|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | |
| |  |  | | --- | --- | |  | Hi Chris,  The beginning question is asking “In your area of psychology.” My area of psychology is Applied Behavioral Analyst or Behavioral Therapist or Clinical Psychology. This exercise trying to get one ready for research area involving psychological questions that may arise in one career into one the areas involving psychology. Chris you can feel free to use another area in psychology if you prefer, as long as the related content of this posting is related to some form of psychology. If you have any questions please feel free to ask me.  **a. ANOVA Testing:** In your area of psychology, formulate a research question that can be addressed using a **one-way ANOVA test**. You may use and expand your research question and include **more than two groups** to compare. Write down your question and why you feel that it is appropriate for a one-way ANOVA test.      **b. State Hypotheses:** State your null hypothesis and your alternative hypothesis. State your dependent variable, your independent variable, and the three or more groups that you plan to compare.      **c. Describe Data:** Describe the type of data you would collect. What sample size would you use and what would your data look like?    **d. Predict Results:** Predict the results of your ANOVA test and write out the appropriate conclusion. Using alpha of .05, include a pretend p-value (Sig. of your F test) that would justify either accepting or rejecting your null hypothesis. What would you expect from a Post Hoc test given your predicted results from your ANOVA test?            **Here is a Helpful Example and Explanations** as well as Guidelines for this assignment  In Unit 7, you considered the t-test for independent means, and you used this test to compare two sample groups from the independent variable. In Unit 7, my research question was whether creating video lectures for my students will significantly affect total class points.     In Unit 7, I had a class of 30 students. To research this question, I gave 15 students access to video tutorials each week, and the other 15 did not have access.     My dependent variable was **total class points.** My question was whether the mean total class points for Group1 (students WITH video access) was significantly different from Group 2 (students WITHOUT video access).     Ho: mean total points for Group1 = mean total points for Group2   Ha: mean total points for Group1 ≠ mean total points for Group2     We can expand this concept into having an independent variable that is separated into **more than** two groups.     Suppose that instead of comparing only two means (Group 1 and Group 2), I want to compare three different groups:     Group 1: Watches all videos (1 per week)   Group 2: Watches half of the videos (1 every other week)   Group 3: Watches none of the videos (no access to videos)     Again, my single independent variable is **video access**. But in this case, it is now separated into three groups (sometimes called levels or classes).   Because I want to compare the mean total points for all three groups, I must use an ANOVA test.     Ho: mean total points Group1 = mean total points Group2 = mean total points Group3   Ha: mean total points Group1 ≠ mean total points Group2 ≠ mean total points Group3     Suppose I pretend that I am going to reject the null hypothesis Ho. This means that at least one of my three video access groups is significantly different than the others. In other words, using alpha is .05, the p-value (Sig of the F test for ANOVA) is less than alpha and I can reject the null.     Next, I can use the Post Hoc to look at a comparison between all three groups. The results of the Post Hoc will help me to determine which groups are significantly different from each other. | |