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EDG 500

SPSS Week 8 Chapter 12

T-Test

One-Sample Statistics						
	N	Mean	Std. Deviation	Std. Error Mean		
Attitude Toward Math	20	3.7000	2.55672	.57170		

One-Sample Test						
Test Value = 4.0						
	t	df	Significance	Mean Difference	95% Confidence Interval of the Difference	
			One-Sided p		Lower	Upper
Attitude Toward Math	-.525	19	.303	.606	-.30000	-.14966

One-Sample Effect Sizes					
		Standardizer ^a	Point Estimate	95% Confidence Interval	
				Lower	Upper
Attitude Toward Math	Cohen's d	2.55672	-.117	-.556	.324
	Hedges' correction	2.66350	-.113	-.533	.311

^a The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation.
Hedges' correction uses the sample standard deviation, plus a correction factor.

Figure 12.5. Output with a test value of 4.0

For the local school district sample, the values of the mean and standard deviation are 3.70 and 2.56, respectively. The national mean is 4.00. The difference between the sample mean and the national mean is not statistically significant at the .05 level ($t = -.525$, $df = 19$).

T-Test

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Attitude Toward Math	20	3.7000	2.55672	.57170

One-Sample Test						
Test Value = 2.50						
	t	df	Significance	Mean Difference	95% Confidence Interval of the Difference	
			One-Sided p		Lower	Upper
Attitude Toward Math	2.099	19	.025	.049	1.20000	.0034

One-Sample Effect Sizes					
		Standardizer ^a	Point Estimate	95% Confidence Interval	
				Lower	Upper
Attitude Toward Math	Cohen's d	2.55672	.469	.001	.926
	Hedges' correction	2.66350	.451	.001	.889

^a The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation.
Hedges' correction uses the sample standard deviation, plus a correction factor.

Figure 12.6. Output with a test value of 2.50.

For the local district sample, the values of the mean and standard deviation are 3.70 and 2.56, respectively. The statewide mean is 2.50. the difference between the sample mean and the statewide mean is statistically significant at the .05. Level ($t = 2.099$, $df = 19$).

Table 12.1

Scores for a random sample at Washington elementary School.

28	28	29	30	31	32	33	34	35	36	38	40
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T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Correct Reading Scores	12	32.7500	4.02549	1.16206

One-Sample Test

Test Value = 32.00

	t	df	Significance		Mean Difference	95% Confidence Interval of the Difference	
			One-Sided p	Two-Sided p		Lower	Upper
Correct Reading Scores	.645	11	.266	.532	.75000	-1.8077	3.3077

One-Sample Effect Sizes

		Standardizer ^a	Point Estimate	95% Confidence Interval	
				Lower	Upper
Correct Reading Scores	Cohen's d	4.02549	.186	-.389	.753
	Hedges' correction	4.32867	.173	-.362	.700

a. The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation.
Hedges' correction uses the sample standard deviation, plus a correction factor.

Figure 12.1. Output with a test value of 32.00

Exercise for Chapter 12

- The value of the mean for the sample at Washington Elementary School is 32.75.
- The value of $t = .645$.
- The probability associated with this t score is .532.
- The difference between the district mean of 32.00 and the mean at Washington Elementary School is statistically insignificant at the .05 level.
- For the Washington Elementary School sample, the values of the mean and the standard deviation are 32.75 and 4.03 respectively. The school district mean is 32.00. The difference between the Washington Elementary School mean and the district mean is statistically insignificant at the .05 level. ($t = .645, df = 11$).