

SPSS 13.0 HELP SHEET: One-way Anova

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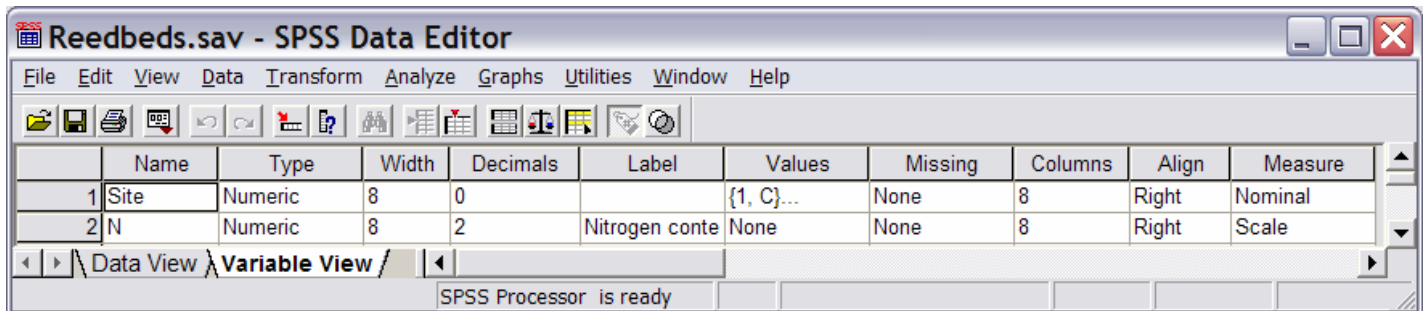
1. How to enter data to do a One-way Anova.
2. How to do a One-way Anova.

1. How to enter data to do a One-way Anova.

For general advice on data entry see the “How to enter data into SPSS” help sheet.

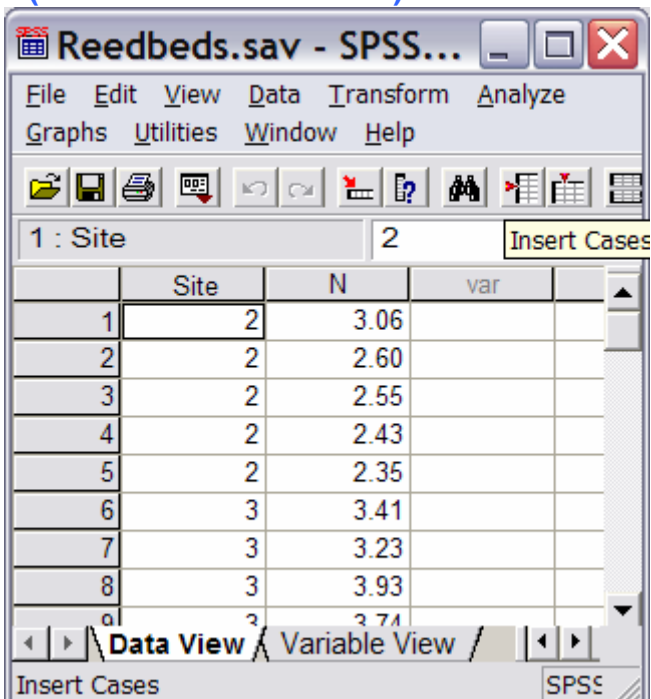
One-way Anova’s are used on unrelated: Data for the dependent variable goes in one column and data for the independent variable goes in another. In this example, the dependent variable is *N* and the independent variable is *Site*. *N* is the nitrogen content of reeds measured as % of dry weight which is a scale level of measurement. *Site* refers to the area within the reed bed that the samples of reeds were taken from measured at the nominal level: either 1 (value label = C), 2 (value label = D) or 3 (value label = E).

Variable View:



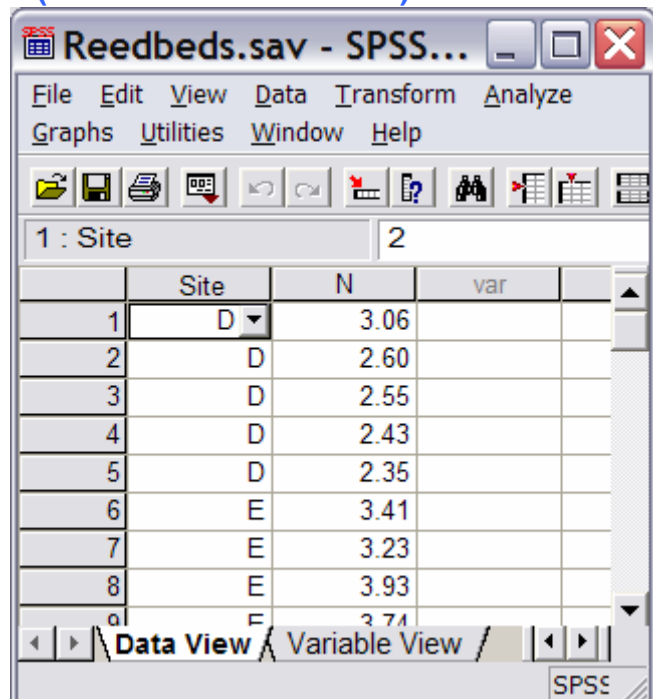
	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
1	Site	Numeric	8	0		{1, C}...	None	8	Right	Nominal
2	N	Numeric	8	2	Nitrogen conte	None	None	8	Right	Scale

Data View (View – Value Labels off)



	Site	N	var
1	2	3.06	
2	2	2.60	
3	2	2.55	
4	2	2.43	
5	2	2.35	
6	3	3.41	
7	3	3.23	
8	3	3.93	
9	3	3.74	

Data View (View – Value Labels on)



	Site	N	var
1	D	3.06	
2	D	2.60	
3	D	2.55	
4	D	2.43	
5	D	2.35	
6	E	3.41	
7	E	3.23	
8	E	3.93	
9	E	3.74	

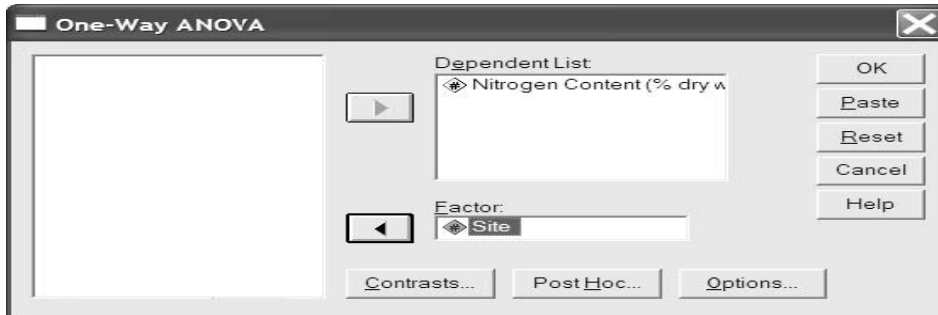
2. How to do a One-way Anova

To get SPSS to conduct a One-way Anova:

Open your data file.

Select: Analyze – Compare Means – One-Way Anova...

This will bring up the One-Way ANOVA window:



Select the dependent variable and send it to the **Dependent List** box (in the example above this is *Nitrogen Content*). Select the independent variable, and send it to the **Factor** box (in the example above this is *Site*). Click OK.

The key elements of the output are:

ANOVA

Nitrogen content (% dry weight)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.028	2	1.014	11.791	.001
Within Groups	1.032	12	.086		
Total	3.061	14			

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