1.1 a. Treatment – 23.25 Control – 4.34

b. Yes, at first glance it doesn’t appear to be a good treatment because there is a difference of 19% in the patients recovered from migraine.

c. Since there is huge difference in recovery of patients in both groups acupuncture might have a positive impact.

1.2 a. Treatment – 77% Control – 80%

b. Both placebo and amoxicillin appears to be effective as equal percentage of patients recovered.

c. There is no considerable difference in the percent of patients recovered in both groups. Although, this might be due to a chance that 80% patients recovered by placebo treatment in control group.

1.3 a. Each premature birth corresponds to one case.

b. Variables – Year(Categorical), Air pollution exposure(Numeric), levels of carbon monoxide (numeric), coarse particulate matter(Numeric), Ozone(Numeric)

c. To understand the effect of exposure to air pollutants on preterm births.

1.4 a.600 asthma patients corresponds to 600 cases.

b. Quality of life(Categorical), Activity(c), asthma symptoms©, medication reduction(c).

c. Is Butekyo method effective to reduce asthma symptoms and improve quality of life.

1.5 a. 160 children between the ages of 5 and 15.

b. Age (n), sex(c), isSingleChild(c), Outcome(c), CheatedOrNot©

c. Understand the relationship between honesty, age and self control. Does explicitly telling children not to cheat affect their likelihood of cheating?

1.6 a. 129 undergraduate students at University of California at Berkeley.

b. SocialClass – c, Money – c, education – c, respected job – c, no of candies – n

c. Are people from high class are more likely to be unethical than lower class.?

1.7 a. 150 flowers data was included in the data set.

b. Sepal length – cont numeric, sepal width – cont. numeric, petal length – cont numeric, petal width – cont numeric

c. Species – categorical – unordered.

1.8 a. Each row represents a case.

b. 1691 participants were included in the survey.

c. Sex – c – un, age – numeric – discrete, marital – c-un, grossIncome – numeric – continuous, smoke- c- un, amtWeekends – numeric-discrete, amtWeekdays-numeric-discrete.

1.9 a. Population of interest are the birth which were preterm in Southern California. Sample is 143196 births between 1989 and 1993

b. The results of the study can not be generalized to the population as the experiment was conducted only on pre term births in Southern California. Air pollutant levels were measured only in Southern California. Although from such small sample size we can associate a casual relationship between CO and PM10 levels.

1.10 a. Population -160 children between the ages of 5 and 15.

b. if the 160 children can be considered as general representation of children between age 5 and 15 then it can be generalized. A casual relationship cant be built between sex and age for girls but the behavior is different for boys.

1.11 a. Population – 600 asthma patients with age between 18-69

b. Since their was a significant improvement shown in patients using butekyo method it can generalized to the population between the age of 18-69. Since the study is experimental casual relationships can’t be formed.

1.12 a. Undergraduate students at University of California. Sample – 129

b. If these 129 undergraduate students are considered to be a representative of all population then it can be generalized to the population of their age. Casual relationships can’t be built.

1.13 a. Observation

b. Variable

c. Sample statistic

d. Population parameter

1.14. a. Population parameter

b. Sample statistic

c. Observation

d. Variable

1.15. a. Explanatory – Study hours/week response variable – GPA

b. for study hours between 10-20 GPA ranges between 3 to 4 on an average. For hours between 40-60 a less numbers of students seems to have scored higher GPA.

c. An observational study

d. No