**Name: Carmona Ross**

**ED 504: Quantitative Research Methods**

**Problem Set #2 (10 points total)**

**Due before class on Tuesday, April 20th**

1. (5 points total) Though family income is often used as an indicator of a student’s socioeconomic status, the education levels of the parents or guardians, particularly the mother or female guardian, also have been shown to be important for students’ educational aspirations and outcomes. Using the Recent College Graduate Survey data, determine if there was a relationship between the graduates’ educational expectations (variable XQ101) and the educational level of their mothers/female guardians (variable XMOMED).

i. (1 point) Before conducting a statistical test, use SPSS to calculate appropriate descriptive statistics for each of the two variables separately (XQ101 and XMOMED). Use your SPSS results to describe in words the graduates’ educational expectations and the educational levels of the graduates’ mothers/female guardians.

ii. (1 point) State a null hypothesis and alternative hypothesis for this question.

iii. (3 points) There are two inferential tests that you can use to examine this relationship. Conduct **both** tests and report your findings/conclusions. Be sure to use conventional reporting standards. Please copy and paste the SPSS output results in your response so that I can see the results that you obtained**.( Chi-Square/ Spearman**)

2. (3 points) Among all recent college graduates, was there a difference in the mean amount of loan debt still owed (variable Q116) by non-minority graduates compared to minority graduates (variable XRACE)? There are two inferential tests that you can use to examine this relationship. Conduct **both** tests and report your findings/conclusions. Be sure to use conventional reporting standards. Please copy and paste the SPSS output results in your response so that I can see the results that you obtained. ( **ANOVA, independent T-Test**)

3. (2 points total) Some argue that gender differences in annual income can be explained by differences in hours worked between males and females. Use SPSS to examine the bivariate relationships between annualized incomes (XT39AMT), gender (Q91), and hours worked per week (variable Q38). Be sure to use conventional reporting standards. Please copy and paste the SPSS output results in your response so that I can see the results that you obtained. **( Pearson ( r ) correlation)**

(i) (1.5 points) Interpret each bivariate relationship.

(ii) (0.5 points) Do these results suggest that differences in hours worked might help explain differences in pay by gender? Explain why or why not. Be specific.