

Reading *DataDesk* Regression Analysis

Summary Report

(You'll need this to create confidence intervals and prediction intervals by hand.)

Summary of	Education
No Selector	
Count	60
Mean	10.9733
Median	11.5500
Variance	0.714531
StdDev	0.845299
Range	3.30000

mean ($\bar{x}$)

explanatory variable (x)

Regression Analysis

response variable (y)

(R^2)

Dependent variable is: Mortality				
No Selector				
R squared = 26.1% R squared (adjusted) = 24.8%				
s = 53.94 with 60 - 2 = 58 degrees of freedom				
Source	Sum of Squares	df	Mean Square	F-ratio
Regression	59661.5	1	59661.5	20.5
Residual	168737	58	2909.26	
Variable	Coefficient	s.e. of Coeff	t-ratio	prob
Constant	1353.16	91.42	14.8	≤ 0.0001
Education	-37.6193	8.307	-4.53	≤ 0.0001

s - the standard error about the line

so the equation of the line is
 $\hat{M} = 1353.16 - 37.6193 Ed$

SE(b)

P-value for $H_0: \beta = 0$
 $H_a: \beta \neq 0$

This model, based upon data from 60 US cities, shows an association that is significant but of weak predictive value between the mean education level and the annual mortality rate per 100,000 residents.