SPSS 3 practice 2
output generation

A pharmaceutical company wants to test a new pain relief drug for patients who are recovering from hip replacement surgery. The new drug comes in two dosages (10 mg and 20 mg). They randomly assign male and female patients who have undergone hip replacement surgery within the last 24 hours to one of four conditions: (1) placebo, (2) control, (3) drug A – 20 mg, and (4) drug B – 10 mg. These treatments are administered in addition to the standard treatment for hip replacement (hydrocodone every 4 hours).

After administration of the treatment every 8 hours for a 48 hour period, the following measures are taken from each participant: (1) pain relief on a 10 point scale where higher ratings indicate greater pain relief, (2) evidence of severe skin irritation in the form of itching, which is a common side effect of the medicine where 0 = no side effect and 1 = side effect is present, (3) the participant's reported ease of movement on a 5 pt scale where higher scores indicate greater movement. Finally, the researcher combines the two no treatment conditions (control and placebo) and the two treatment conditions (drug A and drug B) to create a new variable called treatment (0 = no, 1 = yes).

Using the data file labeled: "spss3.practice2data" conduct the following analyses:

1. Conduct a Oneway ANOVA on movement for the independent variable drug, and generate a Tukey's post-hoc test along with means and standard deviations.

2. Conduct a Pearson Correlation to determine if pain relief is significantly related to movement. Conduct a Point-Biserial correlation to test if gender is significantly related to movement.

3. The researcher wanted to compare the effects of the drug on pain relief for males and females separately in order to determine if the drug was effective, and if the effects interacted with gender. Conduct a factorial ANOVA for the factors drug and gender on the dependent measure pain relief. Do not bother conducting a post-hoc test.

4. Compute a new variable called treatment by combining the control and placebo groups (no treatment) and the drug A and drug B groups (treatment). Conduct a Chi-Square Test of Independence was conducted to determine if treatment is significantly related to side effects. Make sure you include expected values in your table, and show the effect size of the relation.