

Questions to Answer:

1. What is the hypothesis being tested?
2. What alpha level will you use?
3. Interpret what this alpha level means.
4. What are the means being compared in this analysis?
5. (a) What is the total sums of squares? (b) What is the within-groups sums of squares? (c) What is the between-groups sums of squares?
6. (a) What are the total degrees of freedom? (b) What are the within-groups degrees of freedom? (c) What are the between-groups degrees of freedom?
7. (a) What is the within-groups mean square (*MS*)? (b) What is the between-groups mean square (*MS*)?
8. What is your *F* ratio?
9. Put the data you have calculated into an ANOVA summary table.
10. What is the critical value for this analysis?
11. Do you reject or fail to reject the null hypothesis?
12. What is the effect size (partial eta squared) for this analysis?
13. Find the HSD. What does this number mean in plain English?
14. Based on your answer to question 13, were any of the three types of drugs significantly different from each other?
15. In plain English, what do these analyses tell us?
16. Write this result in APA style.

Answers

1. There is no difference in depressive symptomology based on the drug that people ingested.
2. We'll use the usual .05.
3. An alpha of .05 means that we are accepting a 5% chance of rejecting the null hypothesis when in fact the null hypothesis is true in the population (i.e., we accept a 5% chance of making a Type I error).
4. Mean for Experimental Drug = 7.0; mean for Placebo = 5.60; mean for Nothing = 7.0
5. (a) 41.73; (b) 35.20; (c) 6.53
6. (a) 14; (b) 12; (c) 2
7. (a) 2.93; (b) 3.27
8. $F = \frac{3.27}{2.93} = 1.12$
- 9.

Source of variability	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Between-groups	6.53	2	3.27	1.12
Within-groups	35.20	12	2.93	
Total	41.74	14		

(Continued)