

Statistical Analyze

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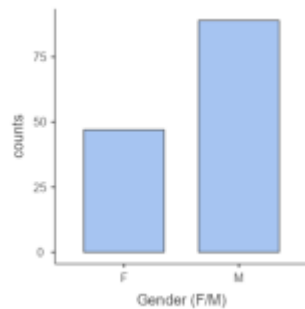
Ex. 7

For the variable Gender,
report the frequency table,

Frequencies of Gender (F/M)

Gender (F/M)	Counts	% of Total	Cumulative %
F	47	34.6 %	34.6 %
M	89	65.4 %	100.0 %

the distribution chart



and the 95% confidence interval for males 0.568 - 0.734

and for the females. 0.266 – 0.432

Interpret those 95% confidence intervals.

With 95 % of confidence the frequency of males IN THE POPULATION FROM WHICH WE EXTRACT THE SAMPLE is between 0.568 - 0.734

With 95 % of confidence the frequency of females IN THE POPULATION FROM WHICH WE EXTRACT THE SAMPLE is between 0.266 – 0.432

Report the probability to random extract a person from the sample to be a man 89/136
and the probability to random extract a person from the sample to be a woman 47/136

Ex. 8

1. For the variable Age,

report

the mean, 56.6 Normally most of the people have the age around 56.6

median, 56.5 Half of the people have the age less than 56.5

mode, 64 The most frequent age is 64

standard deviation, 19.5 Normally, most of the people have the age in the interval $56.6 - 19.5$ – $56.6 + 19.5$ (37.1 – 76.1)

minimum, 18 youngest person in the sample is 18

maximum, 98 Oldest person in the sample is 98

range, 80 The distance between the oldest one and the youngest one is 80 years

1st quartile, 40.8 25 % of the people are youngest than 40.8

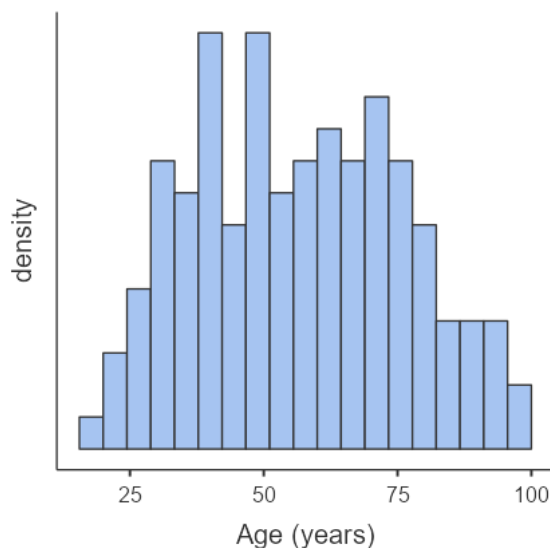
3rd quartile, 70.3 75 % of the people are youngest than 70.3

IQR, 29.5 The distance between Q3 and Q1 is 29.5

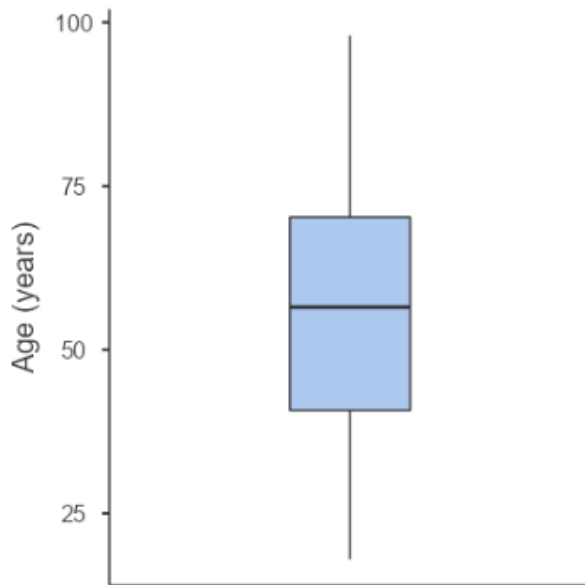
kurt, -0.89 - No excess of kurtosis [-1 1]

skew. 0.132 symmetrical [-1 1]

Present the distribution using the histogram



the box & whisker plot.



Report the level of homogeneity for this variable. Coefficient of variation = $S/\text{Mean} = 19.5/56.6 = 0.34$ Heterogenous

Decide if the variable follow the normal distribution using the values of kurt and skew.

Suggest the normal distribution

Create and interpret the 95% confidence for the mean of the Age 53.3 – 59.9

With 95% of confidence, the mean of the age in the population from which we extract the sample is between 53.3 – 59.9

Ex 9

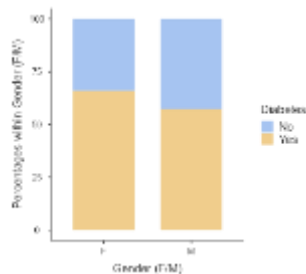
Verify the hypothetical association between gender and the presence of the diabetes.
Create the contingency table

Contingency Tables

Gender (F/M)	Diabetes		Total
	No	Yes	
F	16	31	47
M	38	51	89
Total	54	82	136

and the distribution chart.

Plots



Interpret the distribution chart. The chart fails to suggest that there is association between gender and diabetes

Report the probability to random extract a person from the sample

to be a man with diabetes, $51/136$

a man without diabetes, $38/136$

a woman with diabetes and $31/136$

a woman without diabetes. $16/136$

Report the probability to random extract between women,

a woman without diabetes. $16/47$

Report the probability to random extract between men,

a man with diabetes. $51/89$