Charles Hwang – CJC 206

1.

a. H_0: There is no association between job type and minority status.

b. H_A: There is an association between job type and minority status.

c. I would use a chi-squared test. There are four subsets created by two factors each of two variables to compare with each other. The chi-squared test also tests for association.

2.

a. H_0: $\mu_{SO} = \mu_{OP}$

b. H_A: $\mu_{SO} \neq \mu_{OP}$

c. I would use an independent t-test. There are two groups measuring the same variable to be compared to each other.

3.

a. H_0: There is no relationship between crime rates in Chicago neighborhoods and the number of guns confiscated by police.

b. H_A: There is a relationship between crime rates in Chicago neighborhoods and the number of guns confiscated by police.

c. I would use a chi-squared test. There are 2*n* groups created by a list of *n* neighborhoods and two variables to compare (where *n* is the number of Chicago neighborhoods) with each other. The chi-squared test also tests for association.

4.

a. Inferential statistics would be used in this situation. The pollster is trying to analyze how the candidate will perform.

5.

a. H_0: $\mu_E = \mu_{UE}$

b. H_A: $\mu_E \neq \mu_{UE}$

c. I would use an independent t-test. There are two groups measuring the same variable to be compared to each other.

6.

a. H_0: $\mu_{Min.} = \mu_{Med.} = \mu_{Max.} = \mu_C$

b. H_A: At least one of the means is different

c. I would use a one-way analysis of variance (ANOVA). There are more than two groups measuring the same single variable to be compared to each other.

7.

a. H_0: $\mu_{Before} = \mu_{After}$

b. H_A: $\mu_{Before} \neq \mu_{After}$

c. I would use a paired t-test. The same students are being sampled before and after the presentation, creating equal sample sizes and dependent samples.