**Module 6 – Working with factors practice exercise**

Purpose: Factors are important in statistical modeling and data analysis because they allow you to represent categorical data more efficiently, and they ensure that R recognizes the variable as having discrete categories rather than continuous values. In this exercise, you will learn how to convert vectors to factor types using based R and haven package functions. You will also learn to reorder factors and collapse/lumps levels in a factor variable.

Part 1 – Converting vectors to factor type

1. Convert the sleep\_duration\_cat to an unordered factor variable using the haven::as\_factor() function. The labels should define the levels.
2. Create a new variable called “poverty\_level” using the income variable.
   1. income < 1 ~ "Below poverty"
   2. income == 1 ~ "Poverty"
   3. income > 1 ~ "Above poverty"
3. View the structure of the poverty\_level variable
4. Using the factor() function, convert poverty\_level to an ordered factor. The labels define the levels.

Part 2 – Reordering and lumping factor variables

1. View the sleep\_duration\_cat variable
2. Reorder/relevel the sleep\_duration\_cat variable. The order should be Very Short, Short, Medium, Long
3. Reorder gain to make Medium the first level
4. Combine very short and short into one level