PSY 3211 – Research Methods and Design I – Discussion #14 – All Together Now

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Instructions: With your discussion group, answer the following questions. As an end of semester treat, NO math involved in this one! For each of the studies list below, first indicate the (A) null and (B) alternative hypotheses. Where possible, note whether it is directional or non-directional. Second, note the (C) IVs and (D) DVs (if present). Third, indicate (E) the most appropriate statistical test to use (Figure 13.1 in Salkind, page 235 may help unless it is a correlational study!). Finally, based on your own thought about how the data would turn out if you ran it, I want you to (F) write up the results as you would see it in an APA results section of an empirical article (make up the statistics, including F values, t values, correlation values, degrees of freedom, means, SDs, etc.. Make sure to write them in APA format and make sure they make sense in context – e.g. a SD of 15 for a DV using a 10 point scale would make little sense!).

1. Researchers want to see whether what a victim is wearing impacts assessments of whether she was raped. They dress her in either sexually suggestive clothing or business casual clothing. Participants determined whether the alleged rapist is guilty of rape on a ten point scale (0 = not at all guilty to 10 = very guilty).

   A. Null Hypothesis: Ho: $\mu_1 = \mu_{2T}$
      There is no significant relationship between a victims clothes and assessment of sexual abuse made by others

   B. Alternative hypothesis: there is a significant relationship between a victim's clothes and assessment of sexual abuse made by others.

   C. IVs: The victims clothes

   D. DVs: The assessment of sexual abuse made by others.

   E. Best test to use: The best test to use is biserial correlations.

   F. Results Write-Up: A biserial correlation was computed in order to assess the relationship between victim's clothes and the assessment of sexual abuse made by others. The results revealed a weak correlation between the variables, $r(55) = .23$, $p < .01$.

2. Evidence suggests that married people have a better chance of surviving cancer than do singles means that the unmarried might be good targets for cancer-prevention programs. Researchers design a study to test this possibility.

   A. Null hypothesis: the given case is that there is no significant relationship between the marital status and being cured of cancer.

   B. Alternative hypothesis; there is a significant relationship between the marital status of a person and the likelihood of surviving cancer.

   C. IVs: Marital status

   D. DVs : Cancer Survivors

   E. Best test to use. the best test to use for this study is a t-test for the significance of the correlation coefficient.

   F. Results Write-Up. The positive correlation between marital status and cancer survival was statistically significant, $r(30) = .65$, $p < .05$, two-tailed. Therefore, we did find a correlation between marital status and cancer survival, those who are married have higher survival rates.

3. Researchers are interested in assessing the impact of television violence on aggressive tendencies. They measure a group of kids on violent tendencies and then show them a violent cartoon (think "The Roadrunner dropping boulders on top of Wile E. Coyote." After watching the cartoon, the researchers reassess the kids' violent tendencies.

   A. Null hypothesis

   B. Alternative hypothesis

   C. IVs the independent variable is the violent cartoon show presented to the kids after they took their pretest on aggressive tendencies

   D. DVs The dependent variable is whether the kids would be more violent during their posttest after watching the violent cartoon compared to their pretest. This is

a directional hypothesis because it suggests that will be a higher result in aggressive tendencies after kids are exposed to a violent cartoon

E. Best test to use t-test for dependent sample

F. Results Write-Up We ran a dependent samples t-Test comparing pretest and posttest scores on aggressive tendencies as our dependent variable, which was significant, $t(20) = 3.12$, $p< .05$. Participant's aggressive tendencies increased between the pretest ($M= 16.00$, $Sd= 2.00$ and the posttest ($M= 18.00$, $SD= 4.00$).

4. A teacher wants to know how well the students in her gifted class perform relative to her other classes. She administers a standardized test to all of her classes, which has a mean of 50 ($SD = 10$). Her gifted class of 31 students has an average score of 55. She want to know what percent of all of her classes score lower than her gifted class.

   A. Null hypothesis

   B. Alternative hypothesis

   C. IVs Types of classes

   D. DVs Average score of the standardized tests.

   E. Best test to use T-test For independent.

   F. Results Write-Up   We conducted an independent samples t-Test with class type as our independent variable (gifted versus average) and the standardized test scores as the dependent variable. The groups differed significantly, $t(38) = 4.00$, $p<$ .05, gifted class had higher scored (M=50, SD= 10) than average classes (M= 40, SD= 6). After analyzing these results, we can assume that gifted classes perform better on

5. A waitress wants to know if people are more likely to tip big when she smiles. She decides to smile for some customers and not smile for others. She then counts her tips!

   A. Null hypothesis: smiling has no significant on receiving tips.

   B. Alternative hypothesis Smiling leads to an increased in receiving tips.

   C. IVs: smiling

   D. DVs: receiving tips

   E. Best test to use T-test is the best use.

F. **Results Write-Up** Results indicate a significant increase in tipping when the waitress was smiling (M = 3.45, SD = 1.11) compared to when she was not (M = 3.00, SD = .80), t(15) = 4.00, p = .001. [Dummy data, just for illustration]

6. YOUR OWN original study idea. I want each individual group member to come up with their own original study idea. You'll turn in this original idea with your final assignment.

    A. Original Study Idea

    B. Null hypothesis

    C. Alternative hypothesis

    D. IVs

    E. DVs

    F. Best test to use

    G. Results Write-Up