Rapport package team

t-test Template

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Description

A t-test report with table of descriptives, diagnostic tests and t-test specific statistics.

Introduction

In a nutshell, *t-test* is a statistical test that assesses hypothesis of equality of two means. But in theory, any hypothesis test that yields statistic which follows *t-distribution* can be considered a *t-test*. The most common usage of *t-test* is to:

- compare the mean of a variable with given test mean value - **one-sample *t-test***
- compare means of two variables from independent samples - **independent samples *t-test***
- compare means of two variables from dependent samples - **paired-samples *t-test***

Overview

Independent samples *t-test* is carried out with *Internet usage in leisure time (hours per day)* as dependent variable, and *Gender* as independent variable. Confidence interval is set to 95%. Equality of variances wasn't assumed.

Descriptives

In order to get more insight on the underlying data, a table of basic descriptive statistics is displayed below.

Gender	min	max	mean	sd	var	median	IQR
male	0	12	3.270	1.953	3.816	3	3
female	0	12	3.064	2.355	5.544	2	3

skewness	kurtosis
0.9443	0.9858
1.3979	1.8696

Diagnostics

Since *t-test* is a parametric technique, it sets some basic assumptions on distribution shape: it has to be *normal* (or approximately normal). A few normality test are to be applied, in order to screen possible departures from normality.

Normality Tests We will use *Shapiro-Wilk*, *Lilliefors* and *Anderson-Darling* tests to screen departures from normality in the response variable (*Internet usage in leisure time (hours per day)*).

N	p	NA
Shapiro-Wilk normality test	0.9001	1.617e-20
Lilliefors (Kolmogorov-Smirnov) normality test	0.1680	3.000e-52
Anderson-Darling normality test	18.7530	7.261e-44

As you can see, applied tests yield different results on hypotheses of normality, so you may want to stick with one you find most appropriate or you trust the most..

Results

Welch Two Sample t-test was applied, and significant differences were found.

	statistic	df	p	CI(lower)	CI(upper)
t	1.148	457.9	0.2514	-0.1463	0.5576

Description

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Introduction

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Overview

One-sample *t-test* is carried out with *Internet usage in leisure time (hours per day)* as dependent variable. Confidence interval is set to 95%. Equality of variances wasn't assumed.

Descriptives

In order to get more insight on the underlying data, a table of basic descriptive statistics is displayed below.

Variable	NA	NA	NA
Internet usage in leisure time (hours per day)	0	12	3.199

NA	NA	NA
2.144	4.595	3

NA	NA	NA
2	1.185	1.533

Diagnostics

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As you can see, applied tests yield different results on hypotheses of normality, so you may want to stick with one you find most appropriate or you trust the most..

Results

One Sample t-test was applied, and significant differences were found.

	statistic	df	p	CI(lower)	CI(upper)
t	-0.007198	671	0.9943	3.037	3.362

This report was generated with R (2.15.1) and rapport (0.4) in *1.012* sec on x86_64-unknown-linux-gnu platform.

Figure 1: