**Assignment 5: Growth Curve Model I**

(Own Data)

This assignment is intended to familiarize you with fitting a multilevel growth curve model to your data.

**Assignment**

1. Select a variable in your data for modeling over time. (1 variable, at least 3 occasions). Prepare a long-format data set for use. Use the same variable and data as Assignment 4.
2. Plot the raw longitudinal data for all, or some representative subsample of, participants.
3. Unconditional Growth Curve Analysis (polynomial)
   1. Run the multilevel polynomial growth curve models with increasing order (lin, lin+qua, etc.)
   2. Determine the best model representing the data (use theory and/or fit indices to make your decision)
   3. Write out the multilevel equation for the best model
   4. Make a table for the best model as would appear in a paper. Include fixed effects, random effects, and fit indices (log-likelihood, AIC and BIC).
   5. Plot the predicted scores for all, or a representative subset, of individuals.
   6. Write a few sentences reporting and interpreting the results
4. Growth Curve Analysis with A Time-Invariant Predictor
   1. Select a time-invariant predictor (categorical or continuous) in your data
   2. Include the time-invariant predictor in the best fitting polynomial model in a way you deem appropriate
   3. Write out the multilevel equation for this model
   4. Make a table reporting the results. Include fixed effects, random effects, and fit indices (log-likelihood, AIC and BIC)
   5. Write a few sentences reporting and interpreting the results
5. Include the code you used to complete the assignment.

\*\*Prepare the text, tables, and figures in a format that conforms to APA style.

**Please upload your completed assignment to Canvas by the beginning of class in Week 6.**