SOCY7706: Longitudinal Data Analysis
Instructor: Natasha Sarkisian
Assignment 2
Due: October 12, 2022 at 11:59pm

For this assignment, you will continue working with the data you prepared in assignment 1. Run all the necessary analyses, conduct diagnostics and apply remedies, and write a brief interpretation of your findings. You will submit your do file and your annotated log that will contain the output (with your brief comments) for all of the tasks that you will perform for this assignment. Make sure to provide brief comments throughout your do-file and log file that will clarify your steps and decisions; also, make sure to paste graphs to the corresponding locations in the log. There is no page limit for your annotated log but please edit it to contain only the relevant syntax, output, and graphs (i.e., omit any unproductive steps).

1) Using the dataset you created, estimate four types of models for your key outcome of interest (which could be either health or the personality trait you selected): 1) lagged dependent variable model; 2) difference score model; 3) first difference model; 4) cross-lagged model. Make sure to use some control variables in addition to the main variables in these models. For the cross-lagged model, make sure to do a test for causal predominance.

2) Select a model or models that you plan to use as your final model(s). Conduct all the necessary diagnostics using various tools available in OLS and apply the necessary remedies.

3) Present the results of various models you estimated in one table as multiple columns (or, if necessary, in different tables) and briefly interpret the results of those models. Discuss differences in findings and identify which model or models you would choose for presentation in a journal article and why.

Please submit your do-file and your annotated log file (including all graphs and the table) electronically (by email or using a file transfer website of your choice).