

Question 4 (Follow YH Chan approach)

A clinical trial was conducted to compare the effectiveness of two anti depressants, Fluoxetine (Prozac) and Sertraline (Zoloft) for 6 weeks on 63 depressed patients. The effectiveness of both medications was measured using Hamilton Depression Rating Scale (HAMD) & Hamilton Anxiety Rating Scale (HAMA). The higher the score, the more severe the depression/anxiety. Please use HAMD for this exercise.

The HAMA measurements were done at;

- baseline (dhamdwb0)
- a week after treatment (dhamdwb1)
- two weeks after treatment (dhamdwb2)
- four weeks after treatment (dhamdwb4)
- six weeks after treatment (dhamdwb6)

Copy and paste the appropriate tables/charts into your answer sheet (use Microsoft Word). Discuss your answers in brief.

- c) Create a new variable (HAMDAvg) by computing the average of HAMD scores from baseline until six weeks after treatment. Compare the HAMD average score between Prozac and Zoloft by doing a One-Way ANOVA. Copy and paste the appropriate tables and discuss the results.
- d) Perform the appropriate analysis for repeated measures on your computer using the data given to you and answer the following questions.
 - i. Is there a difference in the HAMD score between the treatment groups?
Is your answer the same as in question (a)?
 - ii. Is there a change of HAMD score over time? Use the multivariate test.
 - iii. Is there a group time interaction? Is there a time trend, whether this trend exists for all groups or only certain groups? Use the multivariate test.
 - iv. Plot a suitable graphical plot for the above analysis, which will show the trend of the HAMD score for both groups over time.