**Psy 633 Lab Assignment 5 PRACTICE: Multiple Regression**

We will be using the Ch. 16 Multiple Regression example from our SPSS manual.  If possible, please download the data file from the course website.  Follow the steps below and provide typed or written responses to each of the questions.  The output is also provided in case students have trouble accessing the data file.

1.  Run the standard multiple regression analysis (the full model with all variables entered into the model simultaneously).  ANALYZE, REGRESSION, LINEAR...Be sure to request descriptives and collinearity diagnostics along with the default selections. Is this model significant in predicting development?

 2.  Now suppose that you entered the study knowing that most previous researchers used the Temperament variable to predict development. In your review of the literature, you are led to hypothesize that perhaps Home Environment and Social Support will predict additional variance in the dependent variable (Development) above and beyond what can be predicted by Temperament alone.  Run a regression analysis that compares two hierarchical models against each other--The "reduced" model using Temperament only vs. your "full" model using Temperament, Social Support, and Home Environment. ANALYZE, REGRESSION, LINEAR, RESET if necessary. Be sure to request descriptives, collinearity diagnostics, and R Squared Change along with the default selections.

3.  Evaluate the tolerance statistics.  Is multicollinearity a problem?

4.  What percentage of variability in Development is explained by the Temperament only model?

5.  For the Temperament only model, how much distance do we expect, on average, between predicted Development and actual Development scores?

6.  What percentage of additional variability in Development is explained when Social Support and Home Environment are included in the model (above and beyond the variability explained by Temperament)?

7.  What is the total percentage of variability explained by the "full" model using all three independent variables?

8.  Is the Temperament only model significant in predicting Development? Explain.

9.  Is the "full" Temperament, Social Support, and Home Environment model significant in predicting Development? Explain.

10.  Which of these two models would you use to make predictions about Developmental abilities? Explain.

11.  Write the regression equation for Development.























