

**Figure 7.9** Annotated SPSS Output for a One-Sample  $t$  Test

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
Salary	15	3680.0000	1038.68048	268.18615

**N:**  
Sample size

**Mean:**  
Sample mean ( $M$ )

**Std. Deviation:**  
Sample standard deviation ( $SD$ )

**Std. Error Mean:** The average distance that all possible sample means of 15 people are from the population mean of 100. This is the estimated sampling error and the denominator of  $t$  test ( $SEM_s$ ).

**Test Value:** Population mean ( $\mu$ ) or the value to which the sample mean is compared

**One-Sample Test**

	Test Value = 3000					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Salary	2.536	14	.024	680.00000	104.7979	1255.2021

**t:** Obtained  $t$  value

**df:** Degrees of freedom ( $N - 1$ )

**Sig. (2-tailed):** Two-tailed  $p$  value; the probability of obtaining a  $t$  score this extreme or more extreme if the null hypothesis is true.  
  
for a one-tailed test, divide  $p$  by 2; reject  $H_0$  if  $p < \alpha$

**Mean Difference:** The difference between the sample mean and the population mean; the numerator of the  $t$  test

**95% Confidence Interval:** We are 95% confident that the actual difference between the sample and population means is between the lower and upper values.