Activity 2.3: Showing Reliability and Validity with SPSS

For both Part 1 and Part 2 below, you will be using the dataset Dataset2.3.xlxs that accompanies this Activity.

The dataset comes from a study conducted by the Faculty of Humanities and Social Sciences, University of Zagreb, in Zagreb, Croatia, called "Assess Your Communication with Colleagues in the Workplace., in which respondents completed a questionnaire of 15 Questions, four general information about the respondent, and 12 questions on communication in the workplace. The questions are shown below.

Q1. In communication, I pay attention to the interlocutor's non-verbal signs.

Q2. I try to understand the ideas of colleagues that are different from mine.

Q3. I encourage work colleagues to clarify their thoughts.

Q4. I give feedback in the form of criticism.

Q5. I accept criticism from colleagues.

Q6. I openly admit my mistakes.

Q7. I ask my colleagues for a critical opinion.

Q8. I adapt to the people I interact with.

Q9. I will take the initiative in resolving misunderstandings as soon as they arise.

Q10. When I am challenged, I can calmly discuss it.

Q11. I clearly express disagreement in a conversation.

Q12. When necessary, I apologize without excessive justification.

They used a five-point Likert scale for responses to Q1 thru Q12.

0 = never

1 = rarely

2 = sometimes

3 = usually

4 = always.

The dataset consists of 60 observations (cases) across 15 variables, which are

- ID: index (ordinal)
- Age: age category of respondent (coded as categorical: ordinal)

  1 = 18 thru 29 years of age

  2 = 30 thru 39

  3 = 40 thru 49

  4 = 50 thru 59

  5 = 60 and above

- Gender: gender of respondent (nominal)
  1 = male
  2 = female
- Years: Years employed at current employer (coded as categorical: ordinal)

  1 = 5 years or less

  2 = between 5 and 10

  3 = between 10 and 15

  4 = between 15 and 20

  5 = more than 20

- Q1 thru Q12: Twelve questions on communication in the workplace (ordinal)

Part 1: Testing for Reliability Using Cronbach's Alpha

1. Import the Excel file **Dataset2.3.xlxs** (accompanying Activity 2.3) to SPSS.
2. In the **Values** column for the variable **Age,** define the categories as given above.
3. In the **Values** column for the variable **Gender**, define the categories as given above.
4. In the **Values** column for the variable **Years**, define the categories as given above.
5. Save file in SPSS as **EffectiveComm.sav**

Procedure for checking the reliability of a scale

6. From the menu at the top of the screen, click on **Analyze**, select **Scale**, then **Reliability Analysis**.
7. Click on all of the individual items that make up the scale, Q1 thru Q12.
8. Move these into the box marked **Items**.
9. In the **Model** section, make sure **Alpha** is selected.
10. In the **Scale** label box, type in the name of the scale or subscale (Effective Communication).
11. Click on the **Statistics** button. In the **Descriptives** for section, select **Item**, **Scale**, and '**Scale if item deleted'**. In the **Inter-Item** section, click on **Correlations**. In the **Summaries** section, click on **Correlations**.
12. Click on **Continue** and then **OK** (or on **Paste** to save to **Syntax Editor**).
13. Find the highest Cronbach's alpha by deleting questions from the calculation if needed.
14. Interpret the Cronbach's alpha found.

Part 2: Finding Construct Validity

Using SPSS, Excel, and the **EffectiveComm.sav** file to find the Construct Validity of the questions, by finding Convergent and Divergent Validity as per instructions given in the video ***Validity Testing with SPSS***.

★ Please create a copy of the Excel file and use the duplicate to complete the activity. Ensure no changes are made to the shared file