**Statistics-I. Group ARA, 2022/23**

A clinical psychologist wants to examine the potential disturbances in the ethical behavior of individuals with bipolar disorder (BD). She recruits 90 BD adult individuals (all between 18-65 y.o.), 30 in their maniac stage, 30 in their depressive stage, and 30 in their asymptomatic (euthymic) stage from a hospital in the metropolitan area of Valencia. She also recruits 30 healthy controls of similar age as the BD individuals. All participants are presented, individually, with the so-called “bridge dilemma” (“would you sacrifice one person from a bridge to save five others by pushing this person from the bridge and stop the ongoing train?”), and they had to decide whether to sacrifice the person or not.

(1a) Is this an experiment or a quasi-experiment? Justify your answer

(1b) How many rows and columns will you need to analyze these data in JASP (or SPSS)? Justify your answer.

 (2a) What type of variable (i.e., which scale for JASP/SPSS) will be the response made by the participants? Justify your answer.

(2b) Let’s assume that the BD individuals in their manic and depressive phase made substantially more “sacrifice” responses than the other two groups (BD asymptomatic, healthy controls). How would you pursue the issue between mental health and ethical behavior further? Justify your answer.

We have the following database (<https://www.uv.es/mperea/SHB.sav> or alternatively, in JASP format, <https://www.uv.es/mperea/SHB.jasp>) which contains a number of variables in a sample of participants. We ask the following two questions.

(3) We want to examine whether there are differences in introversion between the owners of dogs vs. cats. The variable “Introversion” should be computed as the SUM of the scores of the 4 Questions on Introversion (each in a 1-10 Likert scale); please note that Question#2 was INVERSE and must be in the right order before doing the sum. Please indicate in one/two sentences the main conclusion with the support of statistics and plots.

(4) What is the z-score in verbal IQ of the person in the first row? What does that mean? Justify your answer. Also Copy/Paste the screen with the z-score.