Clinical Epidemiology

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QUIZ 19

What does R^2 mean in a linear regression output?

Interpret this R^2 (the dependent variable is the number of civilian gun deaths):

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.524[a]	.274	.270	17924616.1

a. Predictors: (Constant), Guns_per_100_people

What does the standardized β mean in a linear regression output? What does the *unstandardized* β mean in a linear regression output? Which one should you report?

Here is a linear regression output of hospital patients:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	95023.504	10657.913		8.916	.000	74115.221	115931.787
	Age_years	-778.214	165.733	-.128	-4.696	.000	-1103.344	-453.085
	Number_of_Fractured_Ribs	8345.758	1163.507	.203	7.173	.000	6063.234	10628.282
	Pulmonary_Contusion	40606.979	8564.352	.133	4.741	.000	23805.764	57408.195
	TEA__FINAL_COUNT	-22232.653	8757.436	-.070	-2.539	.011	-39412.654	-5052.653

The dependent variable is the patient's bill in dollars. Notice the variable "Number_of_Fractured_Ribs"; what effect does the number of fractured ribs have on the total cost of medical care? (Reference the magnitude of effect and the p-value… meaning the confidence in that magnitude.)

What is a logistic regression? What kind of dependent variable does it require?