# Lab #10

Factor Analysis

Copy and paste any results and write out your answers in the space provided.

## SPSS

1. Factor analysis of **Classroom Interaction Climate** (**CIC**). Open “**social\_fact.sav**”.

1.a Run a principal factor analysis with varimax rotation on the CIC items (CICI102 to CICI111). Include scree plot, sorted by size and suppress values less than .3. Copy, paste, annotate and interpret (CPAI).

1.a.i. Do the number of factors extracted (eigenvalue > 1) match the number you would extract based on the scree plot? Why or why not?

1.a.ii. Are the factors intelligible?

**HIGHLIGHT HERE AND CPAI OUTPUT FOR #1.a**

**1.b.** Run a PFA with promax rotation on the same items. Include the same options. CPAI. Include interpretation of the factors given the item content. How has the solution changed?

**HIGHLIGHT HERE AND CPAI OUTPUT FOR #1.b**

1. Factor analysis of **Outgroup Orientation (OO), Ethnic Identity (EI), and the Quick Discrimination Index (QDI)** 🡪 Still using the “**social\_fact.sav**” dataset.

2.a. Run a principal AXIS factor analysis with varimax rotation on the MEIM and QDI items (QDI104r to MEIMO119). Include scree plot, sorted by size, eigenvalues greater than 1 and suppress values less than .3. CPAI.

2.a.i. Do the number of factors extracted (eigenvalue > 1) match the number you would extract based on the scree plot? Why or why not?

2.a.ii. Are the factors intelligible?

**HIGHLIGHT HERE AND CPAI OUTPUT FOR #2.a**

2.b. Do ‘2.a.’ again with the number of factors based on the scree plot. CPAI.

2.b.i. How did the solution change?

2.b.ii. Are the factors more intelligible now?

2.b.iii. Write an APA style results on this output, make sure to interpret the factors using the item content.

**HIGHLIGHT HERE AND CPAI OUTPUT FOR #2.b**

2.c. Repeat ‘ii’ with promax rotation. Include the same options. CPAI. Include interpretation of the factors given the item content.

2.c.i. Should we look at the orthogonal or oblique rotation?

1. Factor analysis of Subgroup Identity (SUB), Superordinate Group Identity (SUP), and Social Dominance Orientation (SDO). Open “**social2\_fact.sav**”.

3.a. Run all of the variables (except order) through a principal components analysis. Include scree plot, sorted by size and suppress values less than .3. CPAI.

3.a.i. Do the number of factors extracted (eigenvalue > 1) match the number you would extract based on the scree plot? Why or why not?

3.a.ii. Are the factors intelligible?

**HIGHLIGHT HERE AND CPAI OUTPUT FOR #3.a**

3.b. Rerun ‘a’ except change it to a principal axis factor analysis. Do not CPAI. Just tell me how the results changed.

3.c. Rerun again using promax rotation and extract only 6 factors. CPAI. What is your interpretation of the factors? Are they real? Or is there something else going on.

**HIGHLIGHT HERE AND CPAI OUTPUT FOR #3.c**

3.d. Rerun once more with only three factors. CPAI only the important parts that changed. Is this any better?

**HIGHLIGHT HERE AND CPAI OUTPUT FOR #3.d**