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EDG 500

4/5/2023

Chapter 14 Step by Step

Group Statistics										
experimental and control groups		N	Mean	Std. Deviation	Std. Error Mean					
Attitude Toward Drinking and Driving	Experimental Group	7	10.5714	1.61835	.61168					
	Control Group	5	13.8000	2.28035	1.01980					

Independent Samples Test											
		Levene's Test for Equality of Variances				t-test for Equality of Means					
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						One-Sided p	Two-Sided p			Lower	Upper
Attitude Toward Drinking and Driving	Equal variances assumed	.071	.795	-2.886	10	.008	.016	-3.22857	1.11889	-5.72162	-.73553
	Equal variances not assumed			-2.715	6.808	.015	.031	-3.22857	1.18918	-6.05666	-.40048

Exercise 14 Step by Step

Group Statistics										
Experimental and Control Group		N	Mean	Std. Deviation	Std. Error Mean					
Calculus Final Examination Scores	Experimental Group	5	30.6000	4.87852	2.18174					
	2.00	5	30.8000	3.56371	1.59374					

Independent Samples Test											
		Levene's Test for Equality of Variances				t-test for Equality of Means					
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						One-Sided p	Two-Sided p			Lower	Upper
Calculus Final Examination Scores	Equal variances assumed	.675	.435	-.074	8	.471	.943	-.20000	2.70185	-6.43048	6.03048
	Equal variances not assumed			-.074	7.323	.471	.943	-.20000	2.70185	-6.53222	6.13222

a. What is the mean for the experimental group?

30.60

b. What is the mean for the control group?

30.80

c. What is the value off?

8

d. What is the associated probability?

Sig .943

e. Is the difference between the experimental group's mean and the control group's mean statistically significant at the .05 level?

No it is not statistically significant at .05 level.

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

The mean for Group I ($m = 30.60$, $sd = 3.56$) is significantly lower than the mean for Group 2 ($m = 30.60$, $sd = 4.87$) at the .05 level ($t = -.074$, $df = 7.32$). Because the variances were significantly different, a test that did not assume equality of variances was conducted.