EXERCISE 8

Open the **sleep.sav** database uploaded in the **Lab 4** folder. This database includes data collected through a closed questionnaire from 271 people aged 18 and over, who worked at a university in Melbourne, Australia. The research was designed to investigate the frequency and impact of sleep problems experienced by the participants. The questionnaire included questions about the participants' sleep characteristics (hours of sleep per night, sleep quality, etc.), sleep problems they experienced (e.g., difficulty falling asleep), as well as questions regarding the effect of sleep problems on various aspects of their lives (work, driving, relationships, etc.). Try to answer the following questions by applying the required techniques in the SPSS program.

(A) Create a histogram for the variable **weight** for males and females separately.

- Do you notice any significant difference in the shape of the two distributions?
- If so, can you interpret it?

BASIC STEPS
1. Data → Select Cases → If condition is satisfied→ If **sex** = 0 →OK
2. Analyze→Descriptive Statistics→Frequencies→move the variable **weight** to the right →Charts →Histograms →Show normal curve on histogram→Continue →OK
3. Data → Select Cases → If condition is satisfied→ If **sex** = 1 →OK
4. Analyze→Descriptive Statistics→Frequencies→move the variable **weight** to the right →Charts →Histograms →Show normal curve on histogram→Continue →OK

(B) According to the above results, what is the average weight of men and women, respectively?

(C) Create a table showing the mean, standard deviation, range, as well as the maximum and minimum values of the variables "Alcohol" and "Caffeine" <u>for men and women separately</u>.

Alcohol = number of alcoholic drinks per day
Caffeine = number of caffeinated drinks per day

BASIC STEPS
Analyze → Compare Means and Proportions → Means → move variable **sex** to 'Dependent List' → move variable **alcohol/caffeine** to 'Layer 1 of 1' → go to Options → transfer Mean, Median, Standard Deviation, Range, Maximum, Minimum, Number of Cases to the box 'Cell statistics' → Continue →OK

(D) What is the percentage of smokers in the sample (**smoke** variable)? Were there any participants who didn't answer this question? How many?

BASIC STEPS
Analyze→ Descriptive Statistics → Frequencies →Display frequency tables → move the variable **smoke** to the right →OK

(E) How many cigarettes per day do the smokers in the sample smoke on average (**smokenum** variable)?

BASIC STEPS
1. Data → Select Cases → If condition is satisfied→ If **smoke** = 1→OK
2. Analyze →Descriptive Statistics →Frequencies →move the variable **smokenum** to the right →deactivate 'Display frequency tables' →Statistics →select Mean, Maximum, Minimum, Range →Continue →OK

(F) Find the relative frequencies of smokers by level of education. Do you notice any relationship between smoking and level of education? Is it statistically significant?

BASIC STEPS
Analyze → Descriptive Statistics → Crosstabs → move dependent variable '**smoke**' to Row(s)→ move independent variable '**edlevel**' to Column(s) → go to Cells → under Percentages select 'Column' → Continue → go to Statistics → select Chi-square (top left) →Continue →OK

(G) Which gender seems to have more serious sleep problems (**problem** variable)?

BASIC STEPS
Analyze → Descriptive Statistics → Crosstabs → move dependent variable '**problem**' to Row(s)→ move independent variable '**sex**' to Column(s) → go to Cells →under Percentages select 'Column' → Continue → go to Statistics → select Chi-square (top left) →Continue →OK