



## Analysis of diabetics using R-software

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### ABSTRACT

Mathematical software (R-software) plays major role to develop science and technology in this world. In this papers we discuss about the correlation with the help of secondary data (Pima) is collected from 784 women.

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### Introduction

Diabetics is a major problem in human life. The data (Pima) is collected from women [784]. The data contains the details of insulin, glucose, pregnant, diabetics, test, and triceps. This data is used to estimate the value of which one has more effect on diabetics.

#### Diabetics:

It is illness in which body can not absorb sugar and starch properly because it dose not have enough of the hormone insulin. It is a multi factor disease; here we discuss the major factors which one of the factor has more effects on insulin, glucose, pregnant, diabetics, test, and triceps.

#### Data (Pima):

The data which includes the factor like insulin, glucose, pregnant, diabetics, test, and triceps.

#### Insulin:

A hormone which regulates glucose level in the blood.

#### Glucose:

A type of sugar that is easily changed into energy.

#### Diabetics

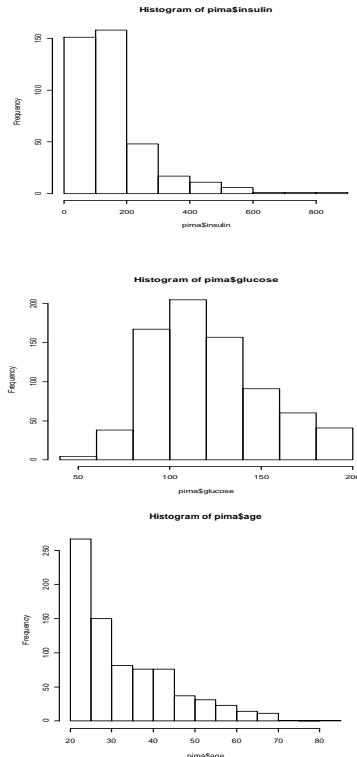
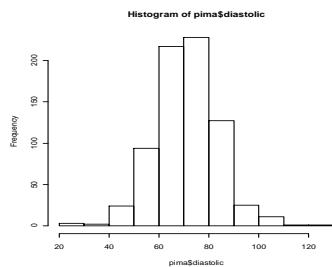
It is illness in which body can not absorb sugar and starch properly because it dose not have enough of the hormone insulin.

#### Triceps:

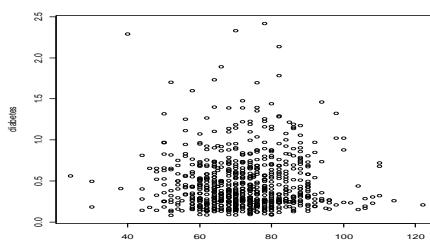
The large muscle at the back of the upper arm.

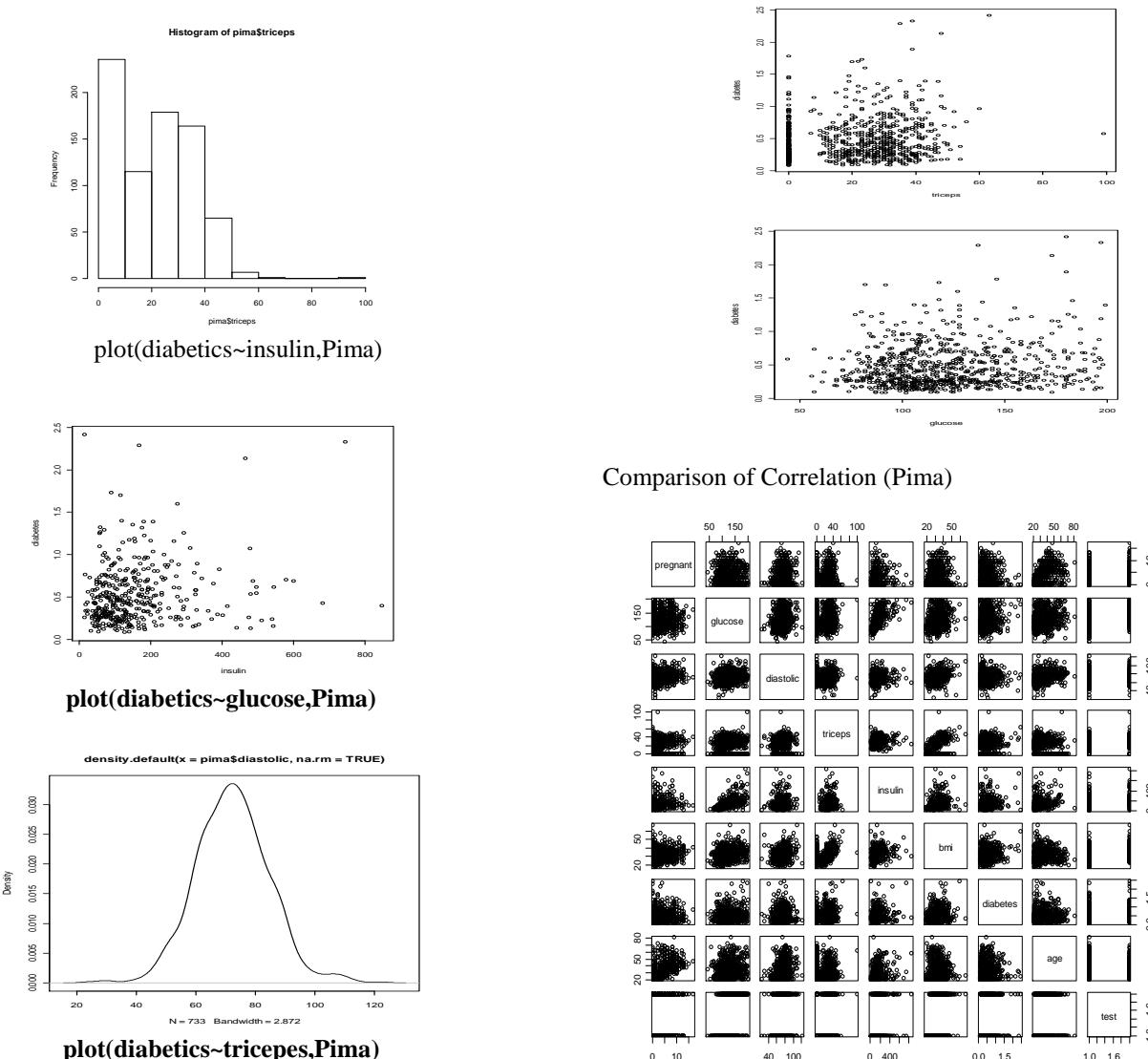
#### Diastolic:

Dilatation of heart is known as diastolic.



plot(diabetics~diastolic,Pima)





### Conclusion:

Triceps has more effects on glucose and diastolic has more effect on diabetics while comparing all other factors. This can be found easily by Correlation coefficient of data (Pima).

### Reference:

1. An Introduction to R, Notes on R: A Programming Environment for Data Analysis and Graphics Version 2.13.1 (2011-07-08)

### Summary of Pima:

	Pregnant	glucose	diastolic	triceps	insulin	bmi	diabetics	age
Min. :	0.000	44.0	24.0	0.00	14.00	18.20	0.078	21.00
1st Qu.:	1.000	99.0	64.0	0.00	76.25	27.50	0.2437	24.00
Median:	3.000	117.0	72.0	23.00	125.00	32.30	0.3725	29.00
Mean :	3.845	121.7	72.4	20.54	155.55	32.46	0.4719	33.24
3rd Qu.:	6.000	141.0	80.0	32.00	190.00	36.60	0.6262	41.00
Max. :	17.000	199.0	122.0	99.00	846.00	67.10	2.4200	81.00

	pregnant	glucose	diastolic	triceps	insulin	bmi	diabetics	age	test
pregnant	1.0000000	0.12945867	0.14128198	-0.08167177	-0.07353461	0.01768309	0.03352267	0.54434123	0.22189815
glucose	0.12945867	1.0000000	0.15258959	0.05732789	0.33135711	0.22107107	0.13733730	0.26351432	0.46658140
diastolic	0.14128198	0.15258959	1.0000000	0.20737054	0.08893338	0.28180529	0.04126495	0.23952795	0.06506836
triceps	0.08167177	0.05732789	0.20737054	1.0000000	0.43678257	0.39257320	0.18392757	0.11397026	0.07475223
insulin	0.07353461	0.33135711	0.08893338	0.43678257	1.0000000	0.19785906	0.18507093	0.04216295	0.13054795
bmi	0.01768309	0.22107107	0.28180529	0.39257320	0.19785906	1.0000000	0.14064695	0.03624187	0.29269466
diabetics	0.03352267	0.13733730	0.04126495	0.18392757	0.18507093	0.14064695	1.0000000	0.03356131	0.17384407
age	0.54434123	0.26351432	0.23952795	-0.11397026	0.04216295	0.03624187	0.03356131	1.0000000	0.23835598
test	0.22189815	0.46658140	0.06506836	0.07475223	0.13054795	0.29269466	0.17384407	0.23835598	1.0000000