

8/27

## Homework 3 Adam Kaderbhai

### Problem 1

"More muscle cramps when stressed"

"Drink more Coffee & sleep less when stressed"

a.) Observational study: It's a survey that seeks information without influencing the responses in any way

b.) No since this is just an observational study it only measures characteristics of the population of Interest without attempting to influence the responses in any way

c.) - Though the sample is generally defined "healthy" the health condition of the students can still vary

- Muscle cramps could be caused by other physical activities conducted
- Stress could be mental or physical
- Coffee can cause dehydration which may lead to muscle cramps
- Lack of sleep may lead stress & muscle cramps

## Problem 2:

a.) This was an experiment because different treatments were applied to different parts of the sample and the variations were noted to determine cause & effect

b.) The explanatory variable is the different dosage and variations of Vitamin C tablets including the placebo and the response variable is the differences in the measure of cold duration, severity and duration of symptoms

c.) Yes, provided all the tablets had identical appearance & packaging

d.) Yes, because neither the patients nor the researchers were aware of who is in which treatment group

e.) Yes, If a subject chooses not to adhere to the medication they can always rely on other remedies or medications