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Effect Modification Lab Warm-up 🖉

Align Quiz to Standard

1. Which of the following is NOT a synonym for effect modification?

A Effect measure modification

B Heterogeneity of effects

C Confounding

D Subgroup effects

ⓘ Confounding is conceptually distinct from effect modification. Heterogeneity of effects and subgroup effects generally mean the same thing. Although some authors make distinctions between effect modification and effect measure modification, most currently do not.

2. Subgroup analysis is a commonly used method of investigating effect modification?

True

ⓘ We do this all the time in epidemiology. Does diet affect disease differently in men and women? Does occupation affect disease differently by race? Does physical activity affect disease differently by age? All of these questions are questions about effect modification. We could also refer to this kind of subgroup

analysis as stratification or stratified analysis.

3. Researchers at the Copenhagen University Hospital are interested in whether or not gender modifies the effect of dietary fat intake on coronary heart disease (CHD) in a cohort study with a 16-year follow-up time.

Which of the following is the most appropriate research study aim in this scenario?

A We aim to investigate the association between dietary fat intake and coronary heart disease, and the association between gender and coronary heart disease.

B We aim to investigate the difference in the association between dietary fat intake and risk of coronary heart disease between men and women.

C We aim to investigate the effect of dietary fat intake on the gender of those with coronary heart disease.

D We aim to investigate if the association between dietary fat intake and and coronary heart disease is due to gender.

i B is correct. The definition of effect modification is a third variable that modifies, or change, the strength of effect that the exposure has on the disease. In this case, we want to know the association difference, if there is one and what is it, between dietary fat (exposure) and risk of CHD (disease) between males and females. A does not explore the interaction between the terms. C examines the association between dietary fat intake and gender. D describes a confounding study.

4. In the graph, A is the exposure, Y is the outcome, and Z is the potential effect modifier. What kind of interaction is illustrated on the graph below?
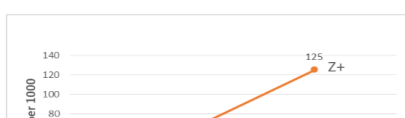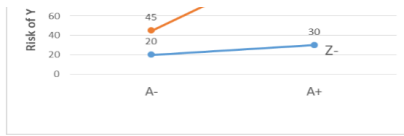
A   Additive, quantitative interaction

B   Additive, qualitative interaction

C   Multiplicative, quantitative Interaction

D   Multiplicative, qualitative interaction

E   There is no evidence of effect modification in this graph

ⓘ   The correct answer choice is A. The graph is only a linear scale and we see the lines headed in the same direction. In addition, with the addition of the potential effect modifier (Z), we see a more steep slope. So, the observed joint effect is higher than the expected joint effect (i.e expected = 25 + 10 = 35. Observed = 105)

Add a Question

Multiple Choice   **True / False**   **Short Answer**

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