



มหาวิทยาลัยราชภัฏนครปฐม
Nakhon Pathom Rajabhat University

CHAPTER 4

+ RESEARCH METHODOLOGY

ระเบียบวิธีวิจัย

Episode 4.2

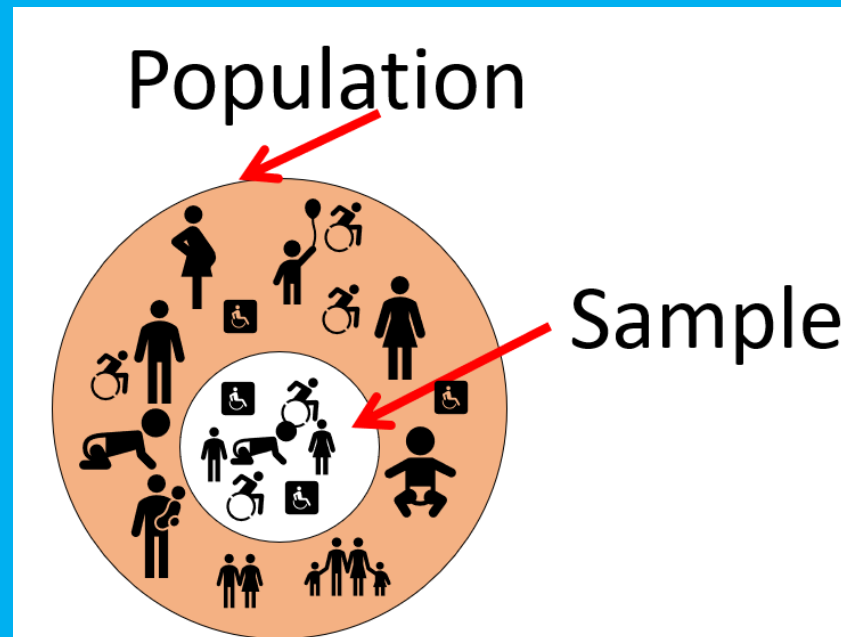
WANPEN WAELVEERAKUP, Asst. Prof. Dr.
Email : wanpenw@webmail.npru.ac.th





Population (ประชากร) & Sample (กลุ่มตัวอย่าง)

- The **study population** is the subset of the target population available for study (e.g. people with hypertension in the researcher's province).
- The **study sample** is the sample chosen from the study population.



(Hodge, 2016)



Sampling: การสุ่ม

Sampling is the process of selecting a small number of elements from a larger defined target group of elements such that the information gathered from small group will allow judgments to be made about the larger groups.

(Hodge, 2016)



Method of Sampling

- **Simple Random Sampling** (การสุ่มตัวอย่างอย่างง่าย)
- **Stratified Random Sampling** (การสุ่มตัวอย่างแบบแบ่งชั้น)
- **Cluster Sampling** (การสุ่มตัวอย่างคลัสเตอร์)
- **Systematic Random Sampling** (การสุ่มตัวอย่างอย่างเป็นระบบ)
- **Multi-stage Sampling** (การสุ่มตัวอย่างแบบหลายขั้นตอน)

Method of **Sampling**: Simple Random Sampling



Simple Random Sampling

- drawing (lottery)
- random number table (random table)
- spinning wheel
- artificial intelligence



(Thomas, 2023)

Method of **Sampling**: Stratified Random Sampling



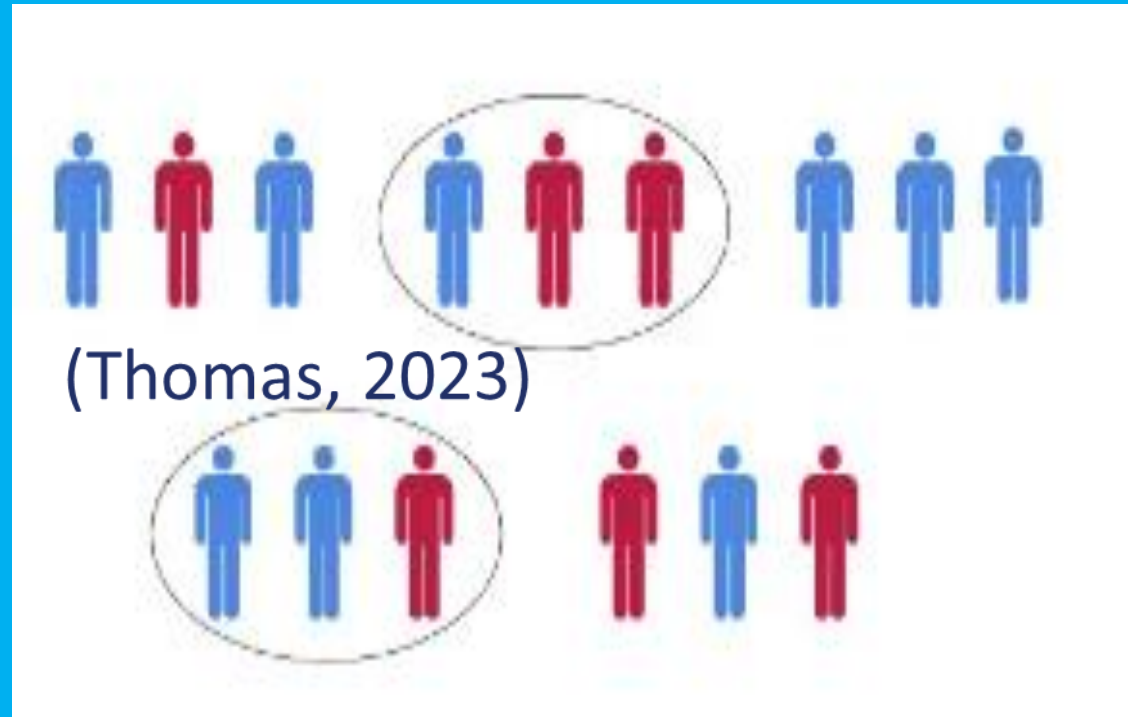
Stratified Random Sampling



(Thomas, 2023) Picture from: <https://www.scribbr.com/methodology/stratified-sampling/>



Method of **Sampling**: Cluster Sampling



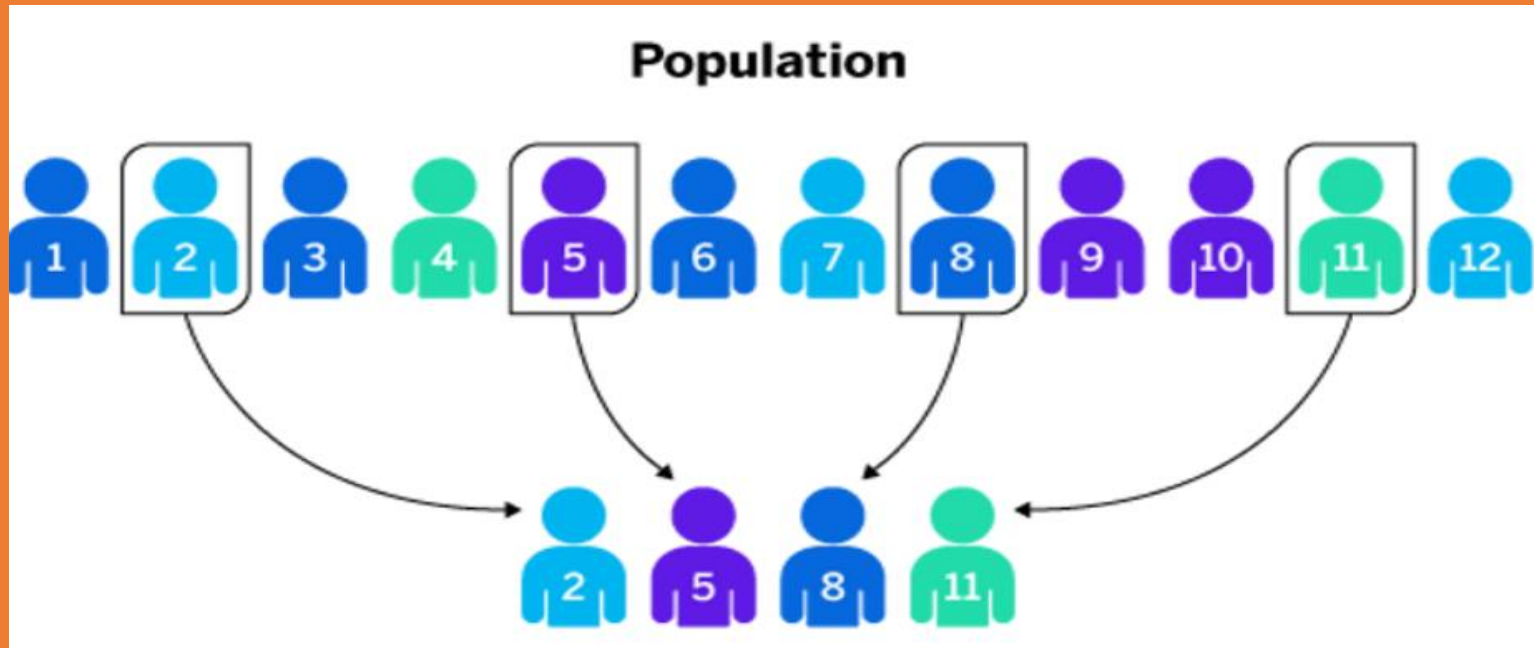
Source: <https://www.voxco.com/blog/stratified-sampling-vs-cluster-sampling/>

(Thomas, 2023)

Method of **Sampling**: Systematic Random Sampling



Systematic Random Sampling



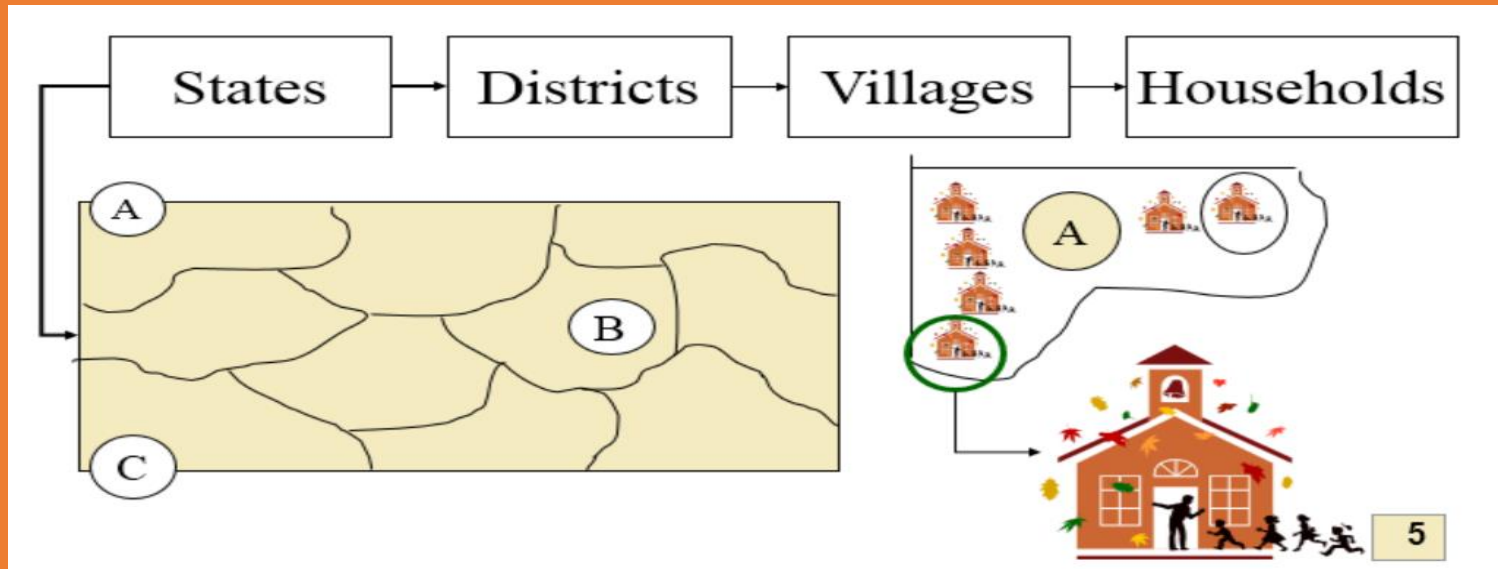
Source: <https://www.qualtrics.com/experiencemanagement/research/systematic-random-sampling/>

(Thomas, 2023)

Method of **Sampling**: Multi-stage Sampling



Multi-stage Sampling



Source: <https://research-methodology.net/sampling-in-primary-data-collection/multi-stage-sampling/>

(Thomas, 2023)



Research Setting / Study Area

- Location detail
- Google Earth/Map
- GPS Coordinates





Research Materials / Tools



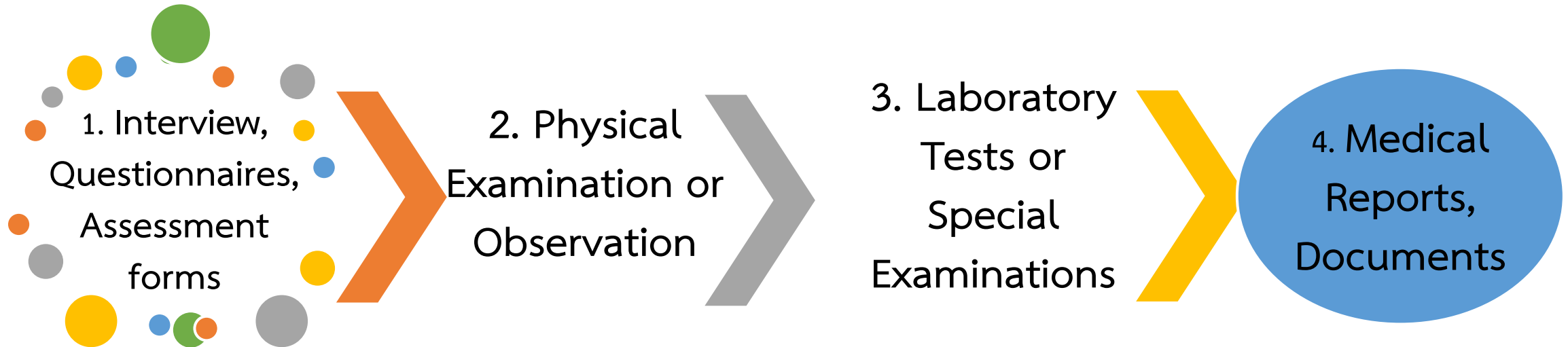
- All materials utilized for the study
 - Testing instruments or other materials used in the course of research
- Measures (Surveys/Interviews/observations) used for the study
 - must provide details about the measures, scale, interpretation of scores
 - When using a pre-existing published measure: Include the full name of the measure followed by abbreviation and citation of the original author.

(Haradhan, 2017)



Example: **The World Health Organization Quality of Life** (WHOQOL, WHO, 2012) After that, you can call it the WHOQOL.

Data Collection



(Waelveerakup, 2022)



Data Analysis

- **Descriptive statistics** / Simple test - Mean, standard deviation (SD), standard error of the mean (SEM)
- **Statistical tests** - Compare mean: ANOVA, t-tests, etc.
 - Compare observed results: Chi-square
- **Statistical tests**— Predicting: regression

(Pandey & Pandey, 2015)



Thank you

