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Exam 1

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Code part is fine. Needs work on other section.

> data <- read.csv("C:/users/home/documents/NCHS\_birthweight2000\_sample.csv")

datainc <- read.csv("C:/users/home/documents/NCHS\_income.csv")

hist(data$annualincome)

head(data)

head(datainc)

datanew <- merge(data, datainc, by = "person\_id", all.x= T)

head(datanew)

datanew <- subset(datanew, dmeduc < 99)

datanew$prop\_low\_bwgt[datanew$dmeduc == 0] <- 0

datanew$low\_bwgt <- 0

datanew$low\_bwgt[datanew$dbirwt < 2500] = 1

mean(datanew$low\_bwgt[datanew$dmeduc == 0])

mean(datanew$low\_bwgt[datanew$dmeduc == 1])

mean(datanew$low\_bwgt[datanew$dmeduc == 2])

mean(datanew$low\_bwgt[datanew$dmeduc == 3])

mean(datanew$low\_bwgt[datanew$dmeduc == 4])

mean(datanew$low\_bwgt[datanew$dmeduc == 5])

mean(datanew$low\_bwgt[datanew$dmeduc == 6])

mean(datanew$low\_bwgt[datanew$dmeduc == 7])

mean(datanew$low\_bwgt[datanew$dmeduc == 8])

mean(datanew$low\_bwgt[datanew$dmeduc == 9])

mean(datanew$low\_bwgt[datanew$dmeduc == 10])

mean(datanew$low\_bwgt[datanew$dmeduc == 11])

mean(datanew$low\_bwgt[datanew$dmeduc == 12])

mean(datanew$low\_bwgt[datanew$dmeduc == 13])

mean(datanew$low\_bwgt[datanew$dmeduc == 14])

mean(datanew$low\_bwgt[datanew$dmeduc == 15])

mean(datanew$low\_bwgt[datanew$dmeduc == 16])

mean(datanew$low\_bwgt[datanew$dmeduc == 17])

datanew$prop\_low\_bwgt[datanew$dmeduc == 0] = 0

datanew$prop\_low\_bwgt[datanew$dmeduc == 1] = 0

datanew$prop\_low\_bwgt[datanew$dmeduc == 2] = 0

datanew$prop\_low\_bwgt[datanew$dmeduc == 3] = 0.125

datanew$prop\_low\_bwgt[datanew$dmeduc == 4] = 0

datanew$prop\_low\_bwgt[datanew$dmeduc == 5] = 0.06666667

datanew$prop\_low\_bwgt[datanew$dmeduc == 6] = 0.08536585

datanew$prop\_low\_bwgt[datanew$dmeduc == 7] = 0.1304348

datanew$prop\_low\_bwgt[datanew$dmeduc == 8] = 0.06818182

datanew$prop\_low\_bwgt[datanew$dmeduc == 9] = 0.1160221

datanew$prop\_low\_bwgt[datanew$dmeduc == 10] = 0.136612

datanew$prop\_low\_bwgt[datanew$dmeduc == 11] = 0.09302326

datanew$prop\_low\_bwgt[datanew$dmeduc == 12] = 0.07935223

datanew$prop\_low\_bwgt[datanew$dmeduc == 13] = 0.06574394

datanew$prop\_low\_bwgt[datanew$dmeduc == 14] = 0.05910165

datanew$prop\_low\_bwgt[datanew$dmeduc == 15] = 0.06716418

datanew$prop\_low\_bwgt[datanew$dmeduc == 16] = 0.05423729

datanew$prop\_low\_bwgt[datanew$dmeduc == 17] = 0.06685237

help(plot)

plot(datanew$dmeduc, datanew$prop\_low\_bwgt, main = "")

title(main="Mothers Years of Schooling & Proportion of Infants with Low Birth Weights")

datanew$aboveHS[datanew$dmeduc<=12] = 0

####If aboveHS = 0 then it is at or below highschool

datanew$aboveHS[datanew$dmeduc>12] = 1

reg2 = lm(low\_bwgt~aboveHS, datanew)

summary(reg2)

reg3 = lm(race\_white~aboveHS, datanew)

summary(reg3)

reg4 = lm(low\_bwgt~aboveHS, datanew)

summary(reg4)

Question 1:

(a) The Beta coefficient being greater than 0 means that there is a significant impact in the study. When people have insurance, they are more likely to go to the doctor because they have the means to do so.

(b) Based off of the beta coefficient and the regression, there is a strong relationship between the two variables. Therefore, it is leaning more towards a causal relationship.

(c) Yes, the demand curve is downward sloping. As doctor visits increase, price decreases and insurance also increases.

Question 2

1. Giving people health insurance will make people be more inclined to use the health insurance and visit the doctors more often. The two variables have a significant relationship with one another.
2. Yes this suggests that there is a relationship between getting insured and number of doctor visits. In linear equations, the number should be greater than 1 to show the correlation and relationship of the 2 variables.
3. Yes, based on that experiment and how it was conducted it can show that more people are likely to go to the doctor more often when they are insured than usual. People usually avoid going to the doctor unless they really need to due to the high cost. Especially those uninsured, if there was a significant decrease in price or coverage that would make visits affordable or even free, you can see an increase in doctor visits.

Section 3:

1. (a) The method they used was one where different scenarios were tested. There is a control and experimental group and both were given the same treatment with only one difference. In this study, experimenters were trying to understand how Medicare affects people.

(b) They were able to solve this problem because they did not allow participants to have issues with getting into the hospital. No one was allowed to get denied due their health so it could solely be based off of medicare.

(c) Access to Medicare has a positive effect on the health of people. Having Medicare reduced the mortality rate signaling that Medicare does have a strong impact on illness and survival rates.

(d) The study is not as broad and is mainly focused on one group, it is mainly focusing on the most sick members of society versus focusing on the entire society and many people with different health needs. This obviously is not an accurate representation for the entire medicare population. It does not discuss the benefits medicare has outside of just physical health as well.