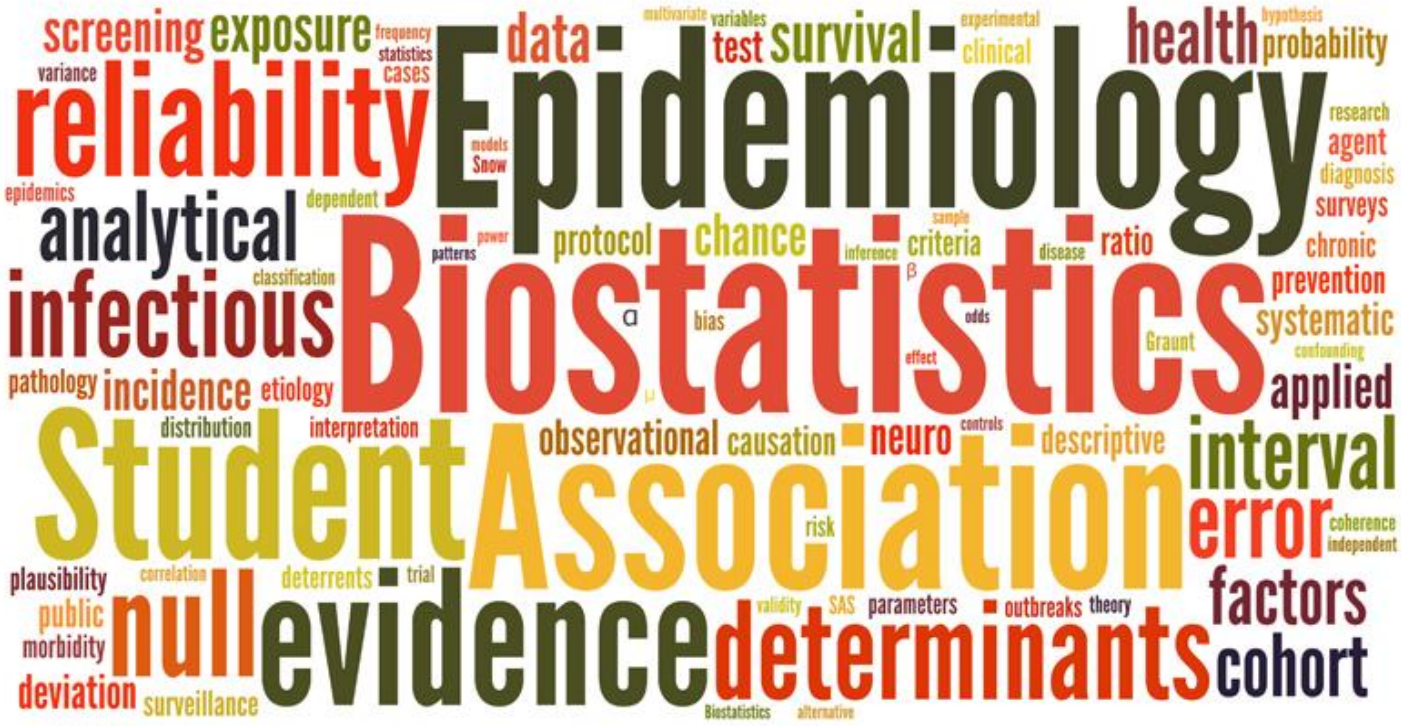
University of Jordan
Faculty of Medicine



☑ Sheet (Notes) ☐ Slide ☐ Handout

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Organizing and Displaying Data

Lec 1

Just a simple intro most of these we will take them in details later on or we took them last semester.

The statistics of biostatistics adherent to types of researches : 1- quantitative , related to numbers, statistics and relationships. 2- qualitative, thoughts and written things , like if I got 10 patients and asked them to give me their medical history for a certain disease.

Reflecting a qualitative type to a quantitative we need to utilize a questioner(yes/no , or use measurements like blood pressure)

Quantitative has 2 types: 1-experimental (randomized control trial)results in the highest evidence , for a design to be called experimental there must be an intervention to utilize e.g new drug, and choosing the experimental group and the control group in a randomized way (randomization) (same age, gender, edu level, health) because I want my intervention the only variable. 2- non-experimental , evidence is weaker and lies under this title , surveys and correlational studies, the studies look for association between variables (smoking and cancer) we end up with a correlation study , also meta-analysis is the conclusion we get in many studies (like 100 study in the world about cholera we collect these studies and analyze their results) meta-analysis gives us the highest level. Psychometric properties we use statistics , mainly 2 characteristics of any tool we utilize validity and reliability (a tool gives right measurements like temperature and between different patient still give temperature)

When we do a research we work on a sample not the whole population, but when we get the results we generalize them to the whole population.

We have 2 types of samples : 1- probability sampling, not easy for use, it has strict conditions, uses simple random sampling (e.g any one with odd seat number is on the experimental group and the even number on the control group) another example like the lottery, 2- non probability sampling (do an interview with any person in the street not depending on any condition (convenience sample) or like TV interviews, the researcher didn't chose specific properties to choose the subjects)

The results in probability sampling is more valid.

Population : divides to aggregate and accessible population, in statistics we are not concerned about parameters but more with characteristics of the sample like certain indicators about this sample.

Descriptive statistics can't take a decision from it alone .

Inferential statistics we depend on it to build predictions and decisions ..etc

Variables : e.g gender, edu level, temperature, heart rate.. etc anything that varies between subjects is a variable

Not mentioned in the book but important** Types of variables : dependent and independent e,g the relationship between smoking (other carcinogens) and lung cancer, the independent variable is smoking while the dependent is lung cancer. Another example , the relationship between anti-coagulant (heparin intake) and hematoma formation post-surgery, the heparin is the independent, the dependent is hematoma. Mostly the independent is the cause and the dependent is the effect.