Advanced Survey Data Analysis for Categorical and Rating Scale Data

EPSY 5245

Assignment 2: Analysis of Multivariate Data

For this assignment you are free to use the data I have provided (TIMSS) or your own data – preferably data that you have on hand or found online. All statistics, tables, and graphical displays should be presented in high-quality and complete format as discussed in class.

Identify one research question associated with multiple survey questions (more than three) to conduct a multivariate analysis. This should include each of the following: (a) cluster analysis, (b) reliability analysis of internal consistency, or (c) exploratory factor analysis. The survey questions must be categorical – nominal or ordinal. You can use the same questions for each analysis if you wish.

For the assignment, please include the following:

1. State your research question.
2. List the survey questions (variables) you use in the analysis.

And for each of the three methods:

1. Describe the method you use to address the research question.
2. Describe how you conducted the analyses (steps or options selected).
3. Report the results of the analyses.
   1. Describe the distributions of the variables.
   2. Include the relevant tables based on your analyses.
   3. Present results of statistical tests, if applicable.
4. Provide a brief interpretation of your findings and directly address the research question you posed in step 1.