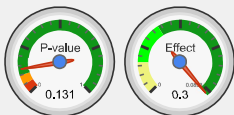


Shapiro-Wilk Test Calculator

Reporting Shapiro-Wilk test in APA Format

The Shapiro-Wilk test did not show a significant departure from normality, $W(5) = .81, p = .131$

Parameter	Value
P-value	0.1315
W	0.8129
Sample size (n)	5
Average ($\bar{x}$)	13
Median	12
Sample Standard Deviation (S)	2.3452
Sum of Squares	22
b	4.2289
Skewness	1.7444
Skewness Shape	 Potentially Symmetrical (pval=0.056)
Excess kurtosis	3.3223
Kurtosis Shape	 Potentially Mesokurtic , normal like tails (pval=0.097)
Outliers	17



Shapiro-Wilk-test, using tables as distribution (right-tailed)

Since $n \leq 50$ we used the Shapiro-Wilk tables to calculate the p-value.

The normal distribution chart is only for visualization.

1. H_0 hypothesis

Since $p\text{-value} > \alpha$, we accept the H_0 .

It is assumed that the data is normally distributed.

In other words, the difference between the data sample and the normal distribution is not big enough to be statistically significant. A non-significance result can not prove that H_0 is correct, only that the null assumption can not be rejected.

2. P-value

The p-value equals **0.1315**, ($P(x \leq 1.1195) = 0.8685$). It means that the chance of type I error, rejecting a correct H_0 , is too high: 0.1315 (13.15%). The larger the p-value the more it supports H_0 .

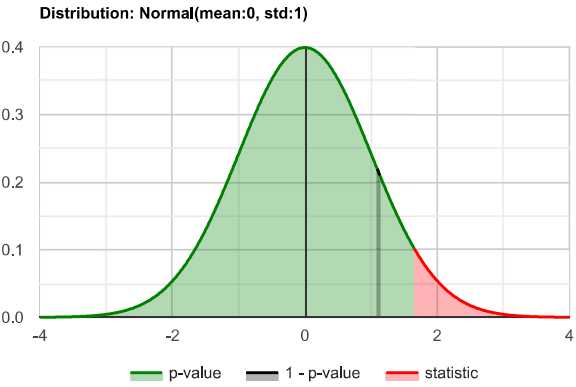
3. Test statistic

The test statistic **W** equals **0.8129**, which is in the 95% region of acceptance: [0.7508, 1].

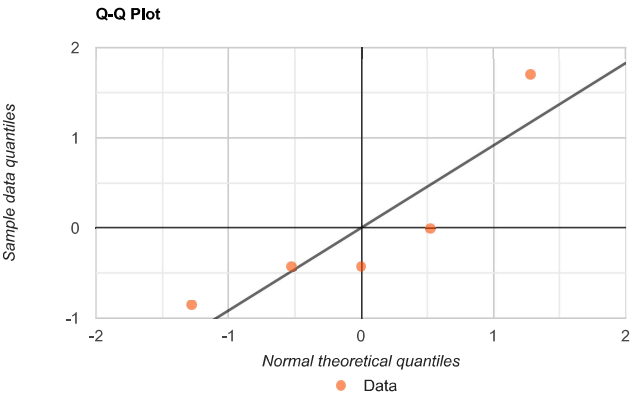
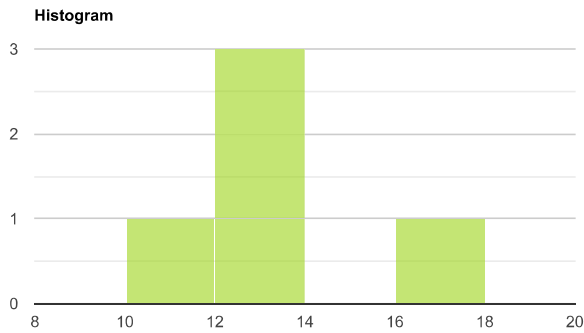
4. Effect size

The observed effect size **KS - D** is **large, 0.3**. This indicates that the magnitude of the difference between the sample distribution and the normal distributions is large.

Since the null assumption cannot be rejected, you may ignore the effect size.



Significance level (α)



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