**Study**: Subjects took two questionnaires. First, they filled out a survey rating different words on their meaningfulness or pleasantness. Scores were rated on a Likert scale from 1 (not meaningful, not pleasant) to 5 (very meaningful, very pleasant). These words were grouped into sets based on previous research, and the data set contains the averages for the words by set. Then they completed a meaning in life questionnaire (scores on questions were totaled).

**Important:** Work the whole assignment (i.e. normally you would stop if one of the steps or the interaction was not significant). Use the PIL total as the happiness scores for the DV. Remember to paste your output in this document and upload your R script to blackboard to complete this assignment.

**Dataset variables:**

IV X-Variables:

* Control variables: Age, gender, priming type (1=meaningful, 2=pleasantness)
* Education words (accomplish, College, Degree, Education, Grades, Graduate, School, Teacher, Undergrad, University, educ avg)
* Goals words (achieve, ambition, become, goals, progress, success, goals avg)
* Nouns words (everything, know, lot, many, mind, much, right, some, something, thing, time, what, when, noun avg)
* Religion words (serve, glorify, religion avg)

DV – Y-variable:

* PIL total – scores on the purpose in life questionnaire

**Mediation:**

Use education average as a mediator variable between religion average and happiness totals (PIL). Do education ratings of importance mediate the relationship between religion importance and happiness ratings? See below.

**Power:**

1. Calculate the number of participants you would need for this analysis with a medium effect size for the mediation.
   1. Include a screen shot or summary of the numbers you typed into G\*Power, so we can give you partial credit if you get a different sample size than us.

**Mediation Analysis:**

1. Run the regression analyses:
   1. Include the output for each regression (you should have three LM outputs here).
   2. Include the coefficients:
      1. Is the c path significant? List b, t, and p values in APA style.
      2. Is the a path significant? List b, t, and p values in APA style.
      3. Is the b path significant? List b, t, and p values in APA style.
      4. Is the c’ path non-significant? List b, t, and p values in APA style.
   3. Include the Sobel test.
      1. Was there significant mediation? List Z and p values in APA style.
2. Write up:
   1. Include a short description of the variables/analysis.
   2. (no data screening, but you can paste in the old one from the HMLR homework in you want).
   3. Include all the path coefficients you listed above.
   4. Include the results of the indirect test.
   5. Include the Sobel test to determine if significant mediation occurred.
   6. Include a picture of the mediation (triangle diagram).
   7. Include a table of the model F values for each model test (should be 3).