Single-Sample t-test -- Analysis of a Single Quantitative Variable
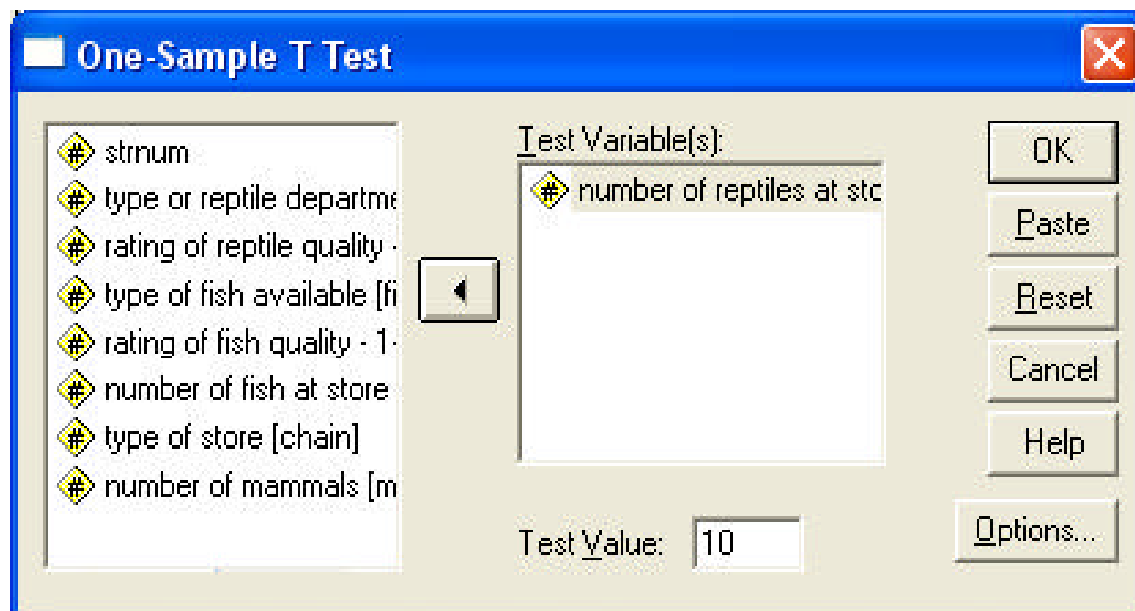
Application: To test a hypothesis about the mean of a single quantitative variable.

Research Hypothesis (it is often the case that the researcher's hypothesis is the statistical null, something more common for this statistical model than for most others): The researcher hypothesized that the average number of reptiles at these pet stores was 10.

H0: The sample represents a population of pet stores that has an average of 10 reptiles.

Analyze / Statistics ➔ Compare Means ➔ One Sample TTest
- highlight the variable (be sure it is quantitative) and press the arrow to put it into the "Test Variable(s)" box
- type the H0: value into the "Test Value" box

Output:

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
number of reptiles at store	12	9.2500	4.2667	1.2317

univariate stats

p-value

Retaining H0: (p > .05) means that we conclude the pet stores have a mean number of reptiles that is not significantly different from 10 (which supports the RH:)

One-Sample Test

	Test Value = 10					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
number of reptiles at store	-.609	11	.555	-.7500	-3.4609	1.9609

Reporting the Results:
  The average number of reptiles in the sampled stores (M = 9.25, S = 4.27) was not significantly different from the hypothesized value of 10, t(11) = .609, p = .555.

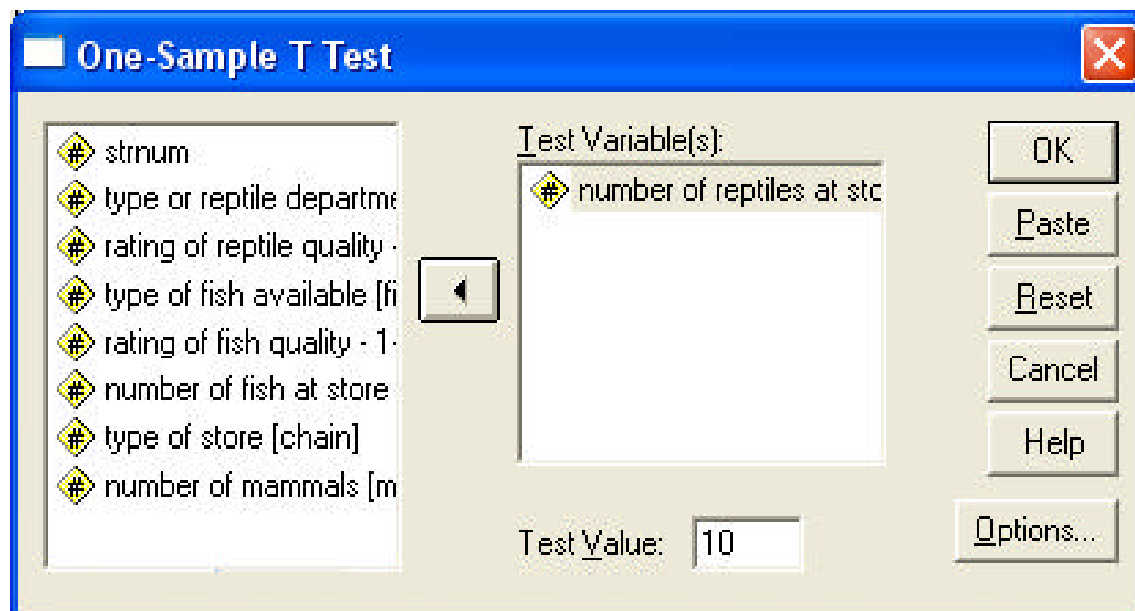# Single-Sample t-test -- Analysis of a Single Quantitative Variable

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