**Statistics-I (1st continuous evaluation activity, November 2018)**

A clinical researcher wants to examine whether attentional training is an effective technique with patients with depression (i.e., lowering the level of depression). She recruits 40 patients with a mild depression (with ages around 20-30 y.o.) from a hospital. Randomly, half of them will form the attentional training group, and the other half will form the control group. Those individuals in the attentional training group will be trained in a new computerized game that was designed to bias the individuals to positive/neutral information. Those individuals in the control group will play a standard educational game. The duration of the training is 2 weeks in both groups. The researcher measures the level of depression before treatment, just after treatment, and 2 months after treatment.

**Question 1**

a) What is/are the independent variable/s? What is/are the dependent variable/s?

b) How would you organize the data in SPSS? (#rows, #columns)

**Question 2**

a) Is this an experiment? Justify your answer.

b) Let’s assume that there is a significant reduction in the level of depression for those individuals in the “attentional training group” after training, but no differences between pre- and post-training in the control group. Can you think of a follow-up study?

We have the following dataset (<http://www.uv.es/mperea/iperson.sav>) in which we have data from a 500 individuals: Gender, Age, Neuroticism, Extraversion, Agreeableness, Conscientiousness, and Sincerity (for sincerity: higher scores, less sincerity)

**Question 3**

We want to divide the sample in two extremes: those with 40 or more years (middle-age and older adults), and those with 39 or fewer years (young adults). Can you see any differences in Neuroticism between the two groups? Summarize the findings with the appropriate graphs and stats (copy/paste from SPSS).

**Question 4**

As you may know, the distribution of a variable like “Neuroticism” approximately follows a normal distribution—as many other psychological variables. Can you verify whether this is the case in the current sample? Justify your choice using graphs (note: this is a quantitative continuous variable) and/or statistics (note: the normal distribution has some distinctive characteristics)—also copy/paste from SPSS.