

```

COMPUTE Diff_BA=Before-After.
EXECUTE.
COMPUTE Diff_AB=After-Before.
EXECUTE.
EXAMINE VARIABLES=Diff_BA Diff_AB
  /PLOT BOXPLOT STEMLEAF HISTOGRAM NPLOT
  /COMPARE GROUPS
  /PERCENTILES(5,10,25,50,75,90,95) HAVERAGE
  /STATISTICS DESCRIPTIVES EXTREME
  /CINTERVAL 95
  /MISSING LISTWISE
  /NOTOTAL.

```

Explore

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Diff_BA	20	100.0%	0	0.0%	20	100.0%
Diff_AB	20	100.0%	0	0.0%	20	100.0%

Descriptives

			Statistic	Std. Error
Diff_BA	Mean		-.5015	.19422
	95% Confidence Interval for Mean	Lower Bound	-.9080	
		Upper Bound	-.0950	
	5% Trimmed Mean		-.5033	
	Median		-.5650	
	Variance		.754	
	Std. Deviation		.86860	
	Minimum		-1.97	
	Maximum		1.00	
	Range		2.97	
	Interquartile Range		1.29	
	Skewness		.147	.512
Kurtosis		-.750	.992	
Diff_AB	Mean		.5015	.19422
	95% Confidence Interval for Mean	Lower Bound	.0950	
		Upper Bound	.9080	
	5% Trimmed Mean		.5033	
	Median		.5650	
	Variance		.754	

Descriptives

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Std. Deviation	.86860	
Minimum	-1.00	
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Interquartile Range	1.29	
Skewness	-.147	.512
Kurtosis	-.750	.992

Percentiles

		Percentiles					
		5	10	25	50	75	90
Weighted Average (Definition 1)	Diff_BA	-1.9625	-1.7920	-1.0500	-.5650	.2375	.9240
	Diff_AB	-.9985	-.9240	-.2375	.5650	1.0500	1.7920
Tukey's Hinges	Diff_BA			-1.0400	-.5650	.2350	
	Diff_AB			-.2350	.5650	1.0400	

Percentiles

		Percentile...
		95
Weighted Average (Definition 1)	Diff_BA	.9985
	Diff_AB	1.9625
Tukey's Hinges	Diff_BA	
	Diff_AB	

Extreme Values

			Case Number	Value
Diff_BA	Highest	1	9	1.00
		2	20	.97
		3	7	.51
		4	17	.46
		5	15	.24
	Lowest	1	12	-1.97
		2	2	-1.82
		3	16	-1.54
		4	13	-1.39
		5	5	-1.06
Diff_AB	Highest	1	12	1.97
		2	2	1.82
		3	16	1.54
		4	13	1.39
		5	5	1.06
	Lowest	1	9	-1.00
		2	20	-.97
		3	7	-.51
		4	17	-.46
		5	15	-.24

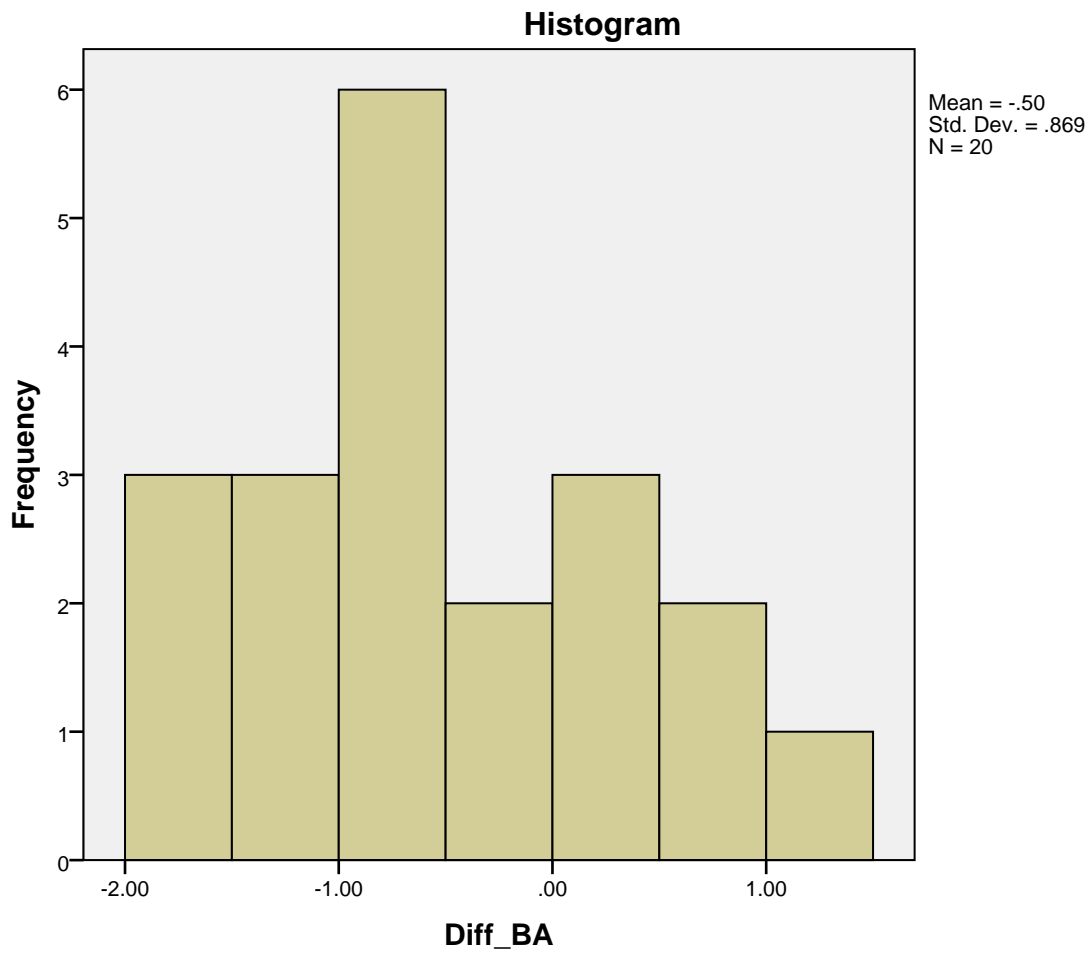
Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Diff_BA	.149	20	.200*	.965	20	.650
Diff_AB	.149	20	.200*	.965	20	.650

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Diff_BA

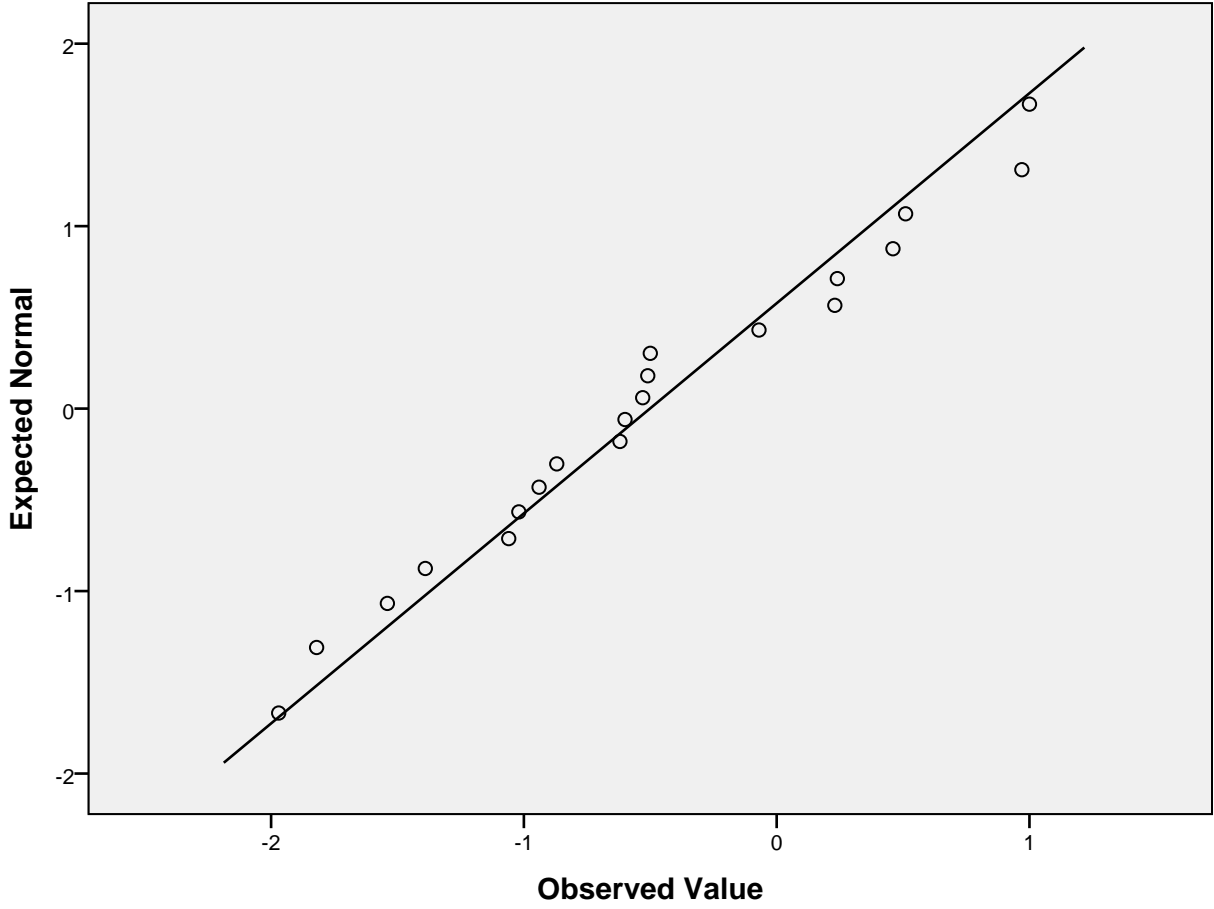


Diff_BA Stem-and-Leaf Plot

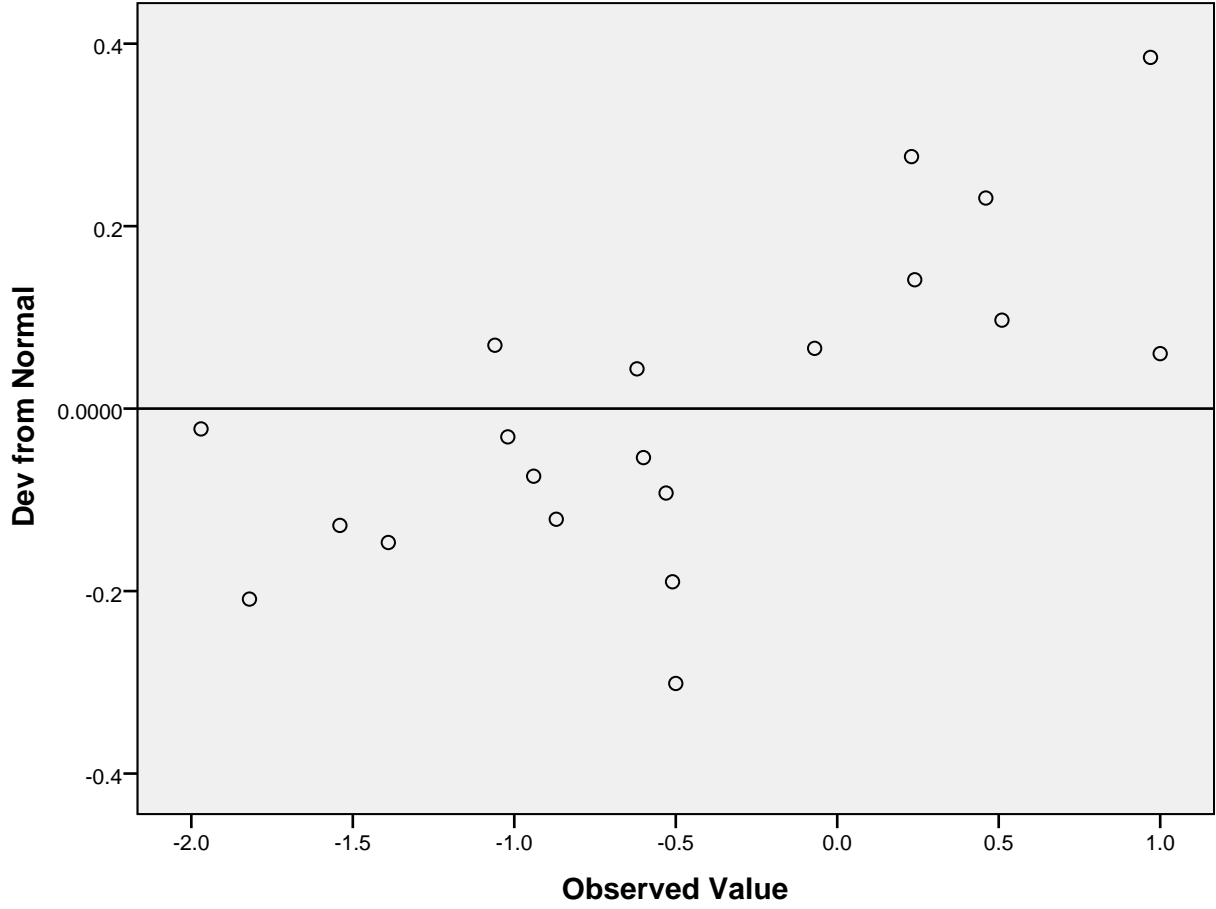
Frequency	Stem &	Leaf
3.00	-1 .	589
3.00	-1 .	003
7.00	-0 .	5556689
1.00	-0 .	0
3.00	0 .	224
2.00	0 .	59
1.00	1 .	0

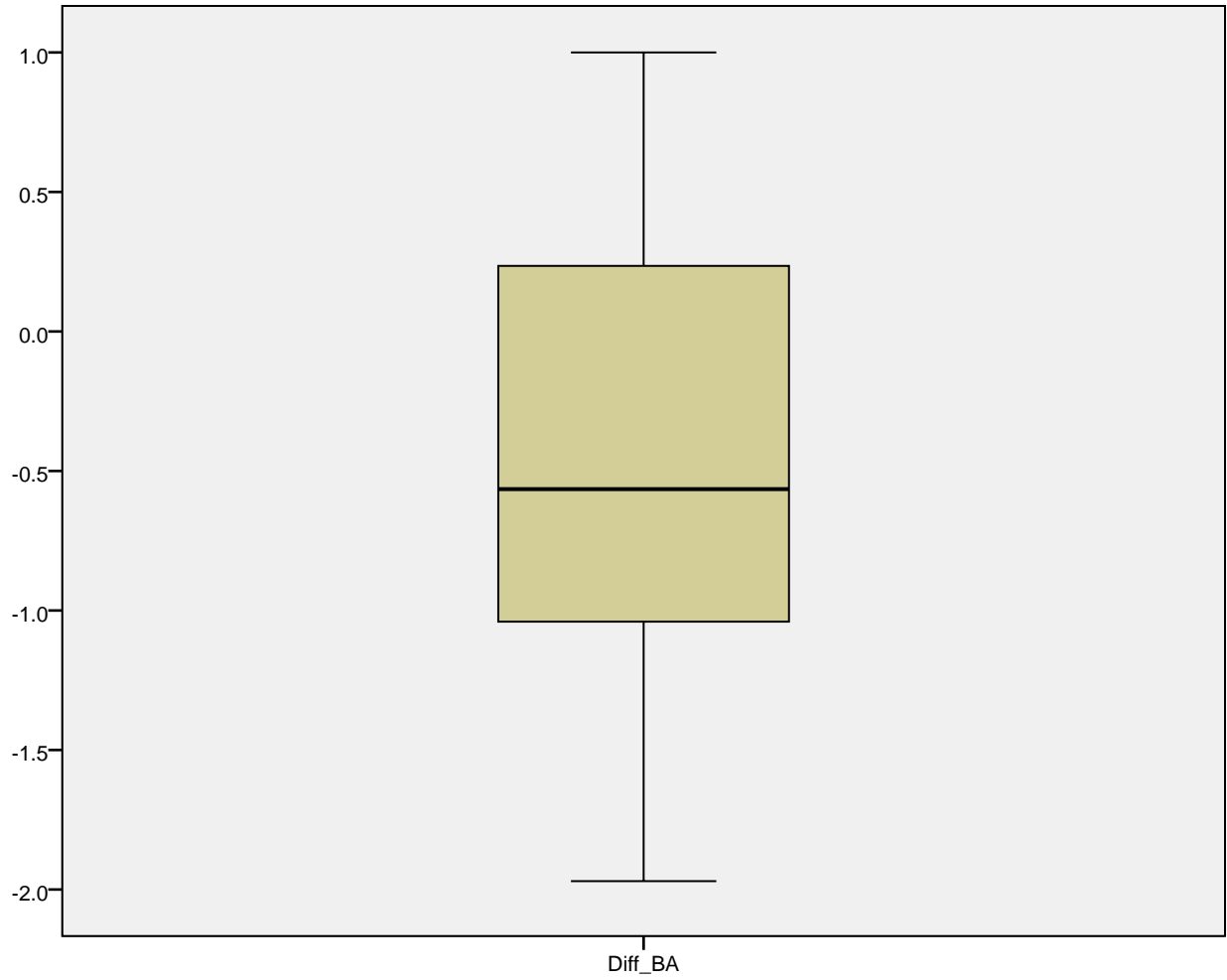
Stem width: 1.00
Each leaf: 1 case(s)

Normal Q-Q Plot of Diff_BA

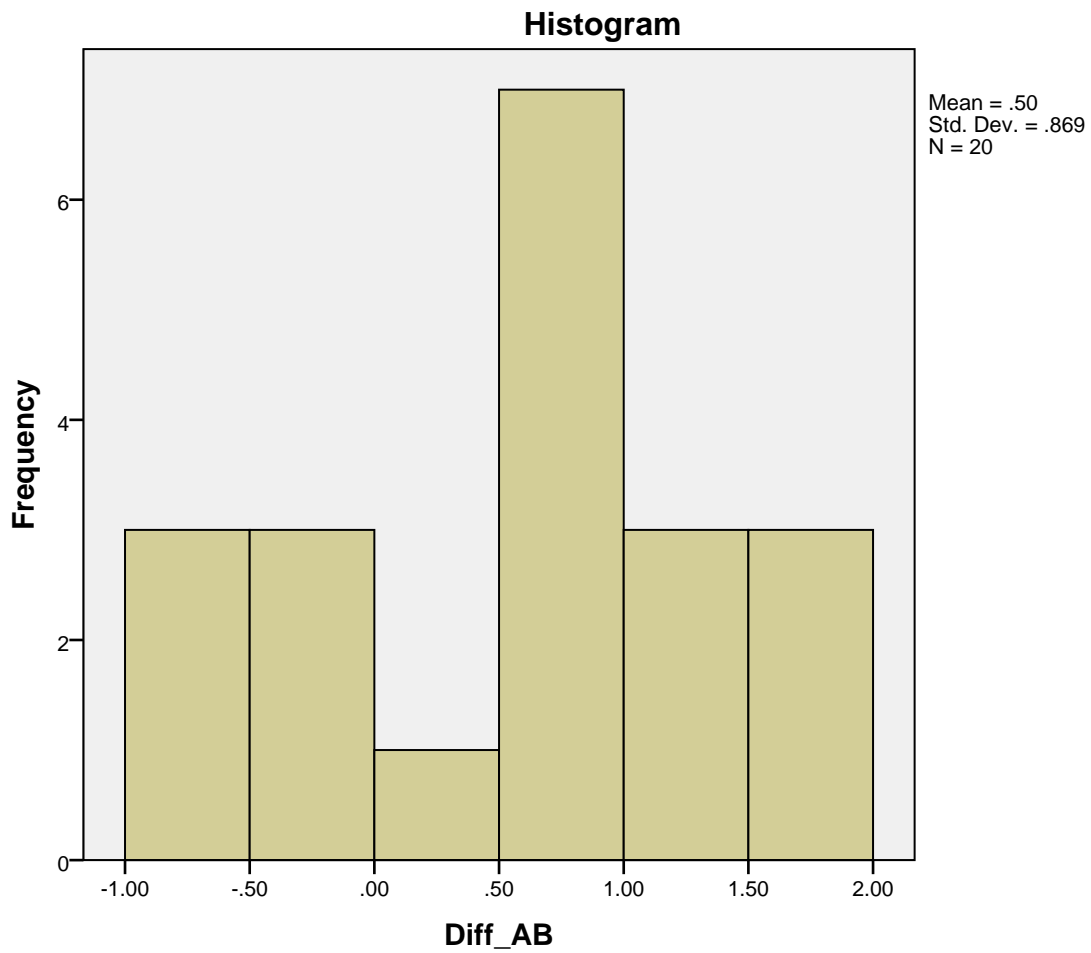


Detrended Normal Q-Q Plot of Diff_BA





Diff_AB

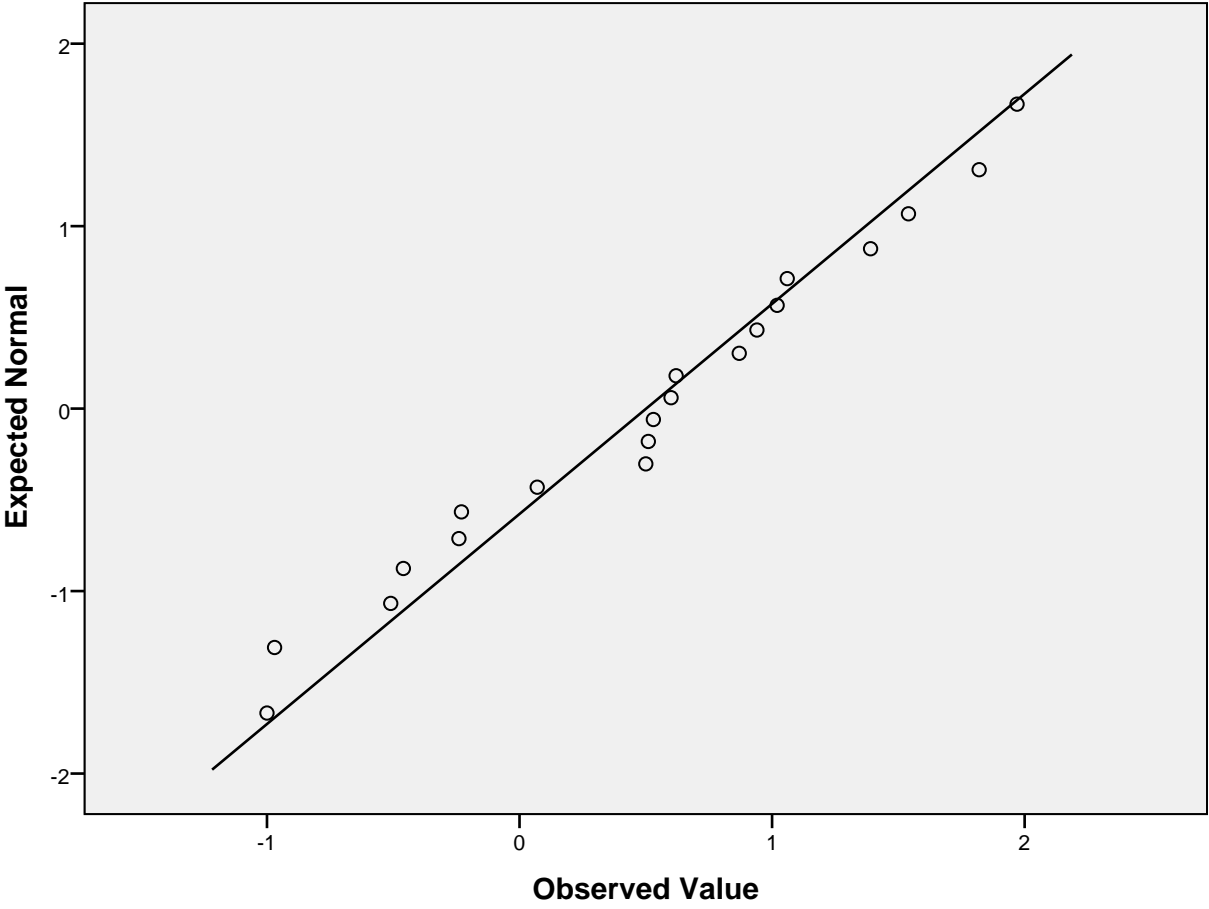


Diff_AB Stem-and-Leaf Plot

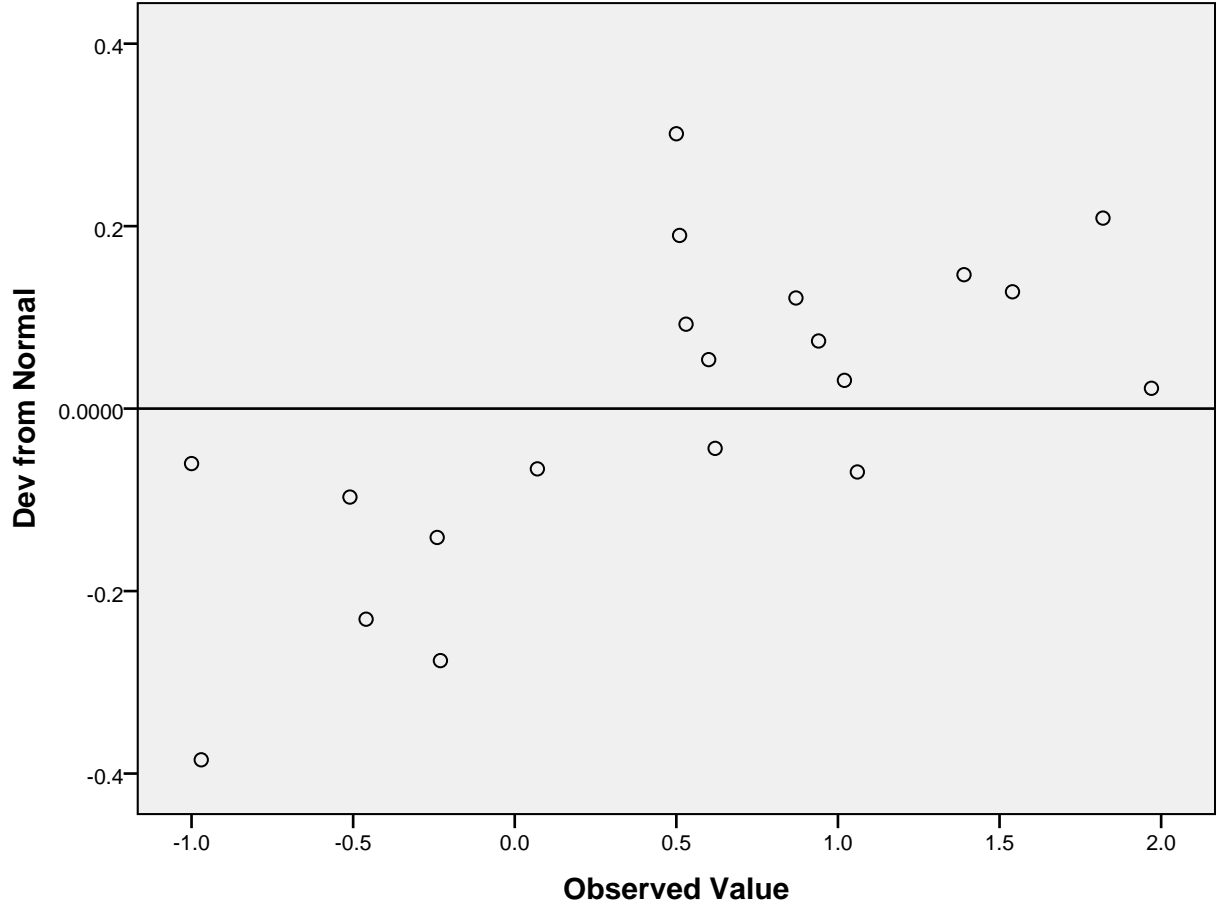
Frequency	Stem &	Leaf
1.00	-1 .	0
2.00	-0 .	59
3.00	-0 .	224
1.00	0 .	0
7.00	0 .	5556689
3.00	1 .	003
3.00	1 .	589

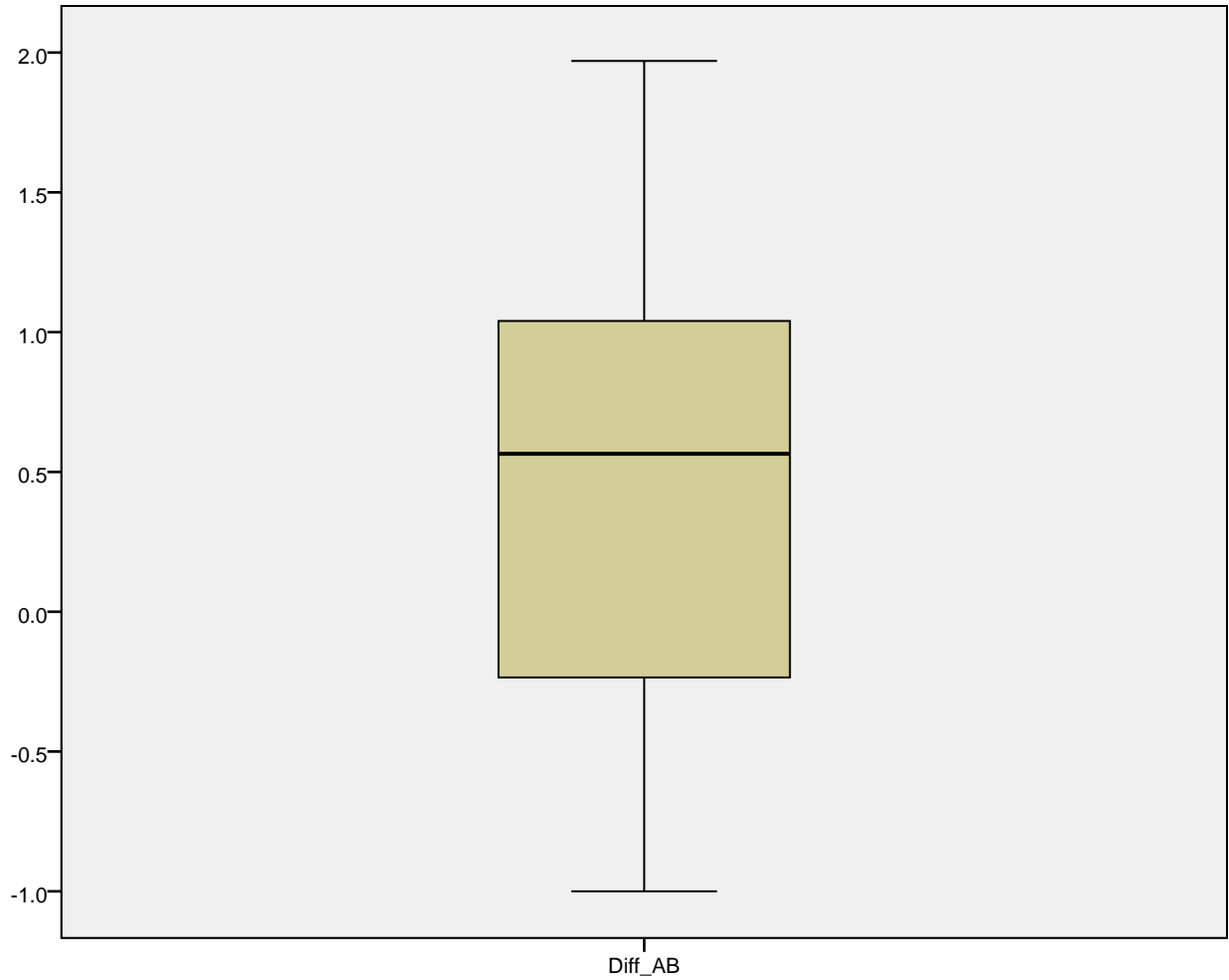
Stem width: 1.00
Each leaf: 1 case(s)

Normal Q-Q Plot of Diff_AB



Detrended Normal Q-Q Plot of Diff_AB





T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Before	4.9615	20	.97095	.21711
	After	5.4630	20	.98289	.21978
Pair 2	After	5.4630	20	.98289	.21978
	Before	4.9615	20	.97095	.21711

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Before & After	20	.605	.005
Pair 2	After & Before	20	.605	.005

Paired Samples Test

		Paired Differences				
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	Before - After	-.50150	.86860	.19422	-.90802	-.09498
Pair 2	After - Before	.50150	.86860	.19422	.09498	.90802

Paired Samples Test

		t	df	Sig. (2-tailed)
Pair 1	Before - After	-2.582	19	.018
Pair 2	After - Before	2.582	19	.018

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Diff_BA	20	-.5015	.86860	.19422
Diff_AB	20	.5015	.86860	.19422

One-Sample Test

		Test Value = 0				
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Diff_BA	-2.582	19	.018	-.50150	-.9080	-.0950
Diff_AB	2.582	19	.018	.50150	.0950	.9080

Nonparametric Tests

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of differences between After and Before equals 0.	Related-Samples Sign Test	.115 ¹	Retain the null hypothesis.
2	The median of differences between Before and After equals 0.	Related-Samples Wilcoxon Signed Rank Test	.020	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

¹ Exact significance is displayed for this test.

Nonparametric Tests

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The categories defined by Diff_BA ≤ 0.00 and > 0.00 occur with probabilities 0.5 and 0.5.	One-Sample Binomial Test	.115 ¹	Retain the null hypothesis.
2	The categories defined by Diff_AB ≤ 0.00 and > 0.00 occur with probabilities 0.5 and 0.5.	One-Sample Binomial Test	.115 ¹	Retain the null hypothesis.
3	The median of Diff_BA equals 0.00.	One-Sample Wilcoxon Signed Rank Test	.020	Reject the null hypothesis.
4	The median of Diff_AB equals 0.00.	One-Sample Wilcoxon Signed Rank Test	.020	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

¹ Exact significance is displayed for this test.