***From* DATA *to* DECISION**

***Critical Thinking: Should you approve this drug?***

|  |
| --- |
| Placebo 10mg 20mg Treatment Treatment  |
| Group Group Group |
| 77 67 7 |
| 61 48 94 |
|  |
| 66 79 57 |
|  |
| 63 67 63 |
|  |
| 81 57 69 |
|  |
| 75 71 59 |
|  |
| 66 66 64 |
|  |
| 79 85 82  |
|  |
| 66 75 34 |
|  |
| 75 77 76 |
|  |
| 48 57 59 |
|  |
| 70 45 53 |

Consider the development of Xynamine—a new drug designed to lower pulse rates. In order to obtain more consistent results that do not have a confounding variable of gender, the drug is tested using males only. Given below are pulse rates for a placebo group, a group of men treated with Xynamine in 10 mg doses, and a group of men treated with 20 mg doses of Xynamine.

1. **Use Excel or SAS** to perform the one-way analysis of variance (ANOVA) for the data.

APA format is required, and solid academic writing is expected

1. ***Analyze the Results***

Analyze the data using the methods of this chapter. (One-way analysis of variance (ANOVA))

**Based on the results, write a brief report summarizing your findings minimum 500 words.**

1. Does it appear that there is sufficient evidence to support the claim that the drug lowers pulse rates?
2. Are there any serious problems with the design of the experiment?
3. Given that only males were involved in the experiment, do the results also apply to females?
4. The project manager compared the post-treatment pulse rates to the mean pulse rate for adult males.
5. Is there a better way to measure the drug’s effectiveness in lowering pulse rates?
6. How would you characterize the overall validity of the experiment?
7. Based on the available results, should the drug be approved?

Minimum of three citations required