Problem 1: Well-being activities and mental health outcomes

We want to investigate how different exercise routines and meditation affect various mental health indicators. The dataset `wellbeing.txt` contains measurements of two mental health indicators:

- `stress` which corresponds to the perceived stress level (on a scale from 0 to 100), that should be kept low;

- `happiness` which corresponds to the happiness index (on a scale from 0 to 100), that should be kept high;

of 200 randomly selected individuals, along with the indication of following a specific exercise routine or not (`exercise`) and practicing meditation or not (`meditation`).

a) Do exercise routines and meditation have a significant effect on the mental health indicators? Support your answer with a MANOVA model.

b) Specify and verify the assumptions of the model introduced in a).

c) After fitting the model in (a), would you now propose a different one? Give reasons for your choice.

d) Provide Bonferroni intervals (global level 95%) for the effects of exercise routines and meditation on the mental health indicators. How would you describe the effect of exercise routines and meditation on the mental health indicators?

Upload your answers there: https://forms.office.com/e/Dw5dwTVeia