1. Your consulting agency has really flourished allowing some much-needed time off. After a lovely vacation to the west coast of Mexico at Barcelo Resorts (all-inclusive) you are back at work and have more clients than ever. Your first client, Melber, from the UCD SPA CCJ capstone is desperate. He did not really pay attention during his courses whiling working on his Masters and now is faced with failing out of capstone and failing out of the program entirely. He has offered *one million dollars* for your assistance.

Her capstone included following ex-convicts over a series of three treatments designed to increase their pro-social friendship network. There are six people in her study and she has the number of pro-social friends at the time of each treatment. Here are her data:

Person Treatment I Treatment II Treatment III

 A 0 4 2

 B 1 5 6

 C 3 3 3

 D 0 1 5

 E 0 2 4

 F 2 3 4

Using the appropriate ANOVA with an alpha of .05, you need to answer his research question: are there significant mean difference among the three treatments? Did the treatment change the number of pro-social ties? If so, how? If there are differences where are they? Remember that Melber did not pay attention so your presentation must be in English and not stats-talk. As with all presentations, first welcome your audience, tell them what you’ll do, why it’s important, the test you’ll use and why it’s the right one, the findings (beginning with descriptives), and finally conclude with policy recommendations.

1. A local television news agency has approached your agency. It seems the president, Mr. John A. Wohl has recently implemented a new programing approach. Prior to this change, the local news shown attempted to present information happening in the community regardless of how titillating, happy, boring, or violent it was. He felt that viewer hours per week were weak with this approach. Mr. Wohl’s new approach was designed to keep people watching more. This approach included only presenting the most titillating and violent news available and to repeat during the day and night until a newer headline was available. He has data on the hours watched per week by 8 viewers and wonders if this programming change has delivered more hours watched or not. The findings of this work will determine if he will implement yet another change to up hours watched. Here are his data.

Person Pre-Change Post-Change

A 3 5

B 5 9

C 1 5

D 1 7

E 5 9

F 3 7

G 2 6

H 4 8

Using the appropriate statistical test, with an alpha of .05, you need to answer his programming research question about whether there is a significant mean difference between the two treatment groups. Did the treatment (i.e., programming) change the mean number of hours watched weekly? If so, how? If there are differences where are they? You have been made aware that Mr. A. Wohl did get study stats as a college student so your presentation must be in English and not stats-talk. As with all presentations, first welcome your audience, tell them what you’ll do, why it’s important, the test you’ll use and why it’s the right one, the findings (beginning with descriptives), and finally conclude with policy recommendations.

1. A psychologist has entered your offices requiring assistance on a project. She is studying whether people are willing to settle for a smaller amount of award money today in exchange for a larger award in the future. Her important work will inform a large legal agency wondering if they should offer to pay their winning clients lesser amounts of their settlement immediately in exchange for gaining the full amount awarded at a future date. If people are willing to do this, the legal agencies stand to make a LOT of money given their very large client base.

The psychologist approached interviewed six respondents to test this. The participants are asked how much they would take today instead of waiting the listed number of year to receive $10,000. Each participant respond to all 5 of the delay periods.

Person 1 year 2 years 3 years 4 years 5 years

A 9500 8500 8000 7000 5500

B 8000 8000 7500 7000 6000

C 8500 7500 6500 6000 5000

D 7500 7000 7000 6500 5500

E 9500 9000 8500 8000 6500

F 9000 9000 8500 7500 6500

Using the appropriate statistical test, with an alpha of .05, you need to answer her research question regarding if there are significant mean differences between five treatments (i.e., years). If there are differences, where are they? Be sure your presentation is in English and not stats-talk. As with all presentations, first welcome your audience, tell them what you’ll do, why it’s important, the test you’ll use and why it’s the right one, the findings (beginning with descriptives), and finally conclude with policy recommendations – the panel of lawyers leading the firm are in the audience and very interested in your findings.

1. A local school district has hired your awesome agency to determine the effectives of tutoring and type of instruction for students learning math. Some research suggests that tutoring is important, and other research shows that hot math is important. The school district wonders which is correct (or both) and if they interact. The stakes are big as scoring higher on standardized math exams will mean the difference between this school closing next year or not.

To conduct the research the representative of the school district has come to you with data. He just doesn’t know what to do with it. He has the number of problems missed on a math exam under a variety of conditions: tutor (yes/no) and hot math (yes/no). Here are his data:

|  |  |  |
| --- | --- | --- |
|  | No Tutoring | Tutoring |
| Traditional Math Instruction | 362247 | 945846 |
| Hot Math Instruction | 772686 | 81291399 |

Using the appropriate statistical test, with an alpha of .05, you need to answer her research question regarding if tutoring matters, type of instruction matters, and if the two interact in terms of mean errors on a math test. Be sure your presentation is in English and not stats-talk. As with all presentations, first welcome your audience, tell them what you’ll do, why it’s important, the test you’ll use and why it’s the right one, the findings, and finally conclude with policy recommendations – the school district is counting on you to assist them in remaining open next year.

1. Research shows that college students who are on Facebook (or have it running in the background) while studying had lower grades than students who did not use the social network (Kirschner & Karpinski, 2010). A local college professor has come to your agency to find out if the same result extends to students in across their grad school career (which is generally three years). The professor gathered grad school grades in six categories numbers from 0 to 5, from low to high. The data gathered are below. The professor needs to know if they should include a “Facebook” policy on their syllabus along with all the other policies that most students don’t read.

|  |  |  |  |
| --- | --- | --- | --- |
|  | First year | Second year | Third year |
| Facebook on | 3553 | 5524 | 5425 |
| Facebook off/not user | 5322 | 1232 | 1003 |

Using the appropriate statistical test, with an alpha of .05, you need to answer the professor’s research question regarding if facebook use matters, year in grad school matters, and if the two interact in terms of mean grades. Be sure your presentation is in English and not stats-talk. As with all presentations, first welcome your audience, tell them what you’ll do, why it’s important, the test you’ll use and why it’s the right one, the findings, and finally conclude with policy recommendations – the professor is eagerly awaiting your findings in order to complete their syllabus.