Data Analysis and Statistical Inference
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In-Video Quiz Questions for Unit 4: Part 1 – (3) Comparing Independent Means

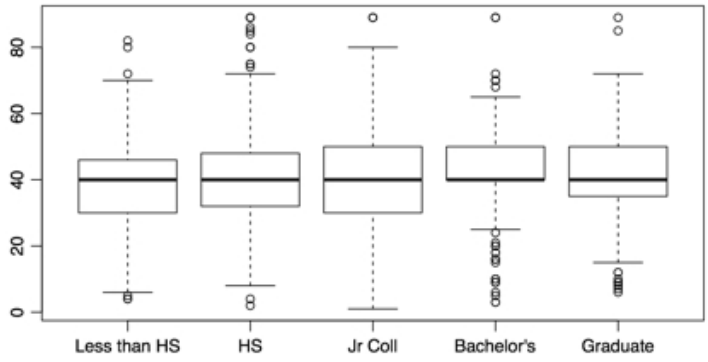
(01:25) – slide 2, after "We can see a prominent peak at 40 hours, which is considered full time working in the U.S., so that's really not surprising."

1. Which of the following is an appropriate visualization for evaluating the relationship between number of hours worked and educational attainment?

(a) mosaicplot
(b) bar plot
(c) scatterplot
(d) side-by-side box plots
(e) segmented bar plot

(01:43) – slide 3, after "but they also can be used to compare shapes and variabilities across the groups."

2. Which of the following is **true** based on the side-by-side box plots below that display the relationship between number of hours worked and educational attainment?



(a) Median number of hours worked is consistent across various educational attainment levels.
(b) Bachelor's degree holders have the most variable number of hours worked.
(c) Those with higher educational attainment work longer hours, on average.

(d) There are more junior college degree holders who work 40 hours per week than other degree holders.

(08:21) – slide 5, after "so the confidence interval comes out to approximately 0.66 to 4.14."

3. Which of the following is the best interpretation of the confidence interval we just calculated?

(a) The difference between the average number of hours worked per week by college and non-college grads is between 0.66 and 4.14 hours.
(b) College grads work on average 0.66 to 4.14 hours more per week than those without a college degree.
(c) College grads work on average 0.66 hours less to 4.14 hours more per week than those without a college degree.
(d) College grads work on average 0.66 to 4.14 hours less per week than those without a college degree.

(13:14) – slide 10, after "the null hypothesis and conclude that there is, that these data indeed provide convincing evidence that the average number of hours worked by college graduates is different than those without a college degree in the US."

4. There is a 0.7% chance that there is no difference between the average number of hours worked per week by college graduates and those with a HS degree or lower.

(a) True
(b) False

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Answers:

1. d
2. a
3. b
4. b