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Neyman and the Average Treatment Effect - Quiz

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Question 1

1/1 point (graded)

What is meant by “homogeneity of treatment effects”?


- ☐ a. Treatment effects that are different across individuals
- ☒ b. Treatment effects that are the same across individuals ✓
- ☐ c. Treatment effects that are the same over time
- ☐ d. Treatment effects that do not vary across conditions and circumstances

Explanation


“Homogeneity of treatment effects” refers to treatment effects that are the same across individuals. “Heterogeneous treatment effects” refer to the case where the treatment has different impacts on different individuals, for example, based on age, gender, etc.

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Causality

[Finger Exercises due Nov 21, 2016 at 05:00 IST](#) 

Analyzing Randomized Experiments

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Question 2

1/1 point (graded)

True or false: Neyman's approach does not impose homogeneity of treatment effects.

☒ a. True ✓

☐ b. False


Explanation

This is true. Neyman's approach does not impose that the treatment effects are homogeneous. The treatment effects for different individuals can vary across individuals; what is tested in Neyman's approach is whether average treatment effects are different from zero or not (this is different from the Fisher exact test, which tests the hypothesis that the effect is zero for every unit).


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**Use of Randomization and
Nonparametric Regression**

Finger Exercises due Nov 21, 2016
at 05:00 IST 

Module 8: Homework

Homework due Nov 14, 2016 at
05:00 IST 

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Question 3

1/1 point (graded)

In the formula for the average treatment effect, what do each of the terms labeled A and B below represent?

$$\hat{\tau} = \overset{\text{A}}{\frac{1}{N_t} \sum_{i: W_i=1} Y_i^{obs}} - \overset{\text{B}}{\frac{1}{N_c} \sum_{i: W_i=0} Y_i^{obs}}$$

- ☐ a. A: The sample mean for treatment group ; B: The sample mean for entire group
- ☐ b. A: A vector of outcomes for treatment group ; B: A vector of outcomes for control group
- ☐ c. A: The outcome for the average individual in the treatment group; B The outcome for the average individual in the control group
- ☒ d. A: The sample mean for treatment group ; B: The sample mean for control group ✓

Explanation

In the equation above, the term labeled A represents the sample mean for a specific outcome for the individuals assigned to the treatment group, and the term labeled B represents the sample mean for the individuals assigned to the control group.

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