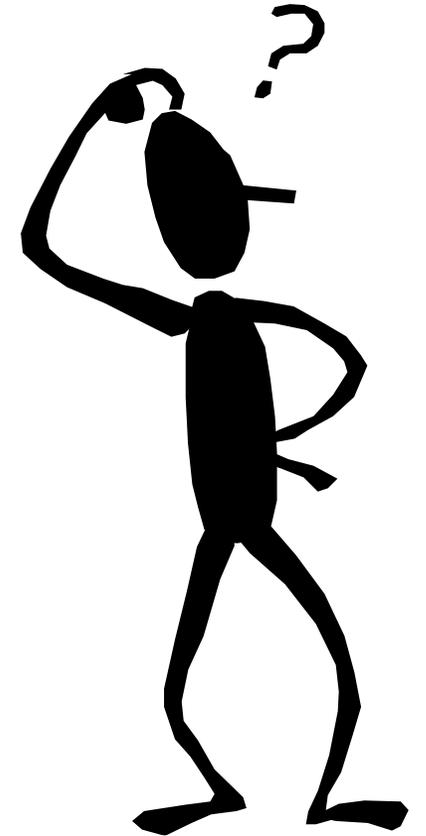


Introduction to Sampling

Snapshot Question

Should we always use sampling methods?



Exhaustive Survey

- Measurements taken from **entire population**.
- Exact picture of nutritional status and/or IYCF practices



Syrian Refugee Camp, Qiam, Iraq - 2012

- ❖ Only in geographically concentrated populations.
- ❖ **Rare.**

True Population Value vs. Estimate

Ex: 5,000 people in your population

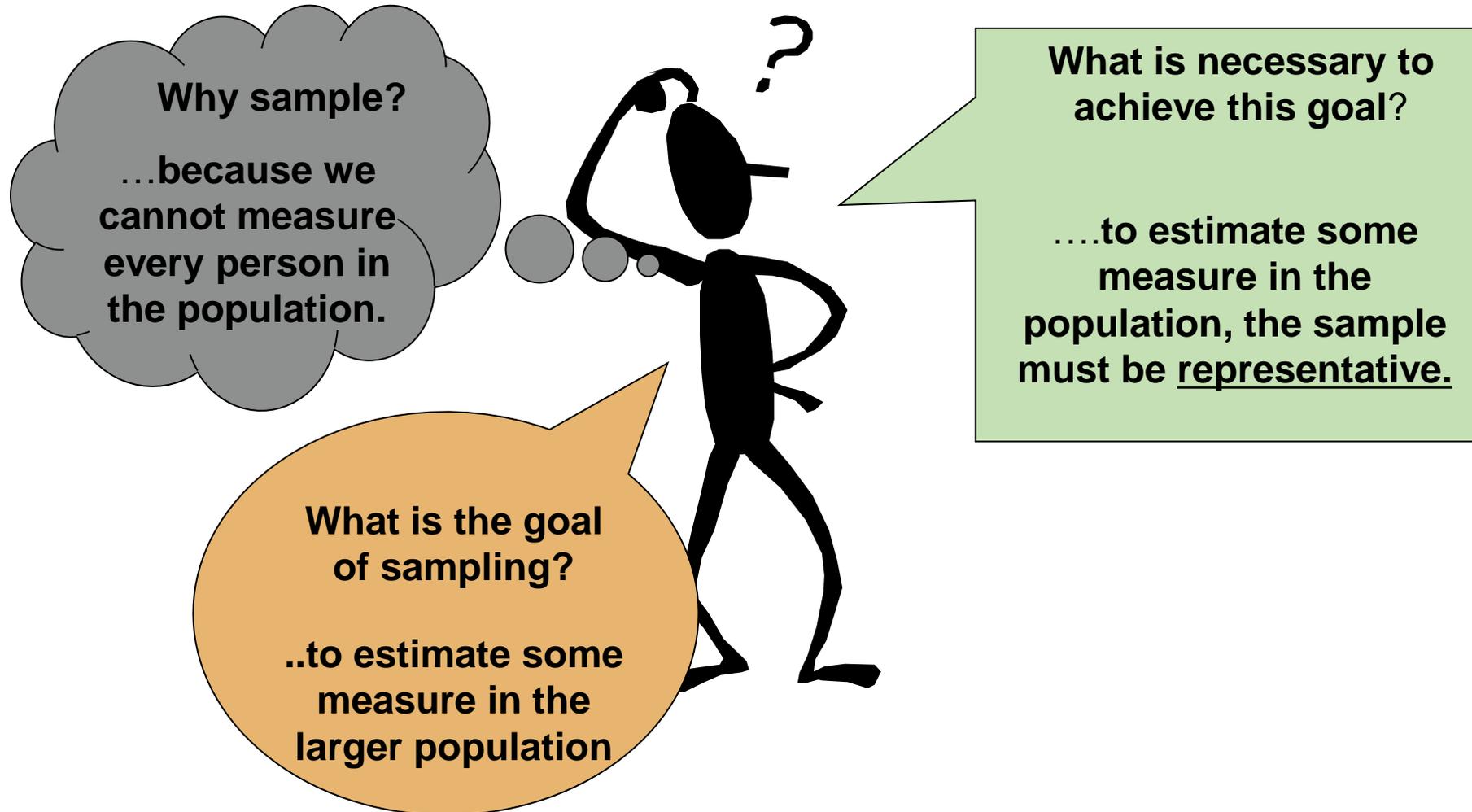
- Exhaustive Survey

You measure *all* 5,000 individuals and you obtain the **true population value**, therefore there is **NO confidence interval**.

- Sample

You measure *only* 500 individuals and you obtain an **estimate**, with an associated confidence interval.

Sampling



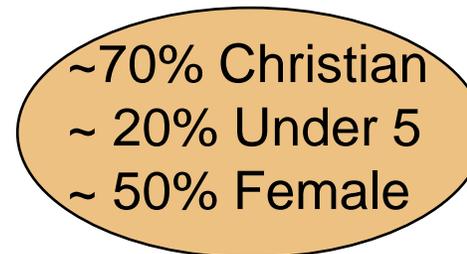
Representative Sample

When your measurements are taken from a population subset with the **same characteristics** as the rest of the target population, you will obtain a **representative sample**.

Example:
Target Population



Without counting, your
representative sample
will also have:



What is a representative sample?

Technically, a representative sample means that:

1. Each individual or sampling unit in the population has a **known non-zero** chance or probability of being selected (*preferably the same chance*).
2. The selection of one individual should be **independent** of the selection of another.

How to achieve representativeness?

Probability Sampling

To be statistically representative, probability sampling requires “randomness”: no one has control over the selection of individuals or households.

Non-Probabilistic Sampling

- Does **not** use random selection to make up a sample and thus cannot be used to obtain a representative sample.
 - E.g., Purposive or convenience sampling.
- Very useful to gather **qualitative** data.
 - E.g., Focus group discussions, for example.

Remember this point!

Regardless of the sampling method, if the sample is not representative, it will not provide a valid estimate of the prevalence in the population.

Exercise- Definitions

Objective of your survey: To assess nutritional status of children 6-59 months and household access to safe water and latrines in typhoon-affected villages of the Maungdaw Township

1. What is your sampling universe?
2. What is your sampling frame?
3. What is your sampling unit?
4. Who is/are your respondent(s)?
5. Who is/are your survey subject(s)?

Sampling Universe

- **General**

- Population from which a sample is selected.

- **Maungdaw Township**

- Population present in the typhoon-affected villages of the Maungdaw Township.

Sampling Frame

- **General**

- The description of the sampling universe that is, the **list** of the elements to be selected for your sample (e.g.: households or individuals.)

- **Maungdaw Township**

- List of typhoon-affected villages in the Maungdaw.

Sampling frame considerations

If the survey excludes areas because of a lack of access:

- The results are **not representative** of the entire Township.
- State clearly in the report which areas were excluded from the survey. Attach to the final report a **map** indicating the excluded areas, and those included in the survey.
- Discuss in the report the most probable **status** of the populations in these villages.

➤ **Maungdaw Township**

- All typhoon-affected villages that cannot be accessed are removed from the sampling frame.

Example of
a sampling
frame

| SL | Ward/Village Tract | Total Population | Male | Female | # of HH |
|----|-----------------------------|------------------|-------------|-------------|-------------|
| 1 | Sha Ra (W) | 1055 | 640 | 415 | 147 |
| 2 | Myo Ma (W) | 1118 | 611 | 507 | 176 |
| 3 | Raw Kaw (W) | 271 | 145 | 126 | 52 |
| 4 | Pi Naung Sut (VT) | 1000 | 501 | 499 | 163 |
| 5 | Kye Tha Yauk (Sun Par) (VT) | 507 | 271 | 236 | 70 |
| 6 | Tha Man Chaung Son (VT) | 283 | 147 | 136 | 45 |
| 7 | Kyaing Raing (VT) | 269 | 146 | 123 | 40 |
| 8 | Yaung Ngway (VT) | 152 | 69 | 83 | 30 |
| 9 | Har War (VT) | 461 | 231 | 230 | 81 |
| 10 | Lar Khu (1) (VT) | 70 | 34 | 36 | 10 |
| 11 | Ga Gaw Ka Bar (VT) | 3201 | 1893 | 1308 | 392 |
| 12 | Thar Man (VT) | 150 | 86 | 64 | 30 |
| 13 | Lein Hnoke (1) (VT) | 151 | 81 | 70 | 33 |
| 14 | Ah Htet Lu Lun (VT) | 344 | 187 | 157 | 60 |
| 15 | Hpar Kyet (VT) | 463 | 244 | 219 | 74 |
| 16 | Ngaing Maung (VT) | 245 | 114 | 131 | 50 |
| 17 | Lar Haung (VT) | 107 | 59 | 48 | 18 |
| 18 | Ha San Kaing (VT) | 222 | 116 | 106 | 30 |
| 19 | Chammakauntlonekaung (VT) | 445 | 219 | 226 | 67 |
| | Nanyun Tsp Total | 10514 | 5794 | 4720 | 1568 |

Sampling Unit

- **General**

- The element or entity selected during a sampling process.
 - Villages, districts, households.

- **Maungdaw Township**

- The typhoon-affected villages in Maungdaw

Respondent

- **General**

- The person who answers your questions in the field.

- **Maungdaw Township**

- WASH: the head of household living in the typhoon-affected villages of Maungdaw
- ANTHROPOMETRY: the caretakers of children aged 6-59 months.

Survey Subject

- **General**

- The person about whom questions are being asked.

- **Maungdaw Township**

- WASH: the head of household living in the typhoon-affected villages in Maungdaw
- ANTHROPOMETRY: the children aged 6-59 months.

Any Question?