☑ Sheet (Notes)   ☐ Slide   ☐ Handout

Number: 2

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Subject: Association and causation

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Price:

Date:

Association and causation in epidemiological studies

It is a question in a research to find the relation between one variable and another

In a research it is important to know the patient's lifestyle, diet. Etc. and its relation with the disease

Slide 5, an example on it (it will help you out with what we will do in the research)

The beginning we start with a descriptive study which is cross sectional, so we begin with doing a survey and collecting data ,then we take a look at the data for example if I wanted to see if there was a relation between socio-economic level and a healthy diet, after gathering the data I start calculating the P-value to see if there is a relation or not, afterwards I link it to environmental factors like life style, education. Etc , I develop a hypothesis as here in my example it should be that there is a relation between socio economic level and a healthy diet, if I want to do further researches on this , I go and try to find the causality by analytical studies (cohort, case-control, experimental studies)

Slide 6

Spurious association: looks like there is an association but in reality when you remove other factors it turns out wrong

Indirect association: other factors that modify the relationship between the factor and the effect

One to one casual association is the strongest

Multi-factorial causation is usually used in chronic diseases

Slide 7

The example here is a cross sectional study, you should be able to differentiate between studies for those who don't, go back to doctor ahmad slides from past semester we will mostly need them in our research

Slide 17

The doctor said to read it, and it is very important to see if you understood the necessary and sufficient

In this example I want to discuss factor A and factor B

As you can see factor A was in the 3 samples, and especially in the 2 who had the disease so it is necessary

But although it was present in sample 1 but it didn't cause him the disease so that means it is not sufficient

As for factor B, it is present in sample 1 and didn't cause him the disease so it is not sufficient, and it wasn't in sample 3 which he had the disease although factor B is absent so it is not necessary

It is impossible to prove causality 100%

Slide 26

Experimental evidence in the strongest in causality

From slide 27 to the end of the slides; deleted they won't be in the exam

Again these are just notes to clarify some hard things in the slides, and for better understanding, so study the slides

Sorry for any mistake

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