

Research Methods for Public Health

Lecture 4

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Sampling Methods in Research

What are the types of sampling methods ?

- 1-) Non-random sample methods
(Non-Probability sampling method)
- 2-) Random sample methods
(Probability sampling method)

Sampling Methods in Research

2-) Random sample methods (Probability sampling method)

When some subjects or members of study have some chance to be selected in the sample of study.

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What are the types of random sample methods ?

1-) Simple random sample :

Every subject in the population has the same chance to be selected in the sample.

Sampling Methods in Research

What are the types of non-random sample methods ?

2-) Systematic random sample:

It can be used when the sample size is very large and can not use simple random sample, the first subject is selected randomly. Then every K th member from the first one is included

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What are the types of non-random sample methods ?

3-) Stratified random sample :

The population is divided into subgroups that called strata and simple random sample can be used to select the a sample from each strata

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What are the types of non-random sample methods ?

4-) Cluster random Sample:

The population is divided into geographical subgroups that called cluster and random sample can be used to select a sample of clusters, then the subject is selected randomly from each cluster.

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What is meant by sampling error or chance error ?

It is the difference between the result of one sample and another that obtained from the same population. This can be done because the same population has different subjects. Also, sampling error can be defined as the difference between the results of sample survey and census.

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Can we avoid sampling error ?

We can not avoid it because of chance, it can be occurred in sampling survey but not in census.

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What is meant by non-sampling error ?

It can be occurred in the collection, recording and tabulation of data because of human mistakes and not chance. We can minimize it if there is good preparation in the study.

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- **What are the types of non-sampling errors ?**

1-) Selection error

When the sampling frame is not representative of the population.

2-) Non-response error

This type of error can be occurred when the members in the study do not respond to a survey such as e-mail survey.

Sampling Methods in Research

What are the types of non-sampling errors ?

3-) Response error

This type of error can be occurred when the member in the study gives incorrect answer to a question in a survey such as the questions about yearly or monthly income.

4-) Information error and recall error

This type of error can be occurred when the member in the study gives incorrect answer to a question or forget some information in the past.

Reference

- Prem S. Mann 1998, Introductory Statistics, 7th edn, New York, USA.

Good Luck for All Students

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أستغفر الله