EDG 500 Educational Research and Statistic

Alliance University

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Chapter 13 Step by step

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	11.5556	9	2.29734	.76578
	Prottest	9.6667	9	2.23607	.74536

Paired Samples Correlations

		N	Correlation	Significance One-Sided p	Significance Two-Sided p
Pair 1	Pretest & Prottest	9	.527	.072	.145

Paired Samples Test

		Paired Differences					t	df	Significance One-Sided p	Significance Two-Sided p
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper				
Pair 1	Pretest - Prottest	1.88889	2.20479	.73493	.19414	3.58364	2.570	8	.017	.033

Paired Samples Effect Sizes

			Standardizer[a]	Point Estimate	95% Confidence Interval Lower	95% Confidence Interval Upper
Pair 1	Pretest - Prottest	Cohen's d	2.20479	.857	.065	1.611
		Hedges' correction	2.44243	.773	.059	1.454

Chapter 13 exercise.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pretest	32.8000	10	4.61399	1.45907
	Prottest	34.0000	10	5.05525	1.59861

Paired Samples Correlations

		N	Correlation	Significance One-Sided p	Significance Two-Sided p
Pair 1	pretest & Prottest	10	.843	.001	.002

Paired Samples Test

		Paired Differences					t	df	Significance One-Sided p	Significance Two-Sided p
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper				
Pair 1	pretest - Prottest	-1.20000	2.74064	.86667	-3.16054	.76054	-1.385	9	.100	.200

Paired Samples Effect Sizes

			Standardizer[a]	Point Estimate	95% Confidence Interval Lower	95% Confidence Interval Upper
Pair 1	pretest - Prottest	Cohen's d	2.74064	-.438	-1.078	.224
		Hedges' correction	2.99892	-.400	-.985	.205

a. What is the mean for the pretest?

32.80

b. What is the mean for the posttest?

34.

c. What is the value of t?

-1.38

d. What is the associated probability?

.200

e. Is the difference between the pretest and posttest means statistically significant at the .05 level?

Yes the pretest is lower than the prottest, so the difference is not statistically significant.

f. Write a statement of the results of the significance test.

The probability of .200 is greater than .05 also t is negative, it is not statistically significant, and it has no bearing on significance.