

Exercise 12 Factor Analysis

These exercises have been prepared for use in conjunction with Chapter 12 of the 4th edition of “SPSS for Psychologists” by Brace, Kemp and Snelgar (2009)

1. A psychologist was interested in whether a mindfulness questionnaire measured a single dimension, or whether it had more than one dimension. The data from this study are recorded in the file **Ex12.sav**. The questionnaire contained 15 items each requiring a response in the range 1 to 6. The responses are coded in the variables s1q1 to s1q15.
 - a. Carry out a principal component analysis with direct oblimin rotation.
 - b. State as many of the indicators of factorability as you can. For each, check and report what they indicate about the factorability of this data set. NB for those without a test of significance, simply give an impression; as in the book, you don't need to give counts.
 - c. How many components have eigenvalue greater than one? Write a brief results section, with suitable table, to report which items load on each component.
 - d. Consider the scree plot: how many components does that suggest?
 - e. How would you alter the analysis to assess which items load onto a single component? Do that, and report the results.
 - f. What other analysis/es might you conduct when considering the questionnaire?