



محاضرة رقم ١

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Lecture No.
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الجانب
النظري
Theoreti
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الاحصاء - SPSS

المحاضرة الاولى

جامعة ساوا
الاهلية
كلية التقنيات الصحية
والطبية
قسم تقنيات المختبرات
الطبية
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Definition of statistics

The term **statistics** is used to mean either **statistical data** or **statistical methods**.



Statistical data: it refers to **numerical descriptions** of things. These descriptions may take the form of **counts or measurements**.

Thus statistics of malaria cases in Ethiopia include fever cases, number of positives obtained, sex and age distribution of positive cases, etc.

Characteristics of statistical data

In order that numerical descriptions may be called statistics they must possess the following characteristics



1. They must be in aggregates. This means that statistics are 'number of facts.' A single fact, even though numerically stated, cannot be called statistics.

Characteristics of statistical data

They must be affected to a marked extent by a multiplicity of causes – This means that statistics are aggregates of such facts only as grow out of a 'variety of circumstances'. Thus the explosion of malaria is attributable to a number of factors, Viz., Human factors, parasite factors, mosquito and environmental factors. All these factors acting jointly determine the severity of the outbreak and it is very difficult for any one to assess the individual contribution of any one of these factors

Characteristics of statistical data

They must be enumerated or estimated according to reasonable standard of accuracy. This means that if aggregates of numerical facts are to be called 'statistics' they must be reasonably accurate. This is necessary because statistical data are to serve as a basis for statistical investigations. If the basis happens to be incorrect the results are bound to be misleading.

Characteristics of statistical data

They must have been collected in a systematic manner for a predetermined purpose. Numerical data can be called statistics only if they have been compiled in a properly.

Characteristics of statistical data

They must be placed in relation to each other. That is, they must be comparable. Numerical facts may be placed in relation to each other either in point of time, space or condition. The phrase, 'placed in relation to each other' suggests that the facts should be comparable.

Statistical methods:

statistical methods refers to a body of methods that are used for **collecting, organising, analyzing and interpreting numerical data** for understanding a phenomenon or making wise decisions.

Health Service Statistics:

Health statistics are very useful **to improve the health situation of the population of a given country**. For example, the following **questions** could not be answered correctly unless the health statistics of a given area is performed

- a) What is the leading cause of death in the area? Is it malaria, tuberculosis, etc.?
- b) At what age is the mortality highest, and from what disease?
- c) Are certain diseases affecting specified groups of the population more than others? (This might apply, for example, to women or children, or to individuals following a particular occupation.)

Health service statistics are used to:

1. describe the level of community health
2. diagnose community ills
3. discover solutions to health problems
4. determine priorities for health programmes
5. promote health legislation
6. determine the met and unmet health needs
7. determine success or failure of specific health programmes.

.....etc.



THANK YOU