Abdelhafid Boussouf University Center, Mila.
Institute of Natural and Life Sciences .
Acadimik Year :2024/2025.

Department of Biotechnology.
Subject: Biostatistics.
Exercise series No: 1

Exercise 1 : Specify the nature of the statistical variable:

(a) Place of residence

(b) Gender

(c) Blood group

(d) Number of white blood cells

(e) Height

(f) Age

(g) Number of languages spoken

(h) Level of obesity

(i) Eye color

Exercise 2 : The medical staff of a large company is collecting statistics on the monthly sports activity of its employees, observations for 88 employees are as follows:

x_i= Number of sessions per month	n_i	$n_i^c \downarrow$	$n_i^c \uparrow$	f_i	$f_i^c \uparrow$	$f_i^c \downarrow$
8	7					
12	20					
16	23					
20	19					
24	14					
28	5					
Total	**88**					

(a) Determine the population, the studied characteristic, and state its nature.

(b) Complete the table.

(c) Graphically represent the statistical series.

(d) Calculate the mode, mean, and median.

(e) Determine the quartiles and the interquartile range.

(f) Calculate the range, variance, standard deviation, and coefficient of variation.

(g) Calculate the Pearson skewness coefficient and provide the necessary conclusion.

Exercise 3 : The following data indicates the hemoglobin levels in the blood (per class, in g/l) measured in 70 men presumed to be in good health:

Classes	[105;115[	[115;125[	[125;135[	[135;145[	[145;155[	[155;165[	[165;175[	[175;185[
Frequency	0	0	3	4	18	19	12	14

(a) Determine the population, the studied characteristic, and state its nature.

(b) Complete the table by adding the increasing cumulative frequency, decreasing cumulative frequency, frequency, increasing cumulative frequency, and decreasing cumulative frequency .

(c) Graphically represent the statistical series.

(d) Calculate the mode, mean, and median.

(e) Calculate the range, variance, standard deviation, and coefficient of variation.