PSYC 2101 Exam 2 June, 2014 (33 points possible)

1a. Severity of blemishes in high school adolescents was significantly greater after eating the food additive (*M* = 9.67, *SD* = 4.32) than before (*M* = 7.67, *SD* = 3.93), *t*(5) = 3.46, *p* = .018, *d* = .48. [two points for each component, sum = 24 points]

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	After	9.67	6	4.320	1.764
	Before	7.67	6	3.933	1.606

Paired Samples Correlations

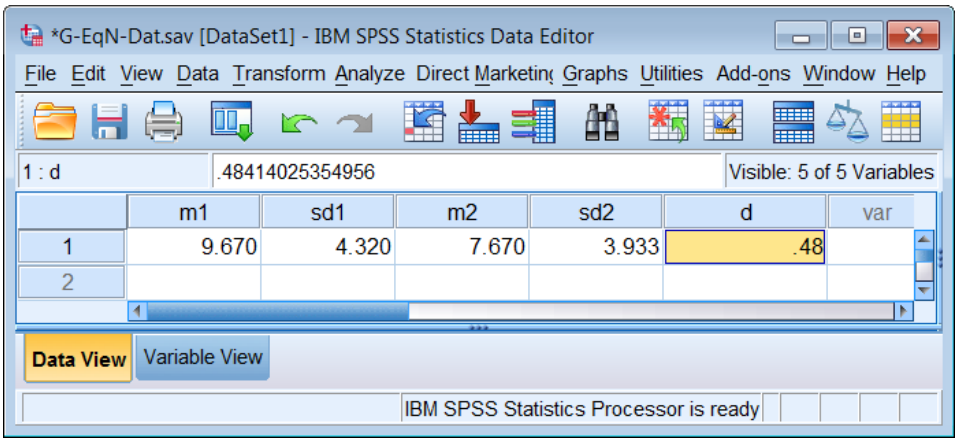
		N	Correlation	Sig.
Pair 1	After & Before	6	.946	.004

Paired Samples Test

		Paired Differences				
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	After - Before	2.000	1.414	.577	.516	3.484

Paired Samples Test

		t	df	Sig. (2-tailed)
Pair 1	After - Before	3.464	5	.018

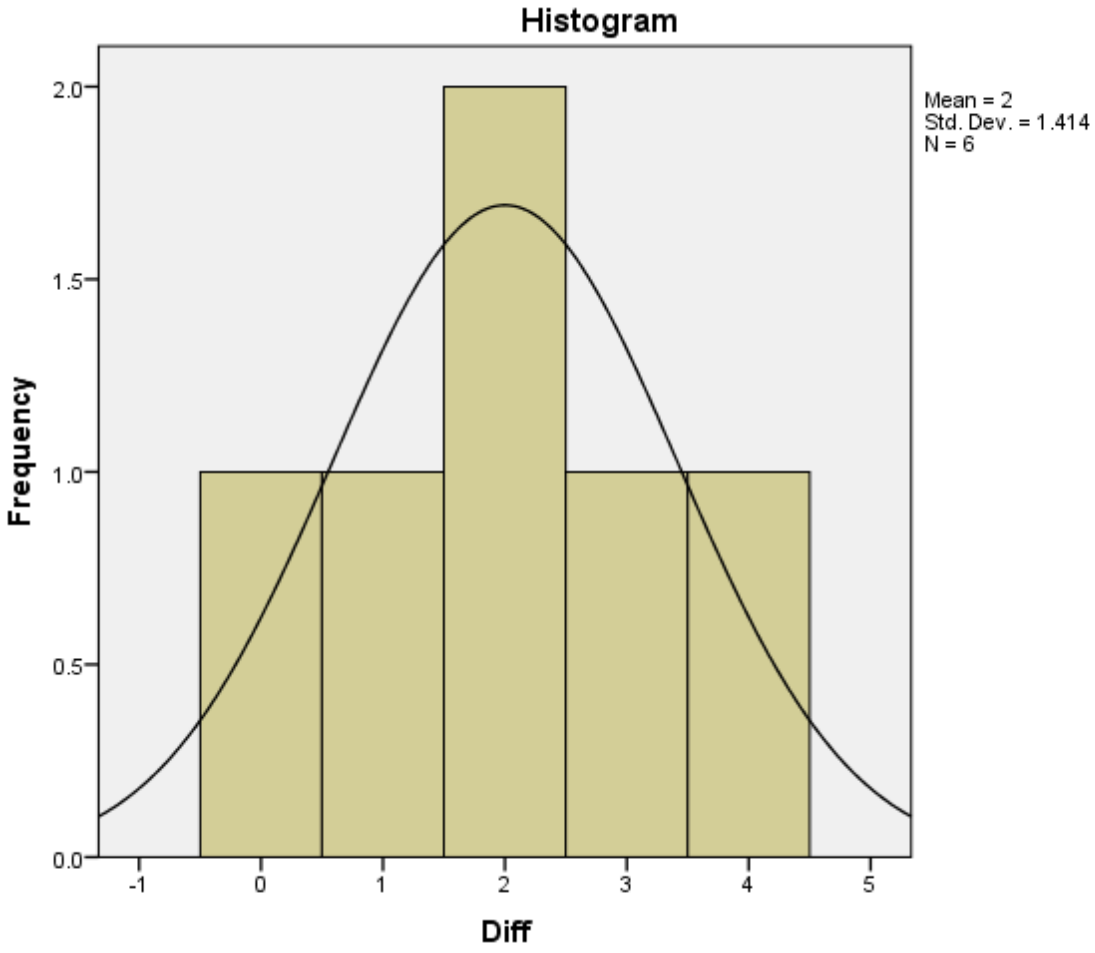


Here I computed the difference scores and computed some stats to see if they appear to be normally distributed.

Statistics

Diff

N	Valid	6
	Missing	0
Mean		2.00
Std. Error of Mean		.577
Median		2.00
Std. Deviation		1.414
Skewness		.000
Std. Error of Skewness		.845
Kurtosis		-.300
Std. Error of Kurtosis		1.741



1b. 95% CI [.516, 3.484] -- 4 points

1c. *r* = .946 -- 2 points

1d. n = 165 -- 3 points

[1] -- *Thursday, June 05, 2014 -- 12:19:05*

t tests - Means: Difference between two dependent means (matched pairs)

Analysis:	A priori: Compute required sample size		
Input:	Tail(s)	=	Two
	Effect size dz	=	0.2828427
	α err prob	=	0.05
	Power (1-β err prob)	=	0.95
Output:	Noncentrality parameter δ	=	3.6331803
	Critical t	=	1.9745346
	Df	=	164
	Total sample size	=	165
	Actual power	=	0.9507184