PSY653, Unit 12, In class activity – Self-Enhancement and Depression

Dataframe: self\_enhance.csv

In this activity you will continue to work with the Gaertner et al. data on self-enhancement. Recall that the file represents data from 60 Taiwanese undergraduate students who were asked to rate themselves on 14 personal traits (e.g., respectful, compliant, unique, etc.). They rated how well each trait characterized themselves relative to a typical Taiwanese student. They also rated how important each trait was to them.

The following variables are included in the file:

**id**: student ID

**enhance**: the repeated self-enhancement score for each trait (Level 1 outcome)

**import**: the repeated importance score for each trait (Level 1 predictor)

**depressed**: a binary indicator of depression (Beck’s Depression Inventory), 1=above average, 0=below average (Level 2 predictor)

**wellbe**: a continuous measure of well-being (Subjective Well-Being Scale) (Level 2 predictor)

1. Create a first level header called: Group dataset by person. Add a code chunk, and then group the selfe dataset by id.f.
2. Create a first level header called: Fit SLR for each student and get parameter estimates. Add a code chunk. Fit a regression model in which enhance is regressed on import for each student and save the intercept and slope for each model, save the 95% CI as well.
3. Create a first level header called: Plot the intercept and slope across students. Add a code chunk. Create a plot that displays the individual intercepts and slopes for each student, along with the 95% CI.
4. Create a first level header called: Create centered versions of import. Add a code chunk. Group the dataset by id.f, then create a variable called person\_import which is the average importance rating for the individual. Then, create a group mean centered version of import (called grpmc\_import).
5. Create a first level header called: Fit model with group mean centered import as a predictor. Add a code chunk. Load the lmerTest library. Then, fit a lmer model in which enhance is regressed on the group mean centered version of import. Calculate the 95% CI for the intercept and slope using the boot method. Interpret the model.
6. Create a second level header called: Plot the fitted model. Create a line plot that plots the model fitted model to represent the model estimated in Step 5. Overlay the best fit line defined by the fixed effects intercept and slope.
7. Create a first level header called: Determine if depression modifies the effect of grpmc\_import. Add a code chunk. Update the model from Step 5. Add depress and the interaction between grpmc\_import and depress.
8. Create a second level header called: Plot the fitted model. Create a line plot that plots the model fitted model to represent the model estimated in Step 7. Overlay the best fit line defined by the fixed effects intercept and slope for those who are depressed and those who are not depressed. Color the lines by depression status.



