

In-Video Quiz Questions for

Unit 5: Part 2 – (2) Hypothesis tests for comparing two proportions

At 1:41:

1. Which of the following are the correct hypotheses for evaluating whether males and females are equally likely to answer “Yes” to the question about whether any of their children have ever been the victim of bullying. Select **all** that apply.

- (a) $H_0: p_{male} = p_{female}; H_A: p_{male} \neq p_{female}$
- (b) $H_0: \hat{p}_{male} = \hat{p}_{female}; H_A: \hat{p}_{male} \neq \hat{p}_{female}$
- (c) $H_0: p_{male} - p_{female} = 0; H_A: p_{male} - p_{female} \neq 0$
- (d) $H_0: p_{male} = p_{female}; H_A: p_{male} < p_{female}$
- (e) $H_0: \hat{p}_{male} - \hat{p}_{female} = 0; H_A: \hat{p}_{male} - \hat{p}_{female} \neq 0$

At 7:21:

2. Which sample proportion (male or female) the pooled estimate is closer to?

- (a) Male
- (b) Female

(TIME) – at the end

3. Which of the following is supported by the results of this hypothesis test?

- (a) Males are more likely to report bullying of their kids than females.
- (b) Females are more likely to report bullying of their kids than males.

- (c) There is a difference in males and females with respect to likelihood of reporting their kids being bullied.
- (d) There is no difference in males and females with respect to likelihood of reporting their kids being bullied.

Answers:

1. a, c

Explanation: We always want population parameters (not sample statistics) in the hypotheses, and these two hypotheses say the same thing (either the difference is 0 or that the two parameters are equal to each other).

2. b

3. d

Explanation: High p-value, so fail to reject the null hypothesis.